



Mother to child transmission of hepatitis B in Far North Queensland, 2013-2023

Josh Hanson, Cairns Hospital and the Kirby Institute

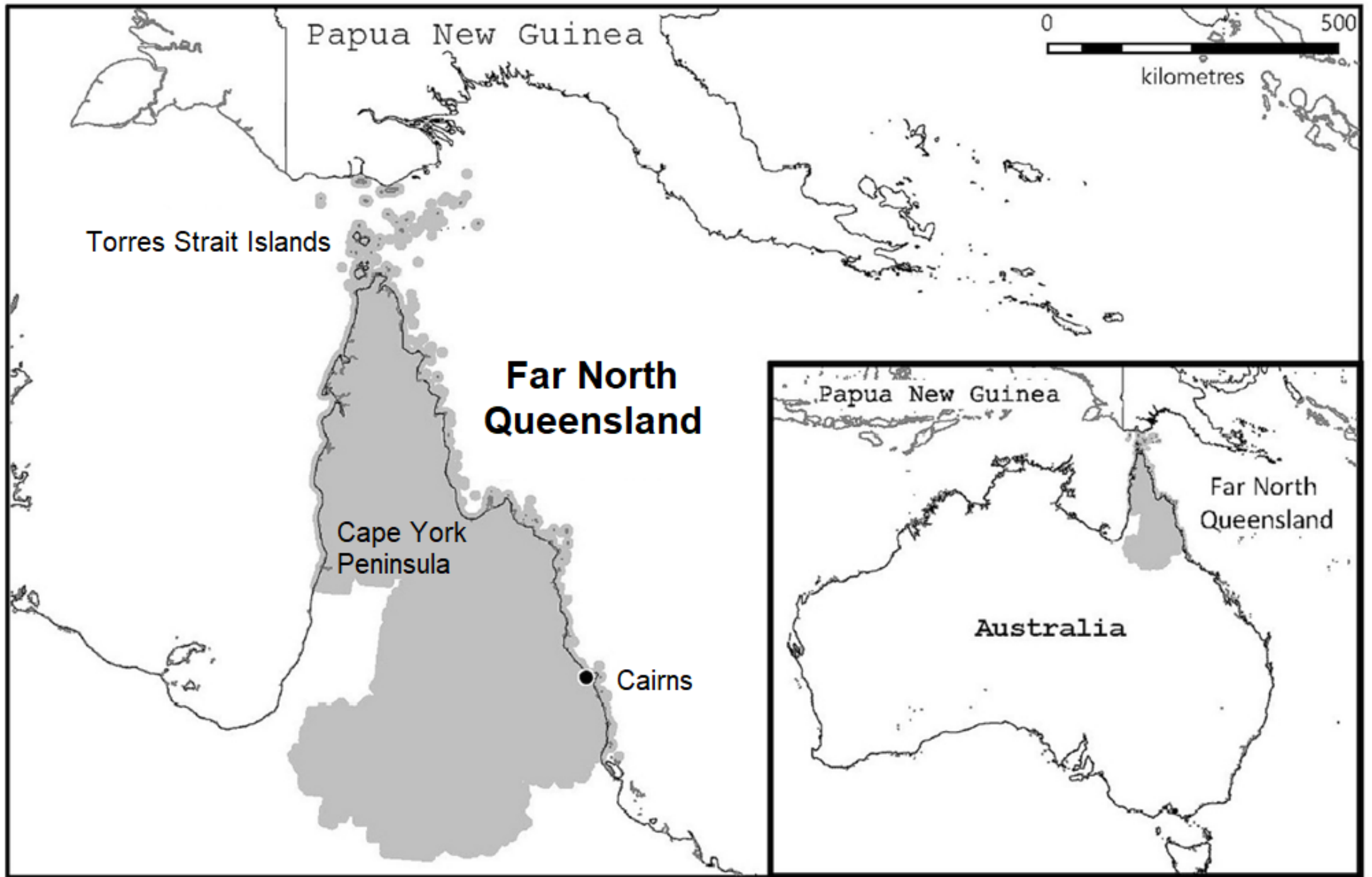


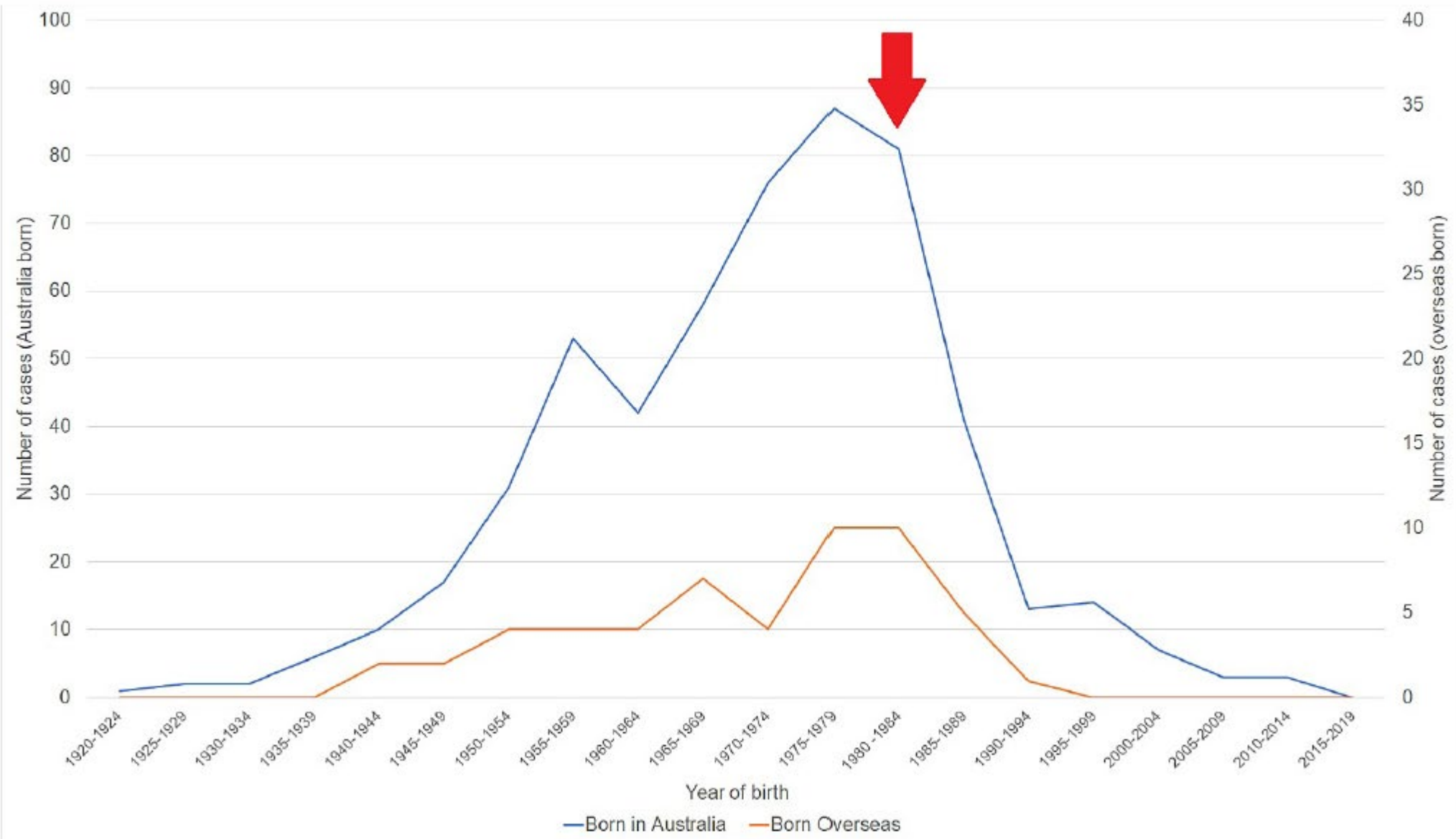


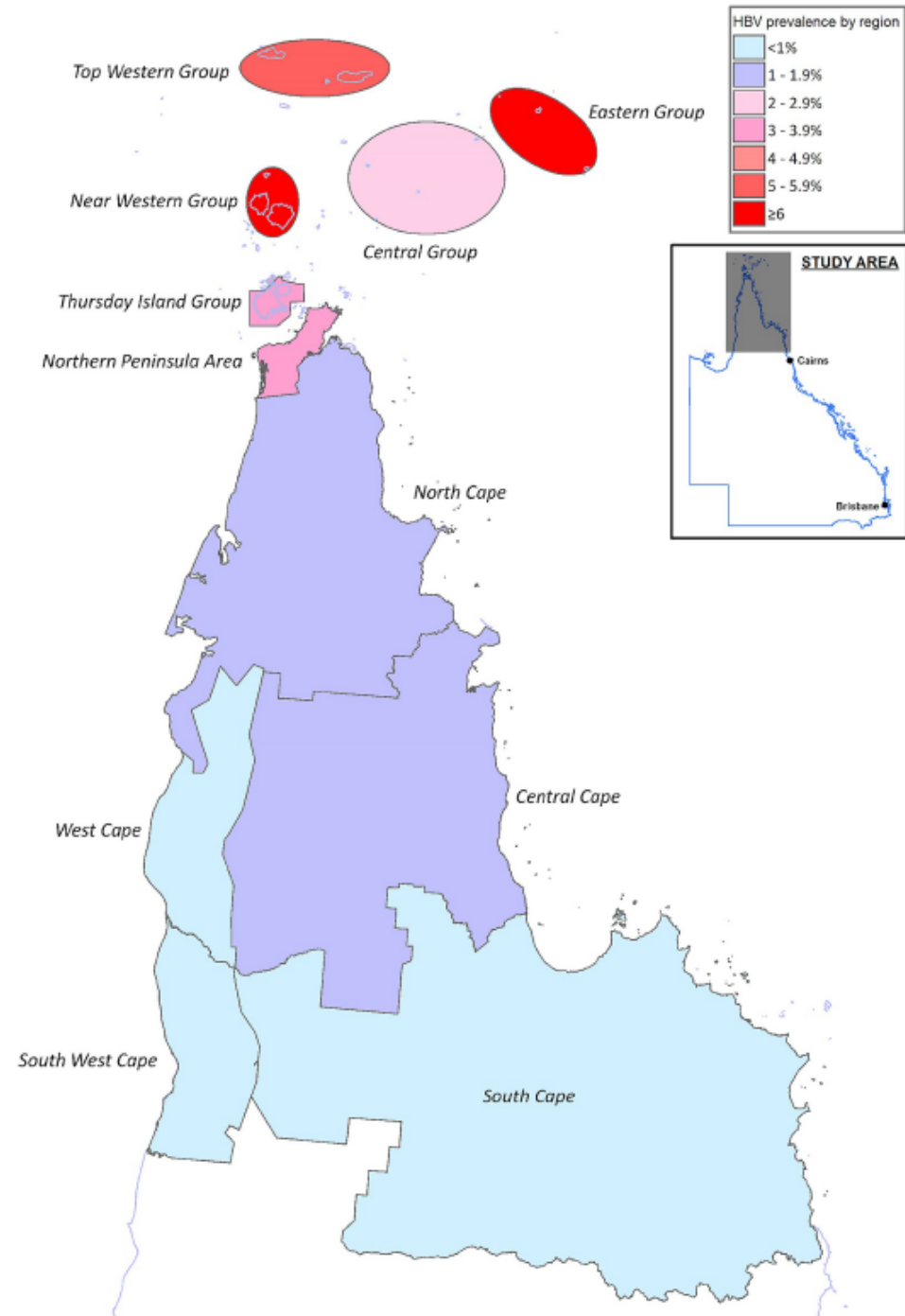
Table 3 PRE-VACCINATION PREVALENCE OF HEPATITIS B SEROLOGICAL MARKERS, QUEENSLAND ABORIGINAL CHILDREN 1987-1989, BY COMMUNITY

Location	HBsAg + ve %	Anti-HBc + ve %	Number tested
Aurukun	6.9	46.4	248
Cherbourg	2.2	10.0	231
Coen	0	5.9	34
Doomadgee	0	3.0	267
Edward R.	0	4.4	45
Eidsvold	0	5.5	73
Hervey Bay	0	0	42
Hopevale	2.1	6.4	94
Kowanyama	3.4	13.7	146
Lockhart R	21.0	79.0	100
Maryborough	10.7	25.0	28
Mornington Is	1.9	8.7	207
Palm Is.	6.4	35.7	456
Woorabinda	0	7.9	139
Total	3.9	21.7	2110

Table 4 PRE-VACCINATION PREVALENCE OF HEPATITIS B SEROLOGICAL MARKERS, QUEENSLAND ABORIGINAL AND ISLANDER CHILDREN 1987-1989, BY COMMUNITY

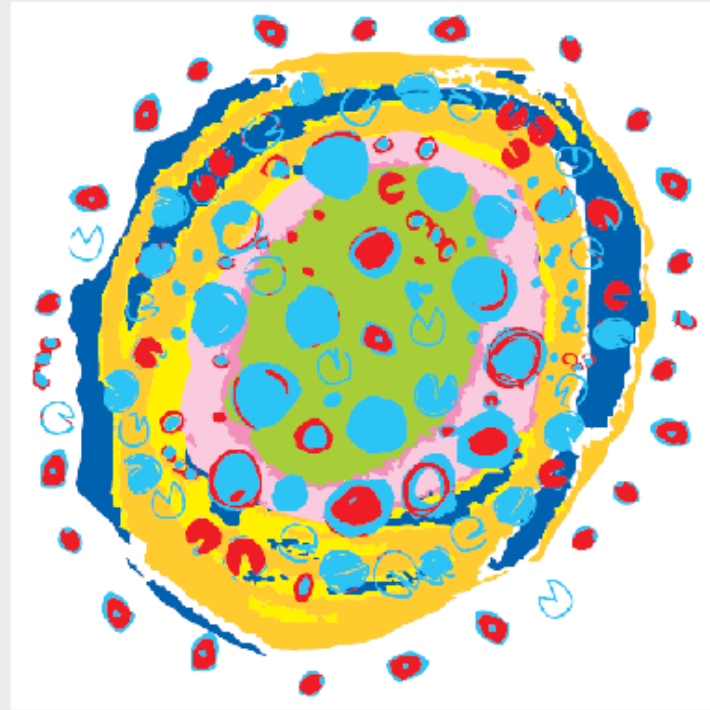
Location	HBsAg + ve %	Anti-HBc + ve %	Number tested
Badu Is.	7.4	31.2	122
Bamaga	12.7	52.4	565
Boigu Is.	17.8	48.9	90
Coconut Is.	0	2.7	37
Darnley Is.	17.6	41.2	51
Dauan Is.	0	38.5	26
Kubin, Moa Is.	14.8	48.1	27
Mabuiag Is.	24.5	59.2	49
Murray Is.	3.8	20.0	105
Saibai Is.	24.6	54.1	61
St Pauls, Moa Is.	24.5	62.3	45
Stephen Is.	36.4	72.7	11
Sue Is.	2.0	14.3	49
Thursday Is.	8.7	29.6	311
Weipa South	1.1	16.1	180
Yam Is.	10.7	39.3	56
Yorke Is.	2.8	11.1	36
Not Stated	0	17.6	17
Total	10.6	38.0	1838





Far North Queensland Aboriginal and Torres Strait Islander Hepatitis B Project

June 2017



People

Patient List

Reports

Update Static
Tables

Reference
Tables

Backup

Quit

User:

File Home Create External Data Database Tools Help

View Paste Cut Copy Format Painter Filter Ascending Descending Remove Sort Selection Advanced Toggle Filter

Refresh All Save Delete Records New Totals Spelling More Find Go To Select Replace

B I U A - Text Formatting

Filter: Region Sub-Region Site Site Status Site Matches Ruled Out Ruled Out Reason Age Data Progress Show List Print List Excel Export Show Filtered Individuals

Either Addr Not Ruled C

	Sub-Region	Locality	Other Locality	First Name	Surname	Age	Sex	Indigenous Status	Immune Phase	Issues	Ruled Out	Data Progress
View	Cairns	Mooroobool				36	M	Torres Strait Is	Escape	DNA 1.7 years ago,	No	Complete
View	Cairns	Kanimbla				51	M	Born Overseas	Escape	No HBsAg Pos, DNA 1.8 years ago,	No	Complete
View	NPA	Bamaga				70	M	Torres Strait Is	Control	DNA 4.1 years ago,	No	Complete
View	North Cape	Napranum				58	M	Torres Strait Is	Control	DNA 1.1 years ago,	No	Complete
View	NPA	Bamaga				53	M	Torres Strait Is	Control	DNA 10.2 years ago,		Complete
View	Western Islands	Badu Island				38	F	Torres Strait Is	Control	DNA 1.6 years ago,	No	Complete
View	Western Islands	Badu Island				41	F	Torres Strait Is	Tolerance	HBeAg 7.9 years ago, ALT 6.0 years ago,		In Progress
View	Western Islands	Badu Island				36	F	Torres Strait Is	Escape	DNA 2.2 years ago,	No	In Progress
View	Western Islands	Badu Island				49	M	Torres Strait Is	Control	HBsAg Pos < 6 months apart, DNA 1.5 years ago,	No	Complete
View	NPA	New Mapoon				40	F	Torres Strait Is	Control	DNA 3.6 years ago,	No	Complete
View	Western Islands	Badu Island				52	M	Torres Strait Is	Control	DNA 2.1 years ago,	No	Complete
View	North Cape	Weipa				45	F	Torres Strait Is	Control	DNA 1.4 years ago,	No	Complete
View	Western Islands	Badu Island				48	M	Torres Strait Is	Unknown Control or Escape	HBsAg Pos < 6 months apart, No DNA,	No	Complete
View	Cairns	Mount Sheridan				24	M	Born Overseas	Unknown - No HBsAg Pos	No HBsAg Pos, No HBeAg,	No	Complete
View	Cairns	Bentley Park				53	M	Born Overseas	Unknown - No HBsAg Pos	No HBsAg Pos, No HBeAg,	No	Complete
View	Central Islands	Thursday Island				61	M	Unknown / Not Stated	Unknown - No HBsAg Pos	No HBsAg Pos, No HBeAg,	Unk	In Progress
View	Cairns	Cairns				56	F	Torres Strait Is	Unknown - No HBsAg Pos	No HBsAg Pos, No HBeAg,	No	Complete
View	Central Islands	Thursday Island				63	F	Torres Strait Is	Tolerance	HBsAg Pos < 6 months apart, HBeAg 16.5 years ago,	No	Complete
View	Western Islands	St Pauls				33	M	Torres Strait Is	Control	DNA 1.6 years ago,	No	Complete
View	Cairns	Manunda				29	M	Born Overseas	Unknown - No HBsAg Pos	No HBsAg Pos, No HBeAg,	No	Complete
View	Cairns	Mooroobool				27	M	Born Overseas	Clearance	HBsAg Pos < 6 months apart, HBeAg 10.1 years ago,	No	In Progress
View	Outer Islands	Murray Island	MER ISLAND			68	M	Torres Strait Is	Control	DNA 3.1 years ago,		
View	Outer Islands	Saibai Island	SAIBAI ISLAND CO			54	M	Torres Strait Is	Control	DNA 1.3 years ago,	No	Complete
View	Outer Islands	Saibai Island	SAIBAI ISLAND			21	M	Torres Strait Is	Unknown - No HBsAg Pos	No HBsAg Pos, No HBeAg,		NEW
View	Hinterland	Atherton				39	M	Torres Strait Is		HBsAg Pos < 6 months apart, HBeAg 5.1 years ago,	No	Complete
View	Outer Islands	Saibai Island				30	M	Torres Strait Is	Control	DNA 2.0 years ago,	No	Complete

File Home Create External Data Database Tools Help Tell me what you want to do

View Paste Cut Copy Format Painter Filter Ascending Descending Remove Sort Toggle Filter Refresh Save Delete All Records Find Replace Go To Select Text Formatting

Search: First Name Surname Other Name Birth Date Onset Date Filter: Sex Indig Locality Data Progress Date Details Current Data Checked Date Back Add Record PersonID

Complete 14-May-18 14-May-18 today 1681

First Name Surname Other Name Birth Date Age Current Sex Indig Other Ethnicity

09-Aug-80 40 F Torres Strait Is

ICD Onset Date Age At Onset Deceased Date Deceased Cause Healthcare Site

HEPATITIS B (CHRONIC) 25-Mar-98 17

Ruled Out Reason Notif Date Age At Notif Child-B Age Baby Due Date

11-Jan-10 29 YES

In Care Treatment APRI Score (last)

Yes 0.12 // 10-Jan-18

Expected Control Cirrhosis HCC Clinical Comments

DNA 1.6 years ago, Fluctuating quantitative hep B DNA 2000->96 --> 3300 --> 130

Last Result:	collected	Locatio	sAg	sAb	cAb	eAg	eAb	gM	cAl	DNA	GenoT	HbVQL	HbVQU	HbVAVT	ALT	AST	GGT	PLT	INR	PT	ALB	A1C	EGFR	BILI	CRE	AFP	HAV IgG	HAV IgM	HCV	HCVRPQ	HIRPQ	HDV	HDV RNA	
Last Result:	10-Jan-18	BADI	RE	< 10	RE	NR	INSUF	NR	130						21	18	22	440	1.0	10	44	5.6	>90	10	52	2.1	RE		NR					

Address Auslab+ Auslab Non-Auslab HBCIS/IEMR NOCS Investigations Medical Cond'ns Treatment Recall Unlinked Auslab Duplicates

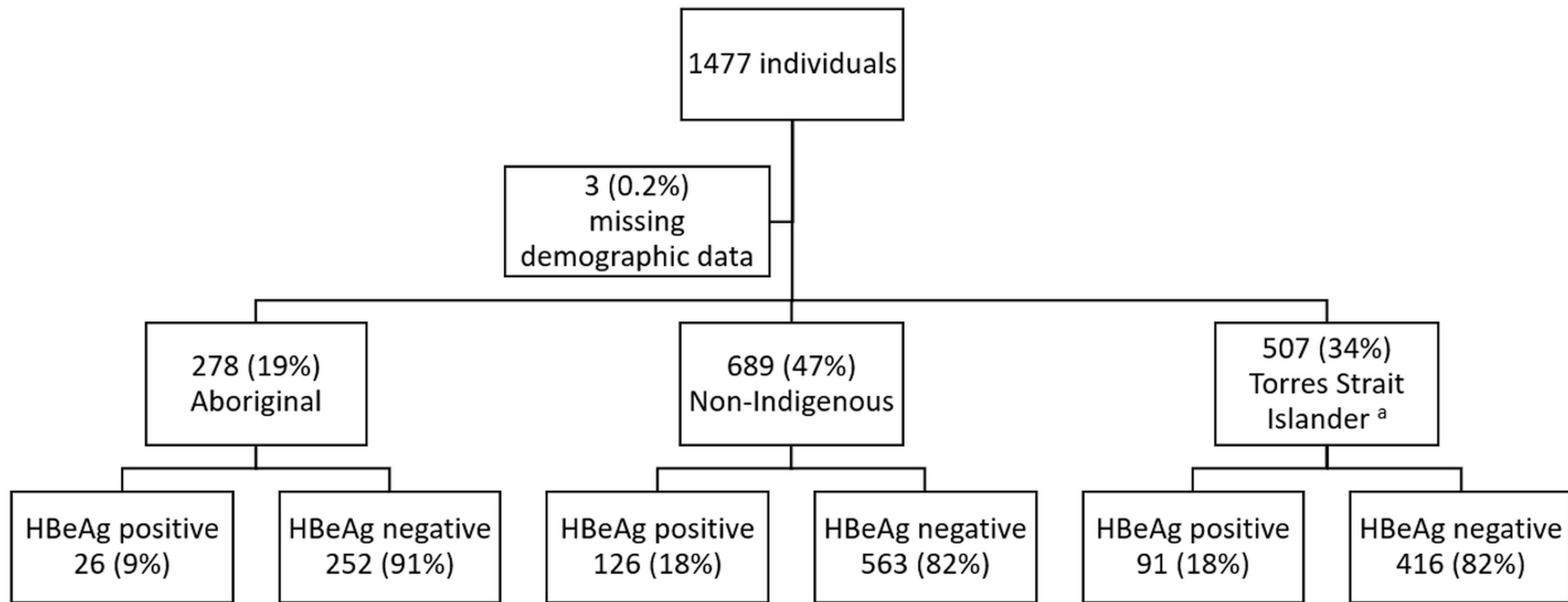
Test	System	Test Date	Result	Result2	Person Link
UltraSound	QLD health	08-Oct-18	Hepatomegaly	Steatosis	

20/03/2017-
 DOB 09/08/1980- confirmed with badu data from Dr VanTinteren not 12/08/1980
 second notif 25/05/2006- merged
 12/04/2017 latest results 01/06/2016- see Western Island Review

Last Auslab:	Location	Birth Date
		09-Aug-80



Currently



The study

- All females of childbearing age (13-45) between 2013 and 2023
- Examined all live births
- Was care concordant with current Australian guidelines?
- Had there been any impact of the local HBV programme?

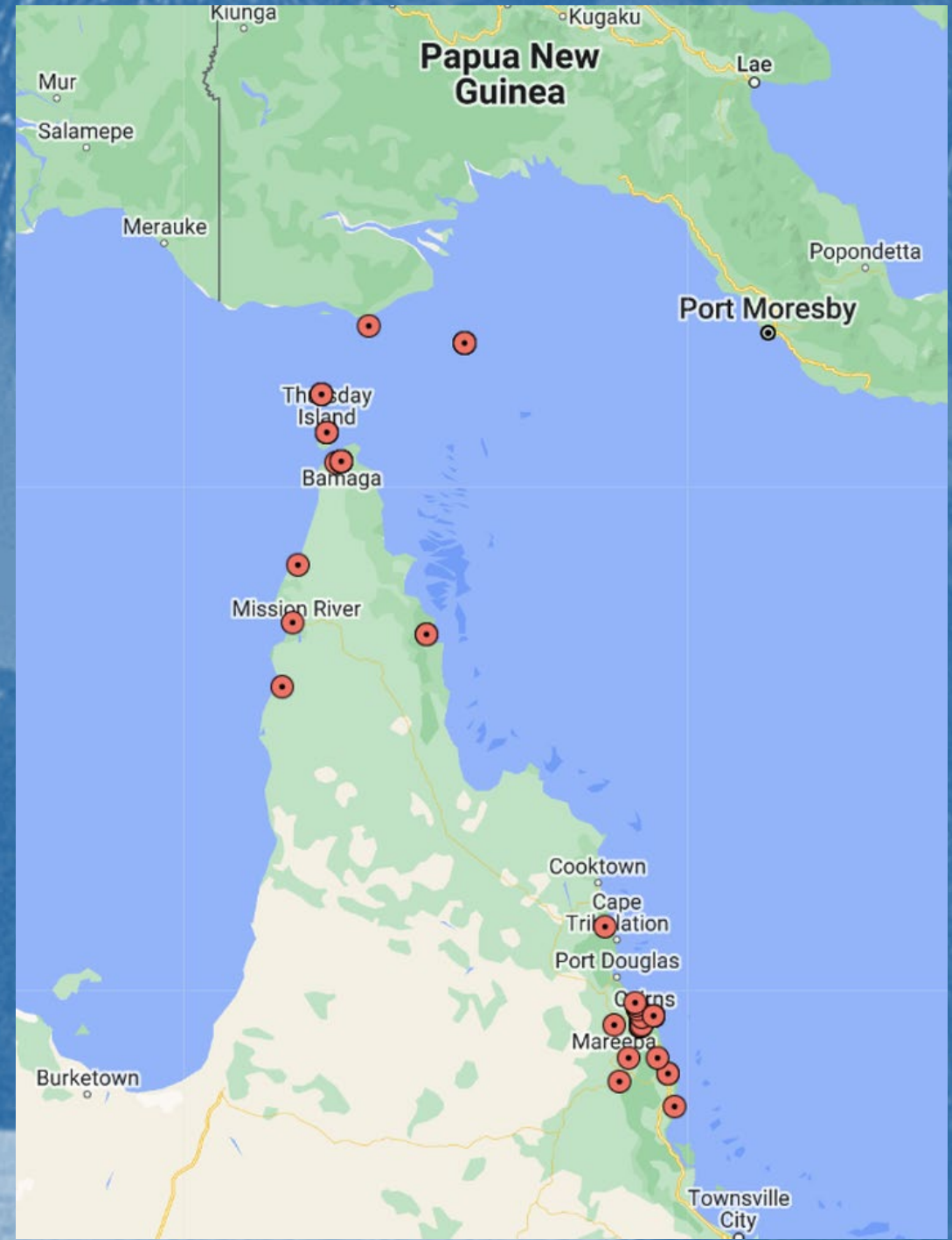
Definitions

- Optimal antenatal care: viral load tested during pregnancy and anti-viral therapy started if indicated
- Optimal perinatal care: child received vaccination and HBIG within 4 hours of birth
- Complete vaccination: perinatal vaccine and standard vaccination
- Subsequent testing of infant for HBV

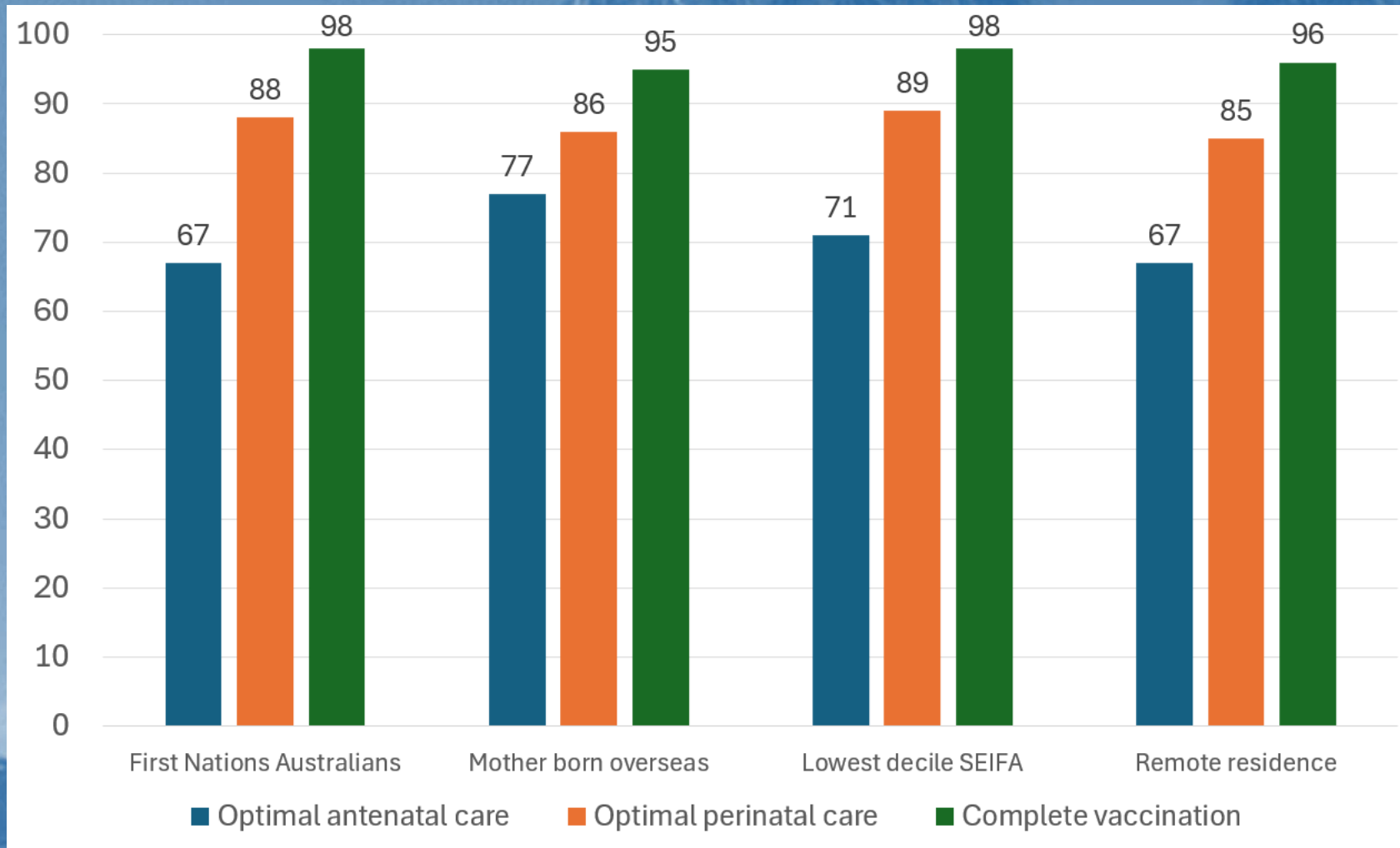
The cohort

- 261 women of childbearing age during the study period
- 165 (63%) identified as a First Nations Australian
- 84 (32%) born overseas (most commonly Asia or PNG)
- 94 (36%) lived in a remote location
- 164 (63%) lived in a location with a SEIFA score in the lowest decile

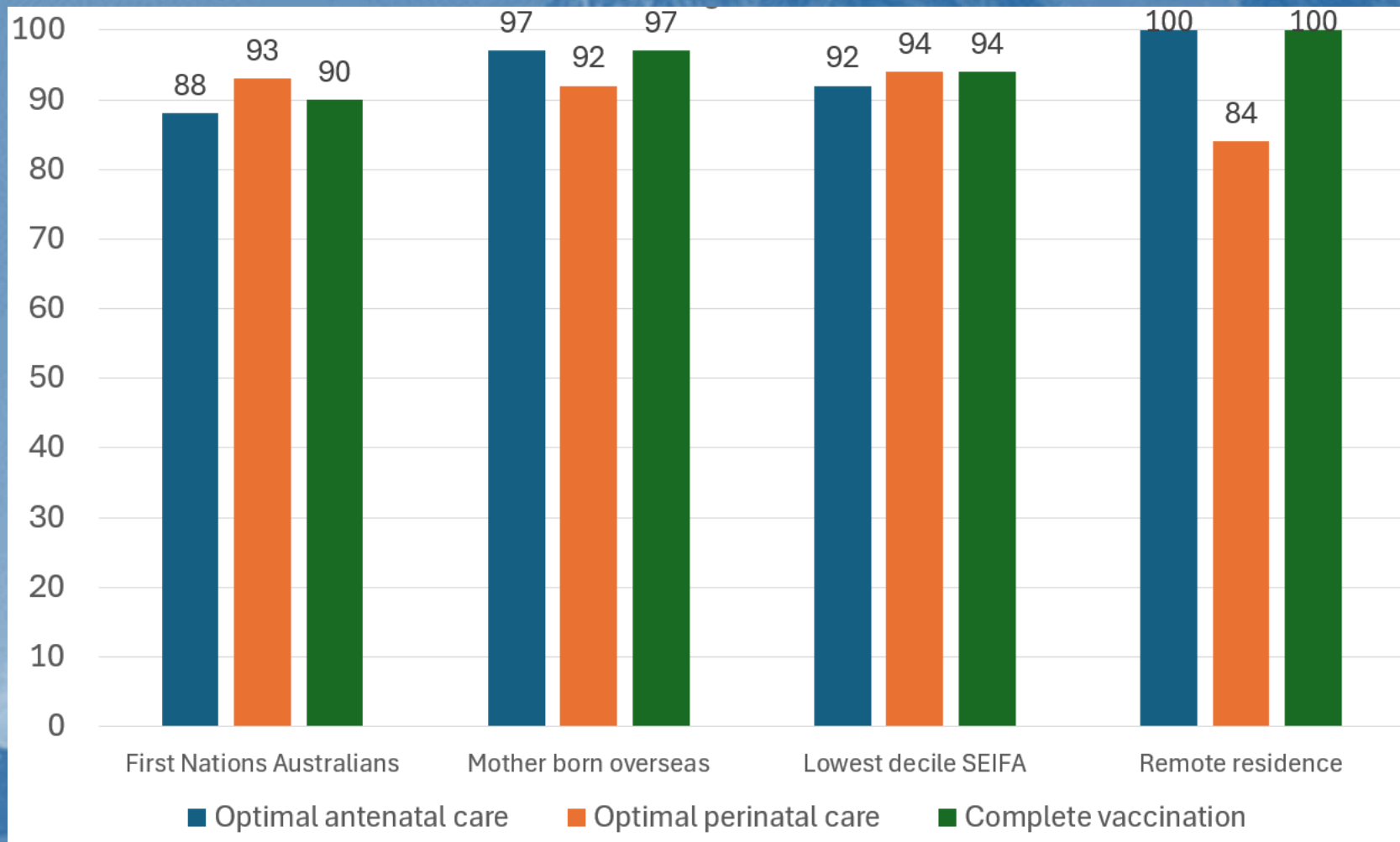
- 84 women had 148 live births
- 93 (63%) born to First Nations mothers
- 58 (39%) born to mothers born overseas
- 94 (64%) in disadvantaged areas
- 46 (31%) born in remote locations



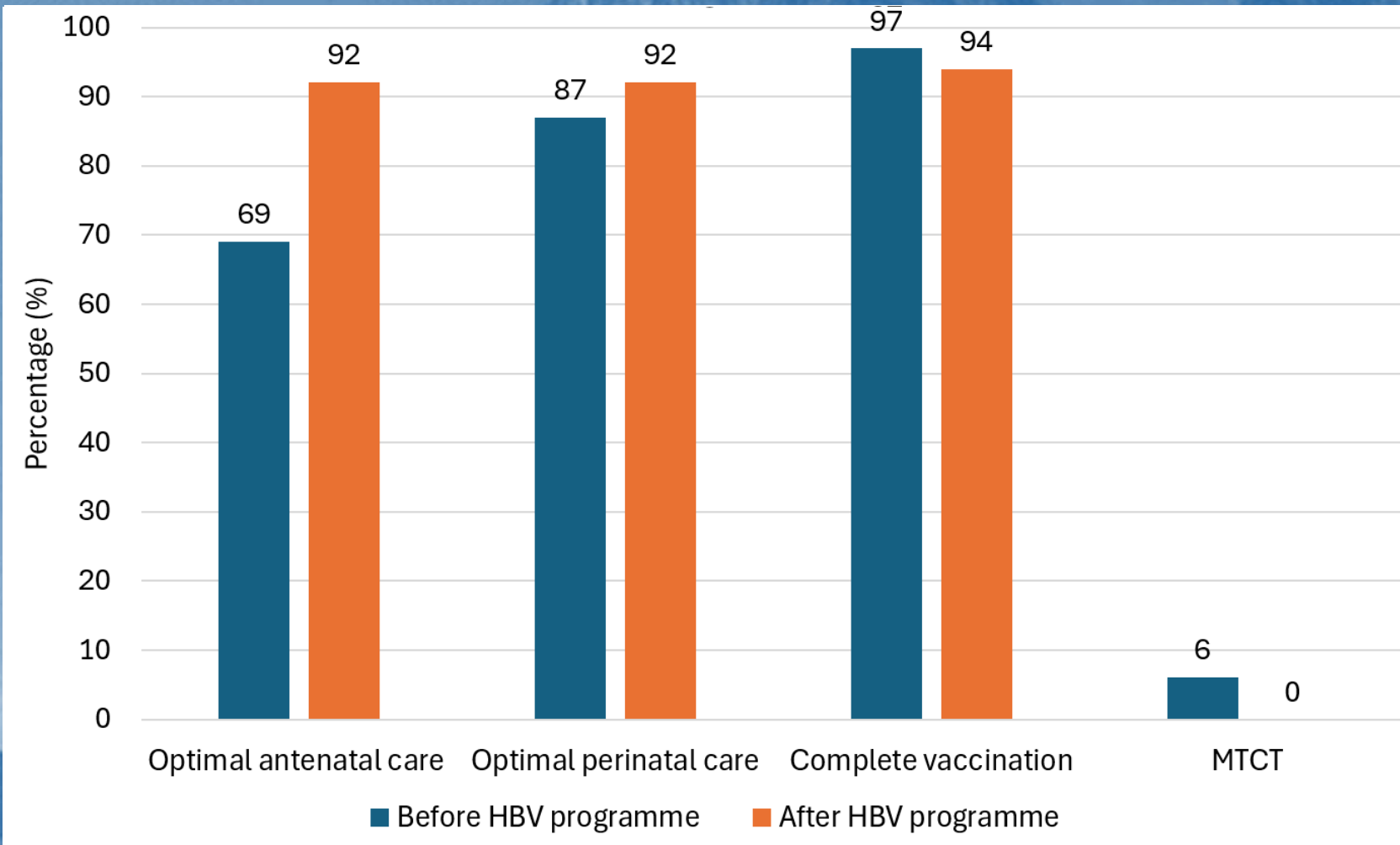
Before HBV programme



After HBV programme



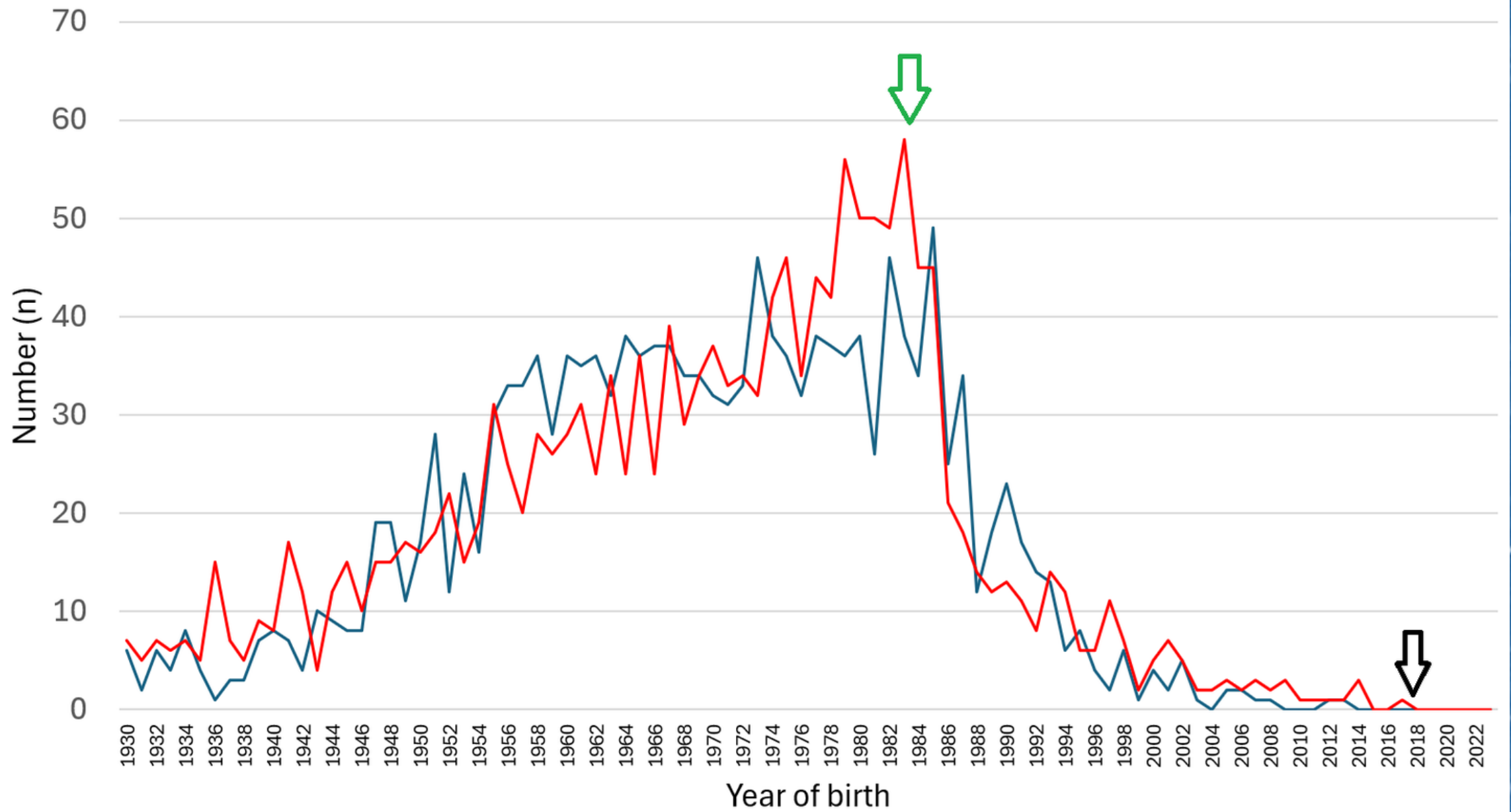
Impact on MTCT





But....

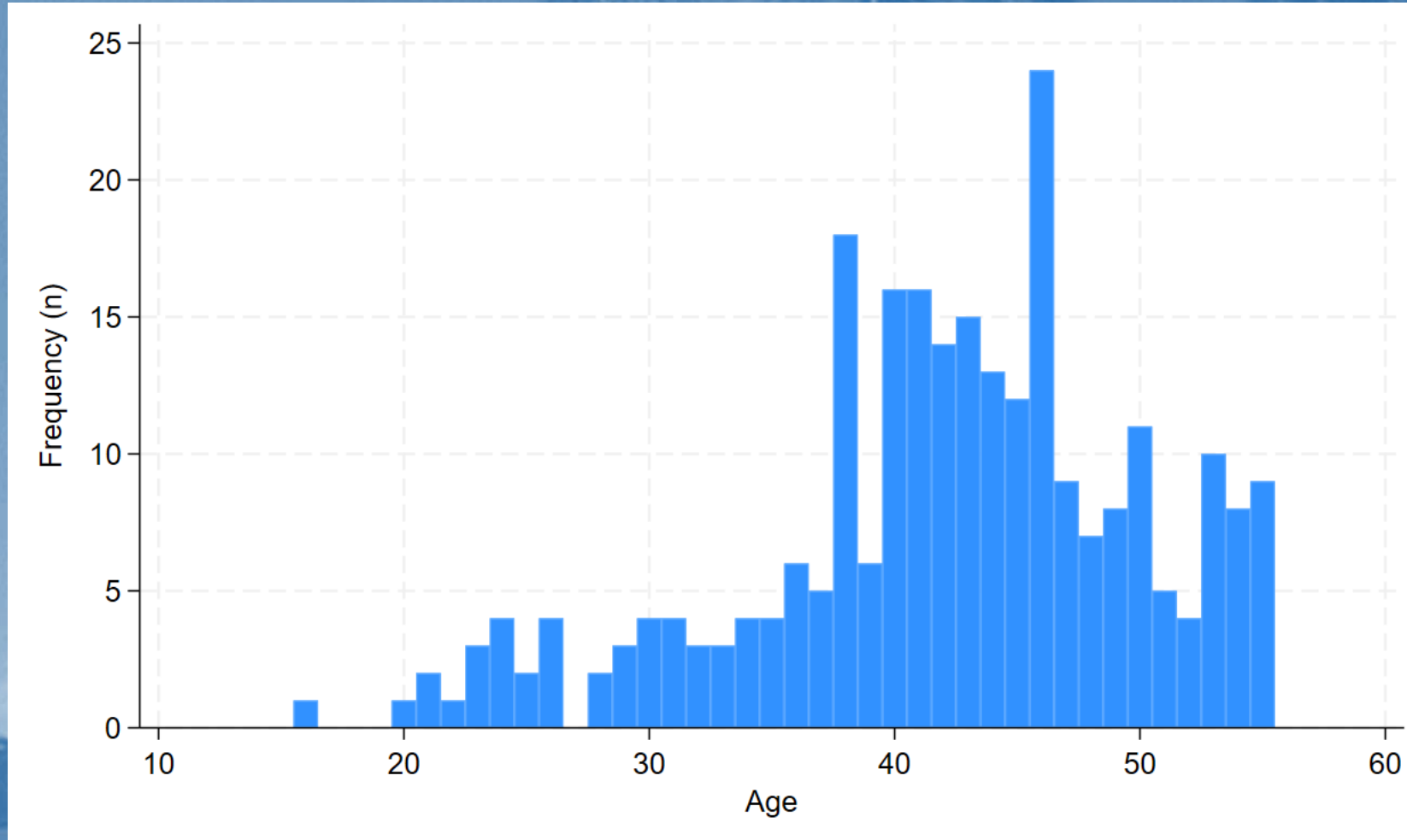
- Only 24/146 (16%) children had HBV testing within 12 months
- Only 57/146 (39%) children have ever had HBV serology testing
- Of 91 untested children
 - 75 (82%) children had optimal antenatal care
 - 83 (91%) had optimal perinatal care
 - 84 (92%) had full hepatitis B vaccination



— Non-First Nations Australian

— First Nations Australian

Current age of women living with CHB in FNQ



Summary

- Since establishment of local HBV programme there have been no documented episodes of MTCT of HBV in FNQ
- Ongoing testing of children to substantiate these findings
- Changing demography and ongoing high rates of HBV vaccination mean that MTCT transmission is likely to be a very rare occurrence in FNQ in the future

Acknowledgements

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