COVID and flu: How big could the dual threat be this winter?

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Credit: Byron Sullivan from Pexels

Although COVID infections are currently low or in decline in most western countries aside from the UK, there's still a long way to go before the threat of the pandemic is over. A big concern this winter is if there's a resurgence of COVID with other respiratory illnesses coming back strongly alongside it—particularly influenza.

In both the southern and northern hemispheres, influenza infections rapidly declined and largely disappeared soon into pandemic. Social distancing measures used to contain COVID were even more effective in reducing the spread of influenza. But unfortunately, this means we now need to be braced for flu to be especially bad this year.

In some ways, immune responses to COVID and influenza are the same. A relatively recent infection or vaccination provides good protection against a subsequent infection, but soon that protection starts to wane. Early reinfections, however, are generally asymptomatic or relatively mild. But the longer the gap between generating immunity and being reinfected, the more severe the subsequent infection is likely to be.

This is particularly obvious when looking at how influenza affects people who live on remote islands. Because they can go for long periods without being exposed to the flu, when they do eventually encounter it, their mortality rates are higher. One study that looked at people living in Tristan da Cunha, a group of isolated south Atlantic islands, found that having just a few years between flu exposures appeared to increase the risk of the disease.

So the concern is that, with COVID control measures having almost completely limited people's exposure to flu over the last 18 months, natural immunity will have fallen across the population. We've essentially all been living on remote islands since the beginning of 2020 thanks to the lockdowns, travel restrictions and working-from-home measures that have been deployed.

When flu does return, it therefore may affect more people and cause more severe disease then we would normally see in a typical flu season. The same will probably also apply to other respiratory viruses. In fact, this might already be happening—recently there have been many anecdotal reports of people getting particularly severe colds in the UK.

However, it's not easy to predict when exactly flu will return, nor how much worse or more common it will be. At present, influenza rates are still quite low in the UK, but this could change quite rapidly if the virus starts to spread.

Fortunately, we have safe and effective flu vaccines that reduce both the risk of infection and severe disease. But they aren't as effective as most of the current COVID vaccines. Plus, how well they work varies year on year. Flu viruses mutate more quickly, meaning multiple strains end up circulating, changing each year. If what turns out to be the dominant viral strain each winter isn't included in the vaccine, then its effectiveness will be lower.

Recommendations for which viruses to include in the annual flu vaccines—created separately for the northern and southern hemisphere winters—are made by the World Health Organization, which assesses the strains that have been circulating beforehand. But with flu cases having been so low this past 18 months, predicting which viruses will be dominant this winter is more difficult than usual. So on top of potentially being more susceptible to flu, there's also a greater than normal risk this year of having a vaccine that isn't as effective as usual.

How this combines with COVID

Even before the pandemic, winter flu added significant pressure on both GP services and hospitals each year. Handling it now, at a time when the health service has many COVID patients occupying hospital beds, would be especially difficult and would intensify pressure on the health service further still. Ultimately, more strain on the NHS puts people's health at risk.

But there's also an additional risk: co-infection. It's possible to have COVID at the same time as another bacterial, fungal or viral infection.

In fact, one study that looked at hospitalized COVID patients estimated that 19% were also carrying another infection. It found that patients with co-infections were more likely to die.

Early in the pandemic, when influenza was still circulating, UK-based researchers were able to compare the outcomes of people with COVID alone vs a COVID-influenza co-infection. People with a co-infection were about twice as likely to be admitted to intensive care, twice as likely to require ventilation and about twice as likely to die than those who just had COVID.

It's not possible to say if we'll see a major influenza epidemic in the UK this year, but if not, there will almost certainly be one soon. And when influenza does return, it's likely to affect more people than in most pre-COVID years and cause more deaths than is typical. The number could be sizeable. In a bad winter, flu kills over 20,000 people in England.

Because of the direct threat posed—and the increased pressure flu will put on health services that will probably still be struggling to cope with COVID—it is doubly important that people take up the offer of influenza and booster COVID vaccines if and when offered this autumn.

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