

City Talk



Air travel can be safe with effective air management systems. REUTERS

LET'S CLEAR THE AIR ON TRAVEL RISKS IN VIRUS ERA

The pandemic may either be gradually receding or getting worse, depending on how you project the pattern of infection.

But one thing is sure for us here: most of the recent cases are imported.

And of these cases, most of them are air passengers, which leads some of us to think that air travel could be a high-risk event in recent times.

I happened to be reading an article published in a recent issue of the *Ashrae Journal*. Ashrae is the acronym for the American Society of Heating Refrigeration and Air-Conditioning Engineers, which is recognized as the world's leading authority in indoor air engineering.

An expert's view of the risks of virus infection in an aircraft cabin revealed that, with the unique combination of low relative humidity (about 10 percent compared to above 55 percent in an air-conditioned room), lower air pressure, and with passengers sitting together for long periods, this could offset the effect of the frequent air changes and the effectiveness of the HEPA filter to combat the transmission of virus.

He argues that the low humidity accelerates the change of air droplets (through coughing or sneezing) to aerosol (by normal breathing), and therefore, the virus can be transmitted over some five rows of passenger seats.

Please note that, so far, there is no concrete proof the virus can be transmitted via aerosol, as most medical experts believe virus infection occurs by droplet transmission or physical contact.

More worrying is that he went on to suggest similar infection possibilities could extend to subway trains and other modes of public transport where passengers are in close proximity to each other.

But I suggest that the conditions in public land transport are rather different.

I am no medical expert, but I do know a tiny dose of virus inhaled into the human



Nuts and bolts

Edmund Leung

body may not necessarily cause infection, as we normally have a certain degree of immunity against viruses in general.

In any event, most air travelers now understand the need to protect oneself, as they wear effective face masks, additional transparent face-shields, and minimize the intake of food and movements in the air.

The fact that aircrews, who by necessity must move about to serve passengers, do not suffer from infections excessively probably proves my point.

Frequent cleaning of surfaces, handrails and other objects, wearing effective protective gear and observing good personal hygiene in disinfecting one's hands and avoid touching one's eyes, nose and mouth are effective means to minimize infection.

Efficient and timely maintenance of an aircraft's air-handling systems and regular replacement of HEPA filters will ensure safe conditions on the aircraft.

I must also point out that while traveling in close proximity on buses and trains may in theory increase the possibilities of infection, it is mitigated by the short time, measured in minutes rather than hours, one dwells in these vehicles.

It should not expose passengers to excessive risks to the point that we need to avoid using them, especially as most of us now observe the need to wear masks and wash our hands often.

Let us continue to trust our professionals to set and maintain the necessary high standards to protect our health and well-being, and not blindly subscribe to theories of absolute possibilities without weighing the relative probability of such rare occurrences.

Veteran engineer Edmund Leung Kwong-ho casts an expert eye over Hong Kong's iconic infrastructure