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cc Dr Colette Bonner DCMO
Ms Richael Duffy Principal Officer
Ms Pauline Brady CMO Office

Re: Timing of administration of COVID-19 booster vaccines in pregnancy

Dear Professor Smyth,

NIAC received a query whether delaying the offer of a second COVID-19 booster during pregnancy until at or after 16 weeks' gestation remains justified.

The recommendation that the primary vaccine series can be given at any stage in pregnancy has been in place since August 2021. In July 2022 NIAC recommended that pregnant women should receive a second mRNA COVID-19 booster vaccine at or after 16 weeks' gestation if not already boosted in that pregnancy. This recommendation was made to minimise any potential risk associated with administration of a second booster in early pregnancy while safety evidence was being gathered and to optimise neonatal protection by aiming for high fetal and maternal antibody levels peripartum by giving a booster vaccination at or after 16 weeks' gestation. At that time, a second COVID-19 booster vaccine was not generally recommended for adults aged under 50 years.

Since the end of December 2022, a second booster has been recommended for all adults aged 18 years and older who are more than six months since a previous booster dose or COVID-19 infection. This recommendation for a second adult booster created an anomaly in that a pregnant person who is at less than 16 weeks' gestation cannot receive a second booster, even if more than six months and possibly up to 15 months, have elapsed since their first booster. This extends the interval between the booster doses increasing their susceptibility to infection.

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NIAC has reviewed the evidence regarding safety and timing of COVID-19 primary and booster vaccines in pregnancy.

Current data are very reassuring regarding the safety of COVID-19 mRNA vaccines given at any stage in pregnancy either as a primary series or as a booster. The EMA, UK Health Security Agency, and CDC have been monitoring the safety of COVID-19 vaccines in pregnancy.[1-3] These safety monitoring systems have not reported any safety concerns for people who receive an mRNA COVID-19 vaccine at any stage of pregnancy. Less data are available regarding non-mRNA vaccines. Vaccination during pregnancy reduces the frequency and severity of COVID-19 disease and may prevent stillbirths.[4] Vaccination during pregnancy has also been shown to increase antibody levels in neonates and can help protect against severe COVID-19 disease in the first six months of life.[5-8]

Over the past year a reduction in the risk of severe COVID-19 disease in pregnant people, adverse pregnancy outcomes, and infection in neonates has been observed.[9] This is likely due to a combination of increased population immunity through vaccination, natural infection, or both and reduced virulence of the Omicron sublineages compared to previous variants such as Delta. While the risk appears to be less than before, those who are pregnant are still at higher risk of complications associated with COVID-19 compared to those who are not pregnant.

Updated Recommendations:

- mRNA COVID-19 vaccines remain the preferred option for use in pregnancy
- COVID-19 vaccines, including booster doses, may be administered at any stage of pregnancy
- Those who are pregnant should be up to date with COVID-19 vaccines in line with NIAC recommendations based on age, risk profile and time since prior vaccination or infection.

The COVID-19 chapter will be amended to reflect this update.

Kind regards,

Karina Butler

Imc 03054

Professor Karina Butler
Chair/Interim Clinical Lead NIAC

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