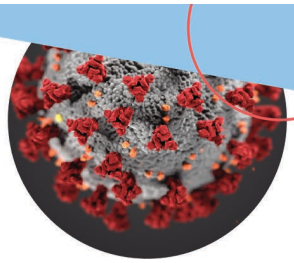
taskforce on bbvs
sexual health and covid-19



FAQS FOR CLINICIANS ABOUT COVID-19 VACCINES AND PEOPLE LIVING WITH HEPATITIS B/HEPATITIS C-RELATED CHRONIC LIVER DISEASE

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 hepatitis B or hepatitis C-related chronic liver disease. 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 have the Therapeutic Goods Administration provisionally registered?

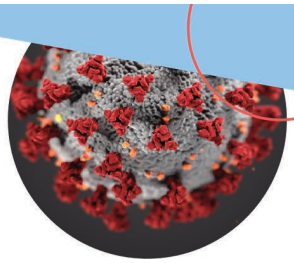
- The Pfizer-BioNTech BNT162b2 mRNA vaccine (COMIRNATY) for people ≥5 years of age [1]
- The Vaxevria (AstraZeneca) ChAdOx1 nCoV-19 (AZD 1222) vaccine for people ≥18 years of age [2]
- The Moderna Spikevax (elasomeran) mRNA-1273 for people ≥ 12 years[3]
- The Nuvaxovid (Novavax) vaccine for people ≥18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

2. Does the Australian Technical Advisory Group on Immunisation (ATAGI) explicitly recommend these vaccines for people living with hepatitis B/hepatitis C-related (HVB/HCV-related) chronic liver disease?

- ATAGI has identified a number of conditions associated with increased risk of severe COVID-19 and this includes chronic liver disease[5]
- ATAGI recommends people with chronic liver disease be vaccinated[5] and this includes HBV/HCV-related chronic liver disease
- Viral hepatitis is a disease of the liver and people who have been living with hepatitis B or hepatitis C for more than six months are determined to have chronic infection[6,7].

3. Are all people living with HBV/HCV-related chronic liver disease eligible to receive the Pfizer-BioNTech, Moderna Spikevax, Vaxevria (AstraZeneca) or Nuvaxovid (Novavax) COVID-19 vaccines in Australia?

- Yes [5]
- Age is the only eligibility criterion that restricts access to these vaccines:
    - Pfizer-BioNTech vaccine: ≥5 years
    - AstraZeneca vaccine: ≥60 years
    - Moderna Spikevax vaccine ≥12 years
    - Nuvaxovid (Novavax) vaccine ≥18yrs
- Other than age, all people living with chronic liver disease (including HBV/HCV-related) 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 [8]

4. Should people with HBV/HCV-related chronic liver disease be offered the Pfizer-BioNTech, Moderna Spikevax, Nuvaxovid (Novavax) and the Vaxevria (AstraZeneca) COVID-19 vaccines?

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

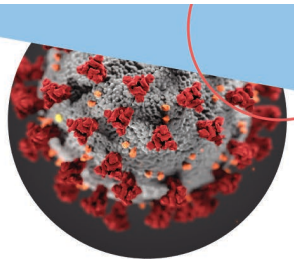
5. Should I be using the COVID-19 vaccine roll-out as an opportunity to recommend that my patients get tested for viral hepatitis, HIV and STIs?

- Yes.
- The COVID-19 vaccine roll-out is an excellent opportunity to recommend testing for HBV, HCV, HIV and STIs to all sexually active people and to people who may have been exposed to HIV, viral hepatitis and STIs in the past
- It is also a good opportunity to conduct a comprehensive liver health check if one has not been done in the last 6 months

6. What are the underlying medical conditions associated with increased risk of severe COVID-19? [5]

Underlying medical conditions include:

- Haematological diseases or cancers
- Organ transplant recipients who are on immune suppressive therapy
- Bone marrow transplant recipients or those on CAR-T therapy or immune suppressive therapy for graft versus host disease
- who have haematological diseases or cancers, diagnosed within the last 5 years
- Non-haematological cancer having chemotherapy or radiotherapy
- Adult survivors of childhood cancers
- Chronic inflammatory conditions requiring medical treatments
- Primary or acquired immunodeficiency (this includes HIV infection)
- Chronic renal (kidney) failure with a eGFR of <44mL/min
- Heart disease (including coronary heart disease and cardiac failure)
- Chronic lung disease (excludes mild or moderate asthma)
- diabetes
- Severe obesity with a BMI ≥ 40kg/m^2
- **Chronic liver disease** (note: includes chronic liver disease related to HBV and HCV)
- Chronic neurological conditions (stroke, dementia, other)
- Chronic inflammatory conditions and treatments
- Poorly controlled blood pressure (defined as two or more pharmacologic agents for blood pressure control, regardless of recent readings)
- Significant disability requiring frequent assistance with activities of daily living
- Severe mental health conditions



7. What if I am not sure whether my patient with HBV infection or current or prior HCV infection has Chronic Liver Disease?

- As people who have been living with hepatitis B or hepatitis C for more than six months are determined to have chronic infection, we recommend that clinicians should err towards assuming that chronic liver disease may be present in their patients with HBV infection and patients with current, or prior HCV. This is because the majority of people with chronic HBV infection have not been assessed for the presence of chronic liver disease and are not receiving HBV antiviral treatment. Also, a significant proportion of people with current, or prior HCV infection may not have been assessed for the presence of chronic liver disease.

8. How should I protect the confidentiality of my patients with HBV/HCV-related chronic liver disease 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 card. To find an eligible suitable vaccination centre, visit: https://covid-vaccine.healthdirect.gov.au/booking/
- If patients are concerned with potential breaches to 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 people living with HBV/HCV-related chronic liver disease in Australia?

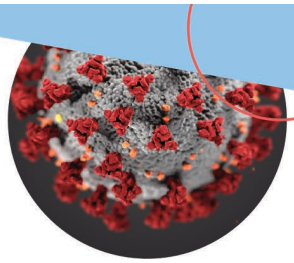
- No, specific data about vaccine hesitancy in people with HBV/HCV-related chronic liver disease in Australia are available.

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

- Pfizer-BioNTech, Moderna Spikevax, Nuvaxovid (Novavax) and the Vaxevria (AstraZeneca) vaccines are highly effective in preventing severe COVID-19 disease in individuals [5,9-13]

11. Can people living with HBV/HCV-related chronic liver disease choose which vaccine they receive?

- 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 after discussing it 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.

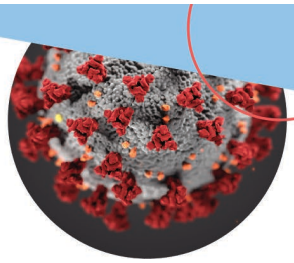
Provided the age restrictions are observed, people can choose which vaccine they receive unless they have any contraindications to any of the vaccines. People can also choose a different vaccine for their booster shot to the one they had for their primary dose. The TGA has not approved Nuvaxovid (Novavax)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

12. Were people living with HBV/HCV-related chronic liver disease enrolled in the Pfizer-BioNTech, Moderna, Vaxevria (AstraZeneca) and Nuvaxovid (Novavax) studies?

- Yes: Pfizer included people with pre-existing stable HBV or HCV infections. They also included people with liver disease[12]. There were 217 people with liver disease but just 3 with moderate to severe liver disease.[14]
- No: Vaxevria (AstraZeneca) excluded people with severe or uncontrolled liver disease, and suspected or known current drug or alcohol dependency, [15]
- Yes: Moderna included 196 people <65 with liver disease[10, 16].
- Nuvaxovid (Novavax) Unknown: Participants with known stable infection with HIV, hepatitis C virus (HCV), or hepatitis B virus (HBV) were not excluded from enrolment[17] However, as this is an ongoing study, there is no data on how many (if any) people with HBV/HCV were included.[18]

13. What were the criteria that people living with HBV or HCV had to meet to be enrolled in the Pfizer and Moderna vaccine studies?

- Pfizer's inclusion criteria for HBV positive people were [13,14]:
  - Confirmed inactive chronic HBV infection, defined as HBsAg present for ≥6 months and the following:
    - HBeAg negative, anti-HBe positive
    - Serum HBV DNA
- Pfizer's inclusion criteria for HCV positive people were:[13,14]
  - History of chronic HCV with evidence of sustained virological response (defined as undetectable HCV RNA) for ≥12 weeks following HCV treatment or without evidence of HCV RNA viremia (undetectable HCV viral load).
- Moderna's inclusion criteria for people with liver disease:[16]
  - participants <65 categorised as 'at increased risk' for severe COVID-19 if they have one of a range of conditions which included liver disease
- Nuvaxovid (Novavax) inclusion criteria included:
  - being medically stable (based on review of health status, vital signs [to include body temperature],
  - medical history, and
  - targeted physical examination [to include body weight]).



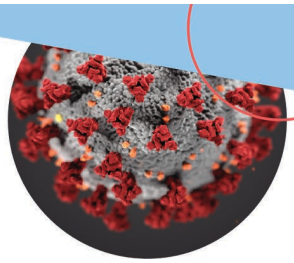
- People with HBV/HCV were excluded if they were deemed clinically unstable within the prior 4 weeks as evidenced by:
  - a) Hospitalisation for the condition, including day surgical interventions;
  - b) New significant organ function deterioration; or c) Needing addition of new treatments or major dose adjustments of current treatments (mild or moderate well-controlled comorbidities are allowed)[17]

14. How efficacious are the Pfizer-BioNTech, Moderna Spikevax, Vaxevria (AstraZeneca) and Nuvaxovid (Novavax) COVID-19 vaccines in preventing COVID-19 disease in people with HBV/HCV-related chronic liver disease?

- A 6 September 2021 News Medical preprint study [18] funded by Public Health England compared the efficacy of Pfizer-BioNTech, and AstraZeneca in individuals with clinical conditions that placed them at higher risk of severe COVID-19. These conditions included people with chronic liver disease. 7,217,929 individuals were recruited with 1,054,510 belonging to one of the risk groups. Results show a strong S-antibody response with both vaccines in the clinical risk groups, including those with liver disease. Pfizer-BioNTech initially produces a higher response, however, from 4 weeks after the first dose the results were similar for both vaccines. Both vaccines were found to be highly effective in preventing symptomatic medically-attended disease, particularly in high-risk individuals.
- A study reported in the New England Journal of Medicine [19] of 30,415 individuals which included people with liver disease, demonstrated a high level of efficacy for Moderna vaccine for all groups including those with co-existing conditions.
- A UK study of 16645 participants published in the New England Journal of Medicine in June 2021[20], identified 44.6% with at least one coexisting condition that had been defined by the Centre for Disease Control and Prevention as a risk factor for severe COVID-19. These conditions included chronic hepatic conditions (although the study did not specify how many participants were in this category). The study confirmed a 2 dose regimen of Nuvaxovid (Novavax) administered 21 days apart was safe and effective against symptomatic COVID-19

15. Are the Pfizer-BioNTech, Moderna, Vaxevria (AstraZeneca) and Nuvaxovid (Novavax) COVID-19 vaccines safe for people living with HBV/HCV-related chronic liver disease?

- The number of people living with liver disease enrolled in the Pfizer- vaccine studies was small (Pfizer, n=217, Moderna n= 195, Nuvaxovid (Novavax) did not disclose those with chronic liver disease[18] and Vaxevria [AstraZeneca] did not include anyone with liver disease) [10,11,13-16]
- The Pfizer-BioNTech vaccine contains messenger RNA from the SARS-CoV-2 virus. The Moderna Spikevax vaccine also contains messenger RNA (mRNA). The Vaxevria [AstraZeneca] vaccine contains a replication-defective



chimpanzee adenovirus, which serves as a vector for the SARS-CoV-2 spike glycoprotein. Nuvaxovid (Novavax) is a recombinant nanoparticle vaccine that contains the full-length spike glycoprotein of the prototype strain plus Matrix-M adjuvant

- All vaccines have been found to be safe in people with HBV or HCV or other forms of liver disease[13-22]

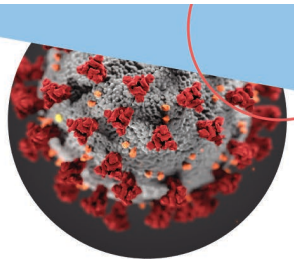
16. Is there specific information I should counsel my patients with HBV/HCV-related chronic liver disease about regarding the Pfizer-BioNTech, Moderna, Nuvaxovid (Novavax) and the Vaxevria [AstraZeneca] COVID-19 vaccines?

- Clinicians should broadly explain that there are limited data currently available on the safety and efficacy of the Pfizer-BioNTech, Moderna, Nuvaxovid (Novavax) and the Vaxevria [AstraZeneca] COVID-19 vaccines in people living with HBV/HCV-related chronic liver disease. People with liver disease are included in recent research but numbers are relatively low. However, current evidence does demonstrate both safety and efficacy of all three vaccines for people with liver disease
- All Australians, including people living with HBV/HCV-related-chronic liver disease, 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. Real-world data is still emerging about the vaccines' ability to prevent or reduce transmission. However, a study published in The Lancet on 14 September 2021[23] concluded vaccination provided moderate transmission prevention for all vaccines[25,26] It should be noted that there is limited data for Moderna Spikevax and Nuvaxovid (Novavax) and more real-world data is expected.

17. Should I vaccinate my patients living with HBV/HCV-related chronic liver disease 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 three months from the time of infection [5], clinicians should not delay offering COVID-19 vaccines to their patients with HBV/HCV-related chronic liver disease 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 against developing severe COVID in the future
- 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 or the Vaxevria [AstraZeneca] vaccine[5].

Note: Several studies [26-33] have shown that infection with SARS-COV19 can cause liver injury, particularly in more severe cases. People with HBV or HCV and



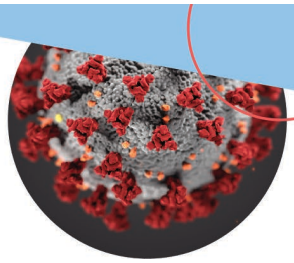
COVID-19 co-infection are at a higher risk of morbidity and mortality [27-34] than people with COVID-19 without HBV/HCV

18. Should people living with HBV or HCV who are pregnant receive the Pfizer-BioNTech, Moderna, Nuvaxovid (Novavax) or the Vaxevria (AstraZeneca) COVID-19 vaccines?

- ATAGI recommends Pfizer-BioNTech or Moderna vaccines for pregnant people without HBV or HCV should be applied to pregnant people living with HBV or HCV. The advice is as follows [5, 11, 34]:
  - RANZCOG and ATAGI recommend that pregnant women be offered Pfizer mRNA vaccine (Cominarty), Moderna (Spikevax) at any stage of pregnancy. Nuvaxovid (Novavax) and Vaxevria (AstraZeneca) are not preferred but can be considered for people who cannot access an mRNA vaccine if the benefits to the individual outweigh the potential risks.
  - The risks of severe outcomes from COVID-19 are significantly higher for people who are pregnant and their unborn baby.
  - Global surveillance data[35-38] have not identified any significant safety concerns at any stage of pregnancy.
  - There is also evidence of antibodies in cord blood and breastmilk which may offer immunity protection to infants [39-43].
- There are no data available about the safety of any of the vaccines in people living with HBV or HCV- who are pregnant and neither has ATAGI provided specific advice for people living with HBV or HCV who are pregnant.

19. Should people living with HBV or HCV who are planning pregnancy, or who are breastfeeding receive the Pfizer-BioNTech, Moderna Spikevax, Nuvaxovid (Novavax) or the AstraZeneca COVID-19 vaccines?

- ATAGI recommends either Pfizer-BioNTech or Moderna Spikevax vaccines for people not living with HBV or HCV who are planning pregnancy, or who are breastfeeding and this advice should be applied to people living with HBV or HCV who are planning pregnancy, or who are breastfeeding. The advice is as follows [4, 35]:
  - People who are breastfeeding or who are planning pregnancy can receive a COVID-19 vaccine.
  - An mRNA vaccine (Pfizer or Moderna Spikevax) is the preferred vaccine for people who are planning pregnancy or are breastfeeding because of their age (i.e. <60 years) and a growing body of real-world evidence on their safety in pregnancy.
  - Nuvaxovid (Novavax) or Vaxeveria (AstraZeneca) COVID-19 vaccine can be administered to pregnant and breastfeeding women. In comparison to Pfizer and Moderna vaccines, there is no substantial data on their safe use in pregnancy and breastfeeding, however, there are no theoretical safety concerns relating to use in pregnancy or breastfeeding [11, 43].



- There is evidence of antibodies in cord blood and breastmilk which may offer immunity protection to infants[38-43]

20. Should I test my patients living with HBV/HCV-related chronic liver disease for their immune response to these vaccines?

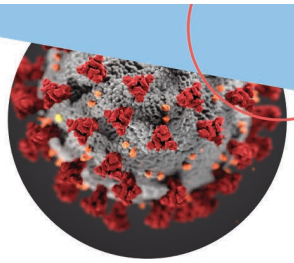
- No
- ATAGI does not recommend testing for anti-spike antibodies or neutralising antibodies against SARS-CoV-2 following COVID-19 vaccines [5]. This is because there is currently no recognised immune correlate of protection against infection with SARS-CoV-2 or COVID-19 disease [5]

21. What is the best time interval for giving my patients living with HBV/HCV-related chronic liver disease a COVID-19 vaccine and other vaccines?

- ATAGI advises COVID-19 vaccines can be administered on the same day as an influenza vaccine. [5]
- ATAGI advises that COVID-19 vaccines can be co-administered with other vaccines (including routine childhood and adolescent vaccines) if required although there is 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 vaccines on separate visits as there is a potential for an increase in mild to moderate adverse events when more than one vaccine is given at the same time.

22. 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[44,45]. In March 2021 Pfizer commenced a study of children aged 6 months -11 years [46]
- Moderna has completed a study which vaccinated 3,000 12-17-year-old children. The study showed “an efficacy consistent with 100%” and effective at stopping mild cases 14 days after vaccination[46].
- Moderna has also begun a Phase 2/3 study vaccinating 6750 children between 6 months to 12 years[47]
- AstraZeneca suspended their trial [48] in April over blood-clot fears [49]
- Johnson & Johnson has commenced phase 2 studies in adolescents aged 12 – 17 [50]
- Nuvaxovid (Novavax) has extended a phase 3 study [49] to include adolescents (>12 to <18 years) at risk for COVID-19 to be completed in June 2023.



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

Third primary dose

In immunocompromised individuals, immunogenicity studies have revealed that some groups can have a suboptimal immune response with evidence of reduced antibody levels or SARS-CoV-2-specific T cell responses after a standard 2 dose schedule of COVID-19 vaccines Comirnaty (Pfizer), Spikevax (Moderna), Vaxevria (AstraZeneca) or Nuvaxovid (Novavax)[52-56,]. ATAGI considers it important to offer a third primary dose to provide a higher level of protection for these individuals, aiming to attain a level as close as possible to that seen in healthy individuals after a two-dose primary vaccine course.

Booster dose

A booster dose refers to an additional vaccine dose after the primary vaccine course to maintain immunity against COVID-19.

In Australia, a primary COVID-19 vaccine course consists of two doses of Comirnaty (Pfizer), Spikevax (Moderna), Vaxzevria (AstraZeneca) or Novavax vaccines. Nuvaxovid (Novavax) COVID-19 vaccine is not recommended for use as a booster vaccine [57].

Evidence suggests that immunity to SARS-Cov-2 (measured by virus-specific antibody) wanes over time resulting in a reduction in protection against infection[58-60].

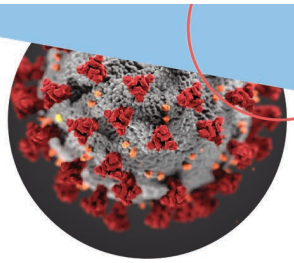
A booster dose of a COVID-19 vaccine after the primary vaccine course has shown to raise antibody levels increasing protection, especially in older people where waning is more pronounced[62-66].

'Winter Booster' dose

A 'winter booster' dose refers to a second booster vaccine dose administered three 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 [67].

24. Who is eligible for a third primary COVID-19 vaccine dose, for a booster dose or 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[64] administered 2 months after the second primary dose. Vaxevria (AstraZeneca) whilst not preferred, can be used for the third dose for people who received it for the first 2 doses or if there are no contraindications for use or a significant adverse reaction after a previous mRNA vaccine. Nuvaxovid (Novavax) can be used as a third primary dose although there are limited data on the immunogenicity or efficacy in people with immunocompromise. See the recommendations for detail[57]. Severely immunocompromising conditions 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
- Long term haemodialysis or peritoneal dialysis

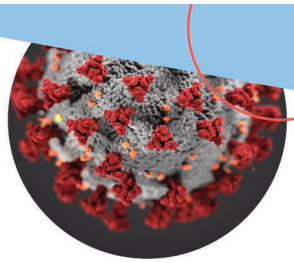
Booster dose

A booster dose refers to an additional dose after the primary COVID-19 vaccine course to mitigate against waning immunity and emergence of SARS-CoV-2 variants [57].

ATAGI recommends that, when practical, boosters be provided to everyone aged >16 years a minimum of 3 months following the second (or third) dose of the primary course [56]. It is important to ensure people living with HBV/HCV-related chronic liver disease continue to prioritise seeking boosters per the ATAGI guidance.

ATAGI also recommends a first booster dose for adolescents aged 12 – 15 yrs[68] 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:

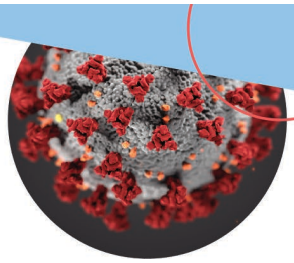
- People over 65 years
- Residents of aged care or disability care facilities
- People with severe immunocompromise
- Aboriginal and Torres Strait Islander people > 50 years
- People >16 years with a medical condition that increases the risk of severe COVID-19
- People >16 years with a disability, significant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

25. Which vaccine is recommended for the booster doses?

- ATAGI recommends Pfizer Comirnaty or Moderna Spikevax vaccine as a single booster dose for people over 18 years, irrespective of the primary vaccine used. Only Pfizer Comirnaty is recommended for those >12 to 18 years. [57,67,68]

- Whilst not preferred, Vaxevria (AstraZeneca) (Vaxzevria) and Nuvaxovid (Novavax) can be used as a booster dose for:
  - Individuals over 18 years who refuse an mRNA vaccine as a booster dose
  - If a significant adverse reaction has occurred after a previous mRNA vaccine dose which contraindicates further doses of mRNA vaccine (e.g., anaphylaxis, myocarditis).[57]

- Both the first and winter booster doses can be co-administered with the influenza vaccine.



26. Is COVID-19 vaccination primary or booster doses 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[5, 56, 67].

27. Where can I find reliable and up-to-date information on blood clotting concerns and the 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

28. 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

29. 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 are continuing. More information will be available over time.[69]

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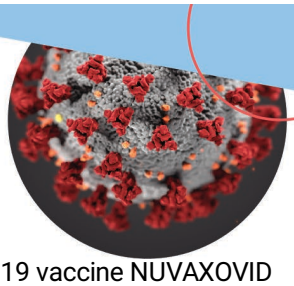

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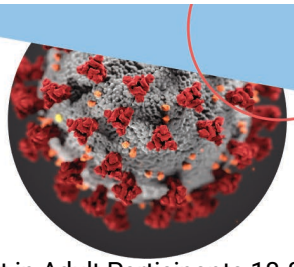

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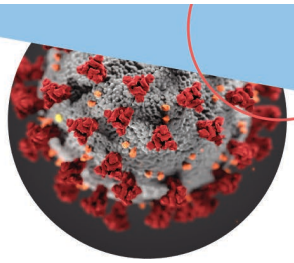

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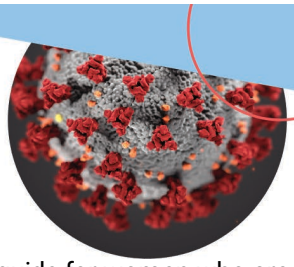

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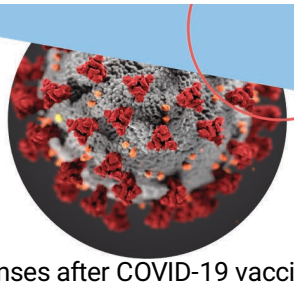

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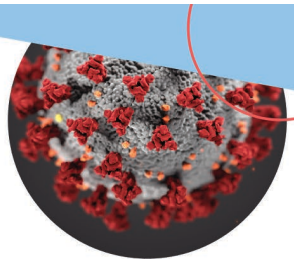

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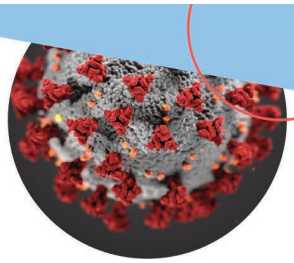

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