19 January 2021

Australian Technical Advisory Group on Immunisation (ATAGI)

Advice on the relative timing of administering influenza and COVID-19 vaccines in 2021

Prepared by NCIRS for the ATAGI COVID-19 Working Group
DT0001307-ATAGI advice on Flu and COVID-19.docx

This guidance is based on current information about COVID-19 vaccines available for use in Australia. This advice will be updated as new information becomes available.

Key messages:

- Routine scheduling and giving of an influenza vaccine with a COVID-19 vaccine on the same day is not recommended.
- The preferred minimum interval between a dose of seasonal influenza vaccine and a dose of BNT162b2 or ChAdOx1-S is 14 days.
- There may be circumstances where co-administration or near administration (within days) of an influenza vaccine with a COVID-19 vaccine may be considered.
- There is no particular requirement regarding the order of receiving a dose of influenza vaccine and either the first or second dose of a COVID-19 vaccine.
- If an influenza vaccine has been inadvertently co-administered or given within a shorter interval than 14 days with a COVID-19 vaccine, revaccination with either vaccine is not considered necessary.

Introduction

- This ATAGI clinical advice statement aims to provide guidance for immunisation program coordinators and immunisation providers on the relative timing of scheduling and giving influenza vaccines and COVID-19 vaccines in 2021.
- Two COVID-19 vaccines are anticipated to be available for use in Australia in early to mid 2021. They are:
- BNT162b2 (Pfizer/BioNTech) – anticipated to be provisionally registered for use in people aged ≥16 years, with 2 doses to be given at least 21 days apart
- ChAdOx1-S (AstraZeneca/University of Oxford) – anticipated to be provisionally registered for use in people aged ≥18 years, with 2 doses to be given 4–12 weeks apart
- At the time of this advice, there are no safety or immunogenicity data for co-administered influenza vaccine with any COVID-19 vaccines. The design of the studies on BNT162b2 and ChAdOx1-S did not assess co-administration of vaccines. The clinical trials of BNT162b2 precluded receipt of other vaccines within a 14 day window. In clinical trials of ChAdOx1-S, participants were permitted to receive influenza vaccine but were encouraged to receive it at least 7 days before or more than 7 days after ChAdOx1-S.

First principles considerations

- There are no common active ingredients, including vaccine target antigens, contained within any 2021 seasonal influenza vaccine and either BNT162b2 or ChAdOx1-S.
- BNT162b2 is not a live vaccine; ChAdOx1-S is a viral vaccine that cannot replicate in the vaccine recipient.
- Although it is plausible that co-administration of an influenza vaccine with a COVID-19 vaccine might reduce the immune response to either or both vaccines, there are no specific identified factors to suggest that this is likely to occur to any clinically significant extent.
- Injection site reactions and general systemic adverse effects (such as fever, fatigue headache and myalgia) are relatively common within several days of receiving either BNT162b2 or ChAdOx1-S. Co-administration may make the attribution of potential adverse events following immunisation more challenging. It is plausible that co-administration or near administration (e.g. within days) with an influenza vaccine may increase the likelihood of some of these reactions, though there is no evidence yet to suggest that this will be the case. Inactivated influenza vaccines are routinely and safely co-administered with many other inactivated or live vaccines.
- BNT162b2 is a lipid nanoparticle-formulated mRNA vaccine. No studies have been identified which assess the safety and immunogenicity of co-administering an mRNA vaccine with an influenza vaccine.
- ChAdOx1-S is a viral vector vaccine for humans based on the chimpanzee adenovirus. While there are no studies on co-administering a seasonal influenza vaccine with ChAdOx1-S, one study was identified which compared the reactogenicity and immunogenicity in healthy adults aged ≥60 years receiving an investigational adenoviral vectored vaccine for humans against the respiratory syncytial virus (RSV) co-administered with a standard dose of unadjuvanted trivalent seasonal influenza vaccine, or administered with either vaccine alone or placebo.[1] Influenza and RSV-specific immune responses elicited after co-administration of the two vaccines were similar to the responses against influenza and RSV, as measured after vaccination with each vaccine alone. Injection site reactions were more common in those receiving the adenoviral vectored RSV vaccine with the influenza vaccine when co-administered, on the arm receiving the RSV vaccine, compared with receiving the influenza vaccine alone, but the frequencies were similar when comparing with receiving the RSV vaccine alone. Systemic reactogenicity in the 7-day post-vaccination period was more frequent after the RSV vaccine than seasonal influenza vaccine, but was generally not more frequent after co-administration of both vaccines than after the RSV vaccine alone.

Routine scheduling and giving an influenza vaccine with a COVID-19 vaccine on the same day is not recommended

- This is based on the lack of direct data demonstrating absence of any safety issues or interference of immune responses after co-administration of an influenza and COVID-19 vaccines. As further information becomes available, this recommendation may change to permit routine co-administration.
- Based on current understanding of the influenza vaccines that will be used in Australia in 2021 and the two COVID-19 vaccines likely to be used (BNT162b2 or ChAdOx1-S), there are no theoretical concerns regarding safety or clinically significant reduction in protective efficacy by co-administration. However, administering the influenza and COVID-19 vaccines sequentially separated by a reasonable time window may reduce the likelihood of overlapping periods of systemic adverse events following immunisation, and will assist in attributing any adverse event following immunisation to a particular vaccine.
- Scheduling for co-administration of both an influenza vaccine and a COVID-19 vaccine may add complexity to implementation in the context of mass vaccination sessions or clinics with high throughput, such as workplaces or outreach settings.

The preferred minimum interval between a dose of seasonal influenza vaccine and a dose of BNT162b2 or ChAdOx1-S is 14 days

- ATAGI considers that the preferred minimum interval between administration of either BNT162b2 or ChAdOx1-S and an influenza vaccine is 14 days. This is a conservative precautionary advice, in the absence of specific data, and is based on the exclusion period implemented in the clinical trial of BNT162b2.
- In a clinical trial, local and systemic adverse events following BNT162b2 had a median duration of 1-2 days.[2] Local and systemic adverse events following ChAdOx1-S most frequently occurred within the first 48 hours following vaccination and decreasing to 4% and 13% regarding local or systemic reactions, respectively, by day 7.[3,4]

There is no particular requirement regarding the order of receiving a dose of influenza vaccine and either the first or second dose of a COVID-19 vaccine

- The dose of influenza vaccine can be given in any sequential order in relation to the 2 doses of a COVID-19 vaccine. An influenza vaccine dose can be administered between dose 1 and dose 2 of BNT162b2 or ChAdOx1-S if sufficiently spaced apart to allow for minimal intervals between vaccines. This is particularly applicable to the ChAdOx1-S for which the 2 doses can be given up to 12 weeks apart. The effect on immune response to the COVID-19 vaccine of intercalating a dose of influenza vaccine between the 2 doses within the 3–4 weeks interval window is currently not known.
- This allows some flexibility in scheduling COVID-19 (2 visits required) and influenza vaccinations to facilitate planning and implementation of both vaccination programs, which may sometimes be constrained by vaccine supply and operational requirements.

Considerations for shortening the interval between or same-day administration of a dose of influenza vaccine and COVID-19 vaccine

There are circumstances where shortening the intervals between or co-administering a dose of influenza vaccine and COVID-19 vaccine are justified, such as:

- if adherence to the recommended minimum interval will likely lead to an individual or a target population for both these vaccines missing the opportunity of receiving any of these vaccine doses
- if there is an imminent need of receiving either of these vaccines due to prevailing local epidemiological situations, with regards to either influenza or COVID-19
- if by the time COVID-19 vaccine doses become available to a certain population, the onset of influenza season is imminent – Ideally forward planning should ensure these groups receive the influenza vaccine dose with a minimum interval of 14 days ahead of the anticipated first dose of COVID-19 vaccine.

Management of inadvertent co-administration of influenza vaccine with a COVID-19 vaccine

- If inadvertent co-administration of an influenza vaccine and COVID-19 vaccine occurs, the patient should be informed of the possibility of an increased likelihood of common adverse effects and be asked to report any untoward adverse events, according to the usual reporting pathway in your jurisdiction or directly to the Therapeutic Goods Administration (https://aems.tga.gov.au/). Refer also to the "How to report AEFIs" section of the Australian Immunisation Handbook.
- However, revaccination with either vaccine is not currently recommended. There are no data to ascertain the effects of receiving more doses of COVID-19 vaccines in close succession than as used in clinical trials.
- If a dose of an influenza vaccine was given within 14 days after the first dose of a COVID-19 vaccine, the second dose of the COVID-19 vaccine should be given at the recommended interval following the first dose of the specific COVID-19 vaccine or at least 14 days after the influenza vaccine dose, whichever is later.

References

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