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# ATAGI Update on the COVID-19 Vaccination Program

Recommendations from the Australian Technical Advisory Group on Immunisation (ATAGI) regarding an additional COVID-19 dose for highest risk people in 2023. These recommendations are in addition the previous ATAGI COVID-19 vaccine booster advice published in February 2023.

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## 1 September 2023

The primary aim of COVID-19 vaccination continues to be to reduce the risk of serious illness and death. This is particularly important for older adults and those with risk factors for severe disease. <u>ATAGI last issued recommendations regarding a 2023 dose of COVID-19 vaccine in February 2023</u>.

This advice provides guidance on who should consider receiving an additional dose of a COVID-19 vaccine in 2023, recognising that older age remains the strongest risk factor for severe COVID-19 disease.

This updated advice also reflects that much of the population, particularly younger individuals with no other medical conditions, are currently well-protected against severe disease from COVID-19 from a combination of their previous vaccinations (including those who have already received a 2023 dose) and additional immunity gained from a previous infection.

#### Recommendations

ATAGI **recommends** that all adults aged  $\geq$  75 years **should receive** an additional 2023 COVID-19 vaccine dose if 6 months have passed since their last dose.

ATAGI advises the following groups should **consider** an additional 2023 COVID-19 vaccine dose if 6 months have passed since their last dose, after discussion with their healthcare provider:

- All adults aged 65 to 74 years, and/or
- Adults aged 18 to 64 years with severe immunocompromise.
- Within the above groups, an additional 2023 COVID-19 vaccine is likely to be of most benefit for people who:
  - Have no known history of SARS-CoV-2 infection (and therefore are unlikely to have protection from hybrid immunity),
  - Have medical comorbidities that increase their risk of severe COVID-19, or disability with significant or complex health needs, or
  - Reside in a residential aged care facility.

ATAGI continues to encourage all adults who were <u>recommended to have a COVID-19 vaccine</u> <u>dose in February 2023</u>, and who have not yet had one, to receive a vaccine dose as soon as possible (refer to Table below).

For younger people or older adults without severe immunocompromise who have already had a dose in 2023, no further doses are currently recommended. Their baseline risk of severe illness is low if they have already been vaccinated, and particularly if they have also had prior infection.<sup>1</sup>

Therefore a further 2023 dose will offer little additional benefit even if it has been more than 6 months since their last dose.

ATAGI continues to note that while there is minimal benefit from having a COVID-19 vaccine dose too soon after infection, current SARS-CoV-2 testing rates have dropped significantly, so from a practical perspective it is challenging for many individuals to know if or when they last had an infection. Where previous infection details are unknown, it is appropriate to proceed with a first 2023 dose, and an additional dose for eligible people outlined in this update.

A person may be vaccinated earlier than the recommended 6-month interval where considered appropriate, such as before starting an immunosuppressant, before overseas travel or if someone cannot reschedule vaccination easily (such as in an outreach or inreach vaccination program).

There are no additional safety concerns relating to the use of additional doses in older adults and people at high risk of severe SARS CoV-2.

	2023 COVID-19 booster dose (February 2023 guidance)		Additional 2023 COVID-19 booster dose (September 2023 guidance)	
Age	At risk <sup>#</sup>	No risk factors	At risk <sup>#</sup>	No risk factors
<5 years	Not recommended	Not recommended	Not recommended	Not recommended
5-17 years	Consider	Not recommended	Not recommended	Not recommended
18-64 years	Recommended	Consider	Consider <b>if severe</b> immunocompromise <sup>^</sup>	Not recommended
65-74 years	Recommended	Recommended	Consider	Consider
≥ 75 years	Recommended	Recommended	Recommended	Recommended

#### ATAGI 2023 COVID-19 Booster Advice – first and additional dose\*

- \*mRNA bivalent vaccine preferred; for ages in which a bivalent vaccine is not approved, <u>use a vaccine approved for that age group</u>. Timing: 2023 vaccine doses should be given from 6 months after a person's last dose.
- <sup>#</sup>Includes those with a medical condition that increases the risk of severe COVID-19 illness (refer to <u>ATAGI clinical guidance</u>) or those with disability with significant or complex health needs or multiple comorbidities which increase the risk of poor outcomes from COVID-19.
- <sup>^</sup> For details, refer to the <u>ATAGI recommendations on the use of a third primary dose of</u> <u>COVID-19 vaccine in individuals who are severely immunocompromised</u>.

## Rationale

Nationally there was a gradual increase in COVID-19 case notifications from March to June 2023 across all age groups<sup>2</sup>. While the number of cases has declined substantially in recent weeks, virus transmission will continue to occur. COVID-19 cases also continue to be reported in residential aged care facilities.<sup>2</sup> Most cases of severe illness (e.g., requiring hospitalisation) continue to be in older adults, particularly those aged  $\geq$  75 years.<sup>3</sup> Among cases reported to the National Notifiable Diseases Surveillance System (NNDSS) during the 4<sup>th</sup> Omicron wave (October 2022 – April 2023), around 2% of Australians aged 65-74 were hospitalised with COVID-19, compared with 7.2% of people aged  $\geq$  75 years.<sup>3</sup>

COVID-19 vaccine doses provide good protection against severe illness and death for several months. However, protection wanes over time. In an Australian study conducted from November 2022 – March 2023, absolute vaccine effectiveness (VE) of a booster COVID-19 vaccine dose against mortality in adults aged  $\geq$  65 years was 74.7% (95% CI 64.9 – 81.7) within 3 months of the dose but declined to 52.9% (95% CI 43.5 – 60.8) after 9 months following that dose.<sup>4</sup> In adults aged  $\geq$  75 years, VE fell from 78.3% (95% CI 69.4 – 84.7) within 3 months of a dose to 60.5% (95% CI 52 – 67.5) after 9 months.<sup>4</sup> In adults aged  $\geq$  75 years, the difference in the rate of COVID-19 mortality in those whose most recent dose was > 9 months earlier compared with those vaccinated within the previous 3 months was 11 out of 10,000 persons a year. In adults aged 65-74 years the difference was only 1 out of 10,000, emphasising that the benefit of a recent vaccine dose is higher with increasing age.

Multiple factors contribute to the relatively lower rates of severe illness in younger compared with older age groups. SARS-CoV-2 has consistently caused more severe illness, hospitalisation and deaths in older adults, particularly those with major medical comorbidities and/or frailty. An analysis of NNDSS data from the 4<sup>th</sup> Omicron wave, about 1% of people aged 18-49 with reported SARS-CoV-2 infection were hospitalised.<sup>3</sup> Furthermore, much of the population now has 'hybrid immunity', a combination of protection from previous vaccination and prior infection. This is supported by serosurveillance conducted at the end of 2022, which indicates that about 70% of the adult population and 64% of children had evidence of infection with SARS-CoV-2.<sup>1,5</sup>

Globally, vaccine advisory groups recognise that severe COVID-19 disproportionally affects older adults and people with high-risk medical conditions. <sup>6-8</sup> These people will benefit most from additional vaccine doses.

## 2023 booster doses delivered

Since 1 January 2023, approximately 3.8 million COVID-19 booster doses have been administered to Australians aged over 18 years.<sup>2</sup> Among eligible aged care residents (i.e., who had not had a dose or known infection within the prior 6 months), around 66% had received a booster dose as of 16 August 2023.<sup>9</sup> Only 53% of people aged 65 years and older have received a booster dose in the last 6 months.<sup>9</sup> These data reflect that a significant proportion of adults  $\geq$  65 years of age, and particularly aged care residents, should be strongly encouraged to receive a COVID vaccine now.

## Additional information and timing of future advice

Bivalent Omicron-based mRNA COVID-19 vaccines continue to be preferred for all doses in people aged  $\geq$  12 years.

ATAGI notes that XBB.1.5-based vaccines have been developed, but these are not yet approved for use by any country and updates will be provided as information is available.

Ongoing surveillance of COVID-19 infection rates and clinical outcomes, new variants, and vaccine availability and effectiveness will inform future recommendations for additional COVID-19 vaccine doses from ATAGI.

### References

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