Sixty seconds on . . . aeroplane waste

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Blue sky thinking?
The US Centers for Disease Control and Prevention (CDC) is reportedly considering sampling aeroplane wastewater in an attempt to track new SARS-CoV-2 variants from China. The idea is being floated in response to the resurgence of covid-19 in China, with modellers predicting cases could hit 3.7m a day by 13 January with deaths potentially rising to 25 000 a day around 10 days later.

Could it be piloted?
While it’s still being considered by the CDC, it’s not such a fanciful idea. Wastewater sampling—also referred to as sewage monitoring—has been used as part of public health plans for decades, including during the US polio outbreaks in 1939. In the UK in recent years it has been used during the covid-19 pandemic to monitor SARS-CoV-2 and also enabled officials to spot poliovirus in London.

Sounds plane and simple . . .
Wastewater sampling works because people infected with SARS-CoV-2 can shed the virus in their faeces, even when asymptomatic. In December 2021, researchers from France tested the wastewater of two planes arriving in Marseille from Addis Ababa, Ethiopia, and found that while mandatory predeparture covid-19 testing was in place, traces of the virus were still detected and a significant number of passengers were found to be infected.

A waste of time?
Since covid-19 is now endemic across the UK and US, with both countries removing the control measures that had kept infection levels at a lower level, it is reasonable to ask whether testing aeroplane wastewater could really make a difference. The answer seems to be no, and yes.

Checking the forecast
While there is unlikely to be much of an impact in terms of reducing transmission, some infectious disease and public health experts think there could be some benefit in terms of getting a clearer view of how SARS-CoV-2 is mutating, especially considering China’s reluctance to share information.

Could the idea take off?
As countries have begun implementing other measures to try to get on top of what’s happening in China, plane wastewater sampling could certainly be an option to consider. Just this week, the UK Health Security Agency asked healthcare professionals to collect samples from patients who have travelled from China.