Proper ventilation is key

Experts: Confined spaces increase chances of catching virus

By CLARISSA CHUNG
clarissachung@thestar.com.my

PETALING JAYA: Better ventilation is needed to prevent the spread of the Covid-19 virus, health experts say, as the World Health Organisation (WHO) recognises that the disease could be transmitted by air.

Universiti Malaya epidemiologist Prof Datuk Dr Awang Bulgiba Awang Mahmud said that there had been a lot of debate surrounding the virus' mode of transmission when it first surfaced.

In March last year, the WHO had considered Covid-19 to be mainly transmitted via droplets, which are more than five to 10 micrometres in diameter.

However, it later gave an update that the virus could be spread by airborne transmission, citing research suggesting that the infection could be caused by aerosols which are less than five micrometres in diameter.

"There was a lot of confusion on this, and people were splitting hairs on what constituted droplets or aerosols," he said.

Dr Awang Bulgiba said as the Covid-19 virus is likely to spread through the air, Malaysians may need to be more mindful of how ventilation plays a role in transmission.

"Airflow and ventilation affect the spread of the virus in the air, so if the virus is airborne, I would expect it to be able to travel much further than one metre – it may even travel for several metres.

"This also means that it could possibly spread much further than we think," he said, adding that the one-metre physical distancing standard was "minimum" and may be a rule that needed to be reviewed upwards.

He, however, added that Malaysians do not need to panic over the airborne transmission of the virus.

"Preventive measures will not change drastically because of this, as mask wearing has always been a part of our non-pharmaceutical interventions.

"The questions that may arise will be whether we need to wear better masks (N95 masks rather than surgical masks), whether we should start wearing face shields and whether we need physical distancing of greater than one metre.

"We also really need to look into the role of ventilation and airflow in spreading the virus," he said.

In April, WHO updated its Q&A page to include how aerosols could lead to long-range transmission of the virus in poorly ventilated areas.

"Current evidence suggests that the virus spreads mainly between people who are in close contact with each other, typically within one metre (short-range). A person can be infected when aerosols or droplets containing the virus are inhaled or come directly into contact with the eyes, nose or mouth.

"The virus can also spread in poorly ventilated and/or crowded indoor settings, where people tend to spend longer periods of time. This is because aerosols remain suspended in the air or travel farther than one metre (long-range)," it said.

Universiti Putra Malaysia medical epidemiologist Assoc Prof Dr Malina Osman said the Covid-19 virus can be transmitted both through droplets and through aerosolised particles released in confined spaces.

"Droplet transmission is through direct contact with body fluids from either coughing or sneezing, or touching the droplets on surfaces. Airborne transmission is a situation when the virus can be spread through the air.

"If the sources of infection are present, for instance if infected people remove masks and begin talking or eating, in confined and poorly ventilated areas, the virus is released to the air as aerosolised particles, and thus has higher chances of spreading to others," she said.

In Singapore, the authorities have issued guidelines on ways to improve ventilation and air quality to curb the spread of the disease.