

Launch of Think Tank 2022: The Front Line in Anti-Covid Efforts

Sarah Gilbert

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Awarded the Albert Medal from the (British) Royal Society of Arts for her work in developing the Oxford-AstraZeneca COVID-19 vaccine



Good morning, good afternoon, good evening. I am Sarah Gilbert, professor of vaccinology at the University of Oxford, and one of the creators of the Oxford AstraZeneca Covid-19 vaccine. I am speaking to you from Oxford, in the UK, where spring has now arrived, bringing with it as always feelings of hope and rejuvenation after the cold dark winter. In the countryside trees are covered in fresh green leaves and there are new lambs in the fields. In the city, trees are covered in blossom. But this year, the sense of hope is stronger than ever.

We are emerging from the lockdown restrictions imposed for our safety during the winter, and as we cautiously return toward the full opening up of society, half of the UK population has received at least a first dose of one of the vaccines that were created, tested and licensed for emergency use in the last sixteen months.

Oxford University partnered with AstraZeneca for the late-stage development and large-scale manufacture of our Covid-19 vaccine. With our encouragement and support, AstraZeneca initiated manufacturing of the vaccine at multiple locations around the world to enable a global vaccine supply. Clinical trials recruited volunteers in many countries so that adults of all ages, many ethnicities and differing states of health took part in the trials. Once the vaccine received approval for emergency use, including approval from the World Health Organization, doses were supplied to COVAX.

From the first deliveries to Ghana and the Ivory Coast in February, within forty-two days, thirty-eight million doses of vaccine had been delivered to a hundred countries via Covax, with thirty-seven million of them the Oxford AstraZeneca vaccine. This is not nearly enough. But whereas the development of vaccines against a new disease, many using new technologies, was achieved more rapidly than many thought possible, and many new partnerships have been formed to produce the vaccines, the unprecedented need to produce enough vaccines for the world in a short space of time has stretched resources and supply lines, resulting in delays in vaccine production and delivery.

All are in this together

No country will be safe until all are safe, and some countries are now suffering greatly. In recent days, new agreements to move vaccine doses, or the raw materials to make them between countries, have been made. But we cannot rely only on vaccines to end the pandemic. Medical supplies are also being provided to assist with demand in the hardest hit countries. Until more people can be vaccinated, we must use non-pharmaceutical interventions to reduce spread of the virus by reducing contact between people.

Lockdowns are hard, but they reduce infections, and in turn, deaths from SARS-CoV-2 [Severe acute respiratory syndrome coronavirus]. For those countries fortunate enough to use vaccines widely, it is essential that we learn more about the effectiveness of the vaccines as they are rolled out. Clinical trials are needed to test the safety and efficacy of novel vaccines, but however promising the results, it is only when millions of people are vaccinated that we can understand how well the vaccines will protect the population.

The UK took the decision to delay the second dose until twelve weeks after the first, and rapidly began to generate data on the effectiveness of this approach, with the oldest members of the population vaccinated first.

Both infections and hospitalization have dramatically decreased as a result. Vaccines have substantially reduced the risk of infection in care homes, in the most vulnerable part of the population. As the lockdown is eased, those most likely to suffer severe disease have been protected.

We also now know that in people who are vaccinated and then become infected, virus transmission to others in the same home was cut by half. As the vaccines are used more widely, we must continue to gather data on their effectiveness over time as well as to track the emergence and spread of new variants of the virus.

We already know that the Oxford-AstraZeneca vaccine is highly effective against the rapidly spreading UK variant. Efficacy may be reduced against the South African variant but there is still the expectation that vaccinated people will be protected against severe disease and death. We need to know more.

As we develop our understanding of the efficacy of the vaccines against new variants, and the duration of protection offered by vaccination, the data will inform policy decisions and allow all countries to deploy the vaccines most effectively.

Risks versus benefits

It is also essential to monitor vaccine safety now that many millions of doses have been administered. The benefits of all the vaccines greatly outweigh the risks when virus transmission is occurring at high levels, but we must continue to collect data to ensure the safest use of the vaccines. There is still much to do to bring this pandemic to an end, but the number of vaccines now in use around the world is a source of hope for all of us.

Vaccines have been a neglected area of medical research for some time, but the great need for them to protect us against coronavirus has resulted in expansion of research and manufacturing capabilities. This puts us in a better position to react more quickly the next time that we need to.

Deployment of non-pharmaceutical measures against coronavirus has also shown us how we may prevent the spread of influenza and other respiratory infections. Another vaccine that has been in development for much longer than the coronavirus vaccines is a malaria vaccine developed by my colleague at Oxford, Professor Adrian Hill. This recently demonstrated high efficacy in a clinical trial in Burkina Faso and offers the prospect of being able to protect children in malaria-endemic areas from that terrible disease.

I would like to end by thanking the Universal Peace Federation for promoting peace and co-operation, to unite countries through interdependence, mutual prosperity and universal values and for bringing particular attention to the leadership of women. It is essential that countries continue to work together at this critical time. Thank you for your attention.