ROYAL COLLEGE OF PHYSICIANS OF IRELAND

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cc Dr Colette Bonner DCMO
Dr Ronan Glynn DCMO
Dr Siobhán O'Sullivan Chief Bioethicist
Ms Pauline Brady CMO Office

Re: Recommendations regarding:

1. **The interval between the primary course and booster COVID-19 vaccines**
2. **Booster vaccination for those with immunocompromise associated with a suboptimal response to vaccines**

Dear Dr Holohan,

Ireland is experiencing a high rate of SARS COV-2 infections and the emergence of the Omicron variant gives cause for concern. NIAC has considered available evidence regarding the benefit of shortening the interval between primary course and booster vaccination and the benefit of a booster (fourth dose) for those with immunocompromise.

Preliminary data indicate that unvaccinated individuals with prior SARS-CoV-2 infection have a three times higher risk of reinfection with the Omicron variant than with other variants. Thus it is important that they are fully vaccinated. There is preliminary evidence that fully vaccinated people with breakthrough infections are naturally boosted against the Omicron variant and so may not require a booster earlier than currently recommended.

Age and immune status remain the dominant risk factors for severe COVID-19 disease. Recent data shows that primary COVID-19 vaccine protection against the Omicron variant is not as robust as that against the Delta variant. Neutralising antibodies against the Omicron variant, which are a known correlate of protection, can be significantly increased by booster vaccination.

Studies have shown that homologous and heterologous mRNA booster vaccination from three months after completion of a primary vaccine course are safe and highly immunogenic with no new safety concerns identified. While most of the safety experience with booster vaccination relates to use after an interval of five months, these data provide limited but reassuring information with respect to short-term reactogenicity when given after a three month interval. The risks of rare reactions, such as myocarditis, after a shorter booster interval have yet to be fully characterised and will be closely monitored.

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Data on a fourth dose of a COVID-19 vaccine in those with immunocompromise associated with a suboptimal response to vaccines are limited. However, they are at a higher risk of severe outcomes of COVID-19 and also at increased risk of decreasing protection over time since vaccination, thus a booster dose at a shorter interval is recommended.

Recommendations

1. Observation of all recommended public health and social measures i.e., use of masks, physical distancing, hand hygiene and ventilation of indoor spaces are key to reducing SARS-CoV-2 transmission.
2. NIAC urges all those eligible to be fully vaccinated and to accept booster vaccination when offered, so that the maximum number of people are protected as quickly as possible.
3. Those who are unvaccinated and develop laboratory confirmed COVID-19 infection should complete a primary vaccination course, with the first dose at least four weeks after diagnosis or onset of symptoms.
4. Those who are partially vaccinated and develop laboratory confirmed COVID-19 infection should complete their primary vaccination course, with their next dose at least four weeks after diagnosis or onset of symptoms.
5. Those who are fully vaccinated and have had breakthrough laboratory confirmed COVID-19 infection should delay their booster vaccination for at least six months in accordance with the Immunisation Guidelines for Ireland.
6. In light of the Omicron variant, reducing the interval between the primary course and the booster dose should facilitate earlier protection. A booster dose of vaccine should now be given after a minimum interval of three months **in the order of priority** as outlined in the Immunisation Guidelines for Ireland.
7. Those aged 16 years and older with immunocompromise associated with a suboptimal response to vaccines who have completed a three dose primary series, should be given an mRNA booster vaccine after a minimum interval of three months. The booster dose is Comirnaty 30 micrograms (for those aged 16 years and older) or Spikevax 50 micrograms (for those aged 30 years and older).

All recommendations reflect current evidence and will be reviewed when more information becomes available.

Yours sincerely,

Karina Butler
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Professor Karina Butler
Chair
National Immunisation Advisory Committee