Southampton Strategic Assessment (JSNA)

COVD-19 Vulnerability Indices

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Contents

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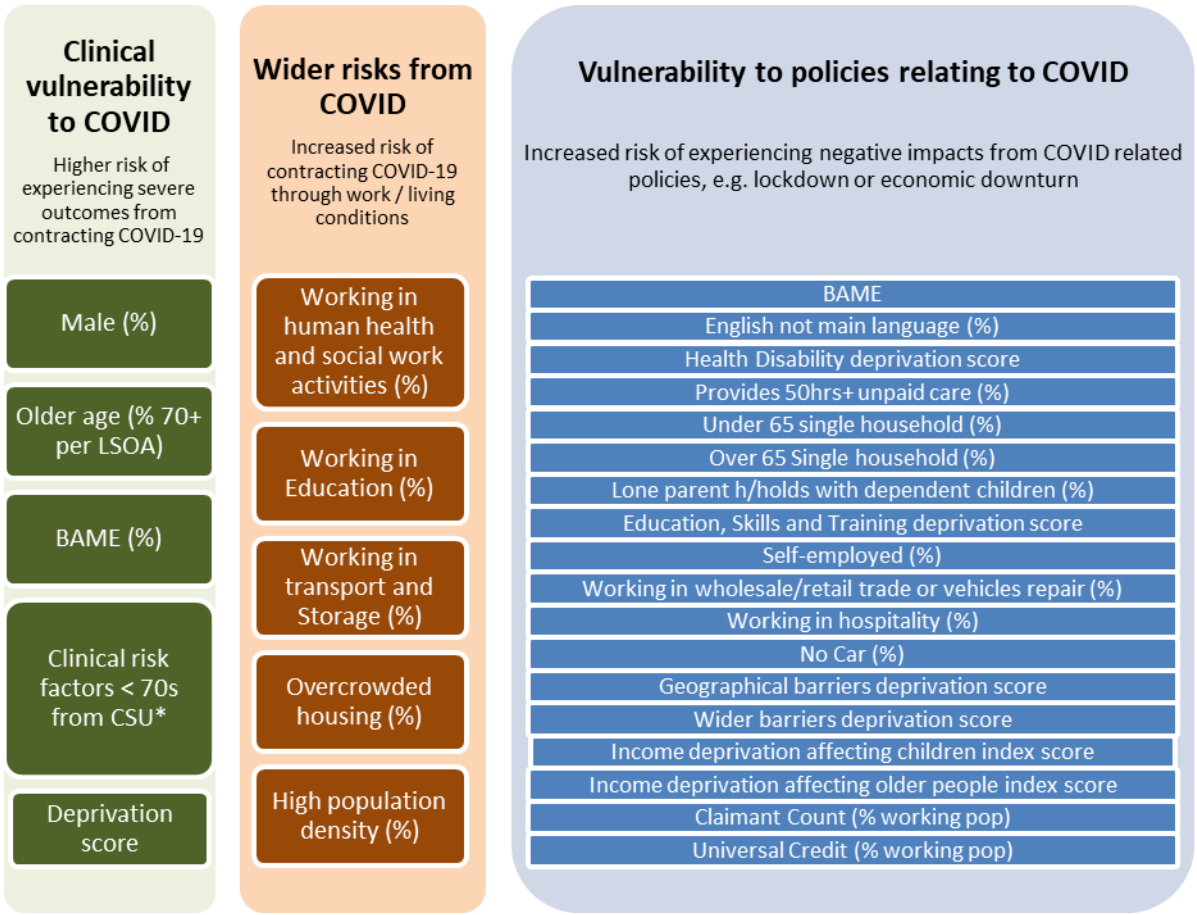
1. Overview

Assorted factors make people more vulnerable at different stages of the COVID-19 outbreak; response, recovery or both. Evidence shows an increased clinical vulnerability to severe outcomes from COVID-19 such as hospitalisation or dying for certain groups of people, as well as specific employment positions and living conditions also widely further increase risks.
Additionally, some groups have greater vulnerability to the negative effects of the 'lockdown' and economic policies put in place in the response and recovery phases.

1.1 Indices Structure

Three separate indices were developed to support the range of approaches for the local authority in different stages and aim to help us understand the potential direct and indirect impact COVID19 may have on our communities. The Indices are not intended to be used as a standalone tool but within the context of local knowledge and other available data. (Figure 1.1).

Figure 1.1:



*Clinical vulnerability includes shielding list patients or has one of QOF diabetes, QOF CKD, QOF COPD, IHD, hypertensive ICD I11-I15, QOF dementia and BMI 40+, and if not already included anyone who has any two of QOF Asthma, QOF hypertension, cardiovascular disease and/or BMI 30-39 (deceased patients were excluded as were those without a postcode).

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Full metadata for indicators can be found in the accompanying spread sheet.

Key points:

- Individual clinical and wider risks to COVID-19, and policies relating to COVID-19, have brought vulnerabilities into sharp focus.
- People facing the greatest deprivation are likely to experience a higher risk of exposure to COVID-19 and existing poor health puts them at risk of more severe outcomes if they contract the virus.
- Southampton has pockets of clinical vulnerability to COVID-19 centred around Bevois, however this may be overestimated by the unweighted inclusion of ethnicity and deprivation. Just looking at the patient data Lordshill, Fremantle and Shirley to have 3 of 4 highest LSOAs
- There are very clear areas across the Southampton which suggest people are more likely to be at risk of contracting COVID-19 through work or living conditions. Particularly in the city centre, Freemantle, Portswood Millbrook, Swaythling and Coxford
- Increased risk of experiencing negative impacts from COVID related policies, e.g. lockdown or economic downturn is much more widespread across the city and is reflective of the wider definition, with focussed areas in the City centre, Redbridge, Thornhill and Woolston, with noticeable lower risk shown in Bassett.

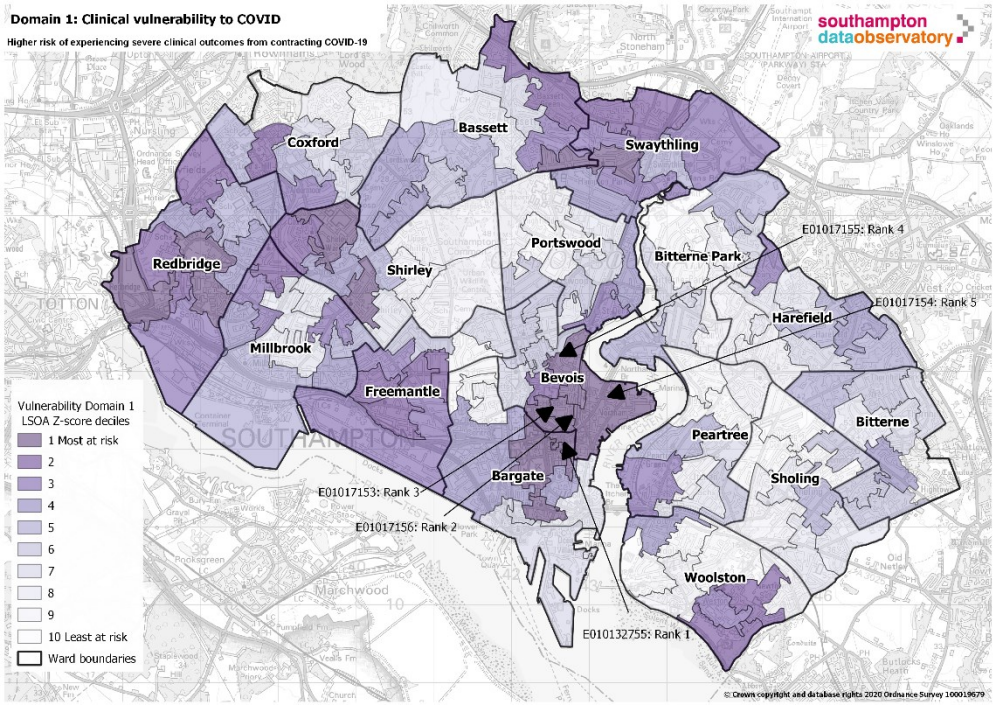
1.2 Method

The indices use (mostly) publicly available indicators at neighbourhood level (the clinical risk data is generated from GP records. A neighbourhood is an Office for National Statistics (ONS) geography called a LSOA which includes around 1,500 people per neighbourhood (Southampton has 148). Across the neighbourhoods, different indicator data have different 'shapes'. The highest value for each indicator is that for the most vulnerable. When ranked in value order some indicators have an average that is clustered around the middle, some have averages clustered closer to the ends. A method called 'z-scoring' forces the values, in value order, to all follow a bell-shaped curve (normal distribution). This makes them more comparable for combining them together into an index. The combined total for each LSOA was split into tenths or deciles for mapping. Decile one suggest areas that may be more at risk of vulnerability and decile ten are areas that may be less at risk of vulnerability.

Figure 2.1 maps neighbourhoods with the higher risk of experiencing severe clinical outcomes from contracting COVID-19 in the darkest colours.
Figure 3.1 maps neighbourhoods with an increased risk of contracting COVID-19 through working and living conditions in darker colours
Figure 4.1 maps neighbourhoods with an increased risk of vulnerability to COVID-19 related policies

2. Domain 1: Clinical vulnerability to COVID

Figure 2.1: Showing higher risk of experiencing severe clinical outcomes from contracting COVID-19



3. Domain 2: Wider risks from COVID

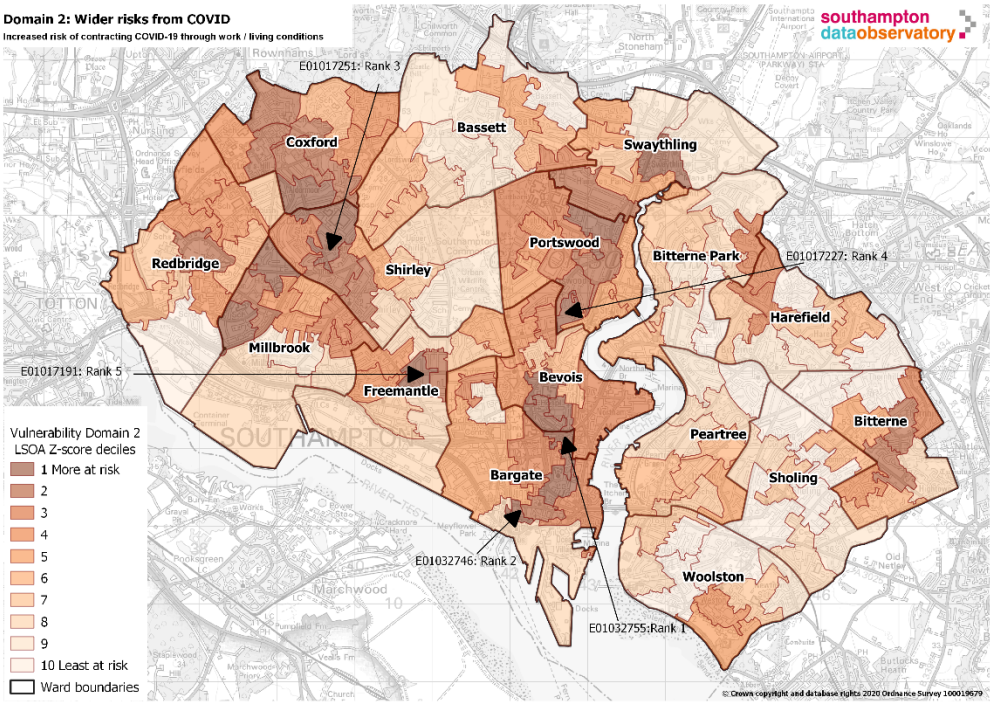


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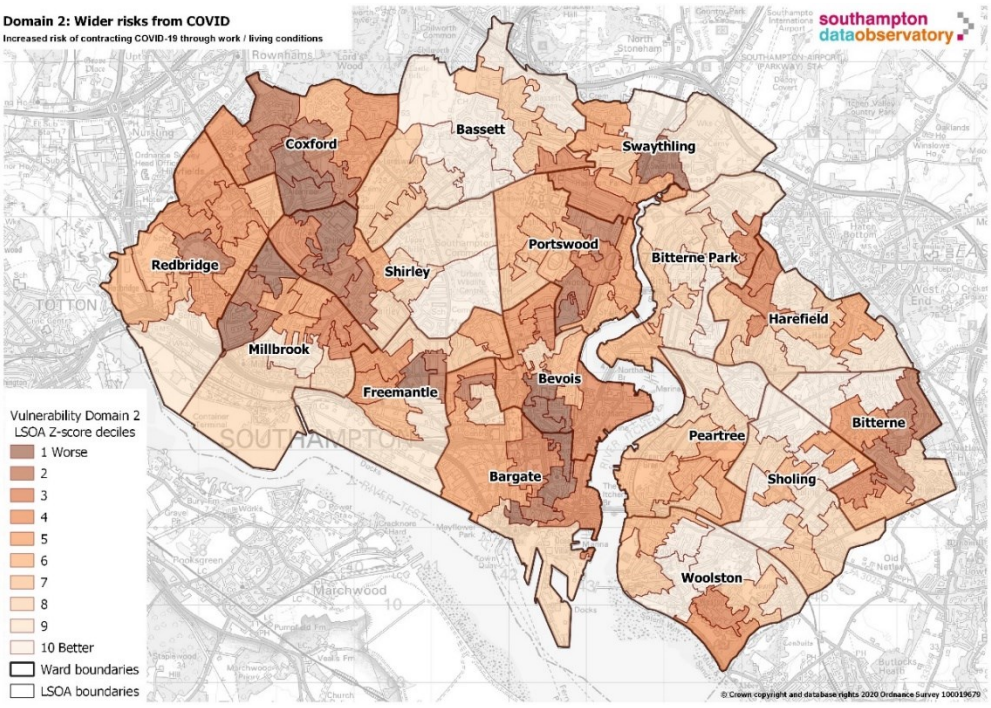
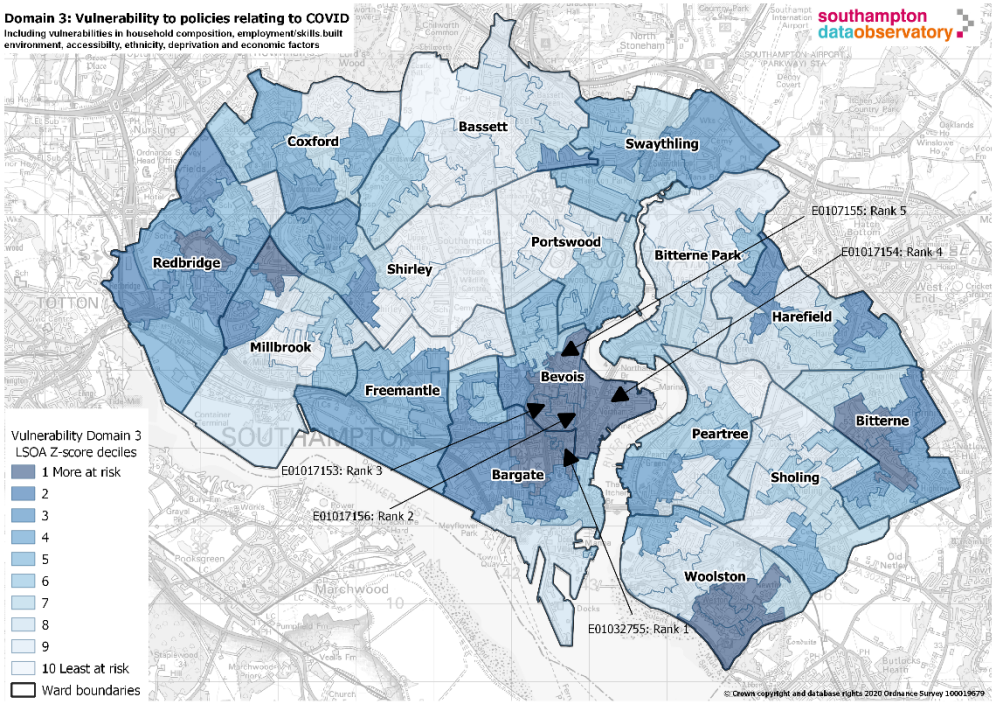
Figure 3.1: Increased risk of contracting COVID-19 through working and living conditions



4. Domain 3: Vulnerability to policies relating to COVID-19

Figure 4.1: Increased risk of vulnerability to COVID-19 related policies



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