

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 and Hospital Frailty Risk Score data. As of November 2019, the Model has produced information that includes the segments and sub-segments (conditions) for the 62 million people in the GP registration list, for each month over the last three years (April 2016 – March 2019).
- Further information on the NSM can be found in the [National Segmentation Workspace on FutureNHS](#).

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, and Frailty. Excludes clinical primary care data, but includes a Master Patient Index for anyone registered to a GP practice in England since August 2014. Additional datasets covering Mental Health, Community Services, SLAM, IAPT currently being added.
- 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:

- 13 million (c.22% of England's population) 'At Risk' of severe COVID-19 illness
- 2/3rds (8.5 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 (2.7 million) of the over 70s have no currently known risk for COVID-19 complications
- Wide variation at CCG level (between 11-31%) in size of the 'At Risk' 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.1.5 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 case-finding 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)
- Not all known 'At Risk' conditions currently included in model- being updated shortly to add these in (where data exists in NCDR)
- Population volumes as at 31.03.19- being updated to Month 11 (Feb 2020) shortly
- 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 2019

OUR HEALTHIER SOUTH EAST LONDON STP

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

| 'AT RISK' CONDITIONS ³ | 'POTENTIALLY AT RISK' CONDITIONS ⁴ |
|---|---|
| Asthma | Autism |
| Atrial Fibrillation | Cancer (inc. Incurable Cancer) |
| Bronchiectasis | Cerebrovascular Disease (inc. Stroke) |
| Chronic Kidney Disease (inc. Renal Failure) | Dementia |
| Chronic Liver Disease (inc. Liver Failure) | Frailty (Intermediate or High Risk based on HFRS) |
| COPD (inc. Severe COPD) | Hypertension |
| Coronary Heart Disease | Inflammatory Bowel Disease |
| Diabetes | Peripheral Vascular Disease |
| Heart Failure (inc. Severe Heart Failure) | Physical Disability |
| Learning Disability | Rheumatoid Arthritis |
| Motor Neurone Disease | Serious Mental Illness |
| Multiple Sclerosis | |
| Parkinson's Disease | |

| CONDITIONS BEING ADDED IN SUBSEQUENT VERSIONS (where data available in the NCDR) |
|---|
| Cystic Fibrosis |
| "Problems with Spleen" ³ |
| e.g. Sickle Cell Disease |
| e.g. Splenectomy |
| "Weakened Immune System" ³ |
| e.g. HIV/AIDs |
| e.g. Steroid Treatment |

| GROUP | OUR HEALTHIER SOUTH EAST LONDON STP | |
|--|-------------------------------------|-------------------------------------|
| | NUMBER OF PEOPLE | % OF TOTAL POPULATION (ALL AGES) |
| Total Population (all ages) | 2,013,584 | |
| Total Population (70+) | 159,147 | 7.9% |
| People with one or more 'at risk' conditions (70+) | 69,438 | |
| People with one or more 'at risk' or 'potentially at risk' conditions (70+) | 101,386 | |
| People with no 'at risk' or 'potentially at risk' conditions (70+) | 57,761 | |
| People with one or more 'at risk' conditions (all ages) | 222,566 | 11.1% |
| People with one or more 'potentially at risk' conditions (all ages) | 233,941 | 11.6% |
| People with one or more 'at risk' or 'potentially at risk' conditions (all ages) | 336,291 | 16.7% |
| People with two or more 'at risk' conditions (all ages) | 62,970 | 3.1% |
| People with two or more 'at risk' or 'potentially at risk' conditions (all ages) | 150,650 | 7.5% |
| People in the maternity cohort (all ages, 2nd and 3rd trimester only) | 11,957 | 0.6% |
| Core 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions, or people in maternity cohort) | 323,164 | 16.0% |
| Wider 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions, or people in the maternity cohort) | 404,662 | 20.1% |
| Multimorbid and maternity 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions, or people in maternity cohort) | 162,456 | 8.1% |

Notes

This is a cross-sectional analysis as at 31st March 2019, 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.

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 PHE. Guidance on social distancing for everyone in the UK. Updated 23 March 2020. Accessed 23 March 2020. <https://www.gov.uk/government/publications/covid-19-guidance-on-social-distancing-and-for-vulnerable-people/guidance-on-social-distancing-for-everyone-in-the-uk-and-protecting-older-people-and-vulnerable-adults>
- 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 2019

NHS BEXLEY CCG

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

| 'AT RISK' CONDITIONS ³ | 'POTENTIALLY AT RISK' CONDITIONS ⁴ |
|---|---|
| Asthma | Autism |
| Atrial Fibrillation | Cancer (inc. Incurable Cancer) |
| Bronchiectasis | Cerebrovascular Disease (inc. Stroke) |
| Chronic Kidney Disease (inc. Renal Failure) | Dementia |
| Chronic Liver Disease (inc. Liver Failure) | Frailty (Intermediate or High Risk based on HFRS) |
| COPD (inc. Severe COPD) | Hypertension |
| Coronary Heart Disease | Inflammatory Bowel Disease |
| Diabetes | Peripheral Vascular Disease |
| Heart Failure (inc. Severe Heart Failure) | Physical Disability |
| Learning Disability | Rheumatoid Arthritis |
| Motor Neurone Disease | Serious Mental Illness |
| Multiple Sclerosis | |
| Parkinson's Disease | |

| CONDITIONS BEING ADDED IN SUBSEQUENT VERSIONS (where data available in the NCDR) |
|---|
| Cystic Fibrosis |
| "Problems with Spleen"³ |
| e.g. Sickle Cell Disease |
| e.g. Splenectomy |
| "Weakened Immune System"³ |
| e.g. HIV/AIDs |
| e.g. Steroid Treatment |

| GROUP | NHS BEXLEY CCG | |
|--|------------------|----------------------------------|
| | NUMBER OF PEOPLE | % OF TOTAL POPULATION (ALL AGES) |
| Total Population (all ages) | 244,743 | |
| Total Population (70+) | 29,835 | 12.2% |
| People with one or more 'at risk' conditions (70+) | 12,550 | |
| People with one or more 'at risk' or 'potentially at risk' conditions (70+) | 18,992 | |
| People with no 'at risk' or 'potentially at risk' conditions (70+) | 10,843 | |
| People with one or more 'at risk' conditions (all ages) | 31,585 | 12.9% |
| People with one or more 'potentially at risk' conditions (all ages) | 36,249 | 14.8% |
| People with one or more 'at risk' or 'potentially at risk' conditions (all ages) | 49,267 | 20.1% |
| People with two or more 'at risk' conditions (all ages) | 9,453 | 3.9% |
| People with two or more 'at risk' or 'potentially at risk' conditions (all ages) | 23,415 | 9.6% |
| People in the maternity cohort (all ages, 2nd and 3rd trimester only) | 1,433 | 0.6% |
| Core 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions, or people in maternity cohort) | 50,156 | 20.5% |
| Wider 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions, or people in the maternity cohort) | 61,364 | 25.1% |
| Multimorbid and maternity 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions, or people in maternity cohort) | 24,833 | 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 2019

NHS BROMLEY CCG

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

| 'AT RISK' CONDITIONS ³ | 'POTENTIALLY AT RISK' CONDITIONS ⁴ |
|---|---|
| Asthma | Autism |
| Atrial Fibrillation | Cancer (inc. Incurable Cancer) |
| Bronchiectasis | Cerebrovascular Disease (inc. Stroke) |
| Chronic Kidney Disease (inc. Renal Failure) | Dementia |
| Chronic Liver Disease (inc. Liver Failure) | Frailty (Intermediate or High Risk based on HFRS) |
| COPD (inc. Severe COPD) | Hypertension |
| Coronary Heart Disease | Inflammatory Bowel Disease |
| Diabetes | Peripheral Vascular Disease |
| Heart Failure (inc. Severe Heart Failure) | Physical Disability |
| Learning Disability | Rheumatoid Arthritis |
| Motor Neurone Disease | Serious Mental Illness |
| Multiple Sclerosis | |
| Parkinson's Disease | |

| CONDITIONS BEING ADDED IN SUBSEQUENT VERSIONS (where data available in the NCDR) |
|---|
| Cystic Fibrosis |
| "Problems with Spleen" ³ |
| e.g. Sickle Cell Disease |
| e.g. Splenectomy |
| "Weakened Immune System" ³ |
| e.g. HIV/AIDs |
| e.g. Steroid Treatment |

| GROUP | NHS BROMLEY CCG | |
|--|------------------|----------------------------------|
| | NUMBER OF PEOPLE | % OF TOTAL POPULATION (ALL AGES) |
| Total Population (all ages) | 353,943 | |
| Total Population (70+) | 45,613 | 12.9% |
| People with one or more 'at risk' conditions (70+) | 18,899 | |
| People with one or more 'at risk' or 'potentially at risk' conditions (70+) | 28,750 | |
| People with no 'at risk' or 'potentially at risk' conditions (70+) | 16,863 | |
| People with one or more 'at risk' conditions (all ages) | 46,259 | 13.1% |
| People with one or more 'potentially at risk' conditions (all ages) | 51,938 | 14.7% |
| People with one or more 'at risk' or 'potentially at risk' conditions (all ages) | 71,836 | 20.3% |
| People with two or more 'at risk' conditions (all ages) | 13,879 | 3.9% |
| People with two or more 'at risk' or 'potentially at risk' conditions (all ages) | 33,391 | 9.4% |
| People in the maternity cohort (all ages, 2nd and 3rd trimester only) | 1,938 | 0.5% |
| Core 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions, or people in maternity cohort) | 74,732 | 21.1% |
| Wider 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions, or people in the maternity cohort) | 90,415 | 25.5% |
| Multimorbid and maternity 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions, or people in maternity cohort) | 35,308 | 10.0% |

Notes

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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 2019

NHS GREENWICH CCG

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

| 'AT RISK' CONDITIONS ³ | 'POTENTIALLY AT RISK' CONDITIONS ⁴ |
|---|---|
| Asthma | Autism |
| Atrial Fibrillation | Cancer (inc. Incurable Cancer) |
| Bronchiectasis | Cerebrovascular Disease (inc. Stroke) |
| Chronic Kidney Disease (inc. Renal Failure) | Dementia |
| Chronic Liver Disease (inc. Liver Failure) | Frailty (Intermediate or High Risk based on HFRS) |
| COPD (inc. Severe COPD) | Hypertension |
| Coronary Heart Disease | Inflammatory Bowel Disease |
| Diabetes | Peripheral Vascular Disease |
| Heart Failure (inc. Severe Heart Failure) | Physical Disability |
| Learning Disability | Rheumatoid Arthritis |
| Motor Neurone Disease | Serious Mental Illness |
| Multiple Sclerosis | |
| Parkinson's Disease | |

| CONDITIONS BEING ADDED IN SUBSEQUENT VERSIONS (where data available in the NCDR) |
|---|
| Cystic Fibrosis |
| "Problems with Spleen"³ |
| e.g. Sickle Cell Disease |
| e.g. Splenectomy |
| "Weakened Immune System"³ |
| e.g. HIV/AIDs |
| e.g. Steroid Treatment |

| GROUP | NHS GREENWICH CCG | |
|--|-------------------|----------------------------------|
| | NUMBER OF PEOPLE | % OF TOTAL POPULATION (ALL AGES) |
| Total Population (all ages) | 303,744 | |
| Total Population (70+) | 21,598 | 7.1% |
| People with one or more 'at risk' conditions (70+) | 9,773 | |
| People with one or more 'at risk' or 'potentially at risk' conditions (70+) | 14,122 | |
| People with no 'at risk' or 'potentially at risk' conditions (70+) | 7,476 | |
| People with one or more 'at risk' conditions (all ages) | 33,849 | 11.1% |
| People with one or more 'potentially at risk' conditions (all ages) | 36,254 | 11.9% |
| People with one or more 'at risk' or 'potentially at risk' conditions (all ages) | 51,171 | 16.8% |
| People with two or more 'at risk' conditions (all ages) | 9,807 | 3.2% |
| People with two or more 'at risk' or 'potentially at risk' conditions (all ages) | 23,431 | 7.7% |
| People in the maternity cohort (all ages, 2nd and 3rd trimester only) | 2,074 | 0.7% |
| Core 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions, or people in maternity cohort) | 47,597 | 15.7% |
| Wider 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions, or people in the maternity cohort) | 60,512 | 19.9% |
| Multimorbid and maternity 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions, or people in maternity cohort) | 25,476 | 8.4% |

Notes

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NHS GREENWICH CCG

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NHS LAMBETH CCG

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

| 'AT RISK' CONDITIONS ³ | 'POTENTIALLY AT RISK' CONDITIONS ⁴ |
|---|---|
| Asthma | Autism |
| Atrial Fibrillation | Cancer (inc. Incurable Cancer) |
| Bronchiectasis | Cerebrovascular Disease (inc. Stroke) |
| Chronic Kidney Disease (inc. Renal Failure) | Dementia |
| Chronic Liver Disease (inc. Liver Failure) | Frailty (Intermediate or High Risk based on HFRS) |
| COPD (inc. Severe COPD) | Hypertension |
| Coronary Heart Disease | Inflammatory Bowel Disease |
| Diabetes | Peripheral Vascular Disease |
| Heart Failure (inc. Severe Heart Failure) | Physical Disability |
| Learning Disability | Rheumatoid Arthritis |
| Motor Neurone Disease | Serious Mental Illness |
| Multiple Sclerosis | |
| Parkinson's Disease | |

| CONDITIONS BEING ADDED IN SUBSEQUENT VERSIONS (where data available in the NCDR) |
|---|
| Cystic Fibrosis |
| "Problems with Spleen"³ |
| e.g. Sickle Cell Disease |
| e.g. Splenectomy |
| "Weakened Immune System"³ |
| e.g. HIV/AIDs |
| e.g. Steroid Treatment |

| GROUP | NHS LAMBETH CCG | |
|--|------------------|----------------------------------|
| | NUMBER OF PEOPLE | % OF TOTAL POPULATION (ALL AGES) |
| Total Population (all ages) | 428,622 | |
| Total Population (70+) | 22,126 | 5.2% |
| People with one or more 'at risk' conditions (70+) | 9,983 | |
| People with one or more 'at risk' or 'potentially at risk' conditions (70+) | 13,924 | |
| People with no 'at risk' or 'potentially at risk' conditions (70+) | 8,202 | |
| People with one or more 'at risk' conditions (all ages) | 40,054 | 9.3% |
| People with one or more 'potentially at risk' conditions (all ages) | 39,102 | 9.1% |
| People with one or more 'at risk' or 'potentially at risk' conditions (all ages) | 59,096 | 13.8% |
| People with two or more 'at risk' conditions (all ages) | 10,724 | 2.5% |
| People with two or more 'at risk' or 'potentially at risk' conditions (all ages) | 25,128 | 5.9% |
| People in the maternity cohort (all ages, 2nd and 3rd trimester only) | 2,344 | 0.5% |
| Core 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions, or people in maternity cohort) | 54,323 | 12.7% |
| Wider 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions, or people in the maternity cohort) | 69,377 | 16.2% |
| Multimorbid and maternity 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions, or people in maternity cohort) | 27,438 | 6.4% |

Notes

This is a cross-sectional analysis as at 31st March 2019, 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.

References

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NHS LEWISHAM CCG

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

| 'AT RISK' CONDITIONS ³ | 'POTENTIALLY AT RISK' CONDITIONS ⁴ |
|---|---|
| Asthma | Autism |
| Atrial Fibrillation | Cancer (inc. Incurable Cancer) |
| Bronchiectasis | Cerebrovascular Disease (inc. Stroke) |
| Chronic Kidney Disease (inc. Renal Failure) | Dementia |
| Chronic Liver Disease (inc. Liver Failure) | Frailty (Intermediate or High Risk based on HFRS) |
| COPD (inc. Severe COPD) | Hypertension |
| Coronary Heart Disease | Inflammatory Bowel Disease |
| Diabetes | Peripheral Vascular Disease |
| Heart Failure (inc. Severe Heart Failure) | Physical Disability |
| Learning Disability | Rheumatoid Arthritis |
| Motor Neurone Disease | Serious Mental Illness |
| Multiple Sclerosis | |
| Parkinson's Disease | |

| CONDITIONS BEING ADDED IN SUBSEQUENT VERSIONS (where data available in the NCDR) |
|---|
| Cystic Fibrosis |
| "Problems with Spleen" ³ |
| e.g. Sickle Cell Disease |
| e.g. Splenectomy |
| "Weakened Immune System" ³ |
| e.g. HIV/AIDs |
| e.g. Steroid Treatment |

| GROUP | NHS LEWISHAM CCG | |
|--|------------------|----------------------------------|
| | NUMBER OF PEOPLE | % OF TOTAL POPULATION (ALL AGES) |
| Total Population (all ages) | 340,409 | |
| Total Population (70+) | 21,868 | 6.4% |
| People with one or more 'at risk' conditions (70+) | 9,706 | |
| People with one or more 'at risk' or 'potentially at risk' conditions (70+) | 13,916 | |
| People with no 'at risk' or 'potentially at risk' conditions (70+) | 7,952 | |
| People with one or more 'at risk' conditions (all ages) | 36,230 | 10.6% |
| People with one or more 'potentially at risk' conditions (all ages) | 36,789 | 10.8% |
| People with one or more 'at risk' or 'potentially at risk' conditions (all ages) | 54,300 | 16.0% |
| People with two or more 'at risk' conditions (all ages) | 9,543 | 2.8% |
| People with two or more 'at risk' or 'potentially at risk' conditions (all ages) | 23,245 | 6.8% |
| People in the maternity cohort (all ages, 2nd and 3rd trimester only) | 2,220 | 0.7% |
| Core 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions, or people in maternity cohort) | 50,437 | 14.8% |
| Wider 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions, or people in the maternity cohort) | 64,248 | 18.9% |
| Multimorbid and maternity 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions, or people in maternity cohort) | 25,437 | 7.5% |

Notes

This is a cross-sectional analysis as at 31st March 2019, 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.

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 PHE. Guidance on social distancing for everyone in the UK. Updated 23 March 2020. Accessed 23 March 2020. <https://www.gov.uk/government/publications/covid-19-guidance-on-social-distancing-and-for-vulnerable-people/guidance-on-social-distancing-for-everyone-in-the-uk-and-protecting-older-people-and-vulnerable-adults>
- 4 Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.

DRAFT

NHS LEWISHAM CCG

DRAFT - Estimated 'vulnerable' populations 'at risk' of severe illness from COVID-19, in the National Clinical Data Repository (NCDR) England- as at 31st March 2019

NHS SOUTHWARK CCG

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

| 'AT RISK' CONDITIONS ³ | 'POTENTIALLY AT RISK' CONDITIONS ⁴ |
|---|---|
| Asthma | Autism |
| Atrial Fibrillation | Cancer (inc. Incurable Cancer) |
| Bronchiectasis | Cerebrovascular Disease (inc. Stroke) |
| Chronic Kidney Disease (inc. Renal Failure) | Dementia |
| Chronic Liver Disease (inc. Liver Failure) | Frailty (Intermediate or High Risk based on HFRS) |
| COPD (inc. Severe COPD) | Hypertension |
| Coronary Heart Disease | Inflammatory Bowel Disease |
| Diabetes | Peripheral Vascular Disease |
| Heart Failure (inc. Severe Heart Failure) | Physical Disability |
| Learning Disability | Rheumatoid Arthritis |
| Motor Neurone Disease | Serious Mental Illness |
| Multiple Sclerosis | |
| Parkinson's Disease | |

| CONDITIONS BEING ADDED IN SUBSEQUENT VERSIONS (where data available in the NCDR) |
|---|
| Cystic Fibrosis |
| "Problems with Spleen" ³ |
| e.g. Sickle Cell Disease |
| e.g. Splenectomy |
| "Weakened Immune System" ³ |
| e.g. HIV/AIDs |
| e.g. Steroid Treatment |

| GROUP | NHS SOUTHWARK CCG | |
|--|-------------------|----------------------------------|
| | NUMBER OF PEOPLE | % OF TOTAL POPULATION (ALL AGES) |
| Total Population (all ages) | 342,123 | |
| Total Population (70+) | 18,107 | 5.3% |
| People with one or more 'at risk' conditions (70+) | 8,527 | |
| People with one or more 'at risk' or 'potentially at risk' conditions (70+) | 11,682 | |
| People with no 'at risk' or 'potentially at risk' conditions (70+) | 6,425 | |
| People with one or more 'at risk' conditions (all ages) | 34,589 | 10.1% |
| People with one or more 'potentially at risk' conditions (all ages) | 33,609 | 9.8% |
| People with one or more 'at risk' or 'potentially at risk' conditions (all ages) | 50,621 | 14.8% |
| People with two or more 'at risk' conditions (all ages) | 9,564 | 2.8% |
| People with two or more 'at risk' or 'potentially at risk' conditions (all ages) | 22,040 | 6.4% |
| People in the maternity cohort (all ages, 2nd and 3rd trimester only) | 1,948 | 0.6% |
| Core 'vulnerable' group (people aged 70+, or with one or more 'at risk' conditions, or people in maternity cohort) | 45,919 | 13.4% |
| Wider 'vulnerable' group (people aged 70+, or with one or more 'at risk', or 'potentially at risk' conditions, or people in the maternity cohort) | 58,746 | 17.2% |
| Multimorbid and maternity 'vulnerable' group (people with two or more 'at risk' or 'potentially at risk' conditions, or people in maternity cohort) | 23,964 | 7.0% |

Notes

This is a cross-sectional analysis as at 31st March 2019, 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.

References

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- PHE. Guidance on social distancing for everyone in the UK. Updated 23 March 2020. Accessed 23 March 2020. <https://www.gov.uk/government/publications/covid-19-guidance-on-social-distancing-and-for-vulnerable-people/guidance-on-social-distancing-for-everyone-in-the-uk-and-protecting-older-people-and-vulnerable-adults>
- Derived from: Imperial College Health Partners COVID-19 case-finding of older and vulnerable people in NWL, 20 March 2020.