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## OnMyMind

# Are certain neighbourhoods more prone to being struck by Covid-19?

A better understanding of how the disease affects neighbourhoods differently could allow for more targeted strategies



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Sited outside Toa Payoh's town centre, Lorong 8 is shaped a bit like an elephant trying to make a break into the inner circle.

It is hemmed in by Braddell Road and the Central Expressway, and boasts a motley mix of older flats – mostly built in the 1970s and 1980s – polyclinics, funeral homes, car workshops and depots.

It also has an immensely popular hawker centre. Growing up in Toa Payoh, I went there for grilled chops with my family when we were up for splashing out on “Western cuisine”.

Toa Payoh is the most recent housing estate to be reeling from the emergence of a handful of Covid-19 clusters. Aside from the bus interchange – the latest in a string affected across Singapore – Lorong 8 boasts the most number of cases. At least 40 cases from the hawker centre alone have been reported.

A few traffic junctions away, another 10 cases had been linked to a wholesale vegetable market that set up shop on the street every night, selling at a discounted rate to bargain hunters – including, no doubt, those from Lorong 8.

Was it just pure bad luck, or were there factors that made Lorong 8 Toa Payoh susceptible to becoming a Covid-19 cluster?

A study that was released this month and reported in The Straits Times looked at why clusters form, and suggests that there is a way to

assess and predict how vulnerable each neighbourhood is to Covid-19, based on its social and built environmental features.

These metrics range from population density, to the flow of people using public transport, to how diverse the land use is.

Another is this: the neighbourhood's socio-economic status (SES), which the researchers measure using average resale housing prices as a proxy.

Here, in Lorong 8 Toa Payoh, there is a greater proportion of older blue-collar residents, heavily dependent on public transport, says Associate Professor Leong Chan-Hoong of the Singapore University of Social Sciences (SUSS) who led a team of researchers on the study.

There is also a large pool of transient workers who move in and out daily. They could be undertakers or hawkers or car repairmen, who do not have the option to work from home. As part of their jobs, they also interact with members of the public, making the likelihood of transmission higher.

The nature of their work – often in hot, cramped environments – also means that they may not adhere to social distancing measures or wear their masks

properly. Habits such as gathering and smoking in close proximity put them at greater risk.

Cheap food at the hawker centre draws yet more human traffic.

There are limitations to the study, acknowledges Prof Leong.

For instance, there is incomplete data available on where patients live. The study also does not explain why if a place like Lorong 8 Toa Payoh was so susceptible to Covid-19, it did not emerge as a cluster earlier. Then there is the question of other burgeoning clusters which may not be mapped so neatly on the study's metrics.

But it provides some food for thought on the question of whether there are some neighbourhoods in Singapore that are more inherently prone to being struck by Covid-19, and if so, whether poorer Singaporeans are more vulnerable as a result.

Another study, from the Singapore University of Technology and Design, identified a list of “spatial super-susceptible” locations, where there is a higher likelihood of contracting the disease, based on human movement flows. They tend to be public transport nodes in the northern and western parts of Singapore such as Choa Chu Kang Central, Woodlands East and Yishun West.

looks at 15 census indicators covering traits like socio-economic status, household composition, minority status, housing and transportation.

One might argue that Singapore, being far smaller than the US, does not need to go down this route.

Indeed, our careful urban planning policies and management of the population mix at local levels have ensured that by and large, there is a certain baseline in terms of amenities, transport links and balance of housing types in all sub-zones across Singapore.

But the fact is that the profile of the residents of Lorong 8 Toa Payoh, their activities and modes of transport, will be quite different from those of Punggol Field or Marine Parade or One Tree Hill.

If it is established that lower-income neighbourhoods do tend to be more at risk of being struck by Covid-19, it confirms the niggling suspicion that poorer Singaporeans are more vulnerable to contracting and spreading the disease – and often because they have fewer good options.

So what can be done? Prof Leong suggests some kind of allowance that recognises the vocational risk that low-income workers in essential services bear, to help ameliorate the financial pressure that so often impels poor decisions and risky behaviour.

But beyond that, there must be a heightened sensitivity to the structural challenges that such Singaporeans face, especially during a pandemic, and to offer multi-faceted solutions accordingly.

I was struck, for instance, by a Sept 14 government advisory titled, “What happens when you test positive for Covid-19?”, which exhorts patients to “immediately return home via private transport (car or taxi)”, and then, “isolate yourself in a room with an attached bathroom”.

Not every flat comes with an en-suite, and even if there is one, a reconfiguring of living spaces could mean such disruption to the household that some families may choose – unwisely – not to adhere to the rules.

Those who cannot safely do what policymakers advocate have to be quickly given other options such as alternative stay-at-home facilities.

To the Government's credit, it has been keenly cognisant of the needs of the more vulnerable. For instance, herculean effort had been put in to ensure that there is free and easy access to vaccines under the national programme, wherever people live. This is the biggest piece of the puzzle, since getting everyone vaccinated is key to tackling the pandemic.

But a better understanding of how Covid-19 affects neighbourhoods differently will be useful for this as well as future pandemics.

Even before Covid-19 reared its head, many have warned of a Singapore that is increasingly being experienced as two different worlds: one of the rarefied air of exclusive restaurants, private cars and spacious homes; and one of hawker centres, MRT trains and public flats.

Covid-19 brought to the forefront how those differences can be a matter of safety and potentially, life and death.

In the United States, there is a social vulnerability index developed by the US Centres for Disease Control and Prevention. It

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