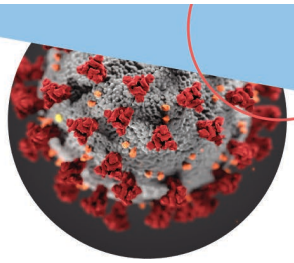
taskforce on bbvs
sexual health and covid-19



FAQS FOR CLINICIANS ABOUT COVID-19 VACCINES AND PEOPLE LIVING WITH HIV

Prepared by ASHM COVID-19 Taskforce Members* Updated 11 July 2022

The purpose of this document is to provide clinicians guidance on COVID-19 vaccines and boosters for people living with HIV. For past and current guidance and updates on COVID-19 refer to ATAGI at: https://www.health.gov.au/news

1. Which COVID-19 vaccines has the Therapeutic Goods Administration provisionally registered?

- The Pfizer-BioNTech BNT162b2 mRNA vaccine (COMIRNATY) for people ≥5 years of age [1]
- The Vaxzevria (AstraZeneca) ChAdOx1 nCoV-19 (AZD 1222) vaccine for people ≥18 years of age [2].
- The Moderna Spikevax (elasomeran) mRNA-1273 for people ≥12 years [3]
- The Nuvaxovid (Novavax) vaccine for people ≥18 years of age [4]

2. Does the Australian Technical Advisory Group on Immunisation (ATAGI) explicitly recommend these vaccines for HIV positive people?

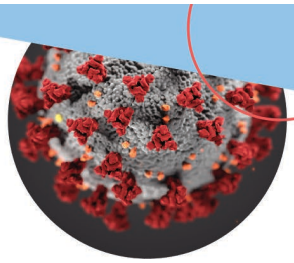
- Yes [5]

3. Are COVID-19 vaccines safe for people living with HIV?

- Yes [6] In a 9 April 2021 media release, the WHO recommended that people living with HIV be prioritised for early vaccination. The WHO state that people living with HIV are at greater risk of poorer outcomes [6] from COVID-19 infection. This is in line with the Statement from the ASHM COVID-19 Taskforce regarding the Prioritisation of COVID-19 Vaccines for People Living with HIV
- Other studies [7-11]

4. Are HIV-positive people eligible to receive the Pfizer-BioNTech, Moderna Spikevax, Nuvaxovid (Novavax) and the Vaxzevria (AstraZeneca) COVID-19 vaccines in Australia?

- Yes [12]
- Age is the only eligibility criterion that restricts access to these vaccines:
    - Pfizer-BioNTech vaccine: ≥5
    - Vaxzevria (AstraZeneca) vaccine: ≥60 years
    - Moderna Spikevax vaccine ≥12 years
    - Novavax (Nuvaxovid) vaccine ≥18yrs
- Other than age, all people living with HIV (PLHIV) are eligible for these vaccines irrespective of whether they have a Medicare number whether they are here on temporary visas, whether they are incarcerated, homeless or in-migrant detention centres [13]



5. Should HIV positive people be offered the Pfizer-BioNTech, Moderna Spikevax, Nuvaxovid (Novavax) and the Vaxzevria (AstraZeneca) COVID-19 vaccines?

- Yes, if they have no contraindications to these vaccines [5]

6. Should I be using the COVID-19 vaccine roll-out as an opportunity to recommend that my patients get tested for HIV, viral hepatitis and STIs?

- Yes.
- The COVID-19 vaccine roll-out is an excellent opportunity to recommend testing for HIV, blood-borne viruses and STIs to all people who are sexually active and to people who may have been exposed to HIV, viral hepatitis and STIs in the past

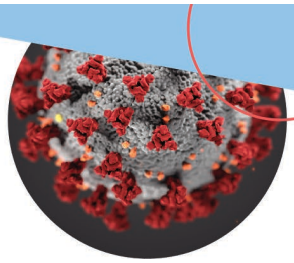
7. What are the underlying medical conditions associated with increased risk of severe COVID-19? [14]

Underlying medical conditions include:

- Organ transplant recipients who are on immune suppressive therapy
- Those who have had a bone marrow transplant in the last 24 months
- Those on immune suppressive therapy for graft versus host disease
- Those who have haematological cancers, for example, leukaemia, lymphoma or myelodysplastic syndrome (diagnosed within the last 5 years)
- Those having chemotherapy or radiotherapy
- Those with chronic renal (kidney) failure
- Those with heart disease (including coronary heart disease and cardiac failure)
- Those with chronic lung disease (excludes mild or moderate asthma)
- Those who have a non-haematological cancer (diagnosed in the last 12 months)
- Those who have diabetes
- Severe obesity with a BMI ≥ 40kg/m^2
- Those with chronic liver disease
- Those with some neurological conditions (stroke, dementia, other)
- Those with some chronic inflammatory conditions and treatments
- Those with other primary or acquired immunodeficiency (this includes HIV infection)
- Those with poorly controlled blood pressure
- Those with severe mental health conditions
- Children with complex chronic disease
- Pregnant people

8. How should I protect the confidentiality of my patients with HIV when I refer them to another service to receive a COVID-19 vaccine or booster?

- Free COVID-19 vaccinations are available to everyone aged 5 years and older. You can get a free vaccination without Medicare. To find an eligible suitable clinic, visit: https://covid-vaccine.healthdirect.gov.au/booking/



- If patients are concerned with potential breaches of their confidentiality relating to their HBV/HCV-related chronic liver disease status, they should approach their primary healthcare provider for further support and guidance. This includes addressing concerns on completing any pre-vaccination checklist or reporting/follow-up surveys or apps.

9. Do we know how acceptable the COVID-19 vaccines are to HIV positive people in Australia?

- Data presented at the 18th European AIDS Conference (EACS 2021) in October 2021 from surveys done in multiple settings do not suggest vaccine hesitancy among PLHIV is higher than in people who do not have HIV [16-22]
- A national survey of PLHIV and PrEP users in Australia, VAX-PLORE, commenced in March 2021 to evaluate COVID-19 vaccine hesitancy. Data revealed that COVID_19 vaccination is highly acceptable to both PLHIV and PrEP users[23]

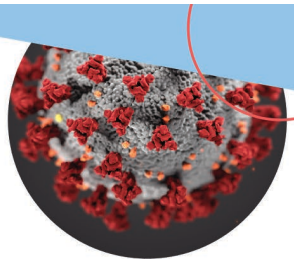
10. How effective are the Pfizer-BioNTech, Moderna Spikevax, Nuvaxovid (Novavax) and the AstraZeneca vaccines in preventing COVID-19 disease overall?

Pfizer-BioNTech, Moderna Spikevax, Nuvaxovid (Novavax) and the AstraZeneca vaccines are highly effective in preventing severe COVID-19 disease in individuals [6,24-27]

11. Will HIV positive people be able to choose which vaccine they receive based on their HIV serostatus?

- No
- Access to any of the vaccines is based on age:
    - Vaxzevria (Astrazenica) = 60 years and older
      People 18-59 years can choose to have Vaxzevria (Astrazenica) after discussing with their health professional
    - Pfizer Comirnaty – anyone over 5 years of age.
    - Moderna Spikevax – anyone over 12 years of age.
    - Nuvaxovid (Novavax)– anyone over 18 years of age.

Provided the age restrictions are observed, people can choose which vaccine they receive unless they have any contraindications to any of the vaccines. People can also choose a different vaccine for their booster shot to the one they had for their primary dose. The TGA has not approved Nuvaxovid (Novavax) as a booster shot but under certain conditions, it may be offered as a booster vaccine.



12. Were HIV-positive people enrolled into the Pfizer-BioNTech, Moderna Spikevax, Nuvaxovid (Novavax)and Vaxzevria (AstraZeneca) studies?

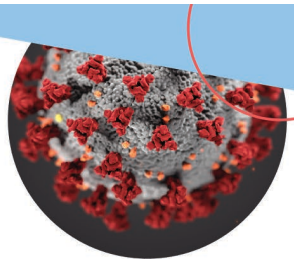
- Yes
- Pfizer reportedly enrolled 120 PLHIV [24, 28, 30]
- Vaxzevria (AstraZeneca) reportedly enrolled 54 PLHIV [29,33]
- Moderna reportedly included 176 people with HIV [31, 32]
- Early Nuvaxovid (Novavax) trials specifically excluded people with HIV[34]. Two other studies in the USA/Mexico [35] included 166 HIV-positive people and a study in South Africa [36,37] included 240 HIV-positive people.

13. What were the criteria that PLHIV had to meet to be enrolled in these three vaccine studies?

- Vaxzevria (AstraZeneca)'s inclusion criteria for HIV-positive people were [29]
    - Receiving antiretroviral therapy
    - Undetectable HIV viral load
    - CD4 cells > 350 cells/Ml
- Pfizer reported that they would enrol HIV-positive people who had 'stable HIV infection'[30]
- Moderna included people with CD4 count ≥350 cells/mm3 and an undetectable HIV viral load within the past year [31,32]
- Nuvaxovid (Novavax) included people with medically stable HIV infection, receiving HAART and using the same regimen for the previous 8 weeks, and have a HIV-1 viral load < 1000 copies/mL within 45 days of randomization in the South African study[36]. In the UK trial[38] HIV-positive participants receiving highly active antiretroviral therapy and a history within 6 months of screening of viral load < 1000 copies/mL or CD4 count > 300 cells/mm3 would be eligible.

14. How efficacious are the Pfizer-BioNTech, Moderna Spikevax, Nuvaxovid (Novavax) and Vaxzevria (AstraZeneca) COVID-19 vaccines in preventing COVID-19 disease in HIV positive people?

- There is emerging data available about how well the vaccines protect PLHIV against COVID-19 disease with studies showing the vaccines to be highly effective in preventing severe COVID-19 disease but may be less effective in preventing infection with SARS-CoV-2 the virus that causes COVID-19 illness.
- A small UK study by Prof John Frater [33] using Vaxzevria (AstraZeneca) vaccine reported that PLHIV who are on effective ART with suppressed viral loads and high CD4 cell counts (>350 cells per µL) do not have diminished humoral and cell-mediated responses to the ChAdOx1 nCoV-19 prime-boost vaccine. Further studies are necessary, and the researchers caution about extrapolating these results to people with lower CD4 counts or CD4/CD8 ratios or those without suppressed HIV viral loads.
- A preprint report of second study conducted by Madhi et al in a small cohort of PLHIV in South Africa showed comparable safety and efficacy of two doses of the Vaxzevria (AstraZeneca) vaccine between PLHIV and HIV-negative individuals. [39]



- Several small studies on the efficacy of Pfizer and Moderna vaccines from Israel [41] Italy[40] USA[42,43] all report that PLHIV with higher CD4 cell counts (>500) had strong antibody responses, people with CD4 cell count 200-500 had somewhat weaker responses and those with cell counts <200 had far weaker (or failed to generate) vaccine responses.
- An unpublished Novovax study reported that data from South African sites with that efficacy decreased from 60% (95% CI 20-80) to 49% (7-74) against the Beta variant (501Y.V2) when 240 people living with HIV were included in the analysis. [44]

15. Are the Pfizer-BioNTech, Moderna Spikevax, Nuvaxovid (Novavax)and Vaxzevria (AstraZeneca) COVID-19 vaccines safe for PLHIV?

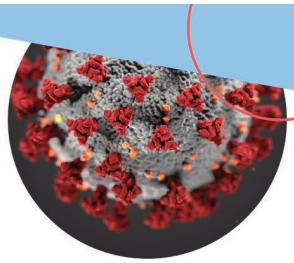
- The number of people enrolled in these vaccine studies was small (Pfizer, n=120, Moderna Spikevax n=176, Nuvaxovid (Novavax) 406 (combined) and Vaxzevria (AstraZeneca), n=54) [28-32] Emerging data confirm the safety of these vaccines for PLHIV with no evidence of higher rates of side-effects. There is no evidence that COVID-19 vaccines interact with HIV treatment or causes HIV viral load to increase. [33-38]
- It was anticipated that these vaccines would be safe in PLHIV, including those who are not on cART, because they do not contain live SARS-CoV-2 virus
- The Pfizer-BioNTech and Moderna Spikevax vaccines contain messenger RNA from the SARS-CoV-2 virus. The Vaxzevria (AstraZeneca) vaccine contains a replication-defective chimpanzee adenovirus, which serves as a vector for the SARS-CoV-2 spike glycoprotein [25]

16. Is there specific information I should counsel my HIV-positive patients about regarding the Pfizer-BioNTech, Moderna Spikevax, Nuvaxovid (Novavax) and the Vaxzevria (AstraZeneca) COVID-19 vaccines?

- Clinicians should broadly explain that recent data currently available indicate both the safety and efficacy of the Pfizer-BioNTech, Moderna Spikevax, Nuvaxovid (Novavax) and the Vaxzevria (AstraZeneca) COVID-19 vaccines in PLHIV. All Australians, including PLHIV, need to be advised that they have to take ongoing protective measures against SARS-CoV-2 infection because COVID-19 vaccines were designed to prevent COVID-19 disease, not to prevent SARS-CoV-2 infection or transmission. Further data are expected about these vaccines' ability to prevent SARS-CoV-2 infection and transmission

17. How should I approach the issue of providing COVID-19 vaccinations for HIV positive people who are not taking antiretrovirals?

- In the setting where there is minimal, or no background community transmission of SARS-CoV-2 we recommend advising untreated HIV-positive patients to first commence combination antiretroviral therapy (cART) and then have their COVID-19 vaccine once they have become virologically suppressed,



which should only take 4-8 weeks. This strategy should improve their chance of having a good immunological response to the vaccine

- In the setting where there is rising, or persistent community transmission of SARS-CoV-2, we recommend advising untreated HIV-positive patients to simultaneously receive a COVID-19 vaccine and commence cART. In this setting, the immunological response to the vaccine may be diminished

- If an HIV-positive person declines cART and requests a COVID-19 vaccine, they should be counselled that their immune response to the vaccine is likely to be diminished

18. Should I vaccinate my HIV-positive patient if they have already had COVID-19?

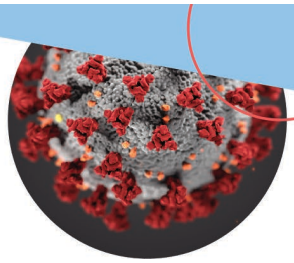
- Yes
- Please note that although ATAGI recommends that a person who has had PCR-confirmed SARS-CoV-2 infection may defer their COVID-19 vaccine for 3 months from the time of infection (12), clinicians should not delay offering COVID-19 vaccines to their HIV-positive patients with prior SARS-CoV-2 infection
- Vaccinating someone with prior COVID-19 has been shown to result in higher levels of antibodies, which likely means enhanced immunity to future infections
- There have not been any safety concerns for people who have had prior SARS-CoV-2 infection and go on to receive the Pfizer-BioNTech Vaxzevria (AstraZeneca) Nuvaxovid (Novavax) or Moderna Spikevax vaccines[12].

19. Should HIV-positive people who are pregnant receive the Pfizer-BioNTech, Moderna Spikevax, Nuvaxovid (Novavax) or the Vaxzevria (AstraZeneca) COVID-19 vaccines?

- The risks of severe outcomes from COVID-19 are significantly higher for people who are pregnant and their unborn baby[45]. There are few data specifically relating to people living with HIV and pregnancy.

- A multisite study conducted between September 2020 to November 2021 in Botswana where few women had access to COVID-19 vaccination, included 144 HIV-positive women. Results showed that HIV-positive people with COVID-19 had a 78% higher risk of any adverse birth outcome, 65% higher risk of severe birth outcome, twice the risk of pre-term or very pre-term delivery and 65% increase in the risk of having a low-birth-weight baby than people with HIV but COVID-19 negative.[46]

- Global surveillance data [47-50], have not identified any significant safety concerns at any stage of pregnancy for the COVID-19 vaccinations in the general population.



- There are no data available about the safety of COVID-19vaccines specifically in HIV-positive people who are pregnant and ATAGI has not provided specific advice for HIV-positive people who are pregnant

- ATAGI recommends offering COVID-19 vaccines to all pregnant people regardless of their HIV status. ATAGI advice: [5,45].

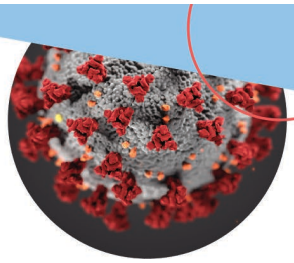
    - RANZCOG and ATAGI recommend that pregnant women be offered Pfizer mRNA vaccine (Comirnaty), Moderna (Spikevax) at any stage of pregnancy
    - Nuvaxovid (Novavax) or Vaxzevria (AstraZeneca) may be offered to people who cannot access an mRNA vaccine if the benefits outweigh the potential risks[45].
    - There is also evidence of antibodies in cord blood and breastmilk which may offer immunity protection to infants [49-54]

20. Should HIV-positive people who are planning pregnancy, or who are breastfeeding receive the Pfizer-BioNTech, Moderna Spikevax, Nuvaxovid (Novavax) or the Vaxzevria (AstraZeneca) COVID-19 vaccines?

- The advice that ATAGI provides regarding offering these vaccines to HIV-negative women who are planning pregnancy, or who are breastfeeding should be applied to HIV-positive women who are planning pregnancy, or who are breastfeeding. The advice is as follows [5, 45]:
    - people who are breastfeeding or who are planning pregnancy should be offered an mRNA COVID-19 vaccine. There are no theoretical concerns regarding the safety of COVID-19 vaccine Vaxzevria (AstraZeneca) or Nuvaxovid (Novavax) in these groups and those who cannot access an mRNA COVID vaccine should consider Vaxzevria or Nuvaxovid (Novavax), particularly in outbreak settings
    - Nuvaxovid (Novavax) COVID-19 vaccine can be administered to pregnant and breastfeeding women. In comparison to Pfizer and Moderna vaccines, there are no substantial data on their safe use in pregnancy or with breastfeeding. However, there are no theoretical safety concerns relating to use in pregnancy or breastfeeding [27]
    - There is also evidence of antibodies in cord blood and breastmilk which may offer immunity protection to infants [49-54]

21. Should I test my HIV-positive patients for their immune response to these vaccines?

- No
- ATAGI does not recommend testing for anti-spike antibodies or neutralising antibodies against SARS-CoV-2 following COVID-19 vaccines [5]. This is because there is currently no recognised immune correlate of protection against infection with SARS-CoV-2 or COVID-19 disease [5]



22. Could the Pfizer-BioNTech, Moderna Spikevax, Nuvaxovid (Novavax) or Vaxzevria (AstraZeneca) COVID-19 vaccines interact with HIV antiretrovirals and make either one less effective?

- There is no evidence or theoretical concerns that these vaccines will make HIV antiretrovirals less effective or that HIV antiretrovirals will make either of these HIV vaccines less effective

23. What is the best time interval for giving my HIV-positive patients a COVID-19 vaccine and other vaccines?

- ATAGI recommends that COVID-19 vaccines and the annual influenza vaccine can be co-administered (on the same day). [5]
- COVID-19 vaccines can be co-administered with other vaccines if required. However, given the current limited evidence on the concomitant use of COVID-19 vaccines with other vaccines, providers need to balance the opportunistic need for co-administration with giving the vaccines on separate visits. days [5]
- This advice is appropriate for PLHIV

24. Could the Vaxzevria (AstraZeneca) HIV vaccine put HIV-negative people at higher risk of HIV infection based on results from prior HIV vaccine studies that used adenovirus as a vector?

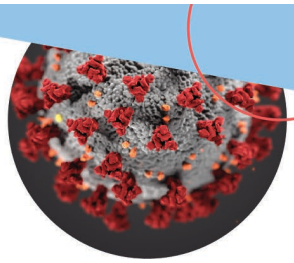
- Two previous HIV vaccine studies, the Step and the Phambili studies used the human adenovirus type 5 (Ad5) as the vaccine vector, as recently summarised by Buchbinder et al [55]. These two studies observed an increased risk of HIV infection in male study participants who were Ad5 seropositive, were uncircumcised and who practiced insertive anal or vaginal sex [55]
- However, the Vaxzevria (AstraZeneca) vaccine does not use the Ad5 vector that was used in these HIV vaccine trials; instead, it uses a chimpanzee adenovirus to which humans are highly unlikely to have been exposed
- All people who are at risk of HIV acquisition should be encouraged to use appropriate HIV prevention strategies including HIV pre- and post-exposure prophylaxis [56,57] condoms and the U=U strategy, which relies on the science that shows that the risk of HIV transmission is effectively zero from an HIV-positive person whose HIV viral load is durably suppressed on cART

25. What are the underlying medical conditions that make children and adolescents ≥ 5 years eligible to receive a COVID-19 vaccine?

- Free COVID-19 vaccinations are available to everyone aged 5 years and older. Children and adolescents are eligible to receive a vaccination with or without an underlying medical condition.

26. Are more COVID-19 vaccine studies in younger adolescents and children underway?

- Yes



- Pfizer enrolled 2,259 children aged 12-15 years into a study. In March 2021 commenced a study of children aged 6 months -11 years [58-60]
- Moderna has completed a study which vaccinated 3,000 12-17-year-old children. The study showed "an efficacy consistent with 100%". The study found the vaccine effective at stopping mild cases 14 days after vaccination. [61]
- Moderna has also begun a Phase 2/3 study vaccinating 6750 children between 6 months to 12 years [62]
- Vaxzevria (AstraZeneca) suspended their trial [33] in April 2021 over blood-clot fears [63,64]
- Johnson & Johnson commenced phase 2 studies in adolescents aged 12 - 17 [65]
- Nuvaxovid (Novavax) has extended a phase 3 study [66] to include adolescents (>12 to <18 years) at risk for COVID-19 to be completed in June 2023.

27. What is the difference between a third primary COVID-19 vaccine dose, a booster dose and a 'winter booster' dose?

Third Primary dose

Primary COVID-19 vaccination consists of two doses of Comirnaty (Pfizer), Spikevax (Moderna) AstraZeneca or Nuvaxovid (Novavax) [27].

However, some immunocompromised people fail to mount a sufficient immune response resulting in reduced antibody levels or SARS-CoV-2-specific T cell responses [66-69] For these people, ATAGI recommends a third primary dose to provide a level of protection close to that of healthy individuals after two doses.

Booster dose

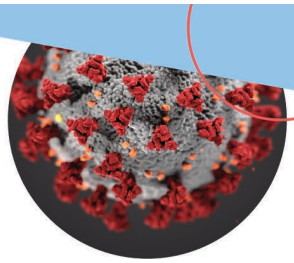
A booster dose refers to an additional vaccine dose after the primary vaccine course.

There is evidence that immunity wanes over time (about 6 months from the last primary dose) which results in reduced protection. [71-74]

A booster dose of a COVID-19 vaccine has been shown to raise antibody levels thereby increasing protection against severe COVID-19 especially in older people where waning is more pronounced. [75-79]

'Winter' booster dose

A 'winter' booster dose refers to a second booster vaccine dose administered four months after the first booster dose, or three months after a confirmed SARS-CoV-2 infection if the infection occurred after the person's first booster for people who are at increased risk of severe COVID-19 illness. [80]



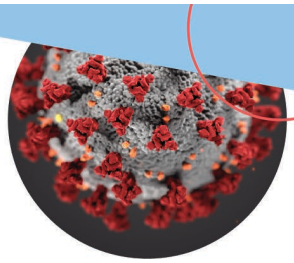
28. Who is eligible for a third primary COVID-19 vaccine dose, for a booster dose and for a 'winter booster' dose?

Third primary dose

- ATAGI recommends an mRNA vaccine (Pfizer or Moderna Spikevax) as the preferred option for a 3rd primary dose of COVID-19 vaccine in severely immunocompromised populations aged >5years to address the risk of suboptimal or non-response to the standard 2 dose schedule [81] See the recommendations for detail. These include:
    - Active haematological malignancy
    - Non-haematological malignancy with current active treatment (e.g., chemotherapy, whole-body irradiation)
    - Solid organ transplant with immunosuppressive therapy
    - Haematopoietic stem cell transplant (HSCT) recipients or chimeric antigen receptor T-cell (CART) therapy within 2 years of transplantation (3 additional doses are required see ATAGI guidelines)
    - Immunosuppressive therapies
    - Primary immunodeficiency including combined immunodeficiency and syndromes, major antibody deficiency, defects of immune regulation, complement deficiencies and phenocopies of primary immunodeficiencies
    - Advanced or untreated HIV with CD4 counts <250/μL or those with a higher CD4 count unable to be established on effective antiretroviral therapy (A third primary dose is not recommended for people with HIV taking ART and CD4 levels above ≤250/μL)[81]
    - Long term haemodialysis or peritoneal dialysis

Booster dose

- A booster dose refers to an additional dose after the primary COVID-19 vaccine course and given 3 months or more after the primary doses.
- ATAGI recommends that when practical, boosters be provided to everyone aged 16 years and over, a minimum of 3 months following the second dose of the primary course [79,82].
- ATAGI also recommends a first booster dose for adolescents aged 12 – 15 yrs[82] who received their primary vaccination course at least three months ago because they
    - are severely immunocompromised
    - have a disability with significant or complex health needs
    - have complex or multiple health conditions that increase the risk of severe COVID-19



'Winter' booster dose

Adults aged over 30 are eligible for a 'winter booster dose three months after a recent COVID-19 infection or the first booster dose[67].

ATAGI advises

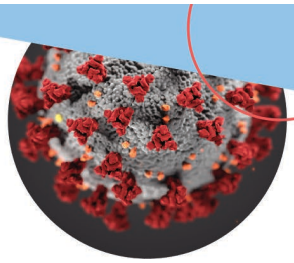
- people aged 50-64 are **recommended** to receive a winter booster dose.
- people aged 30-49 can receive a winter booster dose, however, the benefit is less certain[67].
- ATAGI does not support a winter booster dose for healthy people under the age of 30

ATAGI continues to advise that people previously eligible for the 'winter booster' dose still have a higher risk of severe disease and death from COVID-19 and should receive a 'winter booster' dose as soon as possible. This includes:

- People over 65 years
- Aboriginal and Torres Strait Islander people > 50 years
- Residents of aged care or disability care facilities
- People >16 years with a medical condition that increases the risk of severe COVID-19
- People >16 years with a disability, significant or complect health needs or multiple co-morbidities that increase the risk of a poor outcome [80]

29. Which vaccine is recommended for the booster dose?

- ATAGI recommends Pfizer Comirnaty or Moderna Spikevax vaccines as a single booster dose, irrespective of the primary vaccine used for people over 18 years. [79]
- Only Pfizer Comirnaty is recommended for those >12 to 17 years.
- Booster doses are not recommended for children aged 5-11.
- Boosters are only recommended for adolescents aged 12-15 for
  - those who are severely immunocompromised
  - those who have a disability with complex health needs
  - those with complex or multiple health conditions that increase the risk of severe COVID-19[83]
- Whilst not preferred, Vaxzevria (AstraZeneca) and Nuvaxovid (Novavax) can be used as a booster dose for:
  - Individuals over 18 years who refuse an mRNA vaccine
  - If a significant adverse reaction has occurred after a previous mRNA vaccine dose which contraindicates further doses of mRNA vaccine (e.g., anaphylaxis, myocarditis)[79].



30. Is COVID-19 vaccination (primary, booster or winter dose) recommended after SARS-CoV-2 infection?

- Yes but vaccination is recommended to be deferred for at least 3 months after a confirmed SARS-CoV-2 infection for all COVID-19 vaccine doses, including booster doses[12,79].

31. Where can I find reliable and up to date information on blood clotting concerns and the Vaxzevria (AstraZeneca) vaccine?

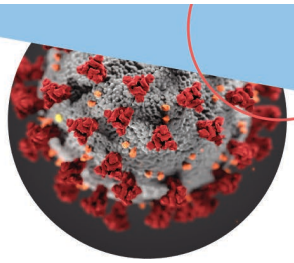
Please see this link for all updated information for Australian providers:
https://www.health.gov.au/initiatives-and-programs/covid-19-vaccines/advice-for-providers/tts

32. Where can I find reliable and up to date information on myocarditis and pericarditis and Pfizer-BioNTech and Moderna Spikevax vaccines?

Please see this link for all updated information for Australian providers:
https://www.health.gov.au/initiatives-and-programs/covid-19-vaccines/advice-for-providers/myocarditis-pericarditis

33. Are there any potentially serious side effects of Nuvaxovid (Novavax)vaccine?

Severe side effects to the Nuvaxovid (Novavax) vaccine were rare in trials.
The risk for blood-clotting or myocarditis and pericarditis is unknown because only relatively small numbers of people have received this vaccine worldwide and phase 3 trials are continuing. More information will be available over time.[84]



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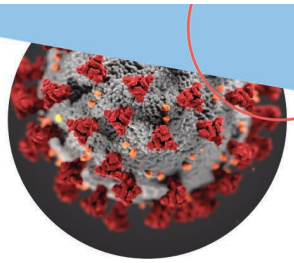

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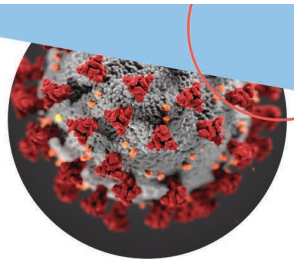

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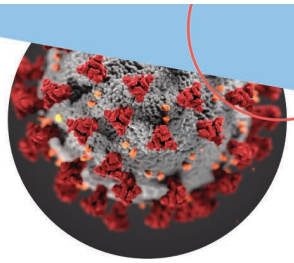

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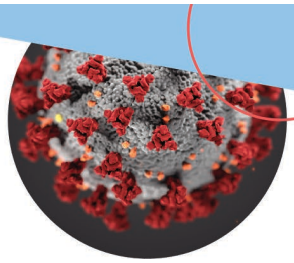

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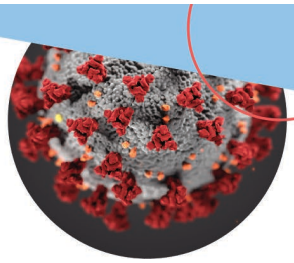

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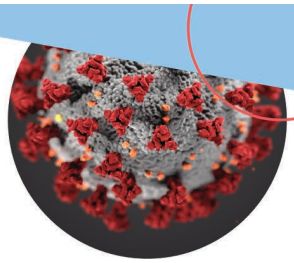

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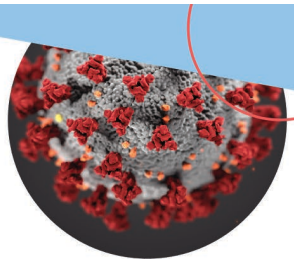
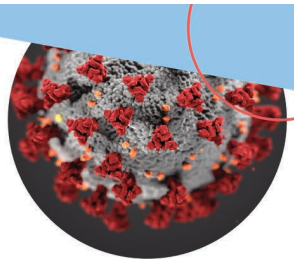


*** This document was drafted by the ASHM COVID-19 Taskforce Chair and reviewed by the ASHM Taskforce Co-Chair, members of the Virology, HIV, Research & Understanding the Data, Pharmacy, Practice Management and Nursing Cluster Groups and the ASHM CEO.**

ASHM COVID-19 Taskforce Chair: A/Prof Edwina Wright
ASHM COVID-19 Taskforce Co-Chair: Mr Scott McGill
Members of the Virology, HIV, Research & Understanding the Data, Pharmacy, Practice Management and Nursing Clusters

Cluster Group	Members
Virology	Martyn French Sharon Lewin Thomas Rasmussen
HIV	Adam Ehm Alison Cowell Belinda Wozencroft Brian Price Charles Gilks Darren Russell Darryl O'Donnell Dean Murphy Edwina Wright Jenny Hoy Joan Ingram (NZ) John Rule Kathy Petoumenous Lauren Foy Mark Bloch Megan McAnally Nick Medland Olga Vujovic Tiffany Tran
Research and Understanding the Data	Carla Treloar Charles Gilks Gail Matthews Graham Brown Jack Wallace James McMahon John Rule Julian Elliott Lisa Maher
Pharmacy	Ms Alison Duncan Mr Bruce Hamish Bowden Ms Claire Bekema Mr Vihung Kapadia



Practice Management	Dr David Baker Dr Elizabeth Crock Ms Penny Kenchington Dr Nick Medland Sally Watkinson Donna Tilley Leanne Myers
Nursing	Dr Jacqui Richmond Ms Jana Van der Jagt Ms Marrianne Black Shannon Woodward Bradley Whitton Melissa Cromarty Gabrielle Bennett

ASHM Staff Members who are core members of these Cluster Groups
Scott McGill, Karen Seager, Bianca Leber and Kate Bath

ASHM CEO, Alexis Apostolellis