

Rapid evidence checks are based on a simplified review method and may not be entirely exhaustive, but aim to provide a balanced assessment of what is already known about a specific problem or issue. This brief has not been peer-reviewed and should not be a substitute for individual clinical judgement, nor is it an endorsed position of NSW Health.

## Deployment and vaccination plan for COVID-19

### Evidence check question

What is the current guidance on developing a vaccination plan for COVID-19?

### In brief

#### COVID-19 vaccine status

- The World Health Organization (WHO) has released an interim guidance on developing a national deployment and vaccination plan for COVID-19 vaccines.(1) This evidence brief provides a summary of this document, with supplementary information specific to the Australian context.
- As of 2 December 2020, on the [National Centre for Immunisation Research and Surveillance website](#), there were 213 vaccine candidates including 45 vaccine candidates in human clinical trials and 11 vaccine candidates in phase III clinical trials.
- It is anticipated that most SARS-CoV-2 vaccines will require at least two doses for optimal immunogenicity. Storage and distribution temperature will likely be +2°C to +8°C for most vaccines but may require an ultra-cold chain of -20°C to -80°C storage for certain products.(2)
- The COVID-19 vaccine products are likely to have varying vaccine characteristics and presentations and will require different administration techniques.
- The Australian government has established vaccination policy and secured agreements for the supply of four promising COVID-19 vaccines, provided they prove to be safe and effective.(3)
- Early studies looking at hypothetical COVID-19 vaccine acceptance amongst Australians estimated that approximately 4.9% would refuse and 9.4% are indifferent about receiving a COVID-19 vaccine. Inadequate health literacy and lower education level were associated with vaccine reluctance.(4)

#### WHO recommended actions for countries

- Using lessons learned from past vaccine introduction experiences, WHO recommends countries to take immediate actions to prepare for COVID-19 vaccination.

- **Planning and coordination** - establish a national coordinating and technical working committees for COVID-19 vaccine introduction.
- **Regulatory** - confirm to WHO the existence of any expedited regulatory pathway for approval of COVID-19 vaccines.
- **Prioritising, targeting and COVID-19 surveillance** – monitor progress of the national immunisation technical advisory group on COVID-19 vaccines and interim recommendations focusing on prioritisation and risk groups.
- **Service delivery** - update protocols for infection prevention and control measures including adequate personal protection equipment to minimise exposure risk during immunization sessions.
- **Training and supervision** - develop a training plan to prepare for COVID-19 vaccine introduction that includes key groups of participants, content topic areas, key training partners and training methods.
- **Monitoring and evaluation** - develop or adapt existing surveillance and monitoring framework with a set of recommended indicators for COVID-19 vaccines.
- **Vaccine cold chain and logistics** – establish and strengthen the national logistics working group with appropriate terms of reference and standard operating procedures to coordinate COVID-19 vaccines and ancillary products deployment.
- **Safety surveillance** - ensure that guidelines, documented procedures and tools for planning and conducting vaccine pharmacovigilance activities are available. Plan active surveillance of specific COVID-19 vaccine related adverse events.
- **Demand generation and communication** - design a demand plan to generate confidence, acceptance and demand for COVID-19 vaccines. It must include a crisis communications preparedness planning.

### Deciding potential population groups for vaccine prioritisation

- The WHO Strategic Advisory Group of Experts (SAGE) established a values framework and prioritisation roadmap for identifying the target populations to receive the vaccine. The report recommended to prioritise those who are at risk of exposure (frontline healthcare workers), those with increased risk of developing severe disease, being infected with and transmitting the virus and those working in services critical to society functioning.(5)
- In line with these recommendations, the Australian Technical Advisory Group on Immunisation (ATAGI) established principles for vaccine prioritisation which includes:(6)
  - those who have an increased risk of developing severe disease or dying from COVID19
    - older people
    - people with pre-existing underlying select medical conditions
    - Aboriginal and Torres Strait Islander people.
  - those who are at increased risk of exposure and hence of being infected with and transmitting SARS-CoV-2 to others at risk of severe disease
    - health and aged care workers and other care workers
    - people in other settings where the risk of virus transmission is increased (detention facilities).
  - those working in services critical to societal functioning

- select essential services personnel (public health personnel and police)
- other key occupations required for societal functioning.
- Tasked by the Centers for Disease Control and Prevention (CDC), the National Academy of Medicine developed an overarching framework for equitable vaccine allocation to assist policy makers in the domestic and global health community.(7) The framework considered lessons learned from prior mass vaccination efforts and key data on the impact of COVID-19 on certain populations. The allocation criteria are:
  - Phase 1a: frontline health workers and health professionals who are involved in direct patient care and those working in transport and environmental services
  - Phase 1b: people of all ages with comorbid and underlying conditions that put them at significantly higher risk and older adults living in congregate or overcrowded settings
  - Phase 2: school staff and teachers, childcare workers and people and staff in high-risk setting (prisons, jails, detention centres and homeless shelters)
  - Phase 3: young adults, children and workers in industries that are both important to the functioning of society and pose moderately high risk of exposure
  - Phase 4: everyone residing who did not have access to the vaccine in prior phases.

## Limitations

Evidence on this topic is emerging rapidly. This rapid evidence check is based on the WHO interim guidance on developing a national deployment and vaccination plan for COVID-19 vaccines.(1) At the time of drafting the interim guidelines, much remains unknown about the full characteristics of the COVID-19 vaccines that will receive approval, and therefore, which vaccine products will be made available to which countries and in what timeframe. Therefore, providing clear guidance in some sections is hindered.

## Methods

This rapid evidence check is based on the WHO interim guidance on developing a national deployment and vaccination plan for COVID-19 vaccines.(1)

## References

1. World Health Organization. Guidance on developing a national deployment and vaccination plan for COVID-19 vaccines (WHO/2019-nCoV/NDVP/2020.1) Licence: CC BY-NC-SA 3.0 IGO [Internet]. Geneva: WHO; 2020 [cited 24 November 2020]. Available from: [https://apps.who.int/iris/bitstream/handle/10665/336603/WHO-2019-nCoV-Vaccine\\_deployment-2020.1-eng.pdf?sequence=1&isAllowed=y](https://apps.who.int/iris/bitstream/handle/10665/336603/WHO-2019-nCoV-Vaccine_deployment-2020.1-eng.pdf?sequence=1&isAllowed=y).
2. World Health Organization. Draft landscape of COVID-19 candidate vaccines [Internet]. Geneva: WHO; 2020 [cited 24 November 2020]. Available from: <https://www.who.int/publications/m/item/draft-landscape-of-covid-19-candidate-vaccines>.
3. Australian Government Department of Health. Australian COVID-19 Vaccination Policy [Internet]. Canberra: Australian Government; 2020 [cited 2 December 2020]. Available from: <https://www.health.gov.au/resources/publications/australian-covid-19-vaccination-policy>.

4. Dodd RH, Cvejic E, Bonner C, et al. Willingness to Vaccinate Against COVID-19 in Australia. *Lancet Infect Dis.* 2020:S1473-3099(20)30559-4.
5. World Health Organization. SAGE values framework for the allocation and prioritization of COVID-19 vaccination [Internet]. Geneva: WHO SAGE; 2020 [cited 24 November 2020]. Available from: <https://www.who.int/publications/i/item/who-sage-values-framework-for-the-allocation-and-prioritization-of-covid-19-vaccination>.
6. Australian Government Department of Health. Preliminary advice on general principles to guide the prioritisation of target populations in a COVID-19 vaccination program in Australia [Internet]. Canberra: ATAGI; 2020 [cited 2 December 2020]. Available from: <https://www.health.gov.au/resources/publications/atagi-preliminary-advice-on-general-principles-to-guide-the-prioritisation-of-target-populations-in-a-covid-19-vaccination-program-in-australia>.
7. National Academies of Sciences, Engineering, and Medicine. Framework for Equitable Allocation of COVID-19 Vaccine [Internet]. NAP Washington DC; 2020 [cited 2 December 2020]. Available from: <http://nap.edu/25917>.