Evaluating the effectiveness of Hepatitis B immunoglobulin and vaccination in preventing transmission of hepatitis B virus, in the context of C4 genotype: a retrospective cohort study in Australia's Northern Territory.

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Acknowledgements

I wish to begin today by acknowledging that we meet on, and much of this work was undertaken on, the beautiful lands of the Larrakia people. I wish to pay my respect to Elders past and present & acknowledge that sovereignty was never ceded. I also wish to thank the Aboriginal and Torres Strait Islander people living with hepatitis B who have generously participated in this research.

PREGNANCY

Screening during pregnancy

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Antiviral therapy from 28 weeks if viral load >=200,000 IU/L

NEONATE

Hepatitis B immunoglobulin Birth dose of hepatitis B vaccine — Within 48 hours Within 7 days of birth

HBV vaccine – 2 months

↕ Minimum interval 6 weeks

HBV vaccine – 4 months

↕ Minimum interval 1 month

HBV vaccine – 6 months

↕ Minimum interval 2 months

Min 4 months

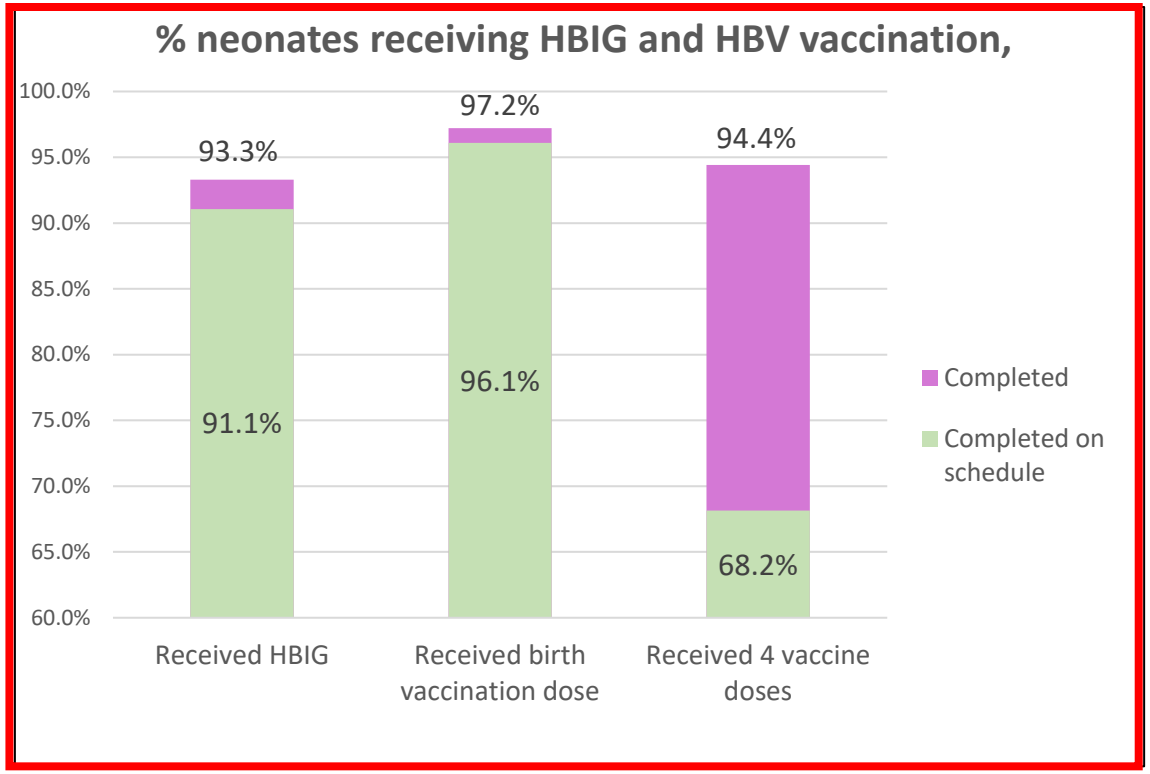
HBV vaccine – 12 months — If born at <32 weeks' gestation or <2000g

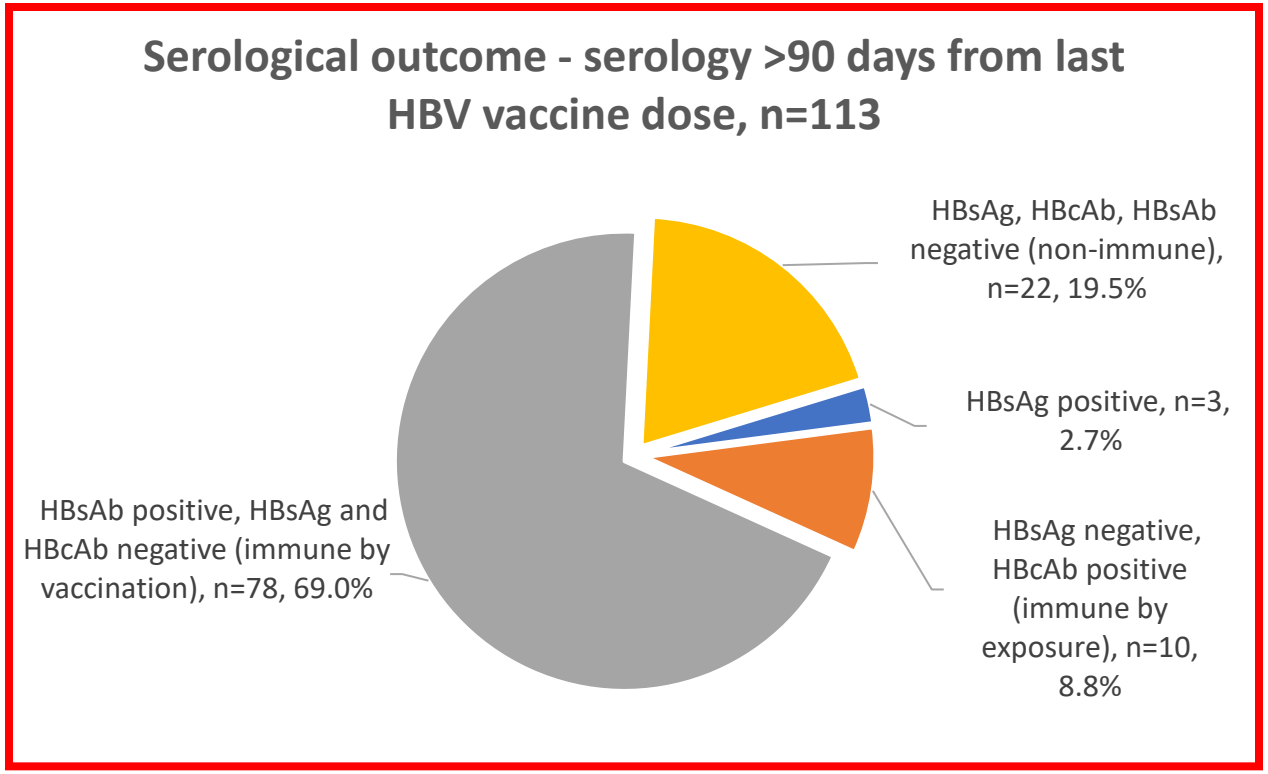
Preventing vertical transmission of hepatitis B

Retrospective study of babies born to Aboriginal and Torres Strait Islander people living with chronic hepatitis B, 2010-2023 in the context of C4 genotype

Results

- 179 neonates born to mothers with chronic hepatitis B infection





- HBeAg status **strongest predictor** of neonatal seroconversion due to maternal hepatitis B exposure - **OR 14.2 (1.46, 137.8)**

Key findings

- High rates of adherence to recommendations including administration of HBIG and 4 dose vaccination schedule
- However, transmission is continuing in the Northern Territory
- 10 infants had evidence of immunity due to hepatitis B exposure
- HBeAg positivity is a key predictor of neonatal exposure
- Seroconversion to HBeAg negative is delayed in carriers of the C4 genotype

Does the current vaccine provide sufficient protection against exposure to the C4 genotype in Aboriginal and Torres Strait Islander communities of the Northern Territory?