The COVID-19 vaccines being made available in Australia have passed stringent tests for safety and efficacy. All have been shown to protect against severe disease. The Australian Academy of Health and Medical Sciences welcomes the roll-out of the vaccination program in Australia. By getting vaccinated, we can all help protect ourselves, our families and the wider community from a disease that has already killed millions of people and caused serious illness in many millions more.

We have all seen the impact of COVID-19. Now we have the tools to help save lives and reduce the societal and economic impacts of the pandemic. The vaccines being offered in Australia will provide an essential level of protection for our population when used in combination with public health measures, such as high levels of testing and contact tracing, isolation and quarantine as needed, physical distancing, hand hygiene, the judicious use of face masks, and effective controls at international borders.

The public can be confident about the safety and efficacy of the vaccines because, despite the urgency for approval, the Australian Therapeutic Goods Administration (TGA) has remained committed to a full and robust review process. This ensures that approved vaccines have met strict safety and efficacy criteria. Australia also has the benefit of information from other countries where the roll-out was a more immediate imperative due to uncontrolled transmission and high rates of morbidity and mortality.

The world now has access to multiple vaccines that have been reported to prevent severe COVID-19 disease, and new vaccines are at various stages of development – some of which are very advanced. We are learning that recently emerged SARS-CoV-2 genetic variants can affect vaccine efficacy. Reassuringly, almost all the vaccines have been produced in ways that allow manufacturers to rapidly adapt their products in response, so it is likely that they will be able to maintain high levels of effectiveness against the virus.

The Australian Government, in consultation with scientific experts, public health officials and community representatives, has set out a plan to ensure that those Australians most vulnerable to exposure to the virus, or to the effects of the virus, will have priority access. Vaccine deployment must be accompanied by clear, consistent messaging and accessible information campaigns, informed by social and behavioural researchers. Meaningful community dialogue ensuring an understanding of, and clear responses to, questions and concerns is essential.

**Vaccine equity**

The public health response to the pandemic extends beyond Australia’s borders. It is therefore crucial that all countries have timely and affordable access to vaccines, to ensure that the world’s most vulnerable individuals can be protected. Australia has an important role to play in supporting such access, particularly across the Indo-Pacific region.
This year

The roll-out of the COVID-19 vaccination program in Australia is welcome news for the community, and a testament to the incredible response to the pandemic by the world's health and medical research community. The Academy has previously highlighted that the roll-out will take time and requires additional work by our health system and workforce. Existing public health measures will therefore remain a critical tool as the nation endeavours to maintain its successful response to the pandemic to date.

The crucial role of medical, health and public health science

At the beginning of 2020, COVID-19 was an unfolding threat of unknown proportions. The global medical research effort has been remarkable. Today, just over 12 months later, we have a suite of vaccines supported by robust diagnostic tests, public health measures, and steadily improving treatments for severe COVID-19 disease.

Australian researchers have played an important part in this process. The virus sequence was first reported on 11 January 2020 and our first COVID case was reported on 25 January 2020. Within weeks, Australian researchers had grown the virus, analysed its genetic sequence, and shared these results globally. They had also designed and begun producing some of the first vaccine candidates. Since then, many hundreds of Australian researchers have contributed to every aspect of the fight against COVID-19: helping to stop its spread through public health measures, improving treatments, developing vaccines, supporting informed communication and reducing the social effects on disrupted families and communities.

Ongoing research will remain crucial as the pandemic continues – as we seek to understand how well vaccines are preventing viral transmission and illness, the duration of protection, and how they can be improved. Research will also help to characterise new and emerging SARS-CoV-2 variants. Such research directly impacts Australia’s ability to understand the deep and lasting effects on individuals and communities, and to continue to improve all aspects of the response to the pandemic.