

<u>DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19,</u> in the National Clinical Data Repository (NCDR) England- as at 31st March 2020



Synopsis

Pre-COVID-19

- In order to support the focus on population health management in the Long Term Plan (LTP), the Data, Analysis and Intelligence Service (DAIS) in NHS England and NHS Improvement (NHSE and NHSI), PHE, Outcomes Based Healthcare and Arden & GEM CSU have developed a common, data-driven approach to population segmentation and a national framework for segmentation to support delivery of the approach by the system using local datasets.
- Through the above partnership, a national segmentation model (NSM) for population segmentation has been developed within NHSE and NHSI's data environment using data sources from the National Commissioning Data Repository (NCDR). This is an adaptation of the internationally recognised 'Bridges to Health' (B2H) segmentation model. The NSM will facilitate a range of novel and actionable population-level insights using a standardised approach.
- The NSM incorporates data from every patient registered to a GP in England (the Master Patient Index), over 10 years of Secondary Uses Service (SUS) data, several years of maternity data, Assuring Transformation data, Hospital Frailty Risk Score data, Mental Health and IAPT data, Community data and SLAM data. As of May 2020 (v1.4), the Model has produced information that includes the segments and sub-segments (conditions) for the 63 million people in the GP registration list, for each month over the last four years (April 2016 March 2020).
- Further information on the NSM can be found in the <u>National Segmentation Workspace on</u> <u>FutureNHS</u>.

What this COVID-19 'vulnerable' population analysis is:

- Builds on work undertaken for a different purpose ('Bridges to Health' population segmentation), over the last 12 months (https://future.nhs.uk/nationalsegmentation/view?objectID=15692432) with PHE, OBH and AGEM CSU.
- Datasets used: linked National Clinical Data Repository (NCDR) data covering Acute (10 years of admissions, outpatients, A&E data), Acute ECDS, Maternity, Learning Disabilities, Frailty, Mental Health, IAPT, Community Services, and SLAM data. Excludes clinical primary care data, but includes a Master Patient Index for anyone registered to a GP practice in England since August 2014.
- Those 'At Risk' of severe illness from COVID-19 have been identified and quantified (at CCG/STP/National levels), using conditions in existing NCDR segmentation model.

Key findings:

- 15.1 million (c.24% of England's population) 'At Risk' of severe COVID-19 illness
- Over 70% (c.11 million) of the 'At Risk' cohort have a known COVID-19 risk factor condition, rather than just being 'At Risk' due to age alone
- 1/3rd (2.6 million) of the over 70s have no currently known risk for COVID-19 complications
- Wide variation at CCG level (between 12-34%) in size of the 'core older and clinically vulnerable' cohort

How it fits with/adds to what has been released so far:

CMO (and NHS Digital) has identified two key groups vulnerable to severe complications from COVID-19:

- Those 'At High Risk' (c.2.5 million) on the Shielded Patient List (SPL)
- Those normally 'At Risk' of flu (c. 19 million)

The wider list of people normally at risk of flu contains groups of people not known to be at significantly increased risk of COVID-19 complications (eg. pre-school children), and excludes people understood to be at risk of complications (eg. people who have had a stroke, or history of cancer, or hypertension).

Conditions in the Red Box (see accompanying pdf analysis) are included in the CMO's wider 'At Risk' list of conditions, and the conditions in the Yellow Box are additional conditions where the evidence suggests an increased risk of severe illness (summarised in the ICHP Literature Review: COVID-19 casefinding of older and vulnerable people in NWL, 20.03.20). The analysis also reflects the significantly increased complication risk associated with multimorbidity (i.e. someone with 2+LTCs).

How it could be useful

- The analysis builds on the work undertaken by NHS Digital and is not framed to challenge but rather to support accurate central and local place-based COVID-19 demand and capacity modelling/planning, to consistent standards and consistent input assumptions
- To potentially use as a base model for creation of wider local 'vulnerable' patient lists, to support local COVID-19 point of care response (subject to confirmation from NCDR colleagues at AGEM CSU)
- To support understanding of the effect of age on complications, independent of comorbidities
- Model can be simply updated as new evidence emerges around risk factors and conditions (as long as the relevant data exists in NCDR)

What are any key limitations and how the analysis will be improved:

- Data excludes National Data Opt-outs (approx 2.4% as at March 2018)
- Population volumes as at 31.03.20
- Excludes clinical primary care data, so some milder conditions managed exclusively in primary care
 not fully represented in data. Work over the last 12 months to link datasets has been able to
 successfully largely compensate for the lack of primary care data- see calibration reports
 https://future.nhs.uk/nationalsegmentation/view?objectID=17145232. Addition of further
 datasets above will further improve this.
- Further iteration is required through collaborations with the following teams: NHSE/I and PHE
 central modelling, vulnerable persons, local modelling and planning and NHS Digital so this should
 still very much be regarded as iterative, draft and developmental work.

DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 ENGLAND

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	ENGLAND	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	63,165,928	
Total Population (16-69)	43,962,966	69.6%
Total Population (70+)	7,892,721	12.5%
People with one or more 'at risk' conditions (70+)	3,826,774	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	5,244,294	
People with no 'at risk' or 'potentially at risk' conditions (70+)	2,648,427	
People with one or more 'at risk' conditions (all ages)	11,071,965	17.5%
People with one or more 'potentially at risk' conditions (all ages)	9,726,188	15.4%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	14,936,606	23.6%
People with two or more 'at risk' conditions (all ages)	3,921,729	6.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	7,335,757	11.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	15,137,912	24.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	6,753,317	10.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	17,585,033	27.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	9,070,266	14.4%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	7,335,757	11.6%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 BATH AND NORTH EAST SOMERSET, SWINDON AND WILTSHIRE STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

		BATH AND NORTH EAST SOMERSET, SWINDON AND WILTSHIRE STP	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)	
Total Population (all ages)	1,017,363		
Total Population (16-69)	695,154	68.3%	
Total Population (70+)	142,734	14.0%	
People with one or more 'at risk' conditions (70+)	66,097		
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	92,901		
People with no 'at risk' or 'potentially at risk' conditions (70+)	49,833		
People with one or more 'at risk' conditions (all ages)	179,444	17.6%	
People with one or more 'potentially at risk' conditions (all ages)	159,863	15.7%	
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	244,830	24.1%	
People with two or more 'at risk' conditions (all ages)	62,103	6.1%	
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	118,512	11.6%	
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	256,081	25.2%	
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	106,099	10.4%	
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	294,663	29.0%	
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	142,734	14.0%	
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	118,512	11.6%	

Notes

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References

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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 BEDFORDSHIRE, LUTON AND MILTON KEYNES STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	BEDFORDSHIRE, LUTON A	AND MILTON KEYNES STP
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,083,298	
Total Population (16-69)	748,601	69.1%
Total Population (70+)	111,960	10.3%
People with one or more 'at risk' conditions (70+)	55,769	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	76,382	
People with no 'at risk' or 'potentially at risk' conditions (70+)	35,578	
People with one or more 'at risk' conditions (all ages)	194,113	17.9%
People with one or more 'potentially at risk' conditions (all ages)	157,468	14.5%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	256,561	23.7%
People with two or more 'at risk' conditions (all ages)	63,831	5.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	119,524	11.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	250,304	23.1%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	122,007	11.3%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	292,139	27.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	161,453	14.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	119,524	11.0%

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Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
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Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	BIRMINGHAM AN	ND SOLIHULL STP
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,385,757	
Total Population (16-69)	949,748	68.5%
Total Population (70+)	146,185	10.5%
People with one or more 'at risk' conditions (70+)	74,769	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	99,512	
People with no 'at risk' or 'potentially at risk' conditions (70+)	46,673	
People with one or more 'at risk' conditions (all ages)	250,815	18.1%
People with one or more 'potentially at risk' conditions (all ages)	207,830	15.0%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	330,112	23.8%
People with two or more 'at risk' conditions (all ages)	88,079	6.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	160,771	11.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	322,231	23.3%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	161,061	11.6%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	376,785	27.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	211,067	15.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	160,771	11.6%

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Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
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Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	GLOUCESTERSHIRE STP	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,104,017	
Total Population (16-69)	787,874	71.4%
Total Population (70+)	127,246	11.5%
People with one or more 'at risk' conditions (70+)	64,695	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	87,717	
People with no 'at risk' or 'potentially at risk' conditions (70+)	39,529	
People with one or more 'at risk' conditions (all ages)	193,301	17.5%
People with one or more 'potentially at risk' conditions (all ages)	164,730	14.9%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	257,668	23.3%
People with two or more 'at risk' conditions (all ages)	68,414	6.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	125,472	11.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	255,852	23.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	119,399	10.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	297,197	26.9%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	158,602	14.4%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	125,472	11.4%

Notes

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RRISTOL NORTH SOMERSET AND SOLITH

DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 BUCKINGHAMSHIRE, OXFORDSHIRE AND BERKSHIRE WEST STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	BUCKINGHAMSHIRE, OXFO	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	2,013,427	
Total Population (16-69)	1,409,941	70.0%
Total Population (70+)	240,718	12.0%
People with one or more 'at risk' conditions (70+)	104,826	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	150,788	
People with no 'at risk' or 'potentially at risk' conditions (70+)	89,930	
People with one or more 'at risk' conditions (all ages)	287,699	14.3%
People with one or more 'potentially at risk' conditions (all ages)	267,088	13.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	404,897	20.1%
People with two or more 'at risk' conditions (all ages)	94,388	4.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	188,533	9.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	423,591	21.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	170,814	8.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	494,827	24.6%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	238,157	11.8%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	188,533	9.4%

Note:

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.





DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 CAMBRIDGESHIRE AND PETERBOROUGH STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	CAMBRIDGESHIRE AND	PETERBOROUGH STP
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,048,000	
Total Population (16-69)	740,408	70.6%
Total Population (70+)	121,199	11.6%
People with one or more 'at risk' conditions (70+)	58,979	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	81,811	
People with no 'at risk' or 'potentially at risk' conditions (70+)	39,388	
People with one or more 'at risk' conditions (all ages)	172,818	16.5%
People with one or more 'potentially at risk' conditions (all ages)	150,263	14.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	234,537	22.4%
People with two or more 'at risk' conditions (all ages)	59,029	5.6%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	111,737	10.7%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	235,038	22.4%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	106,385	10.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	273,925	26.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	143,034	13.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	111,737	10.7%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 CHESHIRE AND MERSEYSIDE STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	CHESHIRE AND MERSEYSIDE STP	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	2,764,486	
Total Population (16-69)	1,910,611	69.1%
Total Population (70+)	376,161	13.6%
People with one or more 'at risk' conditions (70+)	196,995	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	262,943	
People with no 'at risk' or 'potentially at risk' conditions (70+)	113,218	
People with one or more 'at risk' conditions (all ages)	576,530	20.9%
People with one or more 'potentially at risk' conditions (all ages)	504,239	18.2%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	769,071	27.8%
People with two or more 'at risk' conditions (all ages)	217,891	7.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	389,968	14.1%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	755,696	27.3%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	356,722	12.9%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	882,289	31.9%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	475,343	17.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	389,968	14.1%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



CHECHIDE AND MEDSEVSIDE STD

DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 CORNWALL AND THE ISLES OF SCILLY HEALTH & SOCIAL CARE PARTNERSHIP (STP)

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1.2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

		RTNERSHIP (STP)
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	606,353	
Total Population (16-69)	401,835	66.3%
Total Population (70+)	107,535	17.7%
People with one or more 'at risk' conditions (70+)	53,834	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	71,602	
People with no 'at risk' or 'potentially at risk' conditions (70+)	35,933	
People with one or more 'at risk' conditions (all ages)	137,982	22.8%
People with one or more 'potentially at risk' conditions (all ages)	117,232	19.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	180,685	29.8%
People with two or more 'at risk' conditions (all ages)	54,073	8.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	93,719	15.5%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	191,683	31.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	79,129	13.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	216,618	35.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	102,876	17.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	93,719	15.5%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



CORNWALL AND THE ISLES OF SCHOOL HEALTH &

DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 COVENTRY AND WARWICKSHIRE STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	COVENTRY AND W	ARWICKSHIRE STP
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,083,523	
Total Population (16-69)	759,919	70.1%
Total Population (70+)	134,151	12.4%
People with one or more 'at risk' conditions (70+)	64,587	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	89,053	
People with no 'at risk' or 'potentially at risk' conditions (70+)	45,098	
People with one or more 'at risk' conditions (all ages)	182,501	16.8%
People with one or more 'potentially at risk' conditions (all ages)	158,476	14.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	245,138	22.6%
People with two or more 'at risk' conditions (all ages)	63,864	5.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	120,888	11.2%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	252,065	23.3%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	110,591	10.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	290,236	26.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	146,727	13.5%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	120,888	11.2%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 CUMBRIA AND NORTH EAST STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS ⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	CUMBRIA AND N	IORTH EAST STP
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	3,365,780	
Total Population (16-69)	2,318,995	68.9%
Total Population (70+)	478,562	14.2%
People with one or more 'at risk' conditions (70+)	249,216	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	337,425	
People with no 'at risk' or 'potentially at risk' conditions (70+)	141,137	
People with one or more 'at risk' conditions (all ages)	703,409	20.9%
People with one or more 'potentially at risk' conditions (all ages)	618,469	18.4%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	939,821	27.9%
People with two or more 'at risk' conditions (all ages)	257,436	7.6%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	475,533	14.1%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	932,755	27.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	426,688	12.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	1,080,958	32.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	568,079	16.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	475,533	14.1%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 DEVON STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	DEVON STP	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,300,457	
Total Population (16-69)	871,361	67.0%
Total Population (70+)	222,657	17.1%
People with one or more 'at risk' conditions (70+)	97,067	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	135,773	
People with no 'at risk' or 'potentially at risk' conditions (70+)	86,884	
People with one or more 'at risk' conditions (all ages)	238,181	18.3%
People with one or more 'potentially at risk' conditions (all ages)	220,537	17.0%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	329,773	25.4%
People with two or more 'at risk' conditions (all ages)	86,859	6.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	163,432	12.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	363,771	28.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	131,937	10.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	416,657	32.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	181,301	13.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	163,432	12.6%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 DORSET STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	DORSET STP	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	840,115	
Total Population (16-69)	558,753	66.5%
Total Population (70+)	151,708	18.1%
People with one or more 'at risk' conditions (70+)	70,488	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	95,991	
People with no 'at risk' or 'potentially at risk' conditions (70+)	55,717	
People with one or more 'at risk' conditions (all ages)	161,600	19.2%
People with one or more 'potentially at risk' conditions (all ages)	147,568	17.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	218,920	26.1%
People with two or more 'at risk' conditions (all ages)	60,085	7.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	112,167	13.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	242,820	28.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	85,947	10.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	274,637	32.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	116,345	13.8%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	112,167	13.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 EAST LONDON HEALTH & CARE PARTNERSHIP (STP)

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	EAST LONDON HEALTH &	CARE PARTNERSHIP (STP)
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	2,422,544	
Total Population (16-69)	1,792,833	74.0%
Total Population (70+)	152,102	6.3%
People with one or more 'at risk' conditions (70+)	77,614	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	105,335	
People with no 'at risk' or 'potentially at risk' conditions (70+)	46,767	
People with one or more 'at risk' conditions (all ages)	311,394	12.9%
People with one or more 'potentially at risk' conditions (all ages)	285,988	11.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	433,152	17.9%
People with two or more 'at risk' conditions (all ages)	104,865	4.3%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	202,490	8.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	385,882	15.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	217,120	9.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	479,919	19.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	306,408	12.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	202,490	8.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 FRIMLEY HEALTH & CARE ICS (STP)

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	FRIMLEY HEALTH & CARE ICS (STP)	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	841,321	
Total Population (16-69)	582,785	69.3%
Total Population (70+)	93,449	11.1%
People with one or more 'at risk' conditions (70+)	45,032	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	62,301	
People with no 'at risk' or 'potentially at risk' conditions (70+)	31,148	
People with one or more 'at risk' conditions (all ages)	133,786	15.9%
People with one or more 'potentially at risk' conditions (all ages)	118,739	14.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	182,600	21.7%
People with two or more 'at risk' conditions (all ages)	45,345	5.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	87,253	10.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	182,203	21.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	83,154	9.9%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	213,748	25.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	112,951	13.4%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	87,253	10.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 GLOUCESTERSHIRE STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS ⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	GLOUCESTERSHIRE STP	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	691,940	
Total Population (16-69)	468,149	67.7%
Total Population (70+)	104,922	15.2%
People with one or more 'at risk' conditions (70+)	50,146	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	66,462	
People with no 'at risk' or 'potentially at risk' conditions (70+)	38,460	
People with one or more 'at risk' conditions (all ages)	128,940	18.6%
People with one or more 'potentially at risk' conditions (all ages)	108,342	15.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	168,738	24.4%
People with two or more 'at risk' conditions (all ages)	48,021	6.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	84,878	12.3%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	183,716	26.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	74,418	10.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	207,198	29.9%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	96,984	14.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	84,878	12.3%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 GREATER MANCHESTER HEALTH AND SOCIAL CARE PARTNERSHIP (STP)

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	GREATER MANCHESTER HEALTH AND SOCIAL CARE PARTNERSHIP (STP)	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	3,239,334	
Total Population (16-69)	2,256,262	69.7%
Total Population (70+)	349,259	10.8%
People with one or more 'at risk' conditions (70+)	180,390	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	240,646	
People with no 'at risk' or 'potentially at risk' conditions (70+)	108,613	
People with one or more 'at risk' conditions (all ages)	596,907	18.4%
People with one or more 'potentially at risk' conditions (all ages)	499,656	15.4%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	788,667	24.3%
People with two or more 'at risk' conditions (all ages)	214,495	6.6%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	385,476	11.9%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	765,776	23.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	383,251	11.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	897,280	27.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	507,807	15.7%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	385,476	11.9%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



GREATER MANCHESTER HEALTH AND SOCIAL CARE

DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 HAMPSHIRE AND THE ISLE OF WIGHT STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	HAMPSHIRE AND THE ISLE OF WIGHT STP	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,973,056	
Total Population (16-69)	1,347,569	68.3%
Total Population (70+)	289,205	14.7%
People with one or more 'at risk' conditions (70+)	131,965	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	185,473	
People with no 'at risk' or 'potentially at risk' conditions (70+)	103,732	
People with one or more 'at risk' conditions (all ages)	350,827	17.8%
People with one or more 'potentially at risk' conditions (all ages)	311,639	15.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	476,826	24.2%
People with two or more 'at risk' conditions (all ages)	123,107	6.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	234,650	11.9%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	508,067	25.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	207,348	10.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	580,558	29.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	276,322	14.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	234,650	11.9%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 HEALTHIER LANCASHIRE AND SOUTH CUMBRIA

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	HEALTHIER LANCASHIRE	AND SOUTH CUMBRIA
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,846,905	
Total Population (16-69)	1,255,926	68.0%
Total Population (70+)	264,833	14.3%
People with one or more 'at risk' conditions (70+)	135,128	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	181,673	
People with no 'at risk' or 'potentially at risk' conditions (70+)	83,160	
People with one or more 'at risk' conditions (all ages)	387,425	21.0%
People with one or more 'potentially at risk' conditions (all ages)	332,378	18.0%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	512,140	27.7%
People with two or more 'at risk' conditions (all ages)	145,683	7.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	260,598	14.1%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	517,130	28.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	233,266	12.6%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	595,300	32.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	307,467	16.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	260,598	14.1%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 HEREFORDSHIRE AND WORCESTERSHIRE STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	HEREFORDSHIRE AND	WORCESTERSHIRE STP
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	828,102	
Total Population (16-69)	551,211	66.6%
Total Population (70+)	138,101	16.7%
People with one or more 'at risk' conditions (70+)	64,236	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	88,182	
People with no 'at risk' or 'potentially at risk' conditions (70+)	49,919	
People with one or more 'at risk' conditions (all ages)	163,874	19.8%
People with one or more 'potentially at risk' conditions (all ages)	141,724	17.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	218,733	26.4%
People with two or more 'at risk' conditions (all ages)	59,735	7.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	109,284	13.2%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	237,739	28.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	93,932	11.3%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	268,652	32.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	123,409	14.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	109,284	13.2%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 HERTFORDSHIRE AND WEST ESSEX STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	HERTFORDSHIRE AND WEST ESSEX STP	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,643,330	
Total Population (16-69)	1,126,009	68.5%
Total Population (70+)	200,110	12.2%
People with one or more 'at risk' conditions (70+)	95,857	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	133,451	
People with no 'at risk' or 'potentially at risk' conditions (70+)	66,659	
People with one or more 'at risk' conditions (all ages)	273,428	16.6%
People with one or more 'potentially at risk' conditions (all ages)	240,967	14.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	371,385	22.6%
People with two or more 'at risk' conditions (all ages)	93,231	5.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	178,443	10.9%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	377,681	23.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	165,973	10.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	438,044	26.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	223,093	13.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	178,443	10.9%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 HUMBER, COAST AND VALE STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	HUMBER, COAST AND VALE STP	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,493,824	
Total Population (16-69)	1,018,582	68.2%
Total Population (70+)	223,419	15.0%
People with one or more 'at risk' conditions (70+)	107,146	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	146,978	
People with no 'at risk' or 'potentially at risk' conditions (70+)	76,441	
People with one or more 'at risk' conditions (all ages)	285,443	19.1%
People with one or more 'potentially at risk' conditions (all ages)	248,420	16.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	382,886	25.6%
People with two or more 'at risk' conditions (all ages)	103,375	6.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	191,408	12.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	401,716	26.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	168,919	11.3%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	459,327	30.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	224,205	15.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	191,408	12.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 JOINED UP CARE DERBYSHIRE STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	JOINED UP CARE DERBYSHIRE STP	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,089,253	
Total Population (16-69)	740,829	68.0%
Total Population (70+)	158,780	14.6%
People with one or more 'at risk' conditions (70+)	79,544	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	107,149	
People with no 'at risk' or 'potentially at risk' conditions (70+)	51,631	
People with one or more 'at risk' conditions (all ages)	218,277	20.0%
People with one or more 'potentially at risk' conditions (all ages)	188,020	17.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	290,085	26.6%
People with two or more 'at risk' conditions (all ages)	78,801	7.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	145,219	13.3%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	297,513	27.3%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	132,177	12.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	341,716	31.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	174,413	16.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	145,219	13.3%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 KENT AND MEDWAY STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	KENT AND M	EDWAY STP
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,996,768	
Total Population (16-69)	1,342,467	67.2%
Total Population (70+)	278,531	13.9%
People with one or more 'at risk' conditions (70+)	128,757	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	183,277	
People with no 'at risk' or 'potentially at risk' conditions (70+)	95,254	
People with one or more 'at risk' conditions (all ages)	354,126	17.7%
People with one or more 'potentially at risk' conditions (all ages)	332,996	16.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	492,199	24.6%
People with two or more 'at risk' conditions (all ages)	123,225	6.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	244,410	12.2%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	503,900	25.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	209,485	10.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	587,453	29.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	288,557	14.5%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	244,410	12.2%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 LEICESTER, LEICESTERSHIRE AND RUTLAND STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	LEICESTER, LEICESTERSHIRE AND RUTLAND STP	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,214,368	
Total Population (16-69)	847,360	69.8%
Total Population (70+)	147,158	12.1%
People with one or more 'at risk' conditions (70+)	66,561	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	91,499	
People with no 'at risk' or 'potentially at risk' conditions (70+)	55,659	
People with one or more 'at risk' conditions (all ages)	195,546	16.1%
People with one or more 'potentially at risk' conditions (all ages)	168,768	13.9%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	261,321	21.5%
People with two or more 'at risk' conditions (all ages)	69,060	5.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	128,992	10.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	276,143	22.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	122,374	10.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	316,980	26.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	160,888	13.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	128,992	10.6%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 LINCOLNSHIRE STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	LINCOLNSHIRE STP	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	826,239	
Total Population (16-69)	550,297	66.6%
Total Population (70+)	138,418	16.8%
People with one or more 'at risk' conditions (70+)	64,561	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	89,868	
People with no 'at risk' or 'potentially at risk' conditions (70+)	48,550	
People with one or more 'at risk' conditions (all ages)	163,129	19.7%
People with one or more 'potentially at risk' conditions (all ages)	149,857	18.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	222,376	26.9%
People with two or more 'at risk' conditions (all ages)	59,498	7.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	112,904	13.7%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	236,986	28.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	93,375	11.3%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	270,926	32.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	125,512	15.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	112,904	13.7%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 MID AND SOUTH ESSEX STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	MID AND SOUTH ESSEX STP	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,271,191	
Total Population (16-69)	853,763	67.2%
Total Population (70+)	177,571	14.0%
People with one or more 'at risk' conditions (70+)	82,205	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	116,206	
People with no 'at risk' or 'potentially at risk' conditions (70+)	61,365	
People with one or more 'at risk' conditions (all ages)	221,982	17.5%
People with one or more 'potentially at risk' conditions (all ages)	204,180	16.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	306,222	24.1%
People with two or more 'at risk' conditions (all ages)	75,510	5.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	149,239	11.7%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	317,348	25.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	130,909	10.3%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	367,587	28.9%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	178,446	14.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	149,239	11.7%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NORFOLK AND WAVENEY HEALTH & CARE PARTNERSHIP (STP)

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NORFOLK AND WAVENEY HEALTH & CARE PARTNERSHIP (STP)	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,099,111	
Total Population (16-69)	730,008	66.4%
Total Population (70+)	193,861	17.6%
People with one or more 'at risk' conditions (70+)	89,137	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	126,087	
People with no 'at risk' or 'potentially at risk' conditions (70+)	67,774	
People with one or more 'at risk' conditions (all ages)	214,831	19.5%
People with one or more 'potentially at risk' conditions (all ages)	196,981	17.9%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	295,036	26.8%
People with two or more 'at risk' conditions (all ages)	76,244	6.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	147,816	13.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	319,555	29.1%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	118,198	10.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	362,810	33.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	159,475	14.5%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	147,816	13.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NORTH LONDON PARTNERS IN HEALTH & CARE (STP)

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NORTH LONDON PARTNERS IN HEALTH & CARE (STP)	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,835,258	
Total Population (16-69)	1,386,641	75.6%
Total Population (70+)	138,947	7.6%
People with one or more 'at risk' conditions (70+)	65,291	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	90,467	
People with no 'at risk' or 'potentially at risk' conditions (70+)	48,480	
People with one or more 'at risk' conditions (all ages)	221,298	12.1%
People with one or more 'potentially at risk' conditions (all ages)	209,438	11.4%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	315,425	17.2%
People with two or more 'at risk' conditions (all ages)	72,640	4.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	143,108	7.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	294,954	16.1%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	141,302	7.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	363,905	19.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	207,288	11.3%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	143,108	7.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NORTH WEST LONDON HEALTH & CARE PARTNERSHIP (STP)

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	PARTNERSHIP (STP)	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	2,825,341	
Total Population (16-69)	2,144,092	75.9%
Total Population (70+)	211,308	7.5%
People with one or more 'at risk' conditions (70+)	101,357	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	136,096	
People with no 'at risk' or 'potentially at risk' conditions (70+)	75,212	
People with one or more 'at risk' conditions (all ages)	352,352	12.5%
People with one or more 'potentially at risk' conditions (all ages)	309,952	11.0%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	476,545	16.9%
People with two or more 'at risk' conditions (all ages)	119,715	4.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	226,435	8.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	462,303	16.4%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	228,126	8.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	551,757	19.5%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	312,565	11.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	226,435	8.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.





NORTH WEST LONDON HEALTH & CARE

DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NORTHAMPTONSHIRE STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NORTHAMPTONSHIRE STP	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	814,785	
Total Population (16-69)	561,704	68.9%
Total Population (70+)	97,304	11.9%
People with one or more 'at risk' conditions (70+)	49,200	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	66,062	
People with no 'at risk' or 'potentially at risk' conditions (70+)	31,242	
People with one or more 'at risk' conditions (all ages)	150,836	18.5%
People with one or more 'potentially at risk' conditions (all ages)	124,268	15.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	197,529	24.2%
People with two or more 'at risk' conditions (all ages)	54,462	6.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	97,504	12.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	198,940	24.4%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	95,345	11.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	228,771	28.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	123,571	15.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	97,504	12.0%

Notes

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- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NOTTINGHAM AND NOTTINGHAMSHIRE HEALTH AND CARE STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1.2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴	
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence	
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism	
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)	
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)	
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia	
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)	
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension	
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)	
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease	
		Sarcoidosis	Physical Disability	
		Sickle Cell Disease	Serious Mental Illness	
		Spleen Problems (inc. Splenectomy)		

	NOTTINGHAM AND NOTTINGHAMSHIKE HEALTH AND CARE STP	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,165,278	
Total Population (16-69)	823,226	70.6%
Total Population (70+)	140,448	12.1%
People with one or more 'at risk' conditions (70+)	72,513	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	96,544	
People with no 'at risk' or 'potentially at risk' conditions (70+)	43,904	
People with one or more 'at risk' conditions (all ages)	220,539	18.9%
People with one or more 'potentially at risk' conditions (all ages)	183,970	15.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	287,821	24.7%
People with two or more 'at risk' conditions (all ages)	82,432	7.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	146,231	12.5%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	288,474	24.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	140,407	12.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	331,725	28.5%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	181,085	15.5%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	146,231	12.5%

Notes

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References

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.





NOTTINGHAM AND NOTTINGHAMSHIRE HEALTH

DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 OUR HEALTHIER SOUTH EAST LONDON STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴	
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence	
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism	
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)	
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)	
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia	
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)	
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension	
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)	
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease	
		Sarcoidosis	Physical Disability	
		Sickle Cell Disease	Serious Mental Illness	
		Spleen Problems (inc. Splenectomy)		

	OUR HEALTHIER SOUTH EAST LONDON STP	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	2,152,678	
Total Population (16-69)	1,603,558	74.5%
Total Population (70+)	167,748	7.8%
People with one or more 'at risk' conditions (70+)	80,240	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	110,259	
People with no 'at risk' or 'potentially at risk' conditions (70+)	57,489	
People with one or more 'at risk' conditions (all ages)	298,495	13.9%
People with one or more 'potentially at risk' conditions (all ages)	262,906	12.2%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	410,659	19.1%
People with two or more 'at risk' conditions (all ages)	98,404	4.6%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	189,261	8.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	386,003	17.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	201,934	9.4%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	468,148	21.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	280,037	13.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	189,261	8.8%

Notes

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References

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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 SHROPSHIRE AND TELFORD AND WREKIN STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS ⁴	
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence	
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism	
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)	
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)	
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia	
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)	
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension	
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)	
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease	
		Sarcoidosis	Physical Disability	
		Sickle Cell Disease	Serious Mental Illness	
		Spleen Problems (inc. Splenectomy)		

SHROPSHIRE AND TELFO		ORD AND WREKIN STP
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	527,265	
Total Population (16-69)	352,547	66.9%
Total Population (70+)	84,257	16.0%
People with one or more 'at risk' conditions (70+)	41,275	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	55,623	
People with no 'at risk' or 'potentially at risk' conditions (70+)	28,634	
People with one or more 'at risk' conditions (all ages)	109,698	20.8%
People with one or more 'potentially at risk' conditions (all ages)	93,563	17.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	144,913	27.5%
People with two or more 'at risk' conditions (all ages)	40,025	7.6%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	73,426	13.9%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	152,680	29.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	64,037	12.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	173,547	32.9%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	83,889	15.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	73,426	13.9%

Notes

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References

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 SOMERSET STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

SOMER		SET STP
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	602,557	
Total Population (16-69)	395,889	65.7%
Total Population (70+)	105,945	17.6%
People with one or more 'at risk' conditions (70+)	50,067	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	70,365	
People with no 'at risk' or 'potentially at risk' conditions (70+)	35,580	
People with one or more 'at risk' conditions (all ages)	123,904	20.6%
People with one or more 'potentially at risk' conditions (all ages)	112,981	18.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	169,070	28.1%
People with two or more 'at risk' conditions (all ages)	44,302	7.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	84,919	14.1%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	179,782	29.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	69,603	11.6%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	204,650	34.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	93,390	15.5%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	84,919	14.1%

Notes

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 SOUTH WEST LONDON HEALTH & CARE PARTNERSHIP (STP)

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	PARTNERSHIP (STP)	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,813,987	
Total Population (16-69)	1,325,153	73.1%
Total Population (70+)	154,379	8.5%
People with one or more 'at risk' conditions (70+)	69,990	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	98,123	
People with no 'at risk' or 'potentially at risk' conditions (70+)	56,256	
People with one or more 'at risk' conditions (all ages)	223,350	12.3%
People with one or more 'potentially at risk' conditions (all ages)	209,038	11.5%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	314,401	17.3%
People with two or more 'at risk' conditions (all ages)	72,925	4.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	145,575	8.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	307,739	17.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	141,695	7.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	370,657	20.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	201,162	11.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	145,575	8.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.





SOUTH WEST LONDON HEALTH & CARE

DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 SOUTH YORKSHIRE AND BASSETLAW STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	SOUTH YORKSHIRE AND BASSETLAW STP	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,647,443	
Total Population (16-69)	1,143,422	69.4%
Total Population (70+)	210,412	12.8%
People with one or more 'at risk' conditions (70+)	110,572	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	146,009	
People with no 'at risk' or 'potentially at risk' conditions (70+)	64,403	
People with one or more 'at risk' conditions (all ages)	327,948	19.9%
People with one or more 'potentially at risk' conditions (all ages)	270,170	16.4%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	428,324	26.0%
People with two or more 'at risk' conditions (all ages)	118,847	7.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	213,407	13.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	427,788	26.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	200,998	12.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	492,727	29.9%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	261,845	15.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	213,407	13.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 STAFFORDSHIRE AND STOKE ON TRENT STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	STAFFORDSHIRE AND	STOKE ON TRENT STP
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,192,723	
Total Population (16-69)	804,875	67.5%
Total Population (70+)	177,029	14.8%
People with one or more 'at risk' conditions (70+)	85,966	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	118,741	
People with no 'at risk' or 'potentially at risk' conditions (70+)	58,288	
People with one or more 'at risk' conditions (all ages)	238,913	20.0%
People with one or more 'potentially at risk' conditions (all ages)	209,079	17.5%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	320,852	26.9%
People with two or more 'at risk' conditions (all ages)	85,532	7.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	160,767	13.5%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	329,976	27.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	143,820	12.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	379,140	31.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	190,111	15.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	160,767	13.5%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 SUFFOLK AND NORTH EAST ESSEX STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	SUFFOLK AND NORTH EAST ESSEX STP	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,062,579	
Total Population (16-69)	705,671	66.4%
Total Population (70+)	174,841	16.5%
People with one or more 'at risk' conditions (70+)	82,040	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	114,331	
People with no 'at risk' or 'potentially at risk' conditions (70+)	60,510	
People with one or more 'at risk' conditions (all ages)	208,274	19.6%
People with one or more 'potentially at risk' conditions (all ages)	185,741	17.5%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	281,409	26.5%
People with two or more 'at risk' conditions (all ages)	75,014	7.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	141,281	13.3%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	301,075	28.3%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	117,125	11.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	341,919	32.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	155,608	14.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	141,281	13.3%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 SURREY HEARTLANDS HEALTH & CARE PARTNERSHIP (STP)

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS ⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

		SURREY HEARTLANDS HEALTH & CARE PARTNERSHIP (STP)	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)	
Total Population (all ages)	962,275		
Total Population (16-69)	655,713	68.1%	
Total Population (70+)	130,148	13.5%	
People with one or more 'at risk' conditions (70+)	58,824		
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	83,966		
People with no 'at risk' or 'potentially at risk' conditions (70+)	46,182		
People with one or more 'at risk' conditions (all ages)	151,189	15.7%	
People with one or more 'potentially at risk' conditions (all ages)	140,653	14.6%	
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	211,024	21.9%	
People with two or more 'at risk' conditions (all ages)	49,799	5.2%	
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	100,632	10.5%	
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	222,513	23.1%	
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	86,122	8.9%	
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	257,206	26.7%	
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	118,896	12.4%	
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	100,632	10.5%	

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.





CURREY LIEARTI AND CHEALTH & CARE DARTHERSHIP

DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 SUSSEX AND EAST SURREY STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	SUSSEX AND EAST SURREY STP	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	2,060,666	
Total Population (16-69)	1,398,177	67.9%
Total Population (70+)	319,591	15.5%
People with one or more 'at risk' conditions (70+)	148,004	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	207,515	
People with no 'at risk' or 'potentially at risk' conditions (70+)	112,076	
People with one or more 'at risk' conditions (all ages)	369,129	17.9%
People with one or more 'potentially at risk' conditions (all ages)	343,866	16.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	510,470	24.8%
People with two or more 'at risk' conditions (all ages)	132,407	6.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	254,741	12.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	540,716	26.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	207,877	10.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	622,546	30.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	286,002	13.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	254,741	12.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 THE BLACK COUNTRY AND WEST BIRMINGHAM STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	THE BLACK COUNTRY AND WEST BIRMINGHAM STP	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,524,546	
Total Population (16-69)	1,043,311	68.4%
Total Population (70+)	172,403	11.3%
People with one or more 'at risk' conditions (70+)	88,346	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	117,695	
People with no 'at risk' or 'potentially at risk' conditions (70+)	54,708	
People with one or more 'at risk' conditions (all ages)	280,305	18.4%
People with one or more 'potentially at risk' conditions (all ages)	236,335	15.5%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	368,088	24.1%
People with two or more 'at risk' conditions (all ages)	100,609	6.6%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	184,380	12.1%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	364,362	23.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	177,387	11.6%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	422,796	27.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	232,608	15.3%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	184,380	12.1%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 WEST YORKSHIRE AND HARROGATE (HEALTH & CARE PARTNERSHIP) STP

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

		ERSHIP) STP	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)	
Total Population (all ages)	2,864,453		
Total Population (16-69)	1,985,724	69.3%	
Total Population (70+)	333,169	11.6%	
People with one or more 'at risk' conditions (70+)	166,165		
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	224,104		
People with no 'at risk' or 'potentially at risk' conditions (70+)	109,065		
People with one or more 'at risk' conditions (all ages)	514,428	18.0%	
People with one or more 'potentially at risk' conditions (all ages)	429,071	15.0%	
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	681,484	23.8%	
People with two or more 'at risk' conditions (all ages)	177,369	6.2%	
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	328,780	11.5%	
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	681,432	23.8%	
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	325,272	11.4%	
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	790,549	27.6%	
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	428,350	15.0%	
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	328,780	11.5%	

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



WEST YORKSHIRE AND HARROGATE (HEALTH & CARE

DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS AIREDALE, WHARFEDALE AND CRAVEN CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS AIREDALE, WHARFEDALE AND CRAVEN CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	164,589	
Total Population (16-69)	108,846	66.1%
Total Population (70+)	26,384	16.0%
People with one or more 'at risk' conditions (70+)	13,131	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	17,742	
People with no 'at risk' or 'potentially at risk' conditions (70+)	8,642	
People with one or more 'at risk' conditions (all ages)	35,532	21.6%
People with one or more 'potentially at risk' conditions (all ages)	29,853	18.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	46,736	28.4%
People with two or more 'at risk' conditions (all ages)	12,834	7.8%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	23,201	14.1%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	48,785	29.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	20,902	12.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	55,378	33.6%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	27,147	16.5%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	23,201	14.1%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS ASHFORD CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS ASHFORD CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	141,423	
Total Population (16-69)	94,766	67.0%
Total Population (70+)	19,474	13.8%
People with one or more 'at risk' conditions (70+)	8,737	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	12,502	
People with no 'at risk' or 'potentially at risk' conditions (70+)	6,972	
People with one or more 'at risk' conditions (all ages)	24,261	17.2%
People with one or more 'potentially at risk' conditions (all ages)	22,878	16.2%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	33,924	24.0%
People with two or more 'at risk' conditions (all ages)	8,388	5.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	16,733	11.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	34,998	24.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	14,259	10.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	40,896	28.9%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	19,904	14.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	16,733	11.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS BARKING AND DAGENHAM CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS BARKING AND DAGENHAM CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	242,132	
Total Population (16-69)	167,406	69.1%
Total Population (70+)	13,771	5.7%
People with one or more 'at risk' conditions (70+)	7,287	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	9,727	
People with no 'at risk' or 'potentially at risk' conditions (70+)	4,044	
People with one or more 'at risk' conditions (all ages)	34,399	14.2%
People with one or more 'potentially at risk' conditions (all ages)	30,862	12.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	47,501	19.6%
People with two or more 'at risk' conditions (all ages)	11,397	4.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	22,028	9.1%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	40,883	16.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	24,832	10.3%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	51,545	21.3%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	34,862	14.4%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	22,028	9.1%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS BARNET CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS BARNET CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	463,536	
Total Population (16-69)	328,202	70.8%
Total Population (70+)	45,232	9.8%
People with one or more 'at risk' conditions (70+)	20,818	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	28,729	
People with no 'at risk' or 'potentially at risk' conditions (70+)	16,503	
People with one or more 'at risk' conditions (all ages)	58,917	12.7%
People with one or more 'potentially at risk' conditions (all ages)	55,763	12.0%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	82,677	17.8%
People with two or more 'at risk' conditions (all ages)	20,192	4.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	39,448	8.5%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	83,331	18.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	35,016	7.6%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	99,180	21.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	50,036	10.8%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	39,448	8.5%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS BARNSLEY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS ⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS BARN	ISLEY CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	268,530	
Total Population (16-69)	183,317	68.3%
Total Population (70+)	36,140	13.5%
People with one or more 'at risk' conditions (70+)	19,836	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	25,537	
People with no 'at risk' or 'potentially at risk' conditions (70+)	10,603	
People with one or more 'at risk' conditions (all ages)	57,077	21.3%
People with one or more 'potentially at risk' conditions (all ages)	49,286	18.4%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	74,827	27.9%
People with two or more 'at risk' conditions (all ages)	21,815	8.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	38,616	14.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	73,381	27.3%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	34,962	13.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	85,430	31.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	46,401	17.3%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	38,616	14.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS BASILDON AND BRENTWOOD CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS BASILDON AND BRENTWOOD CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	290,351	
Total Population (16-69)	195,464	67.3%
Total Population (70+)	37,860	13.0%
People with one or more 'at risk' conditions (70+)	17,582	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	24,899	
People with no 'at risk' or 'potentially at risk' conditions (70+)	12,961	
People with one or more 'at risk' conditions (all ages)	48,649	16.8%
People with one or more 'potentially at risk' conditions (all ages)	44,936	15.5%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	67,498	23.2%
People with two or more 'at risk' conditions (all ages)	16,612	5.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	32,780	11.3%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	68,927	23.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	29,076	10.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	80,459	27.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	39,951	13.8%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	32,780	11.3%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS BASSETLAW CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS BASSE	TLAW CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	122,213	
Total Population (16-69)	82,033	67.1%
Total Population (70+)	19,002	15.5%
People with one or more 'at risk' conditions (70+)	9,512	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	12,835	
People with no 'at risk' or 'potentially at risk' conditions (70+)	6,167	
People with one or more 'at risk' conditions (all ages)	26,213	21.4%
People with one or more 'potentially at risk' conditions (all ages)	22,105	18.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	34,475	28.2%
People with two or more 'at risk' conditions (all ages)	9,295	7.6%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	17,305	14.2%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	35,703	29.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	15,570	12.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	40,642	33.3%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	20,256	16.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	17,305	14.2%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS BATH AND NORTH EAST SOMERSET CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS BATH AND NORTH	I EAST SOMERSET CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	233,131	
Total Population (16-69)	167,661	71.9%
Total Population (70+)	30,508	13.1%
People with one or more 'at risk' conditions (70+)	14,071	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	19,534	
People with no 'at risk' or 'potentially at risk' conditions (70+)	10,974	
People with one or more 'at risk' conditions (all ages)	36,164	15.5%
People with one or more 'potentially at risk' conditions (all ages)	32,018	13.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	49,257	21.1%
People with two or more 'at risk' conditions (all ages)	12,646	5.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	23,622	10.1%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	52,601	22.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	20,765	8.9%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	60,231	25.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	28,042	12.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	23,622	10.1%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS BEDFORDSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS BEDFOR	DSHIRE CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	514,168	
Total Population (16-69)	351,296	68.3%
Total Population (70+)	63,703	12.4%
People with one or more 'at risk' conditions (70+)	31,373	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	43,473	
People with no 'at risk' or 'potentially at risk' conditions (70+)	20,230	
People with one or more 'at risk' conditions (all ages)	92,722	18.0%
People with one or more 'potentially at risk' conditions (all ages)	81,435	15.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	125,632	24.4%
People with two or more 'at risk' conditions (all ages)	31,814	6.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	60,701	11.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	125,052	24.3%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	56,980	11.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	145,862	28.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	76,703	14.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	60,701	11.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS BERKSHIRE WEST CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS BERKSHI	RE WEST CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	590,816	
Total Population (16-69)	416,861	70.6%
Total Population (70+)	63,947	10.8%
People with one or more 'at risk' conditions (70+)	26,392	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	38,552	
People with no 'at risk' or 'potentially at risk' conditions (70+)	25,395	
People with one or more 'at risk' conditions (all ages)	72,671	12.3%
People with one or more 'potentially at risk' conditions (all ages)	69,209	11.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	103,915	17.6%
People with two or more 'at risk' conditions (all ages)	23,239	3.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	47,721	8.1%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	110,226	18.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	43,204	7.3%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	129,310	21.9%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	61,147	10.3%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	47,721	8.1%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS BEXLEY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS BEX	LEY CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	252,656	
Total Population (16-69)	170,727	67.6%
Total Population (70+)	30,675	12.1%
People with one or more 'at risk' conditions (70+)	14,399	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	20,463	
People with no 'at risk' or 'potentially at risk' conditions (70+)	10,212	
People with one or more 'at risk' conditions (all ages)	40,951	16.2%
People with one or more 'potentially at risk' conditions (all ages)	38,995	15.4%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	57,368	22.7%
People with two or more 'at risk' conditions (all ages)	14,069	5.6%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	28,146	11.1%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	57,227	22.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	24,566	9.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	67,580	26.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	34,411	13.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	28,146	11.1%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS BIRMINGHAM AND SOLIHULL CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS BIRMINGHAM	AND SOLIHULL CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,385,757	
Total Population (16-69)	949,748	68.5%
Total Population (70+)	146,185	10.5%
People with one or more 'at risk' conditions (70+)	74,769	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	99,512	
People with no 'at risk' or 'potentially at risk' conditions (70+)	46,673	
People with one or more 'at risk' conditions (all ages)	250,815	18.1%
People with one or more 'potentially at risk' conditions (all ages)	207,830	15.0%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	330,112	23.8%
People with two or more 'at risk' conditions (all ages)	88,079	6.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	160,771	11.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	322,231	23.3%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	161,061	11.6%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	376,785	27.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	211,067	15.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	160,771	11.6%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS BLACKBURN WITH DARWEN CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS BLACKBURN W	ITH DARWEN CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	182,252	
Total Population (16-69)	124,219	68.2%
Total Population (70+)	18,681	10.3%
People with one or more 'at risk' conditions (70+)	10,240	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	13,295	
People with no 'at risk' or 'potentially at risk' conditions (70+)	5,386	
People with one or more 'at risk' conditions (all ages)	38,652	21.2%
People with one or more 'potentially at risk' conditions (all ages)	29,894	16.4%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	48,994	26.9%
People with two or more 'at risk' conditions (all ages)	14,204	7.8%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	24,353	13.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	47,093	25.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	25,470	14.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	54,380	29.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	32,386	17.8%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	24,353	13.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS BLACKPOOL CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS BLACKPOOL CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	180,110	
Total Population (16-69)	122,903	68.2%
Total Population (70+)	26,757	14.9%
People with one or more 'at risk' conditions (70+)	13,562	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	17,992	
People with no 'at risk' or 'potentially at risk' conditions (70+)	8,765	
People with one or more 'at risk' conditions (all ages)	40,714	22.6%
People with one or more 'potentially at risk' conditions (all ages)	35,359	19.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	53,511	29.7%
People with two or more 'at risk' conditions (all ages)	16,293	9.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	28,537	15.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	53,909	29.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	25,551	14.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	62,276	34.6%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	33,521	18.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	28,537	15.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS BOLTON CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS BOLT	ION CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	325,561	
Total Population (16-69)	219,523	67.4%
Total Population (70+)	38,068	11.7%
People with one or more 'at risk' conditions (70+)	18,640	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	25,420	
People with no 'at risk' or 'potentially at risk' conditions (70+)	12,648	
People with one or more 'at risk' conditions (all ages)	58,611	18.0%
People with one or more 'potentially at risk' conditions (all ages)	50,785	15.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	78,492	24.1%
People with two or more 'at risk' conditions (all ages)	20,476	6.3%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	38,297	11.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	78,039	24.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	36,185	11.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	91,140	28.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	48,649	14.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	38,297	11.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS BRADFORD CITY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS ⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS BRADFO	RD CITY CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	170,319	
Total Population (16-69)	119,345	70.1%
Total Population (70+)	7,115	4.2%
People with one or more 'at risk' conditions (70+)	4,331	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	5,181	
People with no 'at risk' or 'potentially at risk' conditions (70+)	1,934	
People with one or more 'at risk' conditions (all ages)	24,986	14.7%
People with one or more 'potentially at risk' conditions (all ages)	17,533	10.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	30,614	18.0%
People with two or more 'at risk' conditions (all ages)	8,841	5.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	14,739	8.7%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	27,770	16.3%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	18,538	10.9%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	32,548	19.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	22,872	13.4%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	14,739	8.7%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS BRADFORD DISTRICTS CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS BRADFORD	DISTRICTS CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	331,702	
Total Population (16-69)	223,031	67.2%
Total Population (70+)	37,640	11.3%
People with one or more 'at risk' conditions (70+)	19,662	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	26,349	
People with no 'at risk' or 'potentially at risk' conditions (70+)	11,291	
People with one or more 'at risk' conditions (all ages)	66,332	20.0%
People with one or more 'potentially at risk' conditions (all ages)	53,977	16.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	86,194	26.0%
People with two or more 'at risk' conditions (all ages)	23,612	7.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	42,835	12.9%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	84,310	25.4%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	43,521	13.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	97,485	29.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	55,930	16.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	42,835	12.9%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS BRENT CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS BRENT CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	432,696	
Total Population (16-69)	325,673	75.3%
Total Population (70+)	30,286	7.0%
People with one or more 'at risk' conditions (70+)	15,794	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	20,578	
People with no 'at risk' or 'potentially at risk' conditions (70+)	9,708	
People with one or more 'at risk' conditions (all ages)	58,872	13.6%
People with one or more 'potentially at risk' conditions (all ages)	51,395	11.9%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	78,349	18.1%
People with two or more 'at risk' conditions (all ages)	20,557	4.8%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	38,673	8.9%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	73,364	17.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	39,347	9.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	88,057	20.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	53,192	12.3%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	38,673	8.9%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS BRIGHTON AND HOVE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS BRIGHTON AND HOVE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	350,392	
Total Population (16-69)	270,966	77.3%
Total Population (70+)	31,179	8.9%
People with one or more 'at risk' conditions (70+)	13,682	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	19,306	
People with no 'at risk' or 'potentially at risk' conditions (70+)	11,873	
People with one or more 'at risk' conditions (all ages)	42,746	12.2%
People with one or more 'potentially at risk' conditions (all ages)	37,959	10.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	59,621	17.0%
People with two or more 'at risk' conditions (all ages)	13,659	3.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	26,782	7.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	60,243	17.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	27,272	7.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	71,494	20.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	38,059	10.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	26,782	7.6%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS BRISTOL, NORTH SOMERSET AND SOUTH GLOUCESTERSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1.2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	GLOUCESTERSHIRE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,104,017	
Total Population (16-69)	787,874	71.4%
Total Population (70+)	127,246	11.5%
People with one or more 'at risk' conditions (70+)	64,695	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	87,717	
People with no 'at risk' or 'potentially at risk' conditions (70+)	39,529	
People with one or more 'at risk' conditions (all ages)	193,301	17.5%
People with one or more 'potentially at risk' conditions (all ages)	164,730	14.9%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	257,668	23.3%
People with two or more 'at risk' conditions (all ages)	68,414	6.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	125,472	11.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	255,852	23.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	119,399	10.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	297,197	26.9%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	158,602	14.4%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	125,472	11.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.





NHS RRISTOL NORTH SOMERSET AND SOLITH

DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS BROMLEY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS BROMLEY CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	366,451	
Total Population (16-69)	249,126	68.0%
Total Population (70+)	47,041	12.8%
People with one or more 'at risk' conditions (70+)	22,268	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	31,331	
People with no 'at risk' or 'potentially at risk' conditions (70+)	15,710	
People with one or more 'at risk' conditions (all ages)	62,300	17.0%
People with one or more 'potentially at risk' conditions (all ages)	56,704	15.5%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	86,137	23.5%
People with two or more 'at risk' conditions (all ages)	20,853	5.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	41,068	11.2%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	87,073	23.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	37,555	10.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	101,847	27.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	51,559	14.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	41,068	11.2%

Notes

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- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS BUCKINGHAMSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS BUCKINGHAMSHIRE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	591,897	
Total Population (16-69)	397,760	67.2%
Total Population (70+)	79,162	13.4%
People with one or more 'at risk' conditions (70+)	34,679	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	49,427	
People with no 'at risk' or 'potentially at risk' conditions (70+)	29,735	
People with one or more 'at risk' conditions (all ages)	95,463	16.1%
People with one or more 'potentially at risk' conditions (all ages)	85,110	14.4%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	131,326	22.2%
People with two or more 'at risk' conditions (all ages)	31,393	5.3%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	61,502	10.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	139,946	23.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	56,177	9.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	161,061	27.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	76,176	12.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	61,502	10.4%

Notes

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References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS BURY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS BURY CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	211,291	
Total Population (16-69)	142,566	67.5%
Total Population (70+)	27,263	12.9%
People with one or more 'at risk' conditions (70+)	13,166	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	18,067	
People with no 'at risk' or 'potentially at risk' conditions (70+)	9,196	
People with one or more 'at risk' conditions (all ages)	39,054	18.5%
People with one or more 'potentially at risk' conditions (all ages)	34,047	16.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	52,712	24.9%
People with two or more 'at risk' conditions (all ages)	13,555	6.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	25,633	12.1%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	53,151	25.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	23,712	11.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	61,908	29.3%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	32,025	15.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	25,633	12.1%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS CALDERDALE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS CALDERDALE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	227,786	
Total Population (16-69)	155,351	68.2%
Total Population (70+)	29,236	12.8%
People with one or more 'at risk' conditions (70+)	15,128	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	19,863	
People with no 'at risk' or 'potentially at risk' conditions (70+)	9,373	
People with one or more 'at risk' conditions (all ages)	46,373	20.4%
People with one or more 'potentially at risk' conditions (all ages)	36,708	16.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	60,458	26.5%
People with two or more 'at risk' conditions (all ages)	15,025	6.6%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	28,269	12.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	60,481	26.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	29,560	13.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	69,831	30.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	38,504	16.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	28,269	12.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS CAMBRIDGESHIRE AND PETERBOROUGH CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS CAMBRIDGESHIRE A	ND PETERBOROUGH CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,048,000	
Total Population (16-69)	740,408	70.6%
Total Population (70+)	121,199	11.6%
People with one or more 'at risk' conditions (70+)	58,979	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	81,811	
People with no 'at risk' or 'potentially at risk' conditions (70+)	39,388	
People with one or more 'at risk' conditions (all ages)	172,818	16.5%
People with one or more 'potentially at risk' conditions (all ages)	150,263	14.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	234,537	22.4%
People with two or more 'at risk' conditions (all ages)	59,029	5.6%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	111,737	10.7%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	235,038	22.4%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	106,385	10.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	273,925	26.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	143,034	13.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	111,737	10.7%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS CAMDEN CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS CAM	DEN CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	360,476	
Total Population (16-69)	298,206	82.7%
Total Population (70+)	19,969	5.5%
People with one or more 'at risk' conditions (70+)	9,045	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	12,519	
People with no 'at risk' or 'potentially at risk' conditions (70+)	7,450	
People with one or more 'at risk' conditions (all ages)	34,731	9.6%
People with one or more 'potentially at risk' conditions (all ages)	30,750	8.5%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	48,904	13.6%
People with two or more 'at risk' conditions (all ages)	10,919	3.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	20,934	5.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	45,655	12.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	21,355	5.9%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	56,354	15.6%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	31,675	8.8%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	20,934	5.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS CANNOCK CHASE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS ⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS CANNOCK CHASE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	137,029	
Total Population (16-69)	92,966	67.8%
Total Population (70+)	20,149	14.7%
People with one or more 'at risk' conditions (70+)	10,287	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	13,780	
People with no 'at risk' or 'potentially at risk' conditions (70+)	6,369	
People with one or more 'at risk' conditions (all ages)	29,296	21.4%
People with one or more 'potentially at risk' conditions (all ages)	24,833	18.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	38,324	28.0%
People with two or more 'at risk' conditions (all ages)	10,984	8.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	19,781	14.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	39,158	28.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	17,967	13.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	44,693	32.6%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	23,193	16.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	19,781	14.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS CANTERBURY AND COASTAL CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS CANTERBURY	AND COASTAL CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	246,289	
Total Population (16-69)	174,475	70.8%
Total Population (70+)	35,693	14.5%
People with one or more 'at risk' conditions (70+)	16,696	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	23,630	
People with no 'at risk' or 'potentially at risk' conditions (70+)	12,063	
People with one or more 'at risk' conditions (all ages)	42,226	17.1%
People with one or more 'potentially at risk' conditions (all ages)	41,141	16.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	59,222	24.0%
People with two or more 'at risk' conditions (all ages)	15,137	6.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	30,289	12.3%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	61,223	24.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	23,938	9.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	71,285	28.9%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	33,624	13.7%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	30,289	12.3%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS CASTLE POINT AND ROCHFORD CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS CASTLE POINT AND ROCHFORD CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	188,970	
Total Population (16-69)	123,416	65.3%
Total Population (70+)	33,972	18.0%
People with one or more 'at risk' conditions (70+)	15,954	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	22,551	
People with no 'at risk' or 'potentially at risk' conditions (70+)	11,421	
People with one or more 'at risk' conditions (all ages)	37,100	19.6%
People with one or more 'potentially at risk' conditions (all ages)	35,409	18.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	51,354	27.2%
People with two or more 'at risk' conditions (all ages)	13,094	6.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	25,965	13.7%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	55,118	29.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	19,932	10.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	62,775	33.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	27,248	14.4%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	25,965	13.7%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS CENTRAL LONDON (WESTMINSTER) CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS ⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS CENTRAL LONDON	I (WESTMINSTER) CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	289,604	
Total Population (16-69)	240,714	83.1%
Total Population (70+)	18,068	6.2%
People with one or more 'at risk' conditions (70+)	6,884	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	9,568	
People with no 'at risk' or 'potentially at risk' conditions (70+)	8,500	
People with one or more 'at risk' conditions (all ages)	22,988	7.9%
People with one or more 'potentially at risk' conditions (all ages)	21,928	7.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	32,902	11.4%
People with two or more 'at risk' conditions (all ages)	7,752	2.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	14,913	5.1%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	34,172	11.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	15,058	5.2 %
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	41,402	14.3%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	21,950	7.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	14,913	5.1%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS CHORLEY AND SOUTH RIBBLE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

NHS CHORLEY AND SO		SOUTH RIBBLE CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	190,091	
Total Population (16-69)	128,205	67.4%
Total Population (70+)	27,656	14.5%
People with one or more 'at risk' conditions (70+)	14,295	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	19,170	
People with no 'at risk' or 'potentially at risk' conditions (70+)	8,486	
People with one or more 'at risk' conditions (all ages)	39,060	20.5%
People with one or more 'potentially at risk' conditions (all ages)	34,683	18.2%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	52,566	27.7%
People with two or more 'at risk' conditions (all ages)	14,419	7.6%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	26,461	13.9%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	52,421	27.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	23,007	12.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	61,052	32.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	31,139	16.4%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	26,461	13.9%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS CITY AND HACKNEY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS ⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS CITY AND HACKNEY CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	354,087	
Total Population (16-69)	273,037	77.1%
Total Population (70+)	16,942	4.8%
People with one or more 'at risk' conditions (70+)	8,291	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	11,013	
People with no 'at risk' or 'potentially at risk' conditions (70+)	5,929	
People with one or more 'at risk' conditions (all ages)	37,805	10.7%
People with one or more 'potentially at risk' conditions (all ages)	33,598	9.5%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	52,555	14.8%
People with two or more 'at risk' conditions (all ages)	12,455	3.5%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	23,593	6.7%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	46,456	13.1%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	27,741	7.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	58,484	16.5%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	39,184	11.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	23,593	6.7%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS COASTAL WEST SUSSEX CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS COASTAL WEST SUSSEX CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	537,651	
Total Population (16-69)	348,288	64.8%
Total Population (70+)	103,636	19.3%
People with one or more 'at risk' conditions (70+)	48,264	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	68,188	
People with no 'at risk' or 'potentially at risk' conditions (70+)	35,448	
People with one or more 'at risk' conditions (all ages)	111,105	20.7%
People with one or more 'potentially at risk' conditions (all ages)	105,149	19.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	153,429	28.5%
People with two or more 'at risk' conditions (all ages)	41,980	7.8%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	79,531	14.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	166,477	31.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	59,499	11.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	188,877	35.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	80,931	15.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	79,531	14.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS CORBY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS CORBY CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	85,047	
Total Population (16-69)	59,396	69.8%
Total Population (70+)	8,115	9.5%
People with one or more 'at risk' conditions (70+)	4,425	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	5,643	
People with no 'at risk' or 'potentially at risk' conditions (70+)	2,472	
People with one or more 'at risk' conditions (all ages)	16,157	19.0%
People with one or more 'potentially at risk' conditions (all ages)	11,987	14.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	20,352	23.9%
People with two or more 'at risk' conditions (all ages)	6,013	7.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	10,005	11.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	19,847	23.3%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	10,987	12.9%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	22,824	26.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	13,783	16.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	10,005	11.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS COVENTRY AND RUGBY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS COVENTRY AND RUGBY CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	577,478	
Total Population (16-69)	417,142	72.2%
Total Population (70+)	57,062	9.9%
People with one or more 'at risk' conditions (70+)	27,872	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	38,257	
People with no 'at risk' or 'potentially at risk' conditions (70+)	18,805	
People with one or more 'at risk' conditions (all ages)	86,698	15.0%
People with one or more 'potentially at risk' conditions (all ages)	73,566	12.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	116,053	20.1%
People with two or more 'at risk' conditions (all ages)	29,382	5.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	56,190	9.7%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	115,888	20.1%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	54,827	9.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	134,858	23.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	72,720	12.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	56,190	9.7%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS CRAWLEY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS CRAWLEY CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	142,972	
Total Population (16-69)	100,807	70.5%
Total Population (70+)	13,536	9.5%
People with one or more 'at risk' conditions (70+)	6,982	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	9,497	
People with no 'at risk' or 'potentially at risk' conditions (70+)	4,039	
People with one or more 'at risk' conditions (all ages)	23,768	16.6%
People with one or more 'potentially at risk' conditions (all ages)	20,578	14.4%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	32,122	22.5%
People with two or more 'at risk' conditions (all ages)	8,148	5.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	15,342	10.7%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	30,322	21.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	15,666	11.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	36,161	25.3%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	21,212	14.8%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	15,342	10.7%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS CROYDON CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS CROY	DON CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	440,478	
Total Population (16-69)	313,737	71.2%
Total Population (70+)	40,064	9.1%
People with one or more 'at risk' conditions (70+)	18,745	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	25,965	
People with no 'at risk' or 'potentially at risk' conditions (70+)	14,099	
People with one or more 'at risk' conditions (all ages)	63,839	14.5%
People with one or more 'potentially at risk' conditions (all ages)	58,413	13.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	88,769	20.2%
People with two or more 'at risk' conditions (all ages)	20,899	4.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	41,415	9.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	85,158	19.3%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	41,711	9.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	102,868	23.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	58,522	13.3%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	41,415	9.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS DARLINGTON CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS DARLIN	IGTON CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	111,577	
Total Population (16-69)	75,331	67.5%
Total Population (70+)	16,116	14.4%
People with one or more 'at risk' conditions (70+)	7,967	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	11,134	
People with no 'at risk' or 'potentially at risk' conditions (70+)	4,982	
People with one or more 'at risk' conditions (all ages)	22,250	19.9%
People with one or more 'potentially at risk' conditions (all ages)	20,038	18.0%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	30,173	27.0%
People with two or more 'at risk' conditions (all ages)	7,836	7.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	15,139	13.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	30,399	27.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	13,380	12.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	35,155	31.5%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	17,942	16.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	15,139	13.6%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS DARTFORD, GRAVESHAM AND SWANLEY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS DARTFORD, GRAVES	HAM AND SWANLEY CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	283,143	
Total Population (16-69)	189,836	67.0%
Total Population (70+)	34,627	12.2%
People with one or more 'at risk' conditions (70+)	16,111	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	23,076	
People with no 'at risk' or 'potentially at risk' conditions (70+)	11,551	
People with one or more 'at risk' conditions (all ages)	46,446	16.4%
People with one or more 'potentially at risk' conditions (all ages)	44,118	15.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	64,993	23.0%
People with two or more 'at risk' conditions (all ages)	16,058	5.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	31,729	11.2%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	64,962	22.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	28,126	9.9%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	76,544	27.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	38,958	13.8%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	31,729	11.2%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS DERBY AND DERBYSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS DERBY AND DERBYSHIRE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,088,947	
Total Population (16-69)	740,589	68.0%
Total Population (70+)	158,762	14.6%
People with one or more 'at risk' conditions (70+)	79,539	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	107,141	
People with no 'at risk' or 'potentially at risk' conditions (70+)	51,621	
People with one or more 'at risk' conditions (all ages)	218,261	20.0%
People with one or more 'potentially at risk' conditions (all ages)	188,009	17.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	290,062	26.6%
People with two or more 'at risk' conditions (all ages)	78,794	7.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	145,211	13.3%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	297,484	27.3%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	132,167	12.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	341,683	31.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	174,399	16.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	145,211	13.3%

Notes

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References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS DEVON CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS DEVON CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	1,298,282	
Total Population (16-69)	869,438	67.0%
Total Population (70+)	222,563	17.1%
People with one or more 'at risk' conditions (70+)	97,051	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	135,751	
People with no 'at risk' or 'potentially at risk' conditions (70+)	86,812	
People with one or more 'at risk' conditions (all ages)	238,112	18.3%
People with one or more 'potentially at risk' conditions (all ages)	220,486	17.0%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	329,681	25.4%
People with two or more 'at risk' conditions (all ages)	86,841	6.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	163,398	12.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	363,624	28.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	131,887	10.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	416,493	32.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	181,234	14.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	163,398	12.6%

Notes

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- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS DONCASTER CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS DONCASTER CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	332,145	
Total Population (16-69)	225,644	67.9%
Total Population (70+)	44,710	13.5%
People with one or more 'at risk' conditions (70+)	23,879	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	31,407	
People with no 'at risk' or 'potentially at risk' conditions (70+)	13,303	
People with one or more 'at risk' conditions (all ages)	70,662	21.3%
People with one or more 'potentially at risk' conditions (all ages)	59,310	17.9%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	92,889	28.0%
People with two or more 'at risk' conditions (all ages)	25,614	7.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	46,346	14.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	91,493	27.5%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	43,528	13.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	106,192	32.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	57,348	17.3%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	46,346	14.0%

Notes

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- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS DORSET CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS DOR	SET CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	840,115	
Total Population (16-69)	558,753	66.5%
Total Population (70+)	151,708	18.1%
People with one or more 'at risk' conditions (70+)	70,488	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	95,991	
People with no 'at risk' or 'potentially at risk' conditions (70+)	55,717	
People with one or more 'at risk' conditions (all ages)	161,600	19.2%
People with one or more 'potentially at risk' conditions (all ages)	147,568	17.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	218,920	26.1%
People with two or more 'at risk' conditions (all ages)	60,085	7.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	112,167	13.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	242,820	28.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	85,947	10.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	274,637	32.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	116,345	13.8%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	112,167	13.4%

Notes

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS DUDLEY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS ⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS DUDLEY CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	327,533	
Total Population (16-69)	217,521	66.4%
Total Population (70+)	49,814	15.2%
People with one or more 'at risk' conditions (70+)	24,513	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	33,705	
People with no 'at risk' or 'potentially at risk' conditions (70+)	16,109	
People with one or more 'at risk' conditions (all ages)	66,702	20.4%
People with one or more 'potentially at risk' conditions (all ages)	58,700	17.9%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	89,198	27.2%
People with two or more 'at risk' conditions (all ages)	23,534	7.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	44,705	13.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	92,003	28.1%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	39,733	12.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	105,307	32.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	52,374	16.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	44,705	13.6%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS DURHAM DALES, EASINGTON AND SEDGEFIELD CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS DURHAM DALES, EASINGTON AND SEDGEFIELD CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	298,383	
Total Population (16-69)	201,736	67.6%
Total Population (70+)	44,835	15.0%
People with one or more 'at risk' conditions (70+)	23,685	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	31,771	
People with no 'at risk' or 'potentially at risk' conditions (70+)	13,064	
People with one or more 'at risk' conditions (all ages)	67,393	22.6%
People with one or more 'potentially at risk' conditions (all ages)	60,185	20.2%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	89,689	30.1%
People with two or more 'at risk' conditions (all ages)	25,388	8.5%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	46,807	15.7%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	88,543	29.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	41,029	13.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	102,753	34.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	54,680	18.3%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	46,807	15.7%

Notes

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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS EALING CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS EALING CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	487,060	
Total Population (16-69)	360,713	74.1%
Total Population (70+)	35,822	7.4%
People with one or more 'at risk' conditions (70+)	18,498	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	24,285	
People with no 'at risk' or 'potentially at risk' conditions (70+)	11,537	
People with one or more 'at risk' conditions (all ages)	65,012	13.3%
People with one or more 'potentially at risk' conditions (all ages)	57,879	11.9%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	87,015	17.9%
People with two or more 'at risk' conditions (all ages)	23,174	4.8%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	42,949	8.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	82,336	16.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	42,954	8.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	98,552	20.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	58,319	12.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	42,949	8.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS EAST AND NORTH HERTFORDSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS EAST AND NORTH HERTFORDSHIRE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	632,206	
Total Population (16-69)	436,449	69.0%
Total Population (70+)	77,937	12.3%
People with one or more 'at risk' conditions (70+)	36,999	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	51,988	
People with no 'at risk' or 'potentially at risk' conditions (70+)	25,949	
People with one or more 'at risk' conditions (all ages)	103,399	16.4%
People with one or more 'potentially at risk' conditions (all ages)	93,314	14.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	142,303	22.5%
People with two or more 'at risk' conditions (all ages)	34,212	5.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	67,657	10.7%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	144,337	22.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	62,055	9.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	168,252	26.6%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	84,766	13.4%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	67,657	10.7%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS EAST BERKSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS EAST BERKSHIRE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	500,090	
Total Population (16-69)	350,598	70.1%
Total Population (70+)	47,805	9.6%
People with one or more 'at risk' conditions (70+)	22,879	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	31,167	
People with no 'at risk' or 'potentially at risk' conditions (70+)	16,638	
People with one or more 'at risk' conditions (all ages)	74,013	14.8%
People with one or more 'potentially at risk' conditions (all ages)	64,101	12.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	99,853	20.0%
People with two or more 'at risk' conditions (all ages)	25,728	5.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	47,877	9.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	98,939	19.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	47,823	9.6%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	116,491	23.3%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	64,365	12.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	47,877	9.6%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



AULIC EAST DEDUCTURE COO

DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS EAST LANCASHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS EAST LAN	CASHIRE CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	398,089	
Total Population (16-69)	267,555	67.2%
Total Population (70+)	52,120	13.1%
People with one or more 'at risk' conditions (70+)	27,475	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	36,389	
People with no 'at risk' or 'potentially at risk' conditions (70+)	15,731	
People with one or more 'at risk' conditions (all ages)	87,166	21.9%
People with one or more 'potentially at risk' conditions (all ages)	71,775	18.0%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	113,243	28.4%
People with two or more 'at risk' conditions (all ages)	32,031	8.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	57,016	14.3%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	111,811	28.1%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	54,335	13.6%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	128,974	32.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	70,491	17.7%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	57,016	14.3%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS EAST LEICESTERSHIRE AND RUTLAND CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS EAST LEICESTERSHI	RE AND RUTLAND CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	344,911	
Total Population (16-69)	227,882	66.1%
Total Population (70+)	56,301	16.3%
People with one or more 'at risk' conditions (70+)	24,563	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	34,512	
People with no 'at risk' or 'potentially at risk' conditions (70+)	21,789	
People with one or more 'at risk' conditions (all ages)	61,133	17.7%
People with one or more 'potentially at risk' conditions (all ages)	55,277	16.0%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	83,213	24.1%
People with two or more 'at risk' conditions (all ages)	21,723	6.3%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	41,443	12.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	92,871	26.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	34,839	10.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	105,002	30.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	46,340	13.4%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	41,443	12.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



AULG FACT LEIGEGTERGUURE AND BUITLAND GGG

DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS EAST RIDING OF YORKSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS EAST RIDING C	OF YORKSHIRE CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	314,081	
Total Population (16-69)	204,858	65.2%
Total Population (70+)	59,709	19.0%
People with one or more 'at risk' conditions (70+)	28,537	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	39,418	
People with no 'at risk' or 'potentially at risk' conditions (70+)	20,291	
People with one or more 'at risk' conditions (all ages)	66,381	21.1%
People with one or more 'potentially at risk' conditions (all ages)	60,206	19.2%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	89,679	28.6%
People with two or more 'at risk' conditions (all ages)	24,786	7.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	46,361	14.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	97,553	31.1%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	36,098	11.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	109,970	35.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	48,071	15.3%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	46,361	14.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS EAST STAFFORDSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS EAST STAFF	ORDSHIRE CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	148,975	
Total Population (16-69)	100,819	67.7%
Total Population (70+)	20,674	13.9%
People with one or more 'at risk' conditions (70+)	10,217	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	13,728	
People with no 'at risk' or 'potentially at risk' conditions (70+)	6,946	
People with one or more 'at risk' conditions (all ages)	28,961	19.4%
People with one or more 'potentially at risk' conditions (all ages)	23,952	16.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	37,799	25.4%
People with two or more 'at risk' conditions (all ages)	10,731	7.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	19,060	12.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	39,418	26.5%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	17,504	11.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	44,745	30.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	22,564	15.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	19,060	12.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS EAST SURREY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS EAST SURREY CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	195,561	
Total Population (16-69)	131,950	67.5%
Total Population (70+)	25,020	12.8%
People with one or more 'at risk' conditions (70+)	11,892	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	16,673	
People with no 'at risk' or 'potentially at risk' conditions (70+)	8,347	
People with one or more 'at risk' conditions (all ages)	33,312	17.0%
People with one or more 'potentially at risk' conditions (all ages)	30,844	15.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	46,319	23.7%
People with two or more 'at risk' conditions (all ages)	11,406	5.8%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	22,415	11.5%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	46,440	23.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	19,916	10.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	54,666	28.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	27,726	14.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	22,415	11.5%

Notes

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS EASTBOURNE, HAILSHAM AND SEAFORD CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS EASTBOURNE, HAILS	HAM AND SEAFORD CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	207,240	
Total Population (16-69)	133,354	64.3%
Total Population (70+)	40,551	19.6%
People with one or more 'at risk' conditions (70+)	19,422	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	26,606	
People with no 'at risk' or 'potentially at risk' conditions (70+)	13,945	
People with one or more 'at risk' conditions (all ages)	43,244	20.9%
People with one or more 'potentially at risk' conditions (all ages)	40,432	19.5%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	58,880	28.4%
People with two or more 'at risk' conditions (all ages)	16,486	8.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	30,790	14.9%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	64,373	31.1%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	22,350	10.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	72,825	35.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	30,378	14.7%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	30,790	14.9%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS EASTERN CHESHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS EASTERN CHESHIRE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	217,602	
Total Population (16-69)	143,484	65.9%
Total Population (70+)	37,506	17.2%
People with one or more 'at risk' conditions (70+)	16,932	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	23,812	
People with no 'at risk' or 'potentially at risk' conditions (70+)	13,694	
People with one or more 'at risk' conditions (all ages)	40,092	18.4%
People with one or more 'potentially at risk' conditions (all ages)	38,147	17.5%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	55,930	25.7%
People with two or more 'at risk' conditions (all ages)	14,221	6.5%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	27,776	12.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	60,666	27.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	21,698	10.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	69,624	32.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	30,245	13.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	27,776	12.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS ENFIELD CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS ENFIELD CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	364,369	
Total Population (16-69)	252,384	69.3%
Total Population (70+)	33,893	9.3%
People with one or more 'at risk' conditions (70+)	16,179	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	22,922	
People with no 'at risk' or 'potentially at risk' conditions (70+)	10,971	
People with one or more 'at risk' conditions (all ages)	52,201	14.3%
People with one or more 'potentially at risk' conditions (all ages)	51,057	14.0%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	74,772	20.5%
People with two or more 'at risk' conditions (all ages)	17,367	4.8%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	35,109	9.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	69,915	19.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	32,942	9.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	85,743	23.5%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	48,061	13.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	35,109	9.6%

Notes

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS FAREHAM AND GOSPORT CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS FAREHAM AND GOSPORT CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	211,153	
Total Population (16-69)	139,114	65.9%
Total Population (70+)	35,389	16.8%
People with one or more 'at risk' conditions (70+)	16,719	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	23,091	
People with no 'at risk' or 'potentially at risk' conditions (70+)	12,298	
People with one or more 'at risk' conditions (all ages)	42,233	20.0%
People with one or more 'potentially at risk' conditions (all ages)	37,298	17.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	56,637	26.8%
People with two or more 'at risk' conditions (all ages)	15,213	7.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	28,731	13.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	60,903	28.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	24,269	11.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	68,935	32.6%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	31,991	15.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	28,731	13.6%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS FYLDE AND WYRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS FYLDE AND WYRE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	184,237	
Total Population (16-69)	118,852	64.5%
Total Population (70+)	37,351	20.3%
People with one or more 'at risk' conditions (70+)	17,913	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	24,458	
People with no 'at risk' or 'potentially at risk' conditions (70+)	12,893	
People with one or more 'at risk' conditions (all ages)	40,939	22.2%
People with one or more 'potentially at risk' conditions (all ages)	38,073	20.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	55,507	30.1%
People with two or more 'at risk' conditions (all ages)	16,364	8.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	29,464	16.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	60,377	32.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	21,660	11.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	68,400	37.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	29,364	15.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	29,464	16.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS GLOUCESTERSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS ⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS GLOUCESTERSHIRE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	691,940	
Total Population (16-69)	468,149	67.7%
Total Population (70+)	104,922	15.2%
People with one or more 'at risk' conditions (70+)	50,146	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	66,462	
People with no 'at risk' or 'potentially at risk' conditions (70+)	38,460	
People with one or more 'at risk' conditions (all ages)	128,940	18.6%
People with one or more 'potentially at risk' conditions (all ages)	108,342	15.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	168,738	24.4%
People with two or more 'at risk' conditions (all ages)	48,021	6.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	84,878	12.3%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	183,716	26.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	74,418	10.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	207,198	29.9%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	96,984	14.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	84,878	12.3%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS GREAT YARMOUTH AND WAVENEY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS ⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

NHS GREAT YARMOUTH		H AND WAVENEY CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	245,428	
Total Population (16-69)	160,274	65.3%
Total Population (70+)	45,287	18.5%
People with one or more 'at risk' conditions (70+)	21,379	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	30,078	
People with no 'at risk' or 'potentially at risk' conditions (70+)	15,209	
People with one or more 'at risk' conditions (all ages)	52,236	21.3%
People with one or more 'potentially at risk' conditions (all ages)	48,040	19.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	71,407	29.1%
People with two or more 'at risk' conditions (all ages)	18,847	7.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	36,309	14.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	76,144	31.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	28,971	11.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	86,616	35.3%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	38,917	15.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	36,309	14.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS GREATER HUDDERSFIELD CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS GREATER HUDDERSFIELD CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	261,363	
Total Population (16-69)	181,460	69.4%
Total Population (70+)	32,575	12.5%
People with one or more 'at risk' conditions (70+)	15,562	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	21,194	
People with no 'at risk' or 'potentially at risk' conditions (70+)	11,381	
People with one or more 'at risk' conditions (all ages)	46,772	17.9%
People with one or more 'potentially at risk' conditions (all ages)	38,981	14.9%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	62,338	23.9%
People with two or more 'at risk' conditions (all ages)	15,575	6.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	29,471	11.3%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	63,785	24.4%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	29,332	11.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	73,719	28.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	38,869	14.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	29,471	11.3%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS GREATER PRESTON CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS GREATER PRESTON CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	227,579	
Total Population (16-69)	161,345	70.9%
Total Population (70+)	25,321	11.1%
People with one or more 'at risk' conditions (70+)	13,394	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	17,888	
People with no 'at risk' or 'potentially at risk' conditions (70+)	7,433	
People with one or more 'at risk' conditions (all ages)	41,276	18.1%
People with one or more 'potentially at risk' conditions (all ages)	34,965	15.4%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	55,020	24.2%
People with two or more 'at risk' conditions (all ages)	14,828	6.5%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	26,683	11.7%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	53,203	23.4%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	25,519	11.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	62,453	27.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	34,263	15.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	26,683	11.7%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS GREENWICH CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

NHS GREENV		WICH CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	327,754	
Total Population (16-69)	238,054	72.6%
Total Population (70+)	22,818	7.0%
People with one or more 'at risk' conditions (70+)	11,087	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	15,158	
People with no 'at risk' or 'potentially at risk' conditions (70+)	7,660	
People with one or more 'at risk' conditions (all ages)	44,108	13.5%
People with one or more 'potentially at risk' conditions (all ages)	39,875	12.2%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	60,945	18.6%
People with two or more 'at risk' conditions (all ages)	14,461	4.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	28,588	8.7%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	55,839	17.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	30,465	9.3%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	68,605	20.9%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	42,561	13.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	28,588	8.7%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS GUILDFORD AND WAVERLEY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS GUILDFORD AND WAVERLEY CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	245,119	
Total Population (16-69)	171,037	69.8%
Total Population (70+)	33,196	13.5%
People with one or more 'at risk' conditions (70+)	14,873	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	21,246	
People with no 'at risk' or 'potentially at risk' conditions (70+)	11,950	
People with one or more 'at risk' conditions (all ages)	37,284	15.2%
People with one or more 'potentially at risk' conditions (all ages)	34,958	14.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	52,201	21.3%
People with two or more 'at risk' conditions (all ages)	12,536	5.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	25,075	10.2%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	55,607	22.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	21,041	8.6%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	64,151	26.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	29,144	11.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	25,075	10.2%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS HALTON CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS ⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS HALTON CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	135,799	
Total Population (16-69)	93,690	69.0%
Total Population (70+)	16,356	12.0%
People with one or more 'at risk' conditions (70+)	9,269	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	11,961	
People with no 'at risk' or 'potentially at risk' conditions (70+)	4,395	
People with one or more 'at risk' conditions (all ages)	31,584	23.3%
People with one or more 'potentially at risk' conditions (all ages)	26,267	19.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	40,908	30.1%
People with two or more 'at risk' conditions (all ages)	12,248	9.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	21,054	15.5%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	38,671	28.5%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	20,829	15.3%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	45,303	33.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	27,085	19.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	21,054	15.5%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS HAMBLETON, RICHMONDSHIRE AND WHITBY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

NO TAIVIDI		CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)	
Total Population (all ages)	149,574		
Total Population (16-69)	97,685	65.3%	
Total Population (70+)	28,460	19.0%	
People with one or more 'at risk' conditions (70+)	12,868		
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	18,613		
People with no 'at risk' or 'potentially at risk' conditions (70+)	9,847		
People with one or more 'at risk' conditions (all ages)	30,105	20.1%	
People with one or more 'potentially at risk' conditions (all ages)	28,979	19.4%	
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	42,444	28.4%	
People with two or more 'at risk' conditions (all ages)	10,132	6.8%	
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	20,554	13.7%	
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	45,697	30.6%	
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	16,308	10.9%	
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	52,291	35.0%	
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	22,656	15.1%	
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	20,554	13.7%	

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



NHS HAMRIETON RICHMONDSHIRE AND WHITRY

DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS HAMMERSMITH AND FULHAM CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS HAMMERSMITH AND FULHAM CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	328,919	
Total Population (16-69)	275,054	83.6%
Total Population (70+)	16,151	4.9%
People with one or more 'at risk' conditions (70+)	7,384	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	10,062	
People with no 'at risk' or 'potentially at risk' conditions (70+)	6,089	
People with one or more 'at risk' conditions (all ages)	29,256	8.9%
People with one or more 'potentially at risk' conditions (all ages)	25,163	7.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	40,355	12.3%
People with two or more 'at risk' conditions (all ages)	9,432	2.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	17,621	5.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	38,023	11.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	20,750	6.3%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	46,444	14.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	28,806	8.8%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	17,621	5.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS HARINGEY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS HARINGEY CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	352,681	
Total Population (16-69)	269,464	76.4%
Total Population (70+)	23,252	6.6%
People with one or more 'at risk' conditions (70+)	10,855	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	15,176	
People with no 'at risk' or 'potentially at risk' conditions (70+)	8,076	
People with one or more 'at risk' conditions (all ages)	41,107	11.7%
People with one or more 'potentially at risk' conditions (all ages)	41,167	11.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	60,946	17.3%
People with two or more 'at risk' conditions (all ages)	12,873	3.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	26,400	7.5%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	53,504	15.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	27,912	7.9%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	69,022	19.6%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	42,858	12.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	26,400	7.5%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS HARROGATE AND RURAL DISTRICT CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS HARROGATE AND RURAL DISTRICT CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	171,575	
Total Population (16-69)	114,845	66.9%
Total Population (70+)	28,521	16.6%
People with one or more 'at risk' conditions (70+)	13,038	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	18,451	
People with no 'at risk' or 'potentially at risk' conditions (70+)	10,070	
People with one or more 'at risk' conditions (all ages)	31,053	18.1%
People with one or more 'potentially at risk' conditions (all ages)	28,602	16.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	43,078	25.1%
People with two or more 'at risk' conditions (all ages)	10,555	6.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	20,859	12.2%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	46,536	27.1%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	17,057	9.9%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	53,148	31.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	23,360	13.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	20,859	12.2%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS HARROW CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS HARROW CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	292,531	
Total Population (16-69)	206,361	70.5%
Total Population (70+)	29,701	10.2%
People with one or more 'at risk' conditions (70+)	15,587	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	20,538	
People with no 'at risk' or 'potentially at risk' conditions (70+)	9,163	
People with one or more 'at risk' conditions (all ages)	52,504	17.9%
People with one or more 'potentially at risk' conditions (all ages)	40,925	14.0%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	67,303	23.0%
People with two or more 'at risk' conditions (all ages)	17,290	5.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	31,728	10.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	66,618	22.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	30,627	10.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	76,466	26.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	39,875	13.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	31,728	10.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS HARTLEPOOL AND STOCKTON-ON-TEES CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS HARTLEPOOL AND STOCKTON-ON-TEES CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	304,980	
Total Population (16-69)	207,866	68.2%
Total Population (70+)	39,594	13.0%
People with one or more 'at risk' conditions (70+)	21,253	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	28,881	
People with no 'at risk' or 'potentially at risk' conditions (70+)	10,713	
People with one or more 'at risk' conditions (all ages)	66,622	21.8%
People with one or more 'potentially at risk' conditions (all ages)	57,512	18.9%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	88,201	28.9%
People with two or more 'at risk' conditions (all ages)	24,563	8.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	44,663	14.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	84,963	27.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	42,565	14.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	98,914	32.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	55,840	18.3%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	44,663	14.6%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS HASTINGS AND ROTHER CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS HASTINGS AND ROTHER CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	196,119	
Total Population (16-69)	127,298	64.9%
Total Population (70+)	37,198	19.0%
People with one or more 'at risk' conditions (70+)	17,455	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	23,854	
People with no 'at risk' or 'potentially at risk' conditions (70+)	13,344	
People with one or more 'at risk' conditions (all ages)	41,613	21.2%
People with one or more 'potentially at risk' conditions (all ages)	39,277	20.0%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	56,914	29.0%
People with two or more 'at risk' conditions (all ages)	15,936	8.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	29,922	15.3%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	61,356	31.3%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	22,700	11.6%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	70,258	35.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	31,187	15.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	29,922	15.3%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS HAVERING CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS HAVERING CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	289,247	
Total Population (16-69)	195,165	67.5%
Total Population (70+)	37,775	13.1%
People with one or more 'at risk' conditions (70+)	18,126	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	26,213	
People with no 'at risk' or 'potentially at risk' conditions (70+)	11,562	
People with one or more 'at risk' conditions (all ages)	50,186	17.4%
People with one or more 'potentially at risk' conditions (all ages)	50,107	17.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	72,162	24.9%
People with two or more 'at risk' conditions (all ages)	17,337	6.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	35,314	12.2%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	69,835	24.1%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	30,026	10.4%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	83,724	28.9%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	43,316	15.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	35,314	12.2%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS HEREFORDSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS HEREFOR	RDSHIRE CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	197,930	
Total Population (16-69)	130,166	65.8%
Total Population (70+)	36,082	18.2%
People with one or more 'at risk' conditions (70+)	16,117	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	22,235	
People with no 'at risk' or 'potentially at risk' conditions (70+)	13,847	
People with one or more 'at risk' conditions (all ages)	39,721	20.1%
People with one or more 'potentially at risk' conditions (all ages)	34,627	17.5%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	53,405	27.0%
People with two or more 'at risk' conditions (all ages)	14,101	7.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	26,524	13.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	59,686	30.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	21,918	11.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	67,252	34.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	29,160	14.7%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	26,524	13.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS HERTS VALLEYS CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS HERTS VALLEYS CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	683,033	
Total Population (16-69)	467,462	68.4%
Total Population (70+)	80,138	11.7%
People with one or more 'at risk' conditions (70+)	38,780	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	53,137	
People with no 'at risk' or 'potentially at risk' conditions (70+)	27,001	
People with one or more 'at risk' conditions (all ages)	113,188	16.6%
People with one or more 'potentially at risk' conditions (all ages)	95,236	13.9%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	150,676	22.1%
People with two or more 'at risk' conditions (all ages)	38,901	5.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	72,387	10.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	154,546	22.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	69,577	10.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	177,677	26.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	91,320	13.4%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	72,387	10.6%

Notes

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS HEYWOOD, MIDDLETON AND ROCHDALE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS HEYWOOD, MIDDLETON AND ROCHDALE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	244,408	
Total Population (16-69)	165,979	67.9%
Total Population (70+)	27,087	11.1%
People with one or more 'at risk' conditions (70+)	13,823	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	18,321	
People with no 'at risk' or 'potentially at risk' conditions (70+)	8,766	
People with one or more 'at risk' conditions (all ages)	47,223	19.3%
People with one or more 'potentially at risk' conditions (all ages)	39,706	16.2%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	62,328	25.5%
People with two or more 'at risk' conditions (all ages)	16,963	6.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	30,733	12.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	60,487	24.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	30,553	12.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	71,094	29.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	40,547	16.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	30,733	12.6%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS HIGH WEALD LEWES HAVENS CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS HIGH WEALD LEWES HAVENS CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	175,773	
Total Population (16-69)	115,416	65.7%
Total Population (70+)	30,655	17.4%
People with one or more 'at risk' conditions (70+)	13,256	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	18,958	
People with no 'at risk' or 'potentially at risk' conditions (70+)	11,697	
People with one or more 'at risk' conditions (all ages)	30,593	17.4%
People with one or more 'potentially at risk' conditions (all ages)	29,535	16.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	43,204	24.6%
People with two or more 'at risk' conditions (all ages)	10,447	5.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	21,124	12.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	47,992	27.3%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	16,268	9.3%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	54,901	31.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	22,906	13.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	21,124	12.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS HILLINGDON CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS HILLINGDON CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	343,574	
Total Population (16-69)	244,096	71.0%
Total Population (70+)	31,855	9.3%
People with one or more 'at risk' conditions (70+)	15,558	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	21,207	
People with no 'at risk' or 'potentially at risk' conditions (70+)	10,648	
People with one or more 'at risk' conditions (all ages)	52,718	15.3%
People with one or more 'potentially at risk' conditions (all ages)	44,940	13.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	70,676	20.6%
People with two or more 'at risk' conditions (all ages)	17,179	5.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	33,259	9.7%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	69,015	20.1%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	33,319	9.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	81,324	23.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	44,695	13.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	33,259	9.7%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS HORSHAM AND MID SUSSEX CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS ⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS HORSHAM AND MID SUSSEX CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	254,958	
Total Population (16-69)	170,098	66.7%
Total Population (70+)	37,816	14.8%
People with one or more 'at risk' conditions (70+)	17,051	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	24,433	
People with no 'at risk' or 'potentially at risk' conditions (70+)	13,383	
People with one or more 'at risk' conditions (all ages)	42,748	16.8%
People with one or more 'potentially at risk' conditions (all ages)	40,092	15.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	59,981	23.5%
People with two or more 'at risk' conditions (all ages)	14,345	5.6%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	28,835	11.3%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	63,513	24.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	24,206	9.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	73,364	28.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	33,603	13.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	28,835	11.3%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS HOUNSLOW CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS HOUNSLOW CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	356,703	
Total Population (16-69)	261,829	73.4%
Total Population (70+)	26,008	7.3%
People with one or more 'at risk' conditions (70+)	12,495	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	16,983	
People with no 'at risk' or 'potentially at risk' conditions (70+)	9,025	
People with one or more 'at risk' conditions (all ages)	42,455	11.9%
People with one or more 'potentially at risk' conditions (all ages)	39,427	11.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	58,555	16.4%
People with two or more 'at risk' conditions (all ages)	14,540	4.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	28,177	7.9%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	55,968	15.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	27,863	7.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	67,580	18.9%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	38,796	10.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	28,177	7.9%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS HULL CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS HULL CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	313,169	
Total Population (16-69)	220,148	70.3%
Total Population (70+)	33,279	10.6%
People with one or more 'at risk' conditions (70+)	17,362	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	23,287	
People with no 'at risk' or 'potentially at risk' conditions (70+)	9,992	
People with one or more 'at risk' conditions (all ages)	58,427	18.7%
People with one or more 'potentially at risk' conditions (all ages)	48,170	15.4%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	76,963	24.6%
People with two or more 'at risk' conditions (all ages)	20,376	6.5%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	37,465	12.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	74,344	23.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	38,741	12.4%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	86,955	27.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	50,773	16.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	37,465	12.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS IPSWICH AND EAST SUFFOLK CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS IPSWICH AND EAST SUFFOLK CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	426,097	
Total Population (16-69)	282,731	66.4%
Total Population (70+)	68,925	16.2%
People with one or more 'at risk' conditions (70+)	31,660	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	43,788	
People with no 'at risk' or 'potentially at risk' conditions (70+)	25,137	
People with one or more 'at risk' conditions (all ages)	80,696	18.9%
People with one or more 'potentially at risk' conditions (all ages)	70,466	16.5%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	108,002	25.3%
People with two or more 'at risk' conditions (all ages)	29,164	6.8%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	54,056	12.7%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	117,961	27.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	45,756	10.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	133,139	31.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	60,095	14.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	54,056	12.7%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS ISLE OF WIGHT CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS ISLE OF	WIGHT CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	147,811	
Total Population (16-69)	94,760	64.1%
Total Population (70+)	30,894	20.9%
People with one or more 'at risk' conditions (70+)	12,971	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	18,101	
People with no 'at risk' or 'potentially at risk' conditions (70+)	12,793	
People with one or more 'at risk' conditions (all ages)	29,727	20.1%
People with one or more 'potentially at risk' conditions (all ages)	27,786	18.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	40,597	27.5%
People with two or more 'at risk' conditions (all ages)	11,350	7.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	21,244	14.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	47,650	32.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	16,005	10.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	53,390	36.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	21,487	14.5%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	21,244	14.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS ISLINGTON CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS ISLING	GTON CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	294,196	
Total Population (16-69)	238,385	81.0%
Total Population (70+)	16,601	5.6%
People with one or more 'at risk' conditions (70+)	8,394	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	11,121	
People with no 'at risk' or 'potentially at risk' conditions (70+)	5,480	
People with one or more 'at risk' conditions (all ages)	34,342	11.7%
People with one or more 'potentially at risk' conditions (all ages)	30,701	10.4%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	48,126	16.4%
People with two or more 'at risk' conditions (all ages)	11,289	3.8%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	21,217	7.2%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	42,549	14.5%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	24,077	8.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	53,606	18.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	34,658	11.8%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	21,217	7.2%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS KERNOW CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS KERN	low ccg
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	606,353	
Total Population (16-69)	401,835	66.3%
Total Population (70+)	107,535	17.7%
People with one or more 'at risk' conditions (70+)	53,834	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	71,602	
People with no 'at risk' or 'potentially at risk' conditions (70+)	35,933	
People with one or more 'at risk' conditions (all ages)	137,982	22.8%
People with one or more 'potentially at risk' conditions (all ages)	117,232	19.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	180,685	29.8%
People with two or more 'at risk' conditions (all ages)	54,073	8.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	93,719	15.5%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	191,683	31.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	79,129	13.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	216,618	35.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	102,876	17.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	93,719	15.5%

Notes

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- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS KINGSTON CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS KINGS	STON CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	231,933	
Total Population (16-69)	169,027	72.9%
Total Population (70+)	20,782	9.0%
People with one or more 'at risk' conditions (70+)	9,502	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	13,267	
People with no 'at risk' or 'potentially at risk' conditions (70+)	7,515	
People with one or more 'at risk' conditions (all ages)	28,215	12.2%
People with one or more 'potentially at risk' conditions (all ages)	26,415	11.4%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	39,633	17.1%
People with two or more 'at risk' conditions (all ages)	9,434	4.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	18,456	8.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	39,495	17.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	17,260	7.4%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	47,148	20.3%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	24,393	10.5%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	18,456	8.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS KNOWSLEY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS KNOW	/SLEY CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	170,539	
Total Population (16-69)	118,941	69.7%
Total Population (70+)	18,966	11.1%
People with one or more 'at risk' conditions (70+)	11,148	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	14,409	
People with no 'at risk' or 'potentially at risk' conditions (70+)	4,557	
People with one or more 'at risk' conditions (all ages)	37,964	22.3%
People with one or more 'potentially at risk' conditions (all ages)	33,108	19.4%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	50,192	29.4%
People with two or more 'at risk' conditions (all ages)	14,937	8.8%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	25,960	15.2%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	45,782	26.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	25,027	14.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	54,749	32.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	33,411	19.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	25,960	15.2%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS LAMBETH CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS LAMI	BETH CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	465,404	
Total Population (16-69)	374,816	80.5%
Total Population (70+)	24,289	5.2%
People with one or more 'at risk' conditions (70+)	11,586	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	15,449	
People with no 'at risk' or 'potentially at risk' conditions (70+)	8,840	
People with one or more 'at risk' conditions (all ages)	54,914	11.8%
People with one or more 'potentially at risk' conditions (all ages)	45,942	9.9%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	74,988	16.1%
People with two or more 'at risk' conditions (all ages)	17,837	3.8%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	32,853	7.1%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	67,617	14.5%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	40,127	8.6%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	83,828	18.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	55,643	12.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	32,853	7.1%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS LEEDS CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS LEEDS CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	948,397	
Total Population (16-69)	681,538	71.9%
Total Population (70+)	97,986	10.3%
People with one or more 'at risk' conditions (70+)	47,123	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	65,196	
People with no 'at risk' or 'potentially at risk' conditions (70+)	32,790	
People with one or more 'at risk' conditions (all ages)	144,611	15.2%
People with one or more 'potentially at risk' conditions (all ages)	126,446	13.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	197,794	20.9%
People with two or more 'at risk' conditions (all ages)	47,896	5.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	92,739	9.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	195,474	20.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	91,084	9.6%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	230,584	24.3%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	124,195	13.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	92,739	9.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS LEICESTER CITY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS LEICESTER CITY CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	452,931	
Total Population (16-69)	331,034	73.1%
Total Population (70+)	33,641	7.4%
People with one or more 'at risk' conditions (70+)	16,841	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	22,113	
People with no 'at risk' or 'potentially at risk' conditions (70+)	11,528	
People with one or more 'at risk' conditions (all ages)	63,949	14.1%
People with one or more 'potentially at risk' conditions (all ages)	52,095	11.5%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	83,355	18.4%
People with two or more 'at risk' conditions (all ages)	22,344	4.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	40,752	9.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	80,749	17.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	44,398	9.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	94,883	20.9%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	57,598	12.7%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	40,752	9.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS LEWISHAM CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS LEWISHAM CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	365,924	
Total Population (16-69)	275,574	75.3%
Total Population (70+)	23,219	6.3%
People with one or more 'at risk' conditions (70+)	11,026	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	15,046	
People with no 'at risk' or 'potentially at risk' conditions (70+)	8,173	
People with one or more 'at risk' conditions (all ages)	48,354	13.2%
People with one or more 'potentially at risk' conditions (all ages)	42,086	11.5%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	66,819	18.3%
People with two or more 'at risk' conditions (all ages)	14,953	4.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	29,447	8.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	60,547	16.5%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	34,186	9.3%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	74,992	20.5%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	47,938	13.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	29,447	8.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS LINCOLNSHIRE EAST CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS LINCOLNSHIRE EAST CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	261,691	
Total Population (16-69)	170,506	65.2%
Total Population (70+)	49,592	19.0%
People with one or more 'at risk' conditions (70+)	23,421	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	32,116	
People with no 'at risk' or 'potentially at risk' conditions (70+)	17,476	
People with one or more 'at risk' conditions (all ages)	56,260	21.5%
People with one or more 'potentially at risk' conditions (all ages)	52,219	20.0%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	75,960	29.0%
People with two or more 'at risk' conditions (all ages)	21,725	8.3%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	40,357	15.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	82,431	31.5%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	31,175	11.9%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	93,436	35.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	41,662	15.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	40,357	15.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS LINCOLNSHIRE WEST CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS LINCOLNSHIRE WEST CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	249,628	
Total Population (16-69)	171,803	68.8%
Total Population (70+)	35,702	14.3%
People with one or more 'at risk' conditions (70+)	16,377	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	23,001	
People with no 'at risk' or 'potentially at risk' conditions (70+)	12,701	
People with one or more 'at risk' conditions (all ages)	44,799	17.9%
People with one or more 'potentially at risk' conditions (all ages)	39,591	15.9%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	60,979	24.4%
People with two or more 'at risk' conditions (all ages)	15,555	6.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	29,624	11.9%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	64,124	25.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	26,940	10.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	73,680	29.5%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	35,854	14.4%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	29,624	11.9%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS LIVERPOOL CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS LIVERPOOL CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	583,724	
Total Population (16-69)	431,165	73.9%
Total Population (70+)	56,340	9.7%
People with one or more 'at risk' conditions (70+)	32,103	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	41,451	
People with no 'at risk' or 'potentially at risk' conditions (70+)	14,889	
People with one or more 'at risk' conditions (all ages)	110,302	18.9%
People with one or more 'potentially at risk' conditions (all ages)	94,347	16.2%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	145,919	25.0%
People with two or more 'at risk' conditions (all ages)	41,526	7.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	73,016	12.5%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	134,539	23.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	73,616	12.6%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	160,808	27.5%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	98,023	16.8%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	73,016	12.5%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS LUTON CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS LUT	ON CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	253,655	
Total Population (16-69)	176,548	69.6%
Total Population (70+)	20,025	7.9%
People with one or more 'at risk' conditions (70+)	10,751	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	14,013	
People with no 'at risk' or 'potentially at risk' conditions (70+)	6,012	
People with one or more 'at risk' conditions (all ages)	42,367	16.7%
People with one or more 'potentially at risk' conditions (all ages)	34,544	13.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	55,242	21.8%
People with two or more 'at risk' conditions (all ages)	14,809	5.8%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	26,893	10.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	51,641	20.4%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	28,759	11.3%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	61,254	24.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	37,762	14.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	26,893	10.6%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS MANCHESTER CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS MANCH	HESTER CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	720,919	
Total Population (16-69)	540,557	75.0%
Total Population (70+)	44,283	6.1%
People with one or more 'at risk' conditions (70+)	24,019	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	30,891	
People with no 'at risk' or 'potentially at risk' conditions (70+)	13,392	
People with one or more 'at risk' conditions (all ages)	107,933	15.0%
People with one or more 'potentially at risk' conditions (all ages)	83,542	11.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	140,270	19.5%
People with two or more 'at risk' conditions (all ages)	36,959	5.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	64,779	9.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	128,197	17.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	75,999	10.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	153,662	21.3%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	99,990	13.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	64,779	9.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS MANSFIELD AND ASHFIELD CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS MANSFIELD AND ASHFIELD CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	201,233	
Total Population (16-69)	136,888	68.0%
Total Population (70+)	27,272	13.6%
People with one or more 'at risk' conditions (70+)	14,932	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	19,526	
People with no 'at risk' or 'potentially at risk' conditions (70+)	7,746	
People with one or more 'at risk' conditions (all ages)	46,226	23.0%
People with one or more 'potentially at risk' conditions (all ages)	38,041	18.9%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	59,347	29.5%
People with two or more 'at risk' conditions (all ages)	18,232	9.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	31,127	15.5%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	58,566	29.1%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	29,697	14.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	67,093	33.3%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	37,656	18.7%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	31,127	15.5%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS MEDWAY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS MED	WAY CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	315,472	
Total Population (16-69)	215,323	68.3%
Total Population (70+)	36,716	11.6%
People with one or more 'at risk' conditions (70+)	17,929	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	24,885	
People with no 'at risk' or 'potentially at risk' conditions (70+)	11,831	
People with one or more 'at risk' conditions (all ages)	58,723	18.6%
People with one or more 'potentially at risk' conditions (all ages)	50,410	16.0%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	78,763	25.0%
People with two or more 'at risk' conditions (all ages)	20,078	6.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	38,122	12.1%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	77,510	24.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	37,695	11.9%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	90,594	28.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	49,854	15.8%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	38,122	12.1%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS MERTON CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS MERTON CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	241,424	
Total Population (16-69)	176,268	73.0%
Total Population (70+)	20,061	8.3%
People with one or more 'at risk' conditions (70+)	9,130	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	12,587	
People with no 'at risk' or 'potentially at risk' conditions (70+)	7,474	
People with one or more 'at risk' conditions (all ages)	28,465	11.8%
People with one or more 'potentially at risk' conditions (all ages)	27,130	11.2%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	39,973	16.6%
People with two or more 'at risk' conditions (all ages)	9,678	4.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	19,157	7.9%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	39,396	16.3%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	17,753	7.4%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	47,447	19.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	25,410	10.5%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	19,157	7.9%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS MID ESSEX CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS MID E	SSEX CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	407,004	
Total Population (16-69)	273,359	67.2%
Total Population (70+)	60,156	14.8%
People with one or more 'at risk' conditions (70+)	27,135	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	38,641	
People with no 'at risk' or 'potentially at risk' conditions (70+)	21,515	
People with one or more 'at risk' conditions (all ages)	71,754	17.6%
People with one or more 'potentially at risk' conditions (all ages)	65,448	16.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	98,967	24.3%
People with two or more 'at risk' conditions (all ages)	23,954	5.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	47,629	11.7%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	104,775	25.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	41,816	10.3%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	120,482	29.6%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	56,590	13.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	47,629	11.7%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS MILTON KEYNES CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS MILTON	KEYNES CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	315,475	
Total Population (16-69)	220,757	70.0%
Total Population (70+)	28,232	8.9%
People with one or more 'at risk' conditions (70+)	13,645	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	18,896	
People with no 'at risk' or 'potentially at risk' conditions (70+)	9,336	
People with one or more 'at risk' conditions (all ages)	59,024	18.7%
People with one or more 'potentially at risk' conditions (all ages)	41,489	13.2%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	75,687	24.0%
People with two or more 'at risk' conditions (all ages)	17,208	5.5%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	31,930	10.1%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	73,611	23.3%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	36,268	11.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	85,023	27.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	46,988	14.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	31,930	10.1%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS MORECAMBE BAY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS MORECAI	MBE BAY CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	366,897	
Total Population (16-69)	253,133	69.0%
Total Population (70+)	58,531	16.0%
People with one or more 'at risk' conditions (70+)	29,016	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	39,727	
People with no 'at risk' or 'potentially at risk' conditions (70+)	18,804	
People with one or more 'at risk' conditions (all ages)	75,263	20.5%
People with one or more 'potentially at risk' conditions (all ages)	65,716	17.9%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	100,243	27.3%
People with two or more 'at risk' conditions (all ages)	28,691	7.8%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	51,511	14.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	104,778	28.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	43,746	11.9%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	119,047	32.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	57,401	15.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	51,511	14.0%

Notes

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS NENE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS NENE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	729,738	
Total Population (16-69)	502,308	68.8%
Total Population (70+)	89,189	12.2%
People with one or more 'at risk' conditions (70+)	44,775	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	60,419	
People with no 'at risk' or 'potentially at risk' conditions (70+)	28,770	
People with one or more 'at risk' conditions (all ages)	134,679	18.5%
People with one or more 'potentially at risk' conditions (all ages)	112,281	15.4%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	177,177	24.3%
People with two or more 'at risk' conditions (all ages)	48,449	6.6%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	87,499	12.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	179,093	24.5%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	84,358	11.6%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	205,947	28.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	109,788	15.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	87,499	12.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS NEWARK AND SHERWOOD CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS ⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS NEWARK AND	SHERWOOD CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	139,998	
Total Population (16-69)	93,847	67.0%
Total Population (70+)	22,096	15.8%
People with one or more 'at risk' conditions (70+)	11,212	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	15,077	
People with no 'at risk' or 'potentially at risk' conditions (70+)	7,019	
People with one or more 'at risk' conditions (all ages)	30,829	22.0%
People with one or more 'potentially at risk' conditions (all ages)	26,412	18.9%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	40,343	28.8%
People with two or more 'at risk' conditions (all ages)	12,087	8.6%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	20,957	15.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	41,713	29.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	18,565	13.3%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	47,362	33.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	23,894	17.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	20,957	15.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS NEWCASTLE GATESHEAD CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS NEWCASTLE GATESHEAD CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	566,712	
Total Population (16-69)	414,106	73.1%
Total Population (70+)	61,765	10.9%
People with one or more 'at risk' conditions (70+)	33,365	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	44,566	
People with no 'at risk' or 'potentially at risk' conditions (70+)	17,199	
People with one or more 'at risk' conditions (all ages)	101,038	17.8%
People with one or more 'potentially at risk' conditions (all ages)	85,370	15.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	133,634	23.6%
People with two or more 'at risk' conditions (all ages)	36,139	6.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	65,992	11.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	129,438	22.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	64,017	11.3%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	150,833	26.6%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	84,418	14.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	65,992	11.6%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS NEWHAM CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS NEW	HAM CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	459,755	
Total Population (16-69)	350,250	76.2%
Total Population (70+)	19,215	4.2%
People with one or more 'at risk' conditions (70+)	10,381	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	13,395	
People with no 'at risk' or 'potentially at risk' conditions (70+)	5,820	
People with one or more 'at risk' conditions (all ages)	54,530	11.9%
People with one or more 'potentially at risk' conditions (all ages)	47,751	10.4%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	74,187	16.1%
People with two or more 'at risk' conditions (all ages)	17,977	3.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	34,179	7.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	63,364	13.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	41,302	9.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	80,007	17.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	57,068	12.4%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	34,179	7.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS NORTH CUMBRIA CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS NORTH C	UMBRIA CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	335,988	
Total Population (16-69)	226,014	67.3%
Total Population (70+)	55,693	16.6%
People with one or more 'at risk' conditions (70+)	27,855	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	37,794	
People with no 'at risk' or 'potentially at risk' conditions (70+)	17,899	
People with one or more 'at risk' conditions (all ages)	71,135	21.2%
People with one or more 'potentially at risk' conditions (all ages)	62,138	18.5%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	95,016	28.3%
People with two or more 'at risk' conditions (all ages)	25,998	7.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	47,974	14.3%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	98,973	29.5%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	41,023	12.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	112,915	33.6%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	54,389	16.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	47,974	14.3%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS NORTH DURHAM CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS NORTH DURHAM CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	275,861	
Total Population (16-69)	196,158	71.1%
Total Population (70+)	37,367	13.5%
People with one or more 'at risk' conditions (70+)	19,022	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	25,763	
People with no 'at risk' or 'potentially at risk' conditions (70+)	11,604	
People with one or more 'at risk' conditions (all ages)	52,297	19.0%
People with one or more 'potentially at risk' conditions (all ages)	46,714	16.9%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	70,302	25.5%
People with two or more 'at risk' conditions (all ages)	19,294	7.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	35,691	12.9%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	70,642	25.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	31,320	11.4%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	81,906	29.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	42,124	15.3%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	35,691	12.9%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS NORTH EAST ESSEX CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS NORTH EA	AST ESSEX CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	372,413	
Total Population (16-69)	247,580	66.5%
Total Population (70+)	61,286	16.5%
People with one or more 'at risk' conditions (70+)	29,056	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	40,770	
People with no 'at risk' or 'potentially at risk' conditions (70+)	20,516	
People with one or more 'at risk' conditions (all ages)	72,448	19.5%
People with one or more 'potentially at risk' conditions (all ages)	66,986	18.0%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	99,289	26.7%
People with two or more 'at risk' conditions (all ages)	26,018	7.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	50,355	13.5%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	104,678	28.1%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	40,175	10.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	119,805	32.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	54,354	14.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	50,355	13.5%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS NORTH EAST HAMPSHIRE AND FARNHAM CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS NORTH EAST HAMPSHIRE AND FARNHAM CO	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	240,027	
Total Population (16-69)	163,295	68.0%
Total Population (70+)	31,524	13.1%
People with one or more 'at risk' conditions (70+)	15,198	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	21,364	
People with no 'at risk' or 'potentially at risk' conditions (70+)	10,160	
People with one or more 'at risk' conditions (all ages)	41,385	17.2%
People with one or more 'potentially at risk' conditions (all ages)	37,886	15.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	57,393	23.9%
People with two or more 'at risk' conditions (all ages)	13,559	5.6%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	27,231	11.3%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	57,711	24.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	24,604	10.3%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	67,553	28.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	33,933	14.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	27,231	11.3%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS NORTH EAST LINCOLNSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS ⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS NORTH EAST L	INCOLNSHIRE CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	173,864	
Total Population (16-69)	116,398	66.9%
Total Population (70+)	25,278	14.5%
People with one or more 'at risk' conditions (70+)	12,358	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	16,882	
People with no 'at risk' or 'potentially at risk' conditions (70+)	8,396	
People with one or more 'at risk' conditions (all ages)	34,331	19.7%
People with one or more 'potentially at risk' conditions (all ages)	30,830	17.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	46,329	26.6%
People with two or more 'at risk' conditions (all ages)	12,417	7.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	23,520	13.5%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	47,251	27.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	20,547	11.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	54,725	31.5%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	27,702	15.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	23,520	13.5%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS NORTH HAMPSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS NORTH HAMPSHIRE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	239,545	
Total Population (16-69)	164,207	68.5%
Total Population (70+)	31,038	13.0%
People with one or more 'at risk' conditions (70+)	14,011	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	19,851	
People with no 'at risk' or 'potentially at risk' conditions (70+)	11,187	
People with one or more 'at risk' conditions (all ages)	39,496	16.5%
People with one or more 'potentially at risk' conditions (all ages)	34,983	14.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	54,398	22.7%
People with two or more 'at risk' conditions (all ages)	12,380	5.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	25,217	10.5%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	56,523	23.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	23,816	9.9%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	65,585	27.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	32,474	13.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	25,217	10.5%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS NORTH KIRKLEES CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS NORTH K	(IRKLEES CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	199,771	
Total Population (16-69)	134,685	67.4%
Total Population (70+)	22,712	11.4%
People with one or more 'at risk' conditions (70+)	11,866	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	15,677	
People with no 'at risk' or 'potentially at risk' conditions (70+)	7,035	
People with one or more 'at risk' conditions (all ages)	39,438	19.7%
People with one or more 'potentially at risk' conditions (all ages)	31,459	15.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	50,979	25.5%
People with two or more 'at risk' conditions (all ages)	13,688	6.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	24,805	12.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	50,284	25.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	25,390	12.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	58,014	29.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	32,706	16.4%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	24,805	12.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS NORTH LINCOLNSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS NORTH LING	COLNSHIRE CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	185,279	
Total Population (16-69)	124,646	67.3%
Total Population (70+)	28,133	15.2%
People with one or more 'at risk' conditions (70+)	13,297	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	18,653	
People with no 'at risk' or 'potentially at risk' conditions (70+)	9,480	
People with one or more 'at risk' conditions (all ages)	35,213	19.0%
People with one or more 'potentially at risk' conditions (all ages)	32,797	17.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	48,469	26.2%
People with two or more 'at risk' conditions (all ages)	12,638	6.8%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	24,424	13.2%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	50,049	27.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	20,619	11.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	57,949	31.3%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	28,228	15.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	24,424	13.2%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS NORTH NORFOLK CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS NORTH N	IORFOLK CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	178,579	
Total Population (16-69)	112,391	62.9%
Total Population (70+)	40,601	22.7%
People with one or more 'at risk' conditions (70+)	17,864	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	25,493	
People with no 'at risk' or 'potentially at risk' conditions (70+)	15,108	
People with one or more 'at risk' conditions (all ages)	37,528	21.0%
People with one or more 'potentially at risk' conditions (all ages)	36,157	20.2%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	52,327	29.3%
People with two or more 'at risk' conditions (all ages)	13,681	7.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	26,929	15.1%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	60,265	33.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	18,704	10.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	67,435	37.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	25,567	14.3%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	26,929	15.1%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS NORTH STAFFORDSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS NORTH STAFFORDSHIRE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	224,563	
Total Population (16-69)	152,631	68.0%
Total Population (70+)	36,850	16.4%
People with one or more 'at risk' conditions (70+)	17,329	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	24,556	
People with no 'at risk' or 'potentially at risk' conditions (70+)	12,294	
People with one or more 'at risk' conditions (all ages)	45,034	20.1%
People with one or more 'potentially at risk' conditions (all ages)	41,601	18.5%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	62,180	27.7%
People with two or more 'at risk' conditions (all ages)	15,866	7.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	31,138	13.9%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	64,555	28.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	26,198	11.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	74,474	33.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	35,557	15.8%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	31,138	13.9%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS NORTH TYNESIDE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS NORTH T	YNESIDE CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	227,165	
Total Population (16-69)	155,001	68.2%
Total Population (70+)	32,282	14.2%
People with one or more 'at risk' conditions (70+)	17,244	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	23,100	
People with no 'at risk' or 'potentially at risk' conditions (70+)	9,182	
People with one or more 'at risk' conditions (all ages)	50,142	22.1%
People with one or more 'potentially at risk' conditions (all ages)	42,169	18.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	66,045	29.1%
People with two or more 'at risk' conditions (all ages)	18,273	8.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	33,077	14.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	65,180	28.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	30,818	13.6%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	75,227	33.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	40,246	17.7%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	33,077	14.6%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS NORTH WEST SURREY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS NORTH WE	ST SURREY CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	395,722	
Total Population (16-69)	270,339	68.3%
Total Population (70+)	49,479	12.5%
People with one or more 'at risk' conditions (70+)	22,352	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	32,149	
People with no 'at risk' or 'potentially at risk' conditions (70+)	17,330	
People with one or more 'at risk' conditions (all ages)	60,329	15.2%
People with one or more 'potentially at risk' conditions (all ages)	55,799	14.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	84,072	21.2%
People with two or more 'at risk' conditions (all ages)	19,501	4.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	39,835	10.1%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	87,456	22.1%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	35,270	8.9%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	101,402	25.6%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	48,326	12.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	39,835	10.1%

Notes

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS NORTHUMBERLAND CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS NORTHUM	IBERLAND CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	336,891	
Total Population (16-69)	224,010	66.5%
Total Population (70+)	59,308	17.6%
People with one or more 'at risk' conditions (70+)	30,377	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	40,779	
People with no 'at risk' or 'potentially at risk' conditions (70+)	18,529	
People with one or more 'at risk' conditions (all ages)	79,551	23.6%
People with one or more 'potentially at risk' conditions (all ages)	68,140	20.2%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	105,038	31.2%
People with two or more 'at risk' conditions (all ages)	29,603	8.8%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	53,566	15.9%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	108,482	32.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	46,407	13.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	123,567	36.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	60,485	18.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	53,566	15.9%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS NORWICH CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS NORWICH CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	254,416	
Total Population (16-69)	184,236	72.4%
Total Population (70+)	30,362	11.9%
People with one or more 'at risk' conditions (70+)	13,446	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	19,307	
People with no 'at risk' or 'potentially at risk' conditions (70+)	11,055	
People with one or more 'at risk' conditions (all ages)	38,250	15.0%
People with one or more 'potentially at risk' conditions (all ages)	33,440	13.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	52,723	20.7%
People with two or more 'at risk' conditions (all ages)	12,491	4.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	24,503	9.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	55,166	21.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	23,309	9.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	63,778	25.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	31,522	12.4%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	24,503	9.6%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS NOTTINGHAM CITY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS ⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS NOTTINGHAM CITY CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	434,670	
Total Population (16-69)	331,810	76.3%
Total Population (70+)	31,187	7.2%
People with one or more 'at risk' conditions (70+)	16,864	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	21,944	
People with no 'at risk' or 'potentially at risk' conditions (70+)	9,243	
People with one or more 'at risk' conditions (all ages)	66,061	15.2%
People with one or more 'potentially at risk' conditions (all ages)	51,811	11.9%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	85,157	19.6%
People with two or more 'at risk' conditions (all ages)	23,502	5.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	41,457	9.5%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	80,384	18.5%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	46,606	10.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	94,400	21.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	59,743	13.7%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	41,457	9.5%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS NOTTINGHAM NORTH AND EAST CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS NOTTINGHAM NORTH AND EAST CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	144,693	
Total Population (16-69)	96,823	66.9%
Total Population (70+)	21,994	15.2%
People with one or more 'at risk' conditions (70+)	11,149	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	14,936	
People with no 'at risk' or 'potentially at risk' conditions (70+)	7,058	
People with one or more 'at risk' conditions (all ages)	30,513	21.1%
People with one or more 'potentially at risk' conditions (all ages)	26,269	18.2%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	40,215	27.8%
People with two or more 'at risk' conditions (all ages)	11,499	7.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	20,766	14.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	41,358	28.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	18,427	12.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	47,273	32.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	24,007	16.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	20,766	14.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS NOTTINGHAM WEST CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

		NHS NOTTINGHAM WEST CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)	
Total Population (all ages)	110,393		
Total Population (16-69)	74,447	67.4%	
Total Population (70+)	16,966	15.4%	
People with one or more 'at risk' conditions (70+)	8,450		
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	11,473		
People with no 'at risk' or 'potentially at risk' conditions (70+)	5,493		
People with one or more 'at risk' conditions (all ages)	22,278	20.2%	
People with one or more 'potentially at risk' conditions (all ages)	19,485	17.7%	
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	29,471	26.7%	
People with two or more 'at risk' conditions (all ages)	8,457	7.7%	
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	15,385	13.9%	
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	30,794	27.9%	
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	13,184	11.9%	
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	34,964	31.7%	
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	17,144	15.5%	
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	15,385	13.9%	

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



AULIC MOTTINICULANA MUTCET COC

DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS OLDHAM CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS OLDHAM CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	267,338	
Total Population (16-69)	179,126	67.0%
Total Population (70+)	29,340	11.0%
People with one or more 'at risk' conditions (70+)	14,745	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	19,933	
People with no 'at risk' or 'potentially at risk' conditions (70+)	9,407	
People with one or more 'at risk' conditions (all ages)	49,160	18.4%
People with one or more 'potentially at risk' conditions (all ages)	41,745	15.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	65,385	24.5%
People with two or more 'at risk' conditions (all ages)	17,159	6.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	31,863	11.9%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	63,755	23.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	31,274	11.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	74,792	28.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	41,575	15.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	31,863	11.9%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS OXFORDSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS OXFORDSHIRE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	830,714	
Total Population (16-69)	595,320	71.7%
Total Population (70+)	97,609	11.8%
People with one or more 'at risk' conditions (70+)	43,755	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	62,809	
People with no 'at risk' or 'potentially at risk' conditions (70+)	34,800	
People with one or more 'at risk' conditions (all ages)	119,565	14.4%
People with one or more 'potentially at risk' conditions (all ages)	112,769	13.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	169,656	20.4%
People with two or more 'at risk' conditions (all ages)	39,756	4.8%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	79,310	9.5%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	173,419	20.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	71,433	8.6%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	204,456	24.6%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	100,834	12.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	79,310	9.5%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS PORTSMOUTH CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS PORTSMOUTH CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	244,856	
Total Population (16-69)	178,510	72.9%
Total Population (70+)	24,547	10.0%
People with one or more 'at risk' conditions (70+)	12,130	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	16,402	
People with no 'at risk' or 'potentially at risk' conditions (70+)	8,145	
People with one or more 'at risk' conditions (all ages)	40,105	16.4%
People with one or more 'potentially at risk' conditions (all ages)	32,722	13.4%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	52,857	21.6%
People with two or more 'at risk' conditions (all ages)	14,009	5.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	25,418	10.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	52,522	21.5%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	26,288	10.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	61,002	24.9%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	34,358	14.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	25,418	10.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS REDBRIDGE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS REDBRIDGE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	352,407	
Total Population (16-69)	247,903	70.3%
Total Population (70+)	28,346	8.0%
People with one or more 'at risk' conditions (70+)	14,525	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	19,788	
People with no 'at risk' or 'potentially at risk' conditions (70+)	8,558	
People with one or more 'at risk' conditions (all ages)	50,116	14.2%
People with one or more 'potentially at risk' conditions (all ages)	46,729	13.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	69,335	19.7%
People with two or more 'at risk' conditions (all ages)	17,188	4.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	33,526	9.5%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	63,937	18.1%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	32,688	9.3%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	77,893	22.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	46,005	13.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	33,526	9.5%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS REDDITCH AND BROMSGROVE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS REDDITCH AND	BROMSGROVE CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	183,731	
Total Population (16-69)	123,862	67.4%
Total Population (70+)	26,168	14.2%
People with one or more 'at risk' conditions (70+)	13,086	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	17,603	
People with no 'at risk' or 'potentially at risk' conditions (70+)	8,565	
People with one or more 'at risk' conditions (all ages)	36,298	19.8%
People with one or more 'potentially at risk' conditions (all ages)	30,371	16.5%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	47,775	26.0%
People with two or more 'at risk' conditions (all ages)	13,291	7.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	23,792	12.9%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	49,380	26.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	21,962	12.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	56,340	30.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	28,526	15.5%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	23,792	12.9%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS RICHMOND CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS RICHN	NOND CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	235,661	
Total Population (16-69)	165,809	70.4%
Total Population (70+)	23,732	10.1%
People with one or more 'at risk' conditions (70+)	9,668	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	14,293	
People with no 'at risk' or 'potentially at risk' conditions (70+)	9,439	
People with one or more 'at risk' conditions (all ages)	26,718	11.3%
People with one or more 'potentially at risk' conditions (all ages)	26,210	11.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	38,987	16.5%
People with two or more 'at risk' conditions (all ages)	8,367	3.6%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	17,473	7.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	40,782	17.3%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	15,860	6.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	48,426	20.5%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	22,993	9.8%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	17,473	7.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS ROTHERHAM CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS ROTHERHAM CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	269,489	
Total Population (16-69)	181,263	67.3%
Total Population (70+)	37,520	13.9%
People with one or more 'at risk' conditions (70+)	19,191	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	26,104	
People with no 'at risk' or 'potentially at risk' conditions (70+)	11,416	
People with one or more 'at risk' conditions (all ages)	59,720	22.2%
People with one or more 'potentially at risk' conditions (all ages)	48,493	18.0%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	77,817	28.9%
People with two or more 'at risk' conditions (all ages)	21,684	8.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	38,870	14.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	78,049	29.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	37,666	14.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	89,233	33.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	48,135	17.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	38,870	14.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS RUSHCLIFFE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS RUSHCLIFFE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	134,291	
Total Population (16-69)	89,411	66.6%
Total Population (70+)	20,933	15.6%
People with one or more 'at risk' conditions (70+)	9,906	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	13,588	
People with no 'at risk' or 'potentially at risk' conditions (70+)	7,345	
People with one or more 'at risk' conditions (all ages)	24,632	18.3%
People with one or more 'potentially at risk' conditions (all ages)	21,952	16.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	33,288	24.8%
People with two or more 'at risk' conditions (all ages)	8,655	6.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	16,539	12.3%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	35,659	26.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	13,928	10.4%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	40,633	30.3%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	18,641	13.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	16,539	12.3%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SALFORD CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SALFORD CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	299,024	
Total Population (16-69)	213,808	71.5%
Total Population (70+)	27,822	9.3%
People with one or more 'at risk' conditions (70+)	14,951	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	19,457	
People with no 'at risk' or 'potentially at risk' conditions (70+)	8,365	
People with one or more 'at risk' conditions (all ages)	51,680	17.3%
People with one or more 'potentially at risk' conditions (all ages)	42,882	14.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	67,895	22.7%
People with two or more 'at risk' conditions (all ages)	19,736	6.6%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	33,822	11.3%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	64,551	21.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	34,351	11.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	76,260	25.5%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	45,478	15.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	33,822	11.3%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SANDWELL AND WEST BIRMINGHAM CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SANDWELL AND W	EST BIRMINGHAM CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	603,152	
Total Population (16-69)	425,909	70.6%
Total Population (70+)	52,254	8.7%
People with one or more 'at risk' conditions (70+)	27,145	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	35,787	
People with no 'at risk' or 'potentially at risk' conditions (70+)	16,467	
People with one or more 'at risk' conditions (all ages)	97,916	16.2%
People with one or more 'potentially at risk' conditions (all ages)	82,065	13.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	128,777	21.4%
People with two or more 'at risk' conditions (all ages)	33,930	5.6%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	62,975	10.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	123,025	20.4%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	64,581	10.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	145,244	24.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	85,431	14.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	62,975	10.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SCARBOROUGH AND RYEDALE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SCARBOROUGH AND RYEDALE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	125,020	
Total Population (16-69)	82,704	66.2%
Total Population (70+)	22,710	18.2%
People with one or more 'at risk' conditions (70+)	10,792	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	14,657	
People with no 'at risk' or 'potentially at risk' conditions (70+)	8,053	
People with one or more 'at risk' conditions (all ages)	27,084	21.7%
People with one or more 'potentially at risk' conditions (all ages)	22,771	18.2%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	35,630	28.5%
People with two or more 'at risk' conditions (all ages)	10,365	8.3%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	18,218	14.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	39,002	31.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	15,414	12.3%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	43,683	34.9%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	19,916	15.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	18,218	14.6%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SHEFFIELD CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SHEFFIELD CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	655,066	
Total Population (16-69)	471,165	71.9%
Total Population (70+)	73,040	11.2%
People with one or more 'at risk' conditions (70+)	38,154	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	50,126	
People with no 'at risk' or 'potentially at risk' conditions (70+)	22,914	
People with one or more 'at risk' conditions (all ages)	114,276	17.4%
People with one or more 'potentially at risk' conditions (all ages)	90,976	13.9%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	148,316	22.6%
People with two or more 'at risk' conditions (all ages)	40,439	6.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	72,270	11.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	149,162	22.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	69,272	10.6%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	171,230	26.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	89,705	13.7%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	72,270	11.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



AULIC CLIEFFIELD COO

DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SHROPSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SHROPSHIRE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	328,381	
Total Population (16-69)	216,084	65.8%
Total Population (70+)	60,510	18.4%
People with one or more 'at risk' conditions (70+)	29,013	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	39,591	
People with no 'at risk' or 'potentially at risk' conditions (70+)	20,919	
People with one or more 'at risk' conditions (all ages)	69,883	21.3%
People with one or more 'potentially at risk' conditions (all ages)	61,681	18.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	93,472	28.5%
People with two or more 'at risk' conditions (all ages)	25,641	7.8%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	47,796	14.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	101,380	30.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	38,394	11.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	114,391	34.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	50,857	15.5%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	47,796	14.6%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SOMERSET CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

NHS SOM		ERSET CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	602,557	
Total Population (16-69)	395,889	65.7%
Total Population (70+)	105,945	17.6%
People with one or more 'at risk' conditions (70+)	50,067	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	70,365	
People with no 'at risk' or 'potentially at risk' conditions (70+)	35,580	
People with one or more 'at risk' conditions (all ages)	123,904	20.6%
People with one or more 'potentially at risk' conditions (all ages)	112,981	18.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	169,070	28.1%
People with two or more 'at risk' conditions (all ages)	44,302	7.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	84,919	14.1%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	179,782	29.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	69,603	11.6%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	204,650	34.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	93,390	15.5%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	84,919	14.1%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SOUTH CHESHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SOUTH C	HESHIRE CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	197,244	
Total Population (16-69)	133,876	67.9%
Total Population (70+)	28,946	14.7%
People with one or more 'at risk' conditions (70+)	14,717	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	19,817	
People with no 'at risk' or 'potentially at risk' conditions (70+)	9,129	
People with one or more 'at risk' conditions (all ages)	41,259	20.9%
People with one or more 'potentially at risk' conditions (all ages)	35,605	18.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	54,999	27.9%
People with two or more 'at risk' conditions (all ages)	15,051	7.6%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	27,513	13.9%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	55,488	28.1%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	25,100	12.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	64,128	32.5%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	33,295	16.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	27,513	13.9%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SOUTH EAST STAFFORDSHIRE AND SEISDON PENINSULA CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SOUTH EAST STAFFO PENINSU	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	224,348	
Total Population (16-69)	149,850	66.8%
Total Population (70+)	35,691	15.9%
People with one or more 'at risk' conditions (70+)	17,417	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	23,854	
People with no 'at risk' or 'potentially at risk' conditions (70+)	11,837	
People with one or more 'at risk' conditions (all ages)	46,175	20.6%
People with one or more 'potentially at risk' conditions (all ages)	39,693	17.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	61,513	27.4%
People with two or more 'at risk' conditions (all ages)	16,646	7.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	30,789	13.7%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	64,449	28.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	27,001	12.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	73,350	32.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	35,432	15.8%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	30,789	13.7%

Note:

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.





DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SOUTH EASTERN HAMPSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS ⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
			Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SOUTH EASTERN HAMPSHIRE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	223,761	
Total Population (16-69)	146,639	65.5%
Total Population (70+)	38,504	17.2%
People with one or more 'at risk' conditions (70+)	18,044	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	25,162	
People with no 'at risk' or 'potentially at risk' conditions (70+)	13,342	
People with one or more 'at risk' conditions (all ages)	46,001	20.6%
People with one or more 'potentially at risk' conditions (all ages)	40,777	18.2%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	61,809	27.6%
People with two or more 'at risk' conditions (all ages)	16,641	7.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	31,366	14.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	66,461	29.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	26,483	11.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	75,151	33.6%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	34,760	15.5%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	31,366	14.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SOUTH KENT COAST CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SOUTH KENT COAST CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	217,555	
Total Population (16-69)	143,029	65.7%
Total Population (70+)	37,320	17.2%
People with one or more 'at risk' conditions (70+)	17,431	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	24,965	
People with no 'at risk' or 'potentially at risk' conditions (70+)	12,355	
People with one or more 'at risk' conditions (all ages)	44,328	20.4%
People with one or more 'potentially at risk' conditions (all ages)	43,770	20.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	62,185	28.6%
People with two or more 'at risk' conditions (all ages)	16,069	7.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	32,605	15.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	64,217	29.5%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	25,129	11.6%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	74,540	34.3%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	35,015	16.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	32,605	15.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SOUTH LINCOLNSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SOUTH LINCOLNSHIRE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	175,710	
Total Population (16-69)	115,993	66.0%
Total Population (70+)	29,816	17.0%
People with one or more 'at risk' conditions (70+)	14,088	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	19,734	
People with no 'at risk' or 'potentially at risk' conditions (70+)	10,082	
People with one or more 'at risk' conditions (all ages)	35,028	19.9%
People with one or more 'potentially at risk' conditions (all ages)	32,669	18.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	48,202	27.4%
People with two or more 'at risk' conditions (all ages)	12,505	7.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	24,163	13.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	50,756	28.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	19,714	11.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	58,284	33.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	26,909	15.3%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	24,163	13.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SOUTH NORFOLK CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SOUTH N	ORFOLK CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	239,139	
Total Population (16-69)	155,892	65.2%
Total Population (70+)	42,260	17.7%
People with one or more 'at risk' conditions (70+)	18,667	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	26,763	
People with no 'at risk' or 'potentially at risk' conditions (70+)	15,497	
People with one or more 'at risk' conditions (all ages)	44,721	18.7%
People with one or more 'potentially at risk' conditions (all ages)	40,910	17.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	61,866	25.9%
People with two or more 'at risk' conditions (all ages)	15,301	6.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	30,390	12.7%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	68,314	28.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	24,482	10.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	77,363	32.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	33,118	13.8%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	30,390	12.7%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SOUTH SEFTON CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SOUTH S	SEFTON CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	159,410	
Total Population (16-69)	109,627	68.8%
Total Population (70+)	22,189	13.9%
People with one or more 'at risk' conditions (70+)	12,035	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	16,182	
People with no 'at risk' or 'potentially at risk' conditions (70+)	6,007	
People with one or more 'at risk' conditions (all ages)	35,423	22.2%
People with one or more 'potentially at risk' conditions (all ages)	32,209	20.2%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	47,990	30.1%
People with two or more 'at risk' conditions (all ages)	13,250	8.3%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	24,399	15.3%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	45,577	28.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	21,974	13.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	53,997	33.9%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	29,847	18.7%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	24,399	15.3%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SOUTH TEES CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SOUTH	H TEES CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	307,091	
Total Population (16-69)	208,230	67.8%
Total Population (70+)	40,570	13.2%
People with one or more 'at risk' conditions (70+)	21,176	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	29,136	
People with no 'at risk' or 'potentially at risk' conditions (70+)	11,434	
People with one or more 'at risk' conditions (all ages)	63,423	20.7%
People with one or more 'potentially at risk' conditions (all ages)	56,784	18.5%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	85,558	27.9%
People with two or more 'at risk' conditions (all ages)	22,428	7.3%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	42,749	13.9%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	82,817	27.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	39,101	12.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	96,992	31.6%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	52,703	17.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	42,749	13.9%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SOUTH TYNESIDE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SOUTH T	YNESIDE CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	161,317	
Total Population (16-69)	111,312	69.0%
Total Population (70+)	22,601	14.0%
People with one or more 'at risk' conditions (70+)	12,369	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	16,520	
People with no 'at risk' or 'potentially at risk' conditions (70+)	6,081	
People with one or more 'at risk' conditions (all ages)	35,159	21.8%
People with one or more 'potentially at risk' conditions (all ages)	31,997	19.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	47,316	29.3%
People with two or more 'at risk' conditions (all ages)	13,436	8.3%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	24,423	15.1%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	45,391	28.1%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	21,416	13.3%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	53,397	33.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	29,155	18.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	24,423	15.1%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SOUTH WARWICKSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SOUTH WAR	WICKSHIRE CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	307,284	
Total Population (16-69)	208,523	67.9%
Total Population (70+)	48,262	15.7%
People with one or more 'at risk' conditions (70+)	22,804	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	31,498	
People with no 'at risk' or 'potentially at risk' conditions (70+)	16,764	
People with one or more 'at risk' conditions (all ages)	55,862	18.2%
People with one or more 'potentially at risk' conditions (all ages)	49,633	16.2%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	75,557	24.6%
People with two or more 'at risk' conditions (all ages)	20,083	6.5%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	37,573	12.2%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	81,320	26.5%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	31,191	10.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	92,321	30.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	41,645	13.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	37,573	12.2%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SOUTH WEST LINCOLNSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SOUTH WEST L	INCOLNSHIRE CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	139,210	
Total Population (16-69)	91,995	66.1%
Total Population (70+)	23,308	16.7%
People with one or more 'at risk' conditions (70+)	10,675	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	15,017	
People with no 'at risk' or 'potentially at risk' conditions (70+)	8,291	
People with one or more 'at risk' conditions (all ages)	27,042	19.4%
People with one or more 'potentially at risk' conditions (all ages)	25,378	18.2%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	37,235	26.7%
People with two or more 'at risk' conditions (all ages)	9,713	7.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	18,760	13.5%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	39,675	28.5%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	15,546	11.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	45,526	32.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	21,087	15.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	18,760	13.5%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SOUTH WORCESTERSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS ⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SOUTH WOR	CESTERSHIRE CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	326,876	
Total Population (16-69)	219,524	67.2%
Total Population (70+)	53,685	16.4%
People with one or more 'at risk' conditions (70+)	24,617	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	34,069	
People with no 'at risk' or 'potentially at risk' conditions (70+)	19,616	
People with one or more 'at risk' conditions (all ages)	62,286	19.1%
People with one or more 'potentially at risk' conditions (all ages)	54,668	16.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	83,781	25.6%
People with two or more 'at risk' conditions (all ages)	22,842	7.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	41,679	12.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	91,354	27.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	35,710	10.9%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	103,397	31.6%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	47,228	14.4%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	41,679	12.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SOUTHAMPTON CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SOUTHA	MPTON CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	315,964	
Total Population (16-69)	235,916	74.7%
Total Population (70+)	27,920	8.8%
People with one or more 'at risk' conditions (70+)	13,896	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	18,859	
People with no 'at risk' or 'potentially at risk' conditions (70+)	9,061	
People with one or more 'at risk' conditions (all ages)	48,450	15.3%
People with one or more 'potentially at risk' conditions (all ages)	38,995	12.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	63,806	20.2%
People with two or more 'at risk' conditions (all ages)	17,078	5.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	30,523	9.7%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	62,474	19.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	33,005	10.4%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	72,867	23.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	42,735	13.5%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	30,523	9.7%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SOUTHEND CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SOUT	HEND CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	197,073	
Total Population (16-69)	133,608	67.8%
Total Population (70+)	27,316	13.9%
People with one or more 'at risk' conditions (70+)	12,725	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	17,874	
People with no 'at risk' or 'potentially at risk' conditions (70+)	9,442	
People with one or more 'at risk' conditions (all ages)	35,475	18.0%
People with one or more 'potentially at risk' conditions (all ages)	32,530	16.5%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	48,719	24.7%
People with two or more 'at risk' conditions (all ages)	12,217	6.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	24,003	12.2%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	50,066	25.4%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	21,322	10.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	58,161	29.5%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	29,047	14.7%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	24,003	12.2%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SOUTHPORT AND FORMBY CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SOUTHPORT A	AND FORMBY CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	128,881	
Total Population (16-69)	84,023	65.2%
Total Population (70+)	25,250	19.6%
People with one or more 'at risk' conditions (70+)	12,290	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	17,195	
People with no 'at risk' or 'potentially at risk' conditions (70+)	8,055	
People with one or more 'at risk' conditions (all ages)	28,369	22.0%
People with one or more 'potentially at risk' conditions (all ages)	27,334	21.2%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	39,500	30.6%
People with two or more 'at risk' conditions (all ages)	10,531	8.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	20,368	15.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	41,329	32.1%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	15,046	11.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	47,555	36.9%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	20,974	16.3%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	20,368	15.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SOUTHWARK CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SOUTHWARK CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	374,489	
Total Population (16-69)	295,261	78.8%
Total Population (70+)	19,706	5.3%
People with one or more 'at risk' conditions (70+)	9,874	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	12,812	
People with no 'at risk' or 'potentially at risk' conditions (70+)	6,894	
People with one or more 'at risk' conditions (all ages)	47,868	12.8%
People with one or more 'potentially at risk' conditions (all ages)	39,304	10.5%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	64,402	17.2%
People with two or more 'at risk' conditions (all ages)	16,231	4.3%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	29,159	7.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	57,700	15.4%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	35,035	9.4%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	71,296	19.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	47,925	12.8%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	29,159	7.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS ST HELENS CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS ST HE	LENS CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	202,130	
Total Population (16-69)	136,837	67.7%
Total Population (70+)	29,899	14.8%
People with one or more 'at risk' conditions (70+)	16,170	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	21,601	
People with no 'at risk' or 'potentially at risk' conditions (70+)	8,298	
People with one or more 'at risk' conditions (all ages)	46,553	23.0%
People with one or more 'potentially at risk' conditions (all ages)	41,790	20.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	62,159	30.8%
People with two or more 'at risk' conditions (all ages)	18,202	9.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	32,393	16.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	60,282	29.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	28,327	14.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	70,457	34.9%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	37,897	18.7%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	32,393	16.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS STAFFORD AND SURROUNDS CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS STAFFORD AND SURROUNDS CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	153,669	
Total Population (16-69)	102,283	66.6%
Total Population (70+)	25,795	16.8%
People with one or more 'at risk' conditions (70+)	12,083	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	16,966	
People with no 'at risk' or 'potentially at risk' conditions (70+)	8,829	
People with one or more 'at risk' conditions (all ages)	30,206	19.7%
People with one or more 'potentially at risk' conditions (all ages)	27,321	17.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	41,245	26.8%
People with two or more 'at risk' conditions (all ages)	10,704	7.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	20,497	13.3%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	43,918	28.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	17,158	11.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	50,074	32.6%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	22,937	14.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	20,497	13.3%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS STOCKPORT CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS STOCKPORT CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	323,949	
Total Population (16-69)	218,732	67.5%
Total Population (70+)	45,169	13.9%
People with one or more 'at risk' conditions (70+)	23,229	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	31,537	
People with no 'at risk' or 'potentially at risk' conditions (70+)	13,632	
People with one or more 'at risk' conditions (all ages)	68,435	21.1%
People with one or more 'potentially at risk' conditions (all ages)	57,549	17.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	90,543	27.9%
People with two or more 'at risk' conditions (all ages)	25,082	7.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	44,630	13.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	90,375	27.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	42,072	13.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	104,175	32.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	55,169	17.0%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	44,630	13.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS STOKE ON TRENT CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS STOKE ON TRENT CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	304,139	
Total Population (16-69)	206,326	67.8%
Total Population (70+)	37,870	12.5%
People with one or more 'at risk' conditions (70+)	18,633	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	25,857	
People with no 'at risk' or 'potentially at risk' conditions (70+)	12,013	
People with one or more 'at risk' conditions (all ages)	59,241	19.5%
People with one or more 'potentially at risk' conditions (all ages)	51,679	17.0%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	79,791	26.2%
People with two or more 'at risk' conditions (all ages)	20,601	6.8%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	39,502	13.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	78,478	25.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	37,992	12.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	91,804	30.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	50,428	16.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	39,502	13.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SUNDERLAND CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SUNDERLAND CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	290,241	
Total Population (16-69)	201,546	69.4%
Total Population (70+)	39,971	13.8%
People with one or more 'at risk' conditions (70+)	22,035	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	29,368	
People with no 'at risk' or 'potentially at risk' conditions (70+)	10,603	
People with one or more 'at risk' conditions (all ages)	64,294	22.2%
People with one or more 'potentially at risk' conditions (all ages)	58,443	20.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	86,405	29.8%
People with two or more 'at risk' conditions (all ages)	24,346	8.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	44,898	15.5%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	82,230	28.3%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	39,304	13.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	97,008	33.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	53,441	18.4%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	44,898	15.5%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SURREY DOWNS CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SURREY DOWNS CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	321,434	
Total Population (16-69)	214,337	66.7%
Total Population (70+)	47,473	14.8%
People with one or more 'at risk' conditions (70+)	21,599	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	30,571	
People with no 'at risk' or 'potentially at risk' conditions (70+)	16,902	
People with one or more 'at risk' conditions (all ages)	53,576	16.7%
People with one or more 'potentially at risk' conditions (all ages)	49,896	15.5%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	74,751	23.3%
People with two or more 'at risk' conditions (all ages)	17,762	5.5%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	35,722	11.1%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	79,450	24.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	29,811	9.3%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	91,653	28.5%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	41,426	12.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	35,722	11.1%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SURREY HEATH CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SURREY	HEATH CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	101,204	
Total Population (16-69)	68,892	68.1%
Total Population (70+)	14,120	14.0%
People with one or more 'at risk' conditions (70+)	6,955	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	9,770	
People with no 'at risk' or 'potentially at risk' conditions (70+)	4,350	
People with one or more 'at risk' conditions (all ages)	18,388	18.2%
People with one or more 'potentially at risk' conditions (all ages)	16,752	16.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	25,354	25.1%
People with two or more 'at risk' conditions (all ages)	6,058	6.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	12,145	12.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	25,553	25.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	10,727	10.6%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	29,704	29.4%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	14,653	14.5%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	12,145	12.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SUTTON CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SUTTON CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	213,817	
Total Population (16-69)	147,198	68.8%
Total Population (70+)	23,151	10.8%
People with one or more 'at risk' conditions (70+)	10,884	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	15,272	
People with no 'at risk' or 'potentially at risk' conditions (70+)	7,879	
People with one or more 'at risk' conditions (all ages)	32,990	15.4%
People with one or more 'potentially at risk' conditions (all ages)	31,164	14.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	46,276	21.6%
People with two or more 'at risk' conditions (all ages)	10,855	5.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	21,917	10.3%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	45,257	21.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	20,245	9.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	54,155	25.3%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	28,636	13.4%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	21,917	10.3%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SWALE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SWALE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	118,900	
Total Population (16-69)	79,032	66.5%
Total Population (70+)	15,719	13.2%
People with one or more 'at risk' conditions (70+)	7,666	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	10,630	
People with no 'at risk' or 'potentially at risk' conditions (70+)	5,089	
People with one or more 'at risk' conditions (all ages)	23,906	20.1%
People with one or more 'potentially at risk' conditions (all ages)	20,330	17.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	31,662	26.6%
People with two or more 'at risk' conditions (all ages)	8,363	7.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	15,750	13.2%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	31,959	26.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	15,021	12.6%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	36,751	30.9%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	19,459	16.4%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	15,750	13.2%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS SWINDON CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS ⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS SWINDON CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	260,799	
Total Population (16-69)	180,582	69.2%
Total Population (70+)	27,883	10.7%
People with one or more 'at risk' conditions (70+)	13,421	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	18,578	
People with no 'at risk' or 'potentially at risk' conditions (70+)	9,305	
People with one or more 'at risk' conditions (all ages)	43,793	16.8%
People with one or more 'potentially at risk' conditions (all ages)	36,844	14.1%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	58,524	22.4%
People with two or more 'at risk' conditions (all ages)	14,543	5.6%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	27,738	10.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	58,255	22.3%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	27,958	10.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	67,829	26.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	37,041	14.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	27,738	10.6%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS TAMESIDE AND GLOSSOP CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS ⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS TAMESIDE AND GLOSSOP CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	256,313	
Total Population (16-69)	175,239	68.4%
Total Population (70+)	31,890	12.4%
People with one or more 'at risk' conditions (70+)	16,637	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	22,123	
People with no 'at risk' or 'potentially at risk' conditions (70+)	9,767	
People with one or more 'at risk' conditions (all ages)	52,920	20.6%
People with one or more 'potentially at risk' conditions (all ages)	45,862	17.9%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	70,312	27.4%
People with two or more 'at risk' conditions (all ages)	19,108	7.5%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	34,951	13.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	68,173	26.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	33,565	13.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	80,079	31.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	44,920	17.5%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	34,951	13.6%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS TELFORD AND WREKIN CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS TELFORD AND WREKIN CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	198,884	
Total Population (16-69)	136,463	68.6%
Total Population (70+)	23,747	11.9%
People with one or more 'at risk' conditions (70+)	12,262	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	16,032	
People with no 'at risk' or 'potentially at risk' conditions (70+)	7,715	
People with one or more 'at risk' conditions (all ages)	39,815	20.0%
People with one or more 'potentially at risk' conditions (all ages)	31,882	16.0%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	51,441	25.9%
People with two or more 'at risk' conditions (all ages)	14,384	7.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	25,630	12.9%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	51,300	25.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	25,643	12.9%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	59,156	29.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	33,032	16.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	25,630	12.9%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS THANET CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS THANET CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	152,835	
Total Population (16-69)	99,752	65.3%
Total Population (70+)	25,406	16.6%
People with one or more 'at risk' conditions (70+)	12,259	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	17,151	
People with no 'at risk' or 'potentially at risk' conditions (70+)	8,255	
People with one or more 'at risk' conditions (all ages)	31,648	20.7%
People with one or more 'potentially at risk' conditions (all ages)	30,594	20.0%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	43,865	28.7%
People with two or more 'at risk' conditions (all ages)	11,815	7.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	22,968	15.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	44,795	29.3%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	17,976	11.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	52,120	34.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	24,971	16.3%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	22,968	15.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS THURROCK CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS THUR	ROCK CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	187,793	
Total Population (16-69)	127,916	68.1%
Total Population (70+)	18,267	9.7%
People with one or more 'at risk' conditions (70+)	8,809	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	12,241	
People with no 'at risk' or 'potentially at risk' conditions (70+)	6,026	
People with one or more 'at risk' conditions (all ages)	29,004	15.4%
People with one or more 'potentially at risk' conditions (all ages)	25,857	13.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	39,684	21.1%
People with two or more 'at risk' conditions (all ages)	9,633	5.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	18,862	10.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	38,462	20.5%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	18,763	10.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	45,710	24.3%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	25,610	13.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	18,862	10.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS TOWER HAMLETS CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS TOWER F	IAMLETS CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	382,968	
Total Population (16-69)	306,130	79.9%
Total Population (70+)	13,459	3.5%
People with one or more 'at risk' conditions (70+)	7,517	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	9,446	
People with no 'at risk' or 'potentially at risk' conditions (70+)	4,013	
People with one or more 'at risk' conditions (all ages)	38,972	10.2%
People with one or more 'potentially at risk' conditions (all ages)	33,994	8.9%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	53,248	13.9%
People with two or more 'at risk' conditions (all ages)	13,424	3.5%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	24,179	6.3%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	44,914	11.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	29,168	7.6%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	57,261	15.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	40,752	10.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	24,179	6.3%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS TRAFFORD CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS TRAFFORD CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	251,186	
Total Population (16-69)	169,799	67.6%
Total Population (70+)	31,423	12.5%
People with one or more 'at risk' conditions (70+)	16,258	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	21,613	
People with no 'at risk' or 'potentially at risk' conditions (70+)	9,810	
People with one or more 'at risk' conditions (all ages)	47,252	18.8%
People with one or more 'potentially at risk' conditions (all ages)	39,627	15.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	62,476	24.9%
People with two or more 'at risk' conditions (all ages)	17,232	6.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	30,593	12.2%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	62,417	24.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	28,667	11.4%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	72,28 6	28.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	38,035	15.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	30,593	12.2%

Notes

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- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS VALE OF YORK CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS ⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS VALE O	F YORK CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	382,411	
Total Population (16-69)	269,828	70.6%
Total Population (70+)	54,310	14.2%
People with one or more 'at risk' conditions (70+)	24,800	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	34,081	
People with no 'at risk' or 'potentially at risk' conditions (70+)	20,229	
People with one or more 'at risk' conditions (all ages)	64,007	16.7%
People with one or more 'potentially at risk' conditions (all ages)	53,646	14.0%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	85,816	22.4%
People with two or more 'at risk' conditions (all ages)	22,793	6.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	41,420	10.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	93,517	24.5%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	37,500	9.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	106,045	27.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	49,515	12.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	41,420	10.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS VALE ROYAL CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS VALE F	ROYAL CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	112,082	
Total Population (16-69)	76,034	67.8%
Total Population (70+)	15,441	13.8%
People with one or more 'at risk' conditions (70+)	7,954	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	10,620	
People with no 'at risk' or 'potentially at risk' conditions (70+)	4,821	
People with one or more 'at risk' conditions (all ages)	24,051	21.5%
People with one or more 'potentially at risk' conditions (all ages)	20,536	18.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	31,958	28.5%
People with two or more 'at risk' conditions (all ages)	8,904	7.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	15,791	14.1%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	31,538	28.1%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	15,109	13.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	36,779	32.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	19,932	17.8%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	15,791	14.1%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS WAKEFIELD CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS WAKEFIELD CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	388,951	
Total Population (16-69)	266,623	68.5%
Total Population (70+)	51,000	13.1%
People with one or more 'at risk' conditions (70+)	26,324	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	34,451	
People with no 'at risk' or 'potentially at risk' conditions (70+)	16,549	
People with one or more 'at risk' conditions (all ages)	79,331	20.4%
People with one or more 'potentially at risk' conditions (all ages)	65,512	16.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	103,293	26.6%
People with two or more 'at risk' conditions (all ages)	29,343	7.5%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	51,862	13.3%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	104,007	26.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	49,888	12.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	119,842	30.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	64,767	16.7%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	51,862	13.3%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS WALSALL CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
			Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS WALSALL CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	297,900	
Total Population (16-69)	197,997	66.5%
Total Population (70+)	36,658	12.3%
People with one or more 'at risk' conditions (70+)	19,160	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	25,233	
People with no 'at risk' or 'potentially at risk' conditions (70+)	11,425	
People with one or more 'at risk' conditions (all ages)	60,433	20.3%
People with one or more 'potentially at risk' conditions (all ages)	49,892	16.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	78,483	26.3%
People with two or more 'at risk' conditions (all ages)	22,952	7.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	40,238	13.5%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	77,931	26.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	38,450	12.9%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	89,908	30.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	49,772	16.7%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	40,238	13.5%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS WALTHAM FOREST CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS WALTHAM FOREST CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	341,948	
Total Population (16-69)	252,942	74.0%
Total Population (70+)	22,594	6.6%
People with one or more 'at risk' conditions (70+)	11,487	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	15,753	
People with no 'at risk' or 'potentially at risk' conditions (70+)	6,841	
People with one or more 'at risk' conditions (all ages)	45,386	13.3%
People with one or more 'potentially at risk' conditions (all ages)	42,947	12.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	64,164	18.8%
People with two or more 'at risk' conditions (all ages)	15,087	4.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	29,671	8.7%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	56,493	16.5%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	31,363	9.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	71,005	20.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	45,221	13.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	29,671	8.7%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS WANDSWORTH CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS WANDSWORTH CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	450,674	
Total Population (16-69)	353,114	78.4%
Total Population (70+)	26,589	5.9%
People with one or more 'at risk' conditions (70+)	12,061	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	16,739	
People with no 'at risk' or 'potentially at risk' conditions (70+)	9,850	
People with one or more 'at risk' conditions (all ages)	43,123	9.6%
People with one or more 'potentially at risk' conditions (all ages)	39,706	8.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	60,763	13.5%
People with two or more 'at risk' conditions (all ages)	13,692	3.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	27,157	6.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	57,651	12.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	28,866	6.4%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	70,613	15.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	41,208	9.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	27,157	6.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS WARRINGTON CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS WARRINGTON CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	227,266	
Total Population (16-69)	156,572	68.9%
Total Population (70+)	29,735	13.1%
People with one or more 'at risk' conditions (70+)	15,339	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	20,696	
People with no 'at risk' or 'potentially at risk' conditions (70+)	9,039	
People with one or more 'at risk' conditions (all ages)	45,086	19.8%
People with one or more 'potentially at risk' conditions (all ages)	39,408	17.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	60,222	26.5%
People with two or more 'at risk' conditions (all ages)	16,483	7.3%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	30,105	13.2%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	59,482	26.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	27,872	12.3%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	69,261	30.5%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	37,202	16.4%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	30,105	13.2%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS WARWICKSHIRE NORTH CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS WARWICKSHIRE NORTH CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	198,761	
Total Population (16-69)	134,254	67.5%
Total Population (70+)	28,827	14.5%
People with one or more 'at risk' conditions (70+)	13,911	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	19,298	
People with no 'at risk' or 'potentially at risk' conditions (70+)	9,529	
People with one or more 'at risk' conditions (all ages)	39,941	20.1%
People with one or more 'potentially at risk' conditions (all ages)	35,277	17.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	53,528	26.9%
People with two or more 'at risk' conditions (all ages)	14,399	7.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	27,125	13.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	54,857	27.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	24,573	12.4%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	63,057	31.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	32,362	16.3%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	27,125	13.6%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS WEST CHESHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS WEST CHESHIRE CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	284,019	
Total Population (16-69)	194,525	68.5%
Total Population (70+)	42,736	15.0%
People with one or more 'at risk' conditions (70+)	20,662	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	28,077	
People with no 'at risk' or 'potentially at risk' conditions (70+)	14,659	
People with one or more 'at risk' conditions (all ages)	54,409	19.2%
People with one or more 'potentially at risk' conditions (all ages)	47,344	16.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	73,574	25.9%
People with two or more 'at risk' conditions (all ages)	20,048	7.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	35,704	12.6%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	76,483	26.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	31,888	11.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	88,233	31.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	42,423	14.9%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	35,704	12.6%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS WEST ESSEX CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS WEST	ESSEX CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	328,091	
Total Population (16-69)	222,098	67.7%
Total Population (70+)	42,035	12.8%
People with one or more 'at risk' conditions (70+)	20,078	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	28,326	
People with no 'at risk' or 'potentially at risk' conditions (70+)	13,709	
People with one or more 'at risk' conditions (all ages)	56,841	17.3%
People with one or more 'potentially at risk' conditions (all ages)	52,417	16.0%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	78,406	23.9%
People with two or more 'at risk' conditions (all ages)	20,118	6.1%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	38,399	11.7%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	78,798	24.0%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	34,341	10.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	92,115	28.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	47,007	14.3%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	38,399	11.7%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS WEST HAMPSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS WEST HA	MPSHIRE CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	589,966	
Total Population (16-69)	388,423	65.8%
Total Population (70+)	100,913	17.1%
People with one or more 'at risk' conditions (70+)	44,194	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	64,007	
People with no 'at risk' or 'potentially at risk' conditions (70+)	36,906	
People with one or more 'at risk' conditions (all ages)	104,815	17.8%
People with one or more 'potentially at risk' conditions (all ages)	99,078	16.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	146,722	24.9%
People with two or more 'at risk' conditions (all ages)	36,436	6.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	72,151	12.2%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	161,534	27.4%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	57,482	9.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	183,628	31.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	78,517	13.3%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	72,151	12.2%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS WEST KENT CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS WEST	KENT CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	521,151	
Total Population (16-69)	346,254	66.4%
Total Population (70+)	73,576	14.1%
People with one or more 'at risk' conditions (70+)	31,928	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	46,438	
People with no 'at risk' or 'potentially at risk' conditions (70+)	27,138	
People with one or more 'at risk' conditions (all ages)	82,588	15.8%
People with one or more 'potentially at risk' conditions (all ages)	79,755	15.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	117,585	22.6%
People with two or more 'at risk' conditions (all ages)	27,317	5.2%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	56,214	10.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	124,236	23.8%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	47,341	9.1%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	144,723	27.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	66,772	12.8%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	56,214	10.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS WEST LANCASHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS ⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS WEST LAN	ICASHIRE CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	117,650	
Total Population (16-69)	79,714	67.8%
Total Population (70+)	18,416	15.7%
People with one or more 'at risk' conditions (70+)	9,233	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	12,754	
People with no 'at risk' or 'potentially at risk' conditions (70+)	5,662	
People with one or more 'at risk' conditions (all ages)	24,355	20.7%
People with one or more 'potentially at risk' conditions (all ages)	21,913	18.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	33,056	28.1%
People with two or more 'at risk' conditions (all ages)	8,853	7.5%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	16,573	14.1%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	33,538	28.5%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	13,978	11.9%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	38,718	32.9%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	18,902	16.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	16,573	14.1%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS WEST LEICESTERSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS WEST LEICE	STERSHIRE CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	416,526	
Total Population (16-69)	288,444	69.2%
Total Population (70+)	57,216	13.7%
People with one or more 'at risk' conditions (70+)	25,157	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	34,874	
People with no 'at risk' or 'potentially at risk' conditions (70+)	22,342	
People with one or more 'at risk' conditions (all ages)	70,464	16.9%
People with one or more 'potentially at risk' conditions (all ages)	61,396	14.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	94,753	22.7%
People with two or more 'at risk' conditions (all ages)	24,993	6.0%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	46,797	11.2%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	102,523	24.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	43,137	10.4%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	117,095	28.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	56,950	13.7%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	46,797	11.2%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS WEST LONDON CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS WEST LO	ONDON CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	294,254	
Total Population (16-69)	229,652	78.0%
Total Population (70+)	23,417	8.0%
People with one or more 'at risk' conditions (70+)	9,157	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	12,875	
People with no 'at risk' or 'potentially at risk' conditions (70+)	10,542	
People with one or more 'at risk' conditions (all ages)	28,547	9.7%
People with one or more 'potentially at risk' conditions (all ages)	28,295	9.6%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	41,390	14.1%
People with two or more 'at risk' conditions (all ages)	9,791	3.3%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	19,115	6.5%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	42,807	14.5%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	18,208	6.2%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	51,932	17.6%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	26,932	9.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	19,115	6.5%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS WEST NORFOLK CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS WEST NORFOLK CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	181,549	
Total Population (16-69)	117,215	64.6%
Total Population (70+)	35,351	19.5%
People with one or more 'at risk' conditions (70+)	17,781	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	24,446	
People with no 'at risk' or 'potentially at risk' conditions (70+)	10,905	
People with one or more 'at risk' conditions (all ages)	42,096	23.2%
People with one or more 'potentially at risk' conditions (all ages)	38,434	21.2%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	56,713	31.2%
People with two or more 'at risk' conditions (all ages)	15,924	8.8%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	29,685	16.4%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	59,666	32.9%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	22,732	12.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	67,618	37.2%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	30,351	16.7%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	29,685	16.4%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS WEST SUFFOLK CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS WEST S	UFFOLK CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	264,069	
Total Population (16-69)	175,360	66.4%
Total Population (70+)	44,630	16.9%
People with one or more 'at risk' conditions (70+)	21,324	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	29,773	
People with no 'at risk' or 'potentially at risk' conditions (70+)	14,857	
People with one or more 'at risk' conditions (all ages)	55,130	20.9%
People with one or more 'potentially at risk' conditions (all ages)	48,289	18.3%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	74,118	28.1%
People with two or more 'at risk' conditions (all ages)	19,832	7.5%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	36,870	14.0%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	78,436	29.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	31,194	11.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	88,975	33.7%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	41,159	15.6%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	36,870	14.0%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS WIGAN BOROUGH CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS WIGAN B	OROUGH CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	339,345	
Total Population (16-69)	230,933	68.1%
Total Population (70+)	46,914	13.8%
People with one or more 'at risk' conditions (70+)	24,922	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	33,284	
People with no 'at risk' or 'potentially at risk' conditions (70+)	13,630	
People with one or more 'at risk' conditions (all ages)	74,639	22.0%
People with one or more 'potentially at risk' conditions (all ages)	63,911	18.8%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	98,254	29.0%
People with two or more 'at risk' conditions (all ages)	28,225	8.3%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	50,175	14.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	96,631	28.5%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	46,873	13.8%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	111,884	33.0%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	61,419	18.1%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	50,175	14.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS WILTSHIRE CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS WILTS	SHIRE CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	523,433	
Total Population (16-69)	346,911	66.3%
Total Population (70+)	84,343	16.1%
People with one or more 'at risk' conditions (70+)	38,605	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	54,789	
People with no 'at risk' or 'potentially at risk' conditions (70+)	29,554	
People with one or more 'at risk' conditions (all ages)	99,487	19.0%
People with one or more 'potentially at risk' conditions (all ages)	91,001	17.4%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	137,049	26.2%
People with two or more 'at risk' conditions (all ages)	34,914	6.7%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	67,152	12.8%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	145,225	27.7%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	57,376	11.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	166,603	31.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	77,651	14.8%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	67,152	12.8%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS WIRRAL CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS WIR	RAL CCG
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	345,790	
Total Population (16-69)	231,837	67.0%
Total Population (70+)	52,797	15.3%
People with one or more 'at risk' conditions (70+)	28,376	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	37,122	
People with no 'at risk' or 'potentially at risk' conditions (70+)	15,675	
People with one or more 'at risk' conditions (all ages)	81,438	23.6%
People with one or more 'potentially at risk' conditions (all ages)	68,144	19.7%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	105,720	30.6%
People with two or more 'at risk' conditions (all ages)	32,490	9.4%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	55,889	16.2%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	105,859	30.6%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	50,236	14.5%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	121,395	35.1%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	65,009	18.8%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	55,889	16.2%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS WOLVERHAMPTON CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

	'AT RISK' CONDITIONS ³		'POTENTIALLY AT RISK' CONDITIONS⁴
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System" ³ :	Alcohol Dependence
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease
		Sarcoidosis	Physical Disability
		Sickle Cell Disease	Serious Mental Illness
		Spleen Problems (inc. Splenectomy)	

	NHS WOLVERHAMPTON CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	295,961	
Total Population (16-69)	201,884	68.2%
Total Population (70+)	33,677	11.4%
People with one or more 'at risk' conditions (70+)	17,528	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	22,970	
People with no 'at risk' or 'potentially at risk' conditions (70+)	10,707	
People with one or more 'at risk' conditions (all ages)	55,254	18.7%
People with one or more 'potentially at risk' conditions (all ages)	45,678	15.4%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	71,630	24.2%
People with two or more 'at risk' conditions (all ages)	20,193	6.8%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	36,462	12.3%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	71,403	24.1%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	34,623	11.7%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	82,337	27.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	45,031	15.2%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	36,462	12.3%

Notes

This is a cross-sectional analysis as at 31st March 2020, including all people registered to a GP practice in England on that date (excluding national data opt-outs). Categorisation, inclusion and exclusion of specific conditions is derived from: PHE 'at risk' guidance³ and/or Imperial College Health Partners COVID-19 literature review⁴, where those conditions are currently available in the national datasets and data model. The maternity cohort has been temporarily removed whilst data quality issues are investigated, and will be added back in shortly.

References

- 1 Lynn J, Straube BM, Bell KM, Jencks SF. et al. Using population segmentation to provide better health for all: the 'Bridges to Health' model. The Milbank Quarterly 2007: 85(2): 185-208.
- 2 Outcomes Based Healthcare. Segmentation Analytics. Accessed 23 March 2020. https://outcomesbasedhealthcare.com/segmentation-analytics/
- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.



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DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2020 NHS WYRE FOREST CCG

Analysis derived from 'Bridges to Health' Segmentation Data Model v1.5 (Outcomes Based Healthcare), applied to NCDR datasets (NHSE and AGEM CSU) 1,2

'AT RISK' CONDITIONS ³			'POTENTIALLY AT RISK' CONDITIONS⁴	
Asthma	Heart Failure (inc. Severe Heart Failure)	Potentially "Weakened Immune System"3:	Alcohol Dependence	
Atrial Fibrillation	Learning Disability (LD)	Active Cancer (inc. Active Lung Cancer)	Autism	
Bronchiectasis	Multiple Sclerosis	Blood and Bone Marrow Cancer	Cancer (inc. Incurable Cancer)	
Chronic Kidney Disease (inc. Renal Failure)	Obesity	Bone Marrow and Stem Cell Transplants	Cerebrovascular Disease (inc. Stroke)	
Chronic Liver Disease (inc. Liver Failure)	Other Chronic Respiratory Diseases	Downs Syndrome (inc. within LD above)	Dementia	
COPD (inc. Severe COPD)	Other Neurological Organ Failure	Inflammatory Bowel Disease	Frailty (Intermediate or High Risk based on HFRS)	
Coronary Heart Disease	Parkinson's Disease	Organ Transplants	Hypertension	
Cystic Fibrosis	Pulmonary Heart Disease (inc. Pulmonary Embolism)	Rare Diseases	Palliative Care Needs (non-Cancer)	
Diabetes	Severe Interstitial Lung Disease	Rheumatoid Arthritis	Peripheral Vascular Disease	
		Sarcoidosis	Physical Disability	
		Sickle Cell Disease	Serious Mental Illness	
		Spleen Problems (inc. Splenectomy)		

	NHS WYRE FOREST CCG	
GROUP	NUMBER OF PEOPLE	% OF TOTAL POPULATION (all ages)
Total Population (all ages)	119,565	
Total Population (16-69)	77,659	65.0%
Total Population (70+)	22,166	18.5%
People with one or more 'at risk' conditions (70+)	10,416	
People with one or more 'at risk' or 'potentially at risk' conditions (70+)	14,275	
People with no 'at risk' or 'potentially at risk' conditions (70+)	7,891	
People with one or more 'at risk' conditions (all ages)	25,569	21.4%
People with one or more 'potentially at risk' conditions (all ages)	22,058	18.4%
People with one or more 'at risk' or 'potentially at risk' conditions (all ages)	33,772	28.2%
People with two or more 'at risk' conditions (all ages)	9,501	7.9%
People with two or more 'at risk' or 'potentially at risk' conditions (all ages)	17,289	14.5%
Core older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions)	37,319	31.2%
Age 16-69 core clinically 'vulnerable' group (people with one or more 'at risk' conditions)	14,342	12.0%
Wider older and clinically 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions)	41,663	34.8%
Age 16-69 wider clinically 'vulnerable' group (people with one or more 'at risk', or 'potentially at risk' conditions)	18,495	15.5%
Multimorbid 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions)	17,289	14.5%

Notes

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- 3 Cabinet Office. Guidance Staying alert and safe (social distancing). Updated 22 May 2020. Accessed 27 May 2020. <a href="https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-dis
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.

