

Vaccines have been oversold as the pandemic exit strategy

Covid will be around for a long time — virus suppression is the right policy



vaccination service in Salisbury cathedral. Researchers have warned that inoculating the population alone might not induce sufficient herd immunity to stamp out the virus © Finnbar Webster/Getty

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Logistics permitting, about 15m people in the UK will have received at least one dose of a Covid-19 vaccine by some time in February. Provided the second doses are delivered in a timely manner, this should keep the most vulnerable out of hospital.

This milestone will not, however, push us much further towards normality. We do not yet know if the vaccines curb transmission, though it is reasonable to hope they might. Most working-age people are unlikely to receive a first dose before summer. Even if the elderly can savour a newfound freedom, it is unclear why unprotected individuals should be expected to head back to non-essential workplaces, especially amid concern about a deadlier variant. Given that vaccines have been sold as the main exit strategy come spring, some serious expectation management is now required — together with an unrelenting focus on suppressing the virus.

One source of gloom emerged at a briefing last week. Academic researchers warned vaccination alone might not induce sufficient herd immunity to stamp out the virus. **An unhappy combination of imperfect vaccine efficacy, suboptimal take-up and super-infectious variants could derail attempts to reach the herd immunity threshold, when R falls below one and the virus begins to dissipate.** Modelling from the University of East Anglia corroborates this unpalatable possibility.

Another major worry is that countries with poorly controlled transmission might be acting as production lines for dangerous new variants. While current vaccines work against high-profile variants including B.1.1.7, now dominant in the UK, this good fortune might not last.

One variant, first documented in South Africa, shows some resistance in the laboratory to neutralising antibodies, scientists reported in an unreviewed research paper last week. Moderna also said that its vaccine might not be as effective against this variant and has started developing a new formulation that could be given as a booster in the autumn.

The key genetic mutation responsible has also been clocked in a Brazil variant. Yet another has been linked to a surge in California, where 3m cases have been recorded.

Researchers have previously suggested that immunocompromised patients who suffer lengthy infections might act as Petri dishes for such irrepressible strains. But there may be a plausible alternative hypothesis, according to Tulio de Oliveira, a bioinformatician at the University of KwaZulu-Natal. He co-authored the paper on the South African variant and contributes to the World Health Organization's Virus Evolution Working Group. His tip-off led UK scientists to more fully investigate the B.1.1.7 variant.

"We had an open discussion in the group recently about why these variants were emerging independently in so many places," Prof de Oliveira says. "We noticed a common factor about London, the Eastern Cape [South Africa] and Manaus [Brazil], where these three variants appeared: they were very heavily affected in the first wave of infection."

That first wave, the hypothesis goes, produced lots of people with antibodies that then gradually declined over time. In the second wave, some previously infected individuals who re-encountered the virus lacked sufficiently potent immunity to prevent reinfection or kill the virus quickly. In effect, Prof de Oliveira says, a person with waning natural immunity might play the same role as an immunocompromised patient.

If regions with raging transmission do act as breeding grounds for resistant variants, then failing to control spread will prolong the pandemic. Prof de Oliveira stresses that Taiwan, China, Australia and New Zealand, which have chased elimination, are the role models to follow. "This should be a wake-up call for all of us to control transmission, not just in our own regions but globally. This virus will keep outsmarting us if we don't take it very seriously," he says.

That means not just vaccinating but fast testing, accurate and quick contact tracing, quarantine and isolation. In short, vaccination must go hand-in-hand with virus suppression, not become a substitute for it. A successful vaccine rollout will count for little if the country then becomes a crucible for resistant variants.

Over the past year we have given the virus many inches and it has taken many miles. Even mild infections can result in "long Covid", characterised by fatigue and breathlessness that linger for months. The pandemic is also creating a secondary epidemic of trauma among survivors and carers. Countries with rampant transmission are saddling themselves with a chronic health burden, both physical and mental, for decades to come.

Excellent vaccines are, thankfully, reaching millions of arms, but suppression remains a crucial part of the endgame.

Press release

Government Chief Scientific Adviser, Sir Patrick Vallance on the new variant of COVID-19 in the UK

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From: Government Office for Science and Department of Health and Social Care



Commenting on the new variant of COVID-19 in the UK the Government's Chief Scientific Adviser, Sir Patrick Vallance, said:

- The new UK variant comprises a significant number of the our cases. It is spreading 30 to 70% more easily than the old variant. It doesn't differ in terms of age distribution to the original variant.
- When we look at severity and mortality, data for patients who are in hospital with the virus suggest the outcomes for those with the original variant look the same as the new variant. However, when looking at the data for people who have tested positive, there is an indication that the rate for the new variant is higher. Although these data are currently uncertain, **it does appear that this variant has increased mortality compared to the old virus, as well as increased transmission.** For context, with the original variant, if you took a group of 1,000 infected men in their 60s roughly 10 would die. But with the new variant, roughly 13 or 14 of that group might be expected to die.
- There is increasing evidence from studies that vaccines will still work against the UK variant