



The study says that "the continually high percentage contribution of work-related infections, despite work distancing being effective, suggests that the workplace is a key infection site in Singapore". ST PHOTO: BENJAMIN SEETOR

Workplace distancing more effective than school closures: Study

Sick adults more likely to go to work than kids are to go to school, spreading virus, it finds

Salma Khalik
Senior Health Correspondent

Workplace distancing is far more effective in reducing the spread of Covid-19 than school closures, said a team of experts.

They noted in a study that sick adults are more likely to go to work than sick children are to go to school. The adults would spread the virus to co-workers, who would bring it back to their own homes.

The team – mostly from the National University of Singapore Saw Swee Hock School of Public Health – said workplace distancing, quarantine and school closures combined give the best outcome, an approach that should be immediately deployed "if local secondary transmission is confirmed within Singapore. However, quarantine and workplace distancing should be prioritised over school closure".

Singapore is not at the stage where all these measures need to be in place yet, said Associate Pro-

fessor Alex Cook, one of the authors of the study, which was funded by the Ministry of Health and the Singapore Population Health Improvement Centre.

The team assessed various scenarios and the effectiveness of different strategies to keep patient numbers within manageable proportions – flattening the infection curve, as it is called. Their calculations start from the moment 100 unidentified patients in Singapore may be spreading the disease in the community.

The study uses the median from 1,000 simulations carried out for each of five scenarios: doing nothing; quarantine; workplace distancing; school closures; and a combination of the last three.

If all three measures are in place, infection numbers would range from 1,800 to more than 250,000 by day 80, depending on the rate of transmission.

The lower number is based on a rate of one person infecting 1.5 others; the upper figure is from one person infecting 2.5 others. These are

the ranges experts have given for the transmissibility of the virus.

At the lower rate, workplace distancing would reduce the number of people infected by day 80 to 4,000. There would be 10,000 infected people if only schools were closed.

Health Minister Gan Kim Yong told Parliament last Wednesday: "If we do nothing, the number of cases will shoot up, like what happened in several cities and countries recently."

The study, published in *The Lancet Infectious Diseases* journal last Monday, noted that if no measures had been taken, the number of infections here would have been between 279,000 and 1.2 million by day 80.

If Singapore had not started contact tracing and quarantining close contacts, there would have been 100 unidentified people with Covid-19 by early last month, with day 80 falling in mid-April.

Prof Cook said the scenarios apply when contact tracing is no longer possible because of the volume of cases, which is not the situation yet.

"At present, transmission is still being contained here: The large increase in cases has been driven by citizens and residents returning

from outbreak areas. But there's no evidence that contact tracing is 'breaking down' because of this.

"At least for now, there would be little benefit to closing schools. I'm sure that this option will be considered if children start to play a more important role in the outbreak."

But he said people who can work from home should do so. "Older people, including working-age adults, are at greater risk of complications, which is why work distancing is being promoted."

The study said: "The continually high percentage contribution of work-related infections, despite work distancing being effective, suggests that the workplace is a key infection site in Singapore."

This was supported by Mr Gan: "In Singapore, we saw a few local clusters emerge where individuals who were feeling unwell or had medical certificates... did not minimise social contact, and continued to attend work or social activities."

Singapore invoked the Infectious Diseases Act last Wednesday, giving the Government the power to punish those who flout Covid-19-related medical leave.

The study added that another area of concern is the Singaporean habit of eating out.

About 75 per cent of people go to a hawker centre at least once a week, according to the Ministry of the Environment and Water Resources. If possible, people should be incentivised to stay at home and practise workplace distancing, the study noted.

Singapore has closed all pubs, discos and other leisure locations where crowds gather. Eating joints have been told to keep groups of patrons separated by 1m.

The study indicated that most infections, whether interventions are in place or not, would be in the east and north-east of the country. Most of the spread would occur in homes or the community.

The study acknowledged that interventions needed to prevent community transmission might not be widely supported by the population.

But it added: "Current government-led outbreak control measures will only be successful with public cooperation through exercising good hygiene, infection prevention in shared spaces, and adequate education to understand when symptoms might be indicative of a potential Sars-CoV-2 infection."

salma@sph.com.sg

Effectiveness of measures if transmission rate was one person to two others

NOTHING DONE

Total infections	727,000
Home/community	372,000
School	4,300
Workplace	351,000

ONLY QUARANTINE

Total infections	130,000
Home/community	66,000
School	600
Workplace	63,000

ONLY SCHOOL CLOSURE

Total infections	97,000
Home/community	46,000
School	500
Workplace	51,000

ONLY WORKPLACE DISTANCING

Total infections	67,000
Home/community	28,000
School	300
Workplace	38,000

COMBINED INTERVENTION

Total infections	50,000
Home/community	21,000
School	200
Workplace	28,000

NOTE: These are projected infection rates at day 80, from the time there are 100 unidentified people with Covid-19. Figures may not add up due to rounding off.

Source: INTERVENTIONS TO MITIGATE EARLY SPREAD OF SARS-COV-2 IN SINGAPORE: A MODELLING STUDY, THE LANCET INFECTIOUS DISEASES
SUNDAY TIMES GRAPHICS