Want to understand the Covid map? Look at where we live and how we work

Danny Dorling

It’s social, not medical, science that tells us most about the disparate spread of this pandemic

Why does the late November map of the three-tier system in England look so much like a depiction of the north-south divide? In one sense, the explanation is simple: the tiers are principally set according to prevalence of the disease in each area and that is higher in much of northern England.

But why is the disease currently more common in the north? Why, in early autumn, were you more likely to be infected if you lived there? In

part, this might be due to the seasonal nature of the virus and autumn comes first to the north. However, that does not explain why North Yorkshire and Cumbria are not now in the highest tier.

The greater truths are that in **poorer, more often northern**, parts more people have jobs that cannot be done from home and more use public transport. Frequently, childcare is provided by the extended family who live nearby – wages and benefits are usually too low to allow other childcare options. There is less early retirement and more pensioners need to work too. Further, **overcrowding in homes** in cities is more common and anyone out of work exacerbates that.

There is also the **question of taking a test**. People are often not sure whether they have symptoms or not. If the implication of volunteering to take a test is that you and your family are then trapped in a small home for two weeks, that your older children cannot go out to work, that your school-age children will be trying to learn at home with whatever computer you have (if any), and that you and any partner you have also cannot go out – would that influence whether you thought a test was worth it? Of course it would.

The picture is different in the more leafy suburbs of southern towns. People are less likely to have relatives who live nearby and with whom they mix. They are less likely to have work that requires them to have frequent contact with many others. Indeed, they are less likely to be out of work and have time that can only meaningfully be filled by human contact. If they take a test and the result is positive, they can more often carry on working. What’s more, their children might all have their own bedrooms and their own parents might not be reliant on them popping round.
England’s new lockdown measures

Tier 3 Very high alert
Indoor household mixing banned. Pubs and bars closed except for takeaways. Indoor entertainment venues closed. No unnecessary travel outside area

Tier 2 High alert
No indoor household mixing, including hospitality. Pubs and bars can only open to serve alcohol with 'substantial meals'. Indoor entertainment venues open. Restricted spectator sport resumes

Tier 1 Medium alert
Rule of six applies indoors and outdoors. Pubs and bars can serve just alcohol. Indoor entertainment venues open. Spectator sport less restricted than in tier 2

Guardian graphic. Source: Public Health England
Measures come into effect on 2 December
In short, the geographical map of the disease today is a product of various factors, many of them deeply embedded in the diverse ways Britons live their lives. But in the discussions around Covid, social scientists – those who look at people’s lives in the round – are too often absent.

We need to look, for instance, at the economies that have evolved in different places and the networks of care – to look, in short, at the extent to which there is a close-knit and well-connected society in each place. It’s not just about examining individuals and their small, nuclear families. So, socially and economically, much of Kent, south Gloucestershire and northern Somerset is a little more like the north of England than other parts of the south; it is therefore not so surprising that these areas have been placed in the highest tier.

In the next few months, before both the warmth of spring and the distribution of vaccines kick in, the pattern we see today might change little. While we wait, some people can afford, and are able, to isolate and distance far more easily than others. Because of this, southern counties will tend to report lower rates of infection and remain in lower tiers (or be put in them earlier).

There are, however, complications to the geographical story. We also need to know why rates of transmission in London, which contains some of the poorest places in the UK, have remained so low. Perhaps because the virus can no longer spread as easily there as it did initially. Again the explanation is, in large part, sociological.
When Covid-19 first arrived in the UK, it did so disproportionately in the home areas of those who had skied in Italy in February – largely, affluent districts of southern England. (At one point, there was a lot of Covid-19 in Kensington and Chelsea.) However, it quickly spread from those areas and to the rest of London more than any other place in the UK.

London has by far the greatest density of population and, in February and March, it experienced the most travel in and out. London had the most social mixing and, very likely, the highest rate of infection before voluntary social distancing began. (We will never know for sure, as surveillance testing of the population did not begin until months later.)

Today, London is a little less crowded and much less busy, but we know, from the Office for National Statistics’ (ONS) survey of large random samples of the population, the proportion who have antibodies. That figure is at its highest in the capital. London is also very well served with hospitals per person (compared with the rest of England) and has a relatively small elderly population. Last week, the ONS revealed that its central estimate for the proportion of people aged 70 or over with the disease in the capital had fallen slightly to 0.55% and was lower than in every region in the north. It had never risen above 0.58%.

Like London, the Liverpool City region is now to be in tier 2 because transmission rates there are now falling. This is only speculative as yet, but perhaps it is because so many people recently had the virus in Liverpool that, as in London, susceptibility might have fallen, at least enough to make a difference in reducing transmission.

It is inevitable that national and local politicians will want to claim credit for any fall in disease rates. However, it is worth being patient and waiting for the longer-term, cross-national studies to emerge. These will,
hopefully, reveal which political approaches and specific interventions helped most, which were largely irrelevant and which might have made things worse.

What’s certain is that the key to understanding the map is the underlying social and economic geography of England. To understand the changing medical geography of this pandemic, you must first understand how the country lives and works.

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