COVID: Why the UK's autumn vaccine strategy could fail patients

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This summer has seen a large COVID wave—one which is showing the potential to be bigger than the 2023 winter wave was.

The current wave has largely been driven by the so-called FLiRT variants, which have acquired greater immune evasion and the ability to

enter our cells. The rise in COVID cases across the UK has also been accompanied by a spike in hospitalizations.

COVID is not seasonal, as this current wave is stark evidence of. This is why vulnerable people are given spring boosters. Nonetheless, most respiratory infections (COVID included) are at high levels during the colder months. Having access to a COVID booster in the autumn is of great importance, as it protects those who are most vulnerable from severe COVID infections.

The Joint Committee for Vaccination and Immunization (JCVI) have just published their recommendations for the autumn vaccine campaign. Unfortunately, the recommendations they've made mean even fewer people will have access to vaccines for free on the NHS this autumn. And, the vaccines that will be made available may not be as effective against the current variants as newer formulations would be. This could leave more patients at risk of potentially serious infection.

The JCVI use a number of considerations in costing their recommendations for vaccine campaigns (although they have not fully released details of their costing model). What is clear is that the main concern is the cost of buying and delivering vaccines to prevent severe disease and deaths.

This year sees even fewer people able to access the vaccine for free on the NHS. The boosters will be offered to those over the age of 65, residents in old-age care homes and people who are at greater risk of catching COVID due to a compromised immune system. The JCVI haven't advised offering the vaccine to frontline health and social care workers, staff in care homes and unpaid caregivers or household contacts of immunosuppressed people. Fortunately, the government has agreed to maintain the vaccine this year for frontline health workers.

Reduced vaccine coverage leaves those with regular, close access to vulnerable people unable to reduce their own risk of catching or spreading COVID. Although it's possible to purchase vaccines from many pharmacies, this is not cheap—with doses costing as much as £100 . Many people may not have the resources to pay for one.

Vaccines don't just lower the risk of severe infection. They may also lower the risk of developing long COVID after an infection by up to 52%. Recent data shows that the risk of developing long COVID from an infection has not disappeared. The most recent Office for National Statistics data also shows new cases of long COVID are still being reported in the UK. Although fewer new cases are emerging, it's still a significant number.

Despite the benefit of vaccination on reducing long COVID risk, the JCVI say there's not enough evidence showing boosters reduce the risk of the condition. This is why they did not factor the risk of long COVID into their cost-benefit analysis.

The autumn vaccine campaign will also provide eligible patients with left-over vaccines from the Autumn 2023 campaign instead of purchasing new vaccines.

Although using pre-procured doses means less money will be spent on the autumn booster program, research shows older formulations of vaccines are less effective against variants which emerged after they were developed (such as the JN.1 variant). Modeling suggests they'll be up to a third less protective against severe disease.

Indeed, the European Medicines Agency, in line with World Health Organization advice, have recommended boosters be updated to target the JN.1 variants. Several manufacturers have begun preparing updated formulas for mRNA and protein-based vaccines. The US's Food and

Drug Administration noted the upsurge in FLiRT variants and requested a modification to vaccines in order to target this variant as well.

But even with vaccine modifications being made to target this variant it may still be too late, given FLiRT variants are starting to dominate. Recent data suggests the virus is even evolving away from the FLiRT variants with even more evasive features.

The fact we're in a position where we're using vaccines that may be less effective against current variants is enormously frustrating. Ideally, we would be looking to develop or acquire more durable vaccines that confer longer-lasting immunity—such as nasal vaccines or multi-variant universal vaccines that may be more resilient against the ever-evolving virus.

These could potentially have been developed in the UK's vaccine manufacturing production center. However, this center was sold to a private US company in 2022. This leaves us lagging well behind other countries, such as the US, India and China, which are continuing to invest in developing the next generation of vaccines.

Vaccines, of course, aren't the only tool we have. We can reduce the impact of infection by widening access to anti-viral COVID drugs (such as Paxlovid). Access to Paxlovid was to be expanded to cover many vulnerable groups who aren't eligible for the vaccine (such as people who are obese or have diabetes). But the reality is there aren't enough supplies and funding to cover the 15 million people that could become eligible—so these plans cannot yet be implemented. Patients currently eligible to access the drug have described difficulty getting hold of this valuable treatment.

Public health measures such as wearing masks and improving ventilation in buildings could also help lower the risk of infection. But again, no

money is being invested into making these measures more accessible.

COVID is not just another cold. It still has the potential to cause serious disease—and this threat is not going away anytime soon. Ignoring it isn't an option, which is why ensuring people still have access to the latest, most effective vaccines is so important.

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