

Emergence from the COVID-19 pandemic through mass vaccination

While COVID-19 is one of the most significant pandemics in recorded history, it has come at a time when science and technology had banked solutions. Just a year after the discovery of a strange pneumonia in Wuhan China vaccines had been developed, tested, and approved for widespread deployment. This unprecedented achievement represents one of the greatest scientific achievements in history. A culmination of centuries of scientific endeavour, collaboration, and financial support has made this possible.

What does this mean for New Zealand? Where do the vaccines come from? How will they be distributed? Mass immunisation campaigns are a challenge in logistics at the best of times but never have we attempted to vaccinate the entire population in a matter of months. Between 2004 and 2006 NZ had a campaign to vaccinate all those aged twenty-years and below, the largest vaccine endeavour in this country. Around one million received the tailor-made meningococcal (MeNZB) vaccine during this time through school and primary health care. This required an expansion of the workforce and a multi-pronged intensive vaccine safety monitoring system, still held up as a gold standard by the international community.

Vaccines are remarkable, but they are not silver bullets. To realise the full potential of COVID-19 vaccines they will need to be deployed fast and the uptake will need to be high. Rather than vaccinating one million people over two years we will aim to vaccinate four to five million people within weeks to months.

Many challenges lie ahead as we move to deploy multiple vaccines to reach everybody equitably and one of the obstacles we face is attaining and maintaining confidence in vaccines. Among those hesitant about vaccines concerns about safety are at the forefront. Being prepared for potential vaccine safety crisis (real or perceived) is essential and requires multi-faceted approaches. We have exceptional tools to monitor the safety of vaccines not just in NZ but internationally. Not only digital applications but big data and statistical methodologies. This talk will focus on how the safety profile of vaccines develops after they are deployed. We must not only be able to detect safety signals but also verify and test them, and today the tools at our disposal are phenomenally powerful.