

## Double threat of COVID-19 and influenza



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At the time of publication, it looks like the second wave of COVID-19 is well underway in Europe. The weekly tally of new cases has been steadily rising for more than 2 months, but the past few weeks have seen accelerated transmission. Cases have also been trending upwards in the USA. Oct 14, 2020, saw the nation register the highest number of new cases of COVID-19 since Aug 7. In general, countries are much better prepared than they were when severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) first exploded onto the scene. But October also marks the beginning of the flu season in the northern hemisphere. If both viruses surge simultaneously, even the best resourced health-care systems would be hard pressed to cope.

The southern hemisphere avoided such an eventuality. Their recently concluded flu season was exceptionally mild. It is possible that behind the apparently low caseload lay thousands of undetected patients. Perhaps influenza testing fell away as countries concentrated their resources on COVID-19. Large numbers of people might have struggled through bouts of influenza at home, hidden from the statisticians. In a briefing to the media on June 15, 2020, WHO director-general Tedros Adhanom Ghebreyesus noted that “influenza surveillance has either been suspended or is declining in many countries, and there has been a sharp decline in sharing of influenza information and viruses because of the COVID-19 pandemic”. He added that “compared with the last 3 years, we’ve seen a dramatic decrease in the number of specimens tested for influenza globally”.

Nonetheless, it is hard to imagine that the precautions against SARS-CoV-2 did not prove even more effective against influenza, a less contagious virus. By this time last year, Australia had confirmed 298 120 cases of influenza and 812 deaths. Thus far

this year, the country has registered 21 156 cases and just 36 deaths. “While influenza testing in Australia and New Zealand is maintained or even increased, very few influenza viruses were detected”, stated WHO, in their most recent influenza update. But whether this will translate to an equivalently mild flu season in the northern hemisphere, where the public is becoming increasingly tired of control measures, remains to be seen. The UK, for example, is unlikely to replicate the kind of lockdown it enacted in the early part of the pandemic.

“I think we are probably going to see a great deal more COVID-19 in the USA over the next few months, as people move indoors and we continue without any concerted approach to containment”, said Daniel Salmon, director of Johns Hopkins Institute for Vaccine Safety (Baltimore, USA). “But we should expect the social distancing and other measures to have some effect on influenza transmission, even if they are not followed across the board.”

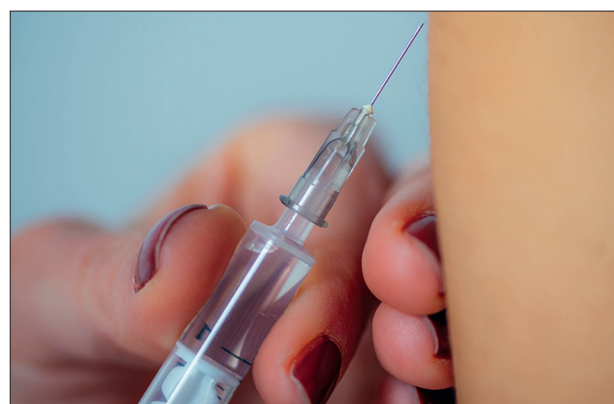
Influenza is notoriously difficult to predict. In terms of how a large outbreak would affect the COVID-19 pandemic, there is not that much that can be said with certainty. “We know very little about co-infection or the interaction between SARS-CoV-2 and influenza”, points out Salmon. “There just have not been enough cases for us to draw any conclusions.” Crucial unanswered questions include: how does co-infection with SARS-CoV-2 and influenza affect mortality from either disease? Is a patient infected with one virus more likely to contract the other? Is the influenza vaccine protective against SARS-CoV-2?

Clinicians will have to become accustomed to distinguishing between influenza and COVID-19. The similar symptoms makes this something of a challenge. “Diagnostics for flu are widely available, but we really need a rapid test for SARS-CoV-2; something

sensitive and specific, with a high positive predictive value”, Salmon told *The Lancet Respiratory Medicine*. “This is not a situation where we should be making diagnoses based on clinical signs alone.” Misdiagnosis could lead to all kinds of problems. Influenza and COVID-19 have different recommended treatments and patients with influenza are not typically told to isolate. “We also need to bear in mind that a diagnosis of COVID-19 or influenza alone would be insufficient to exclude the presence of another co-infecting pathogen”, adds Benjamin Singer, assistant professor of medicine (Pulmonary and Critical Care) at Northwestern University (Chicago, Illinois, USA).

Amid all the uncertainty, experts are agreed on one matter. “We really need to ramp up vaccination against influenza”, said Singer. The UK has ordered 30 000 doses of the influenza vaccine. It aims to vaccinate a wide range of groups, including the older population, health and social care workers, children aged 2–3 years, as well as those in year 7 of school. “The influenza vaccine is by no means perfect”, concluded Singer. “But if countries manage to get as many people vaccinated as possible, they would put themselves in the best possible position to minimise the burden on health-care systems.”

Talha Khan Burki



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