

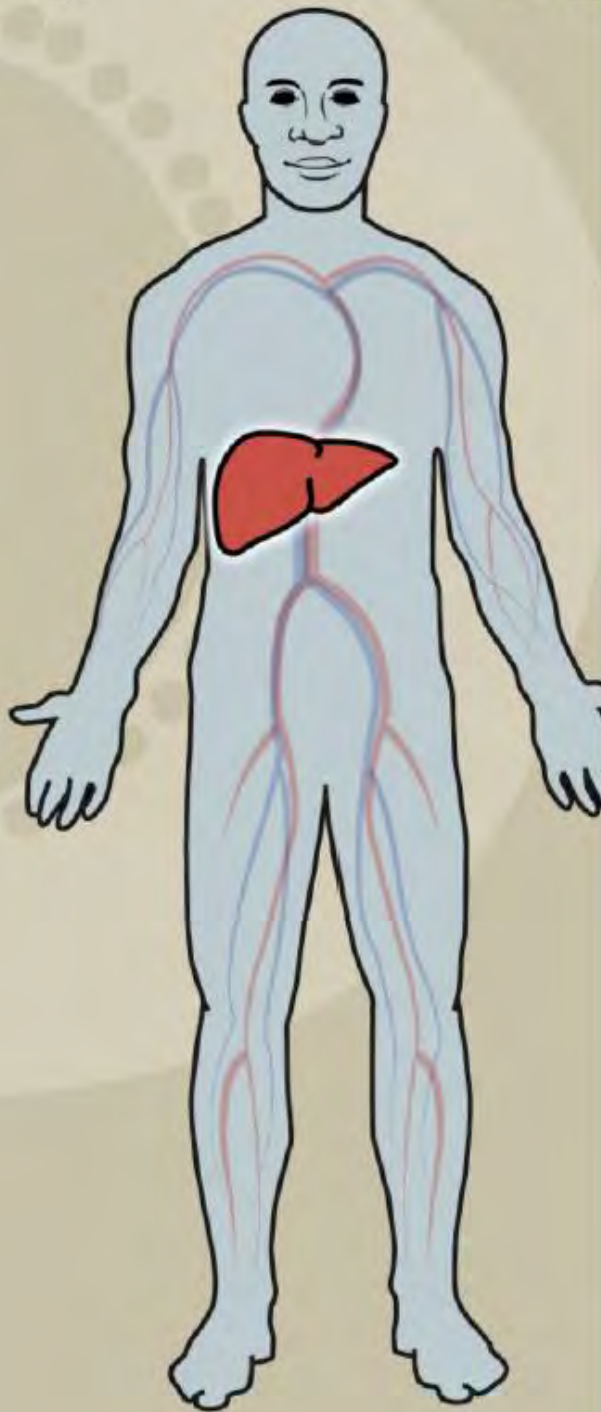
Hep B Story

▶ English

▶ Yolngu
matha

Select Chapter

Women's Business



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&

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now

- ❖ Background epidemiology
- ❖ The sub-genotype C4 story
- ❖ What is the significance of the C4 sub-genotype (evolving information)
 - ❖ Clinical
 - ❖ Vaccine
- ❖ The elephant in the room – cross cultural communication

- ❖ VIDRL/Doherty/ASHM mapping data
Indigenous Australians make up 9.3% of those living with chronic hepatitis B in Australia

Table 2.6: Meta-analysis data to estimate the prevalence of CHB in Indigenous adults/pregnant women in Australia before and after universal vaccination. Data from Graham et al. [53]

	Pooled HBsAg prevalence in adults/pregnant women		
	Overall (95% CI)	Indigenous (95% CI)	Non-Indigenous (95% CI)
Pre-2000	6.47% (4.56-8.39)	16.72% (7.38-26.02)	0.36% (0.14-0.86)
Post-2000	2.25% (1.26-3.23)	3.96% (3.15-4.77)	0.9% (0.53-1.28)

Figure 1: Notifications of CHB by state and territory and year, 2006-2015

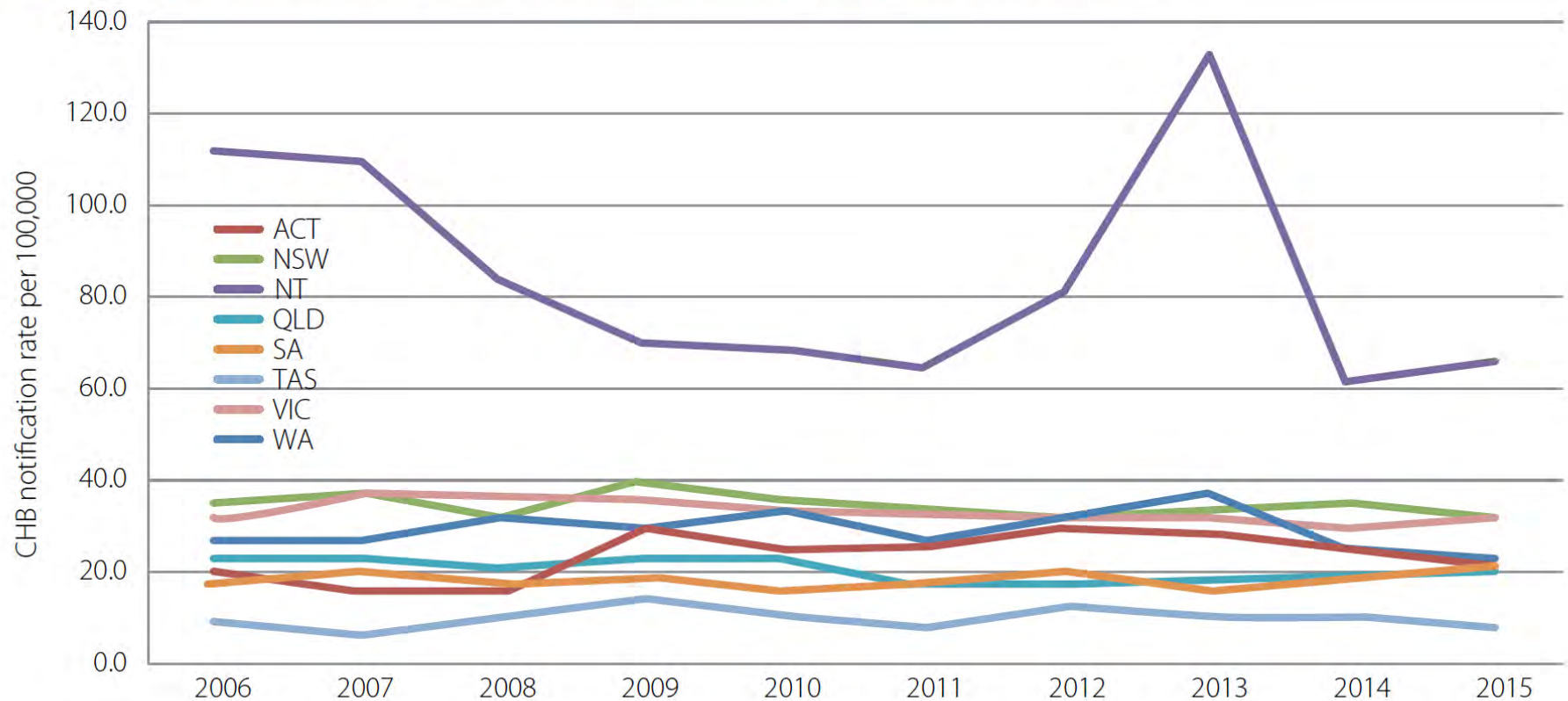
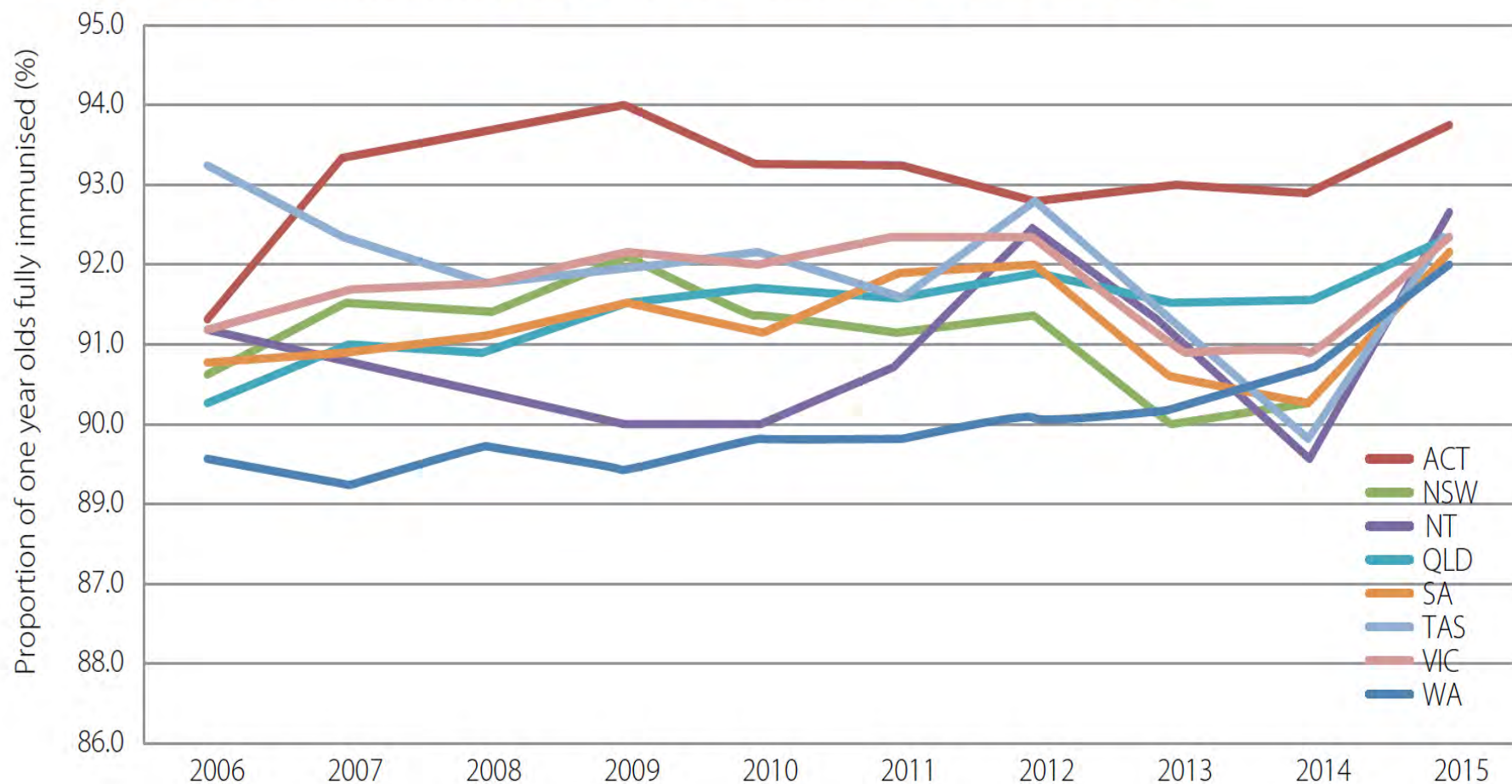


Figure 3: Immunisation coverage by state and territory and year, 2006-2015



Data source: Immunise Australia Australian Childhood Immunisation Register statistics.



Adapted from Schaefer, S. *World J Gastroenterol* 2007.



**CHARM – Characterising Hepatitis B in northern Australia through Molecular epidemiology
Case Report Form v.2**

Risk factors

Alcohol use: ☐ 0=none, 1=0-2, 2=3-4, 3=>4, 8=unknown; units is std drinks/d
 IVDU: ☐ 0=none, 1=past, 2=current, 8=unknown
 Diabetes: ☐ 0=no; 1=yes

Treatment

Past HBV treatment: ☐ ☐ ☐ 0=none, 1=lamivudine, 2=adefovir, 3=entecavir, 4=tenofovir, 5=interferon, 8=unknown. Enter up to 3 treatments.
 Current HBV Rx: ☐ ☐ ☐

Investigations

Serologies and ultrasound within past 12 months. Apart from HIV/HCV/ultrasound/biopsy, all other investigations should be ordered if not available. If any investigation is pending or has been ordered, write "R" or "W" (if ordered through RDH or Westerns respectively) next to box and leave box blank.
 For serology 0=negative, 1=positive, 2=equivalent, 3=not done.

eAg ☐ HCV Ab ☐
 eAb ☐ HIV Ab ☐
 HBV DNA VL (IU/ml) ☐ HDV Ab ☐

ALT ☐ ☐ ☐ ☐
 Bilirubin ☐ ☐ ☐ ☐
 Albumin ☐ ☐ ☐ ☐
 INR ☐ ☐ ☐ ☐
 Platelets ☐ ☐ ☐ ☐
 Creatinine ☐ ☐ ☐ ☐

Ascites: ☐ 0=none, 1=mild/suppressed on medication, 2=severe/refractory
 Encephalopathy: ☐ 0=none, 1=grade 1 (sleep disturbance, impaired concentration), 2=grade 2 (drowsiness, disorientation), 3=grade 3 (unconsciousness, confusion, amnesia)

Biopsy (most recent) ☐ Scheur score (0.1, 2, 3, 4) if done, 8=done, but result unknown, 9=not done.
 Estimated date if done: - -

Ultrasound ☐ 0=not done, 1=normal, 2=increased echogenicity, no portal HT, 3=portal HT

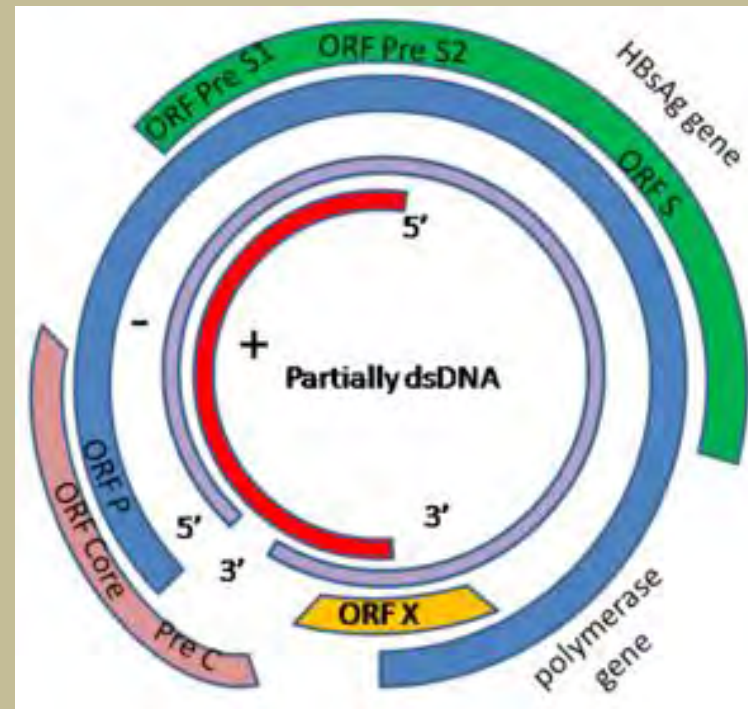
Additional comments:

Return form to Steven Tong or Josh Davis. Thank you.

If found, please return to Steven Tong or Joshua Davis at the Menzies School of Health Research. Telephone 08 8988 8196.

Residential details (if unknown, write unknown)

Place of birth:
 Main residence in 1st 5 yrs of life:
 Mother's place of birth:





CHARM



❖ 204 patients enrolled

❖ All Aboriginal

❖ 39 communities

❖ Single genotype

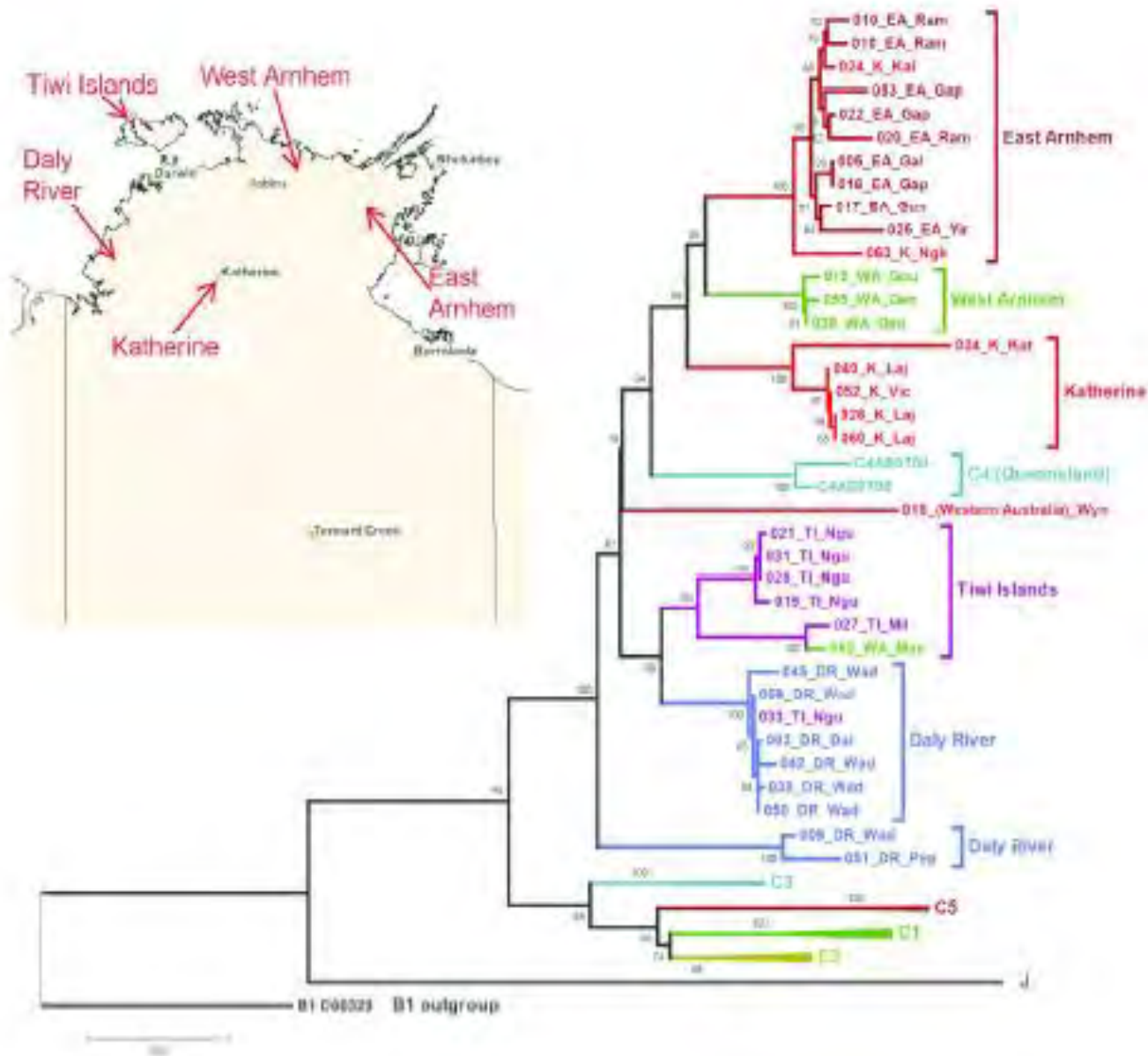
identified **C4** single

serotype **ayw3**



VIDRL

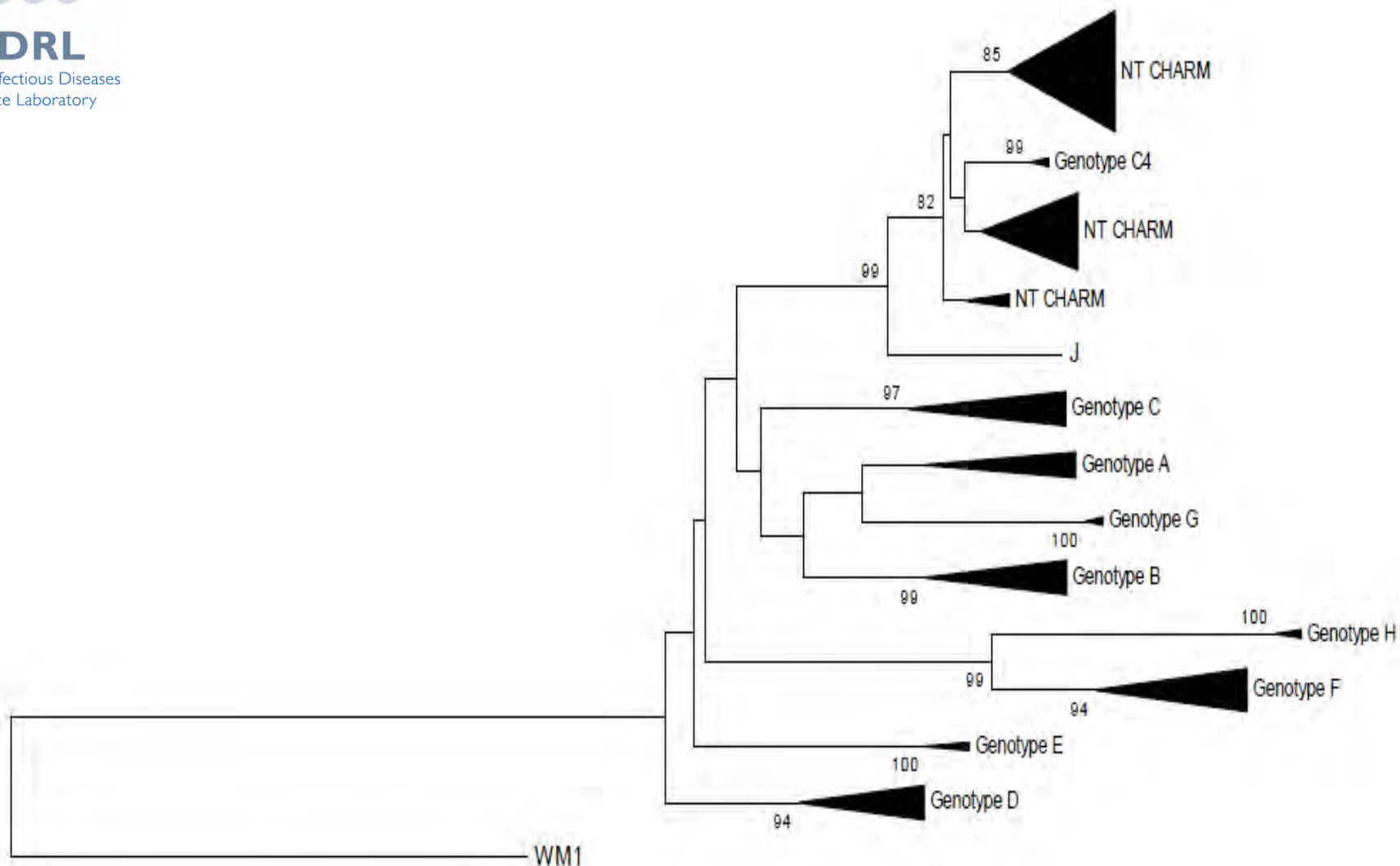
Victorian Infectious Diseases
Reference Laboratory





VIDRL

Victorian Infectious Diseases
Reference Laboratory



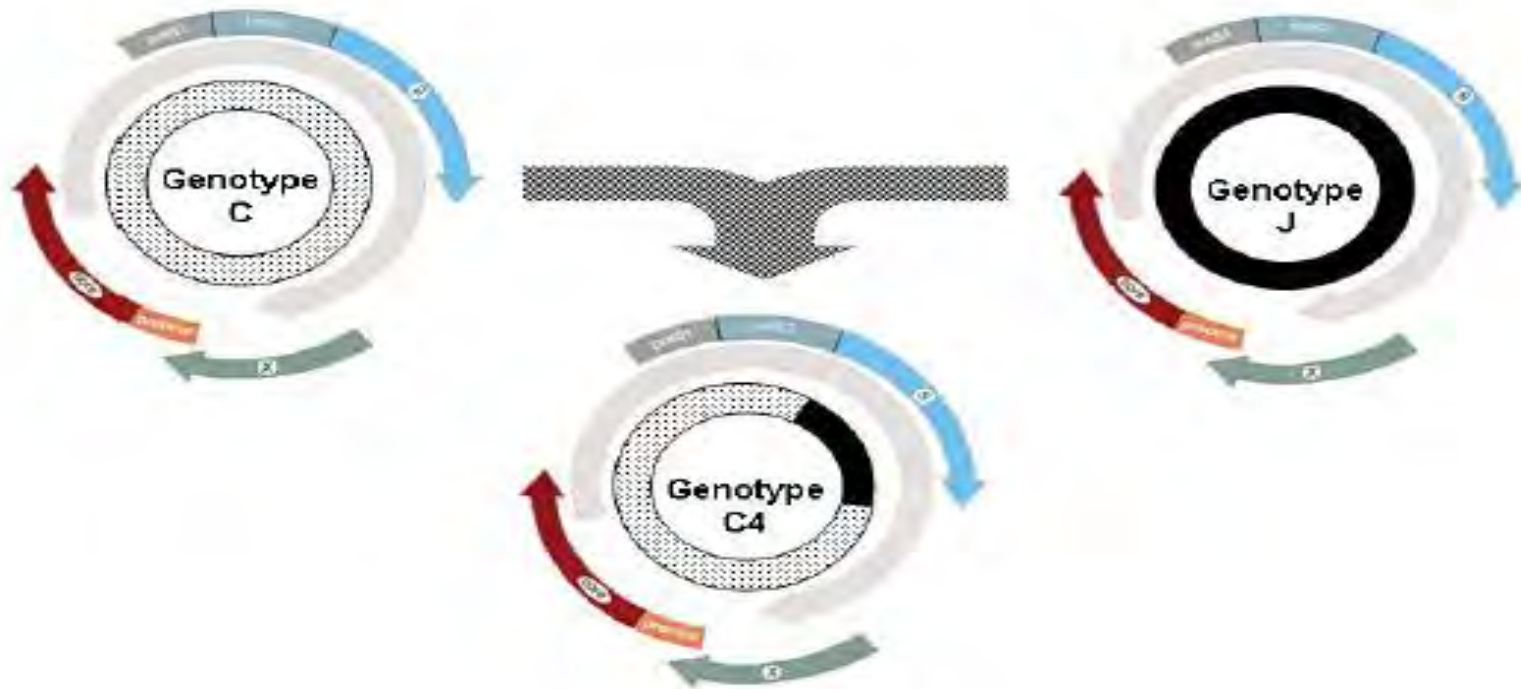


Figure 1: HBV genomes with genotype C (grey) and J (black). The recombinant genotype C4 has a 600bp genotype J like region encompassing HBsAg.

[illegible]

Baseline
recruitment

- Demographics, clinical, laboratory details
- HBV viral load + genotype +/- FGS

Retrospective
follow up

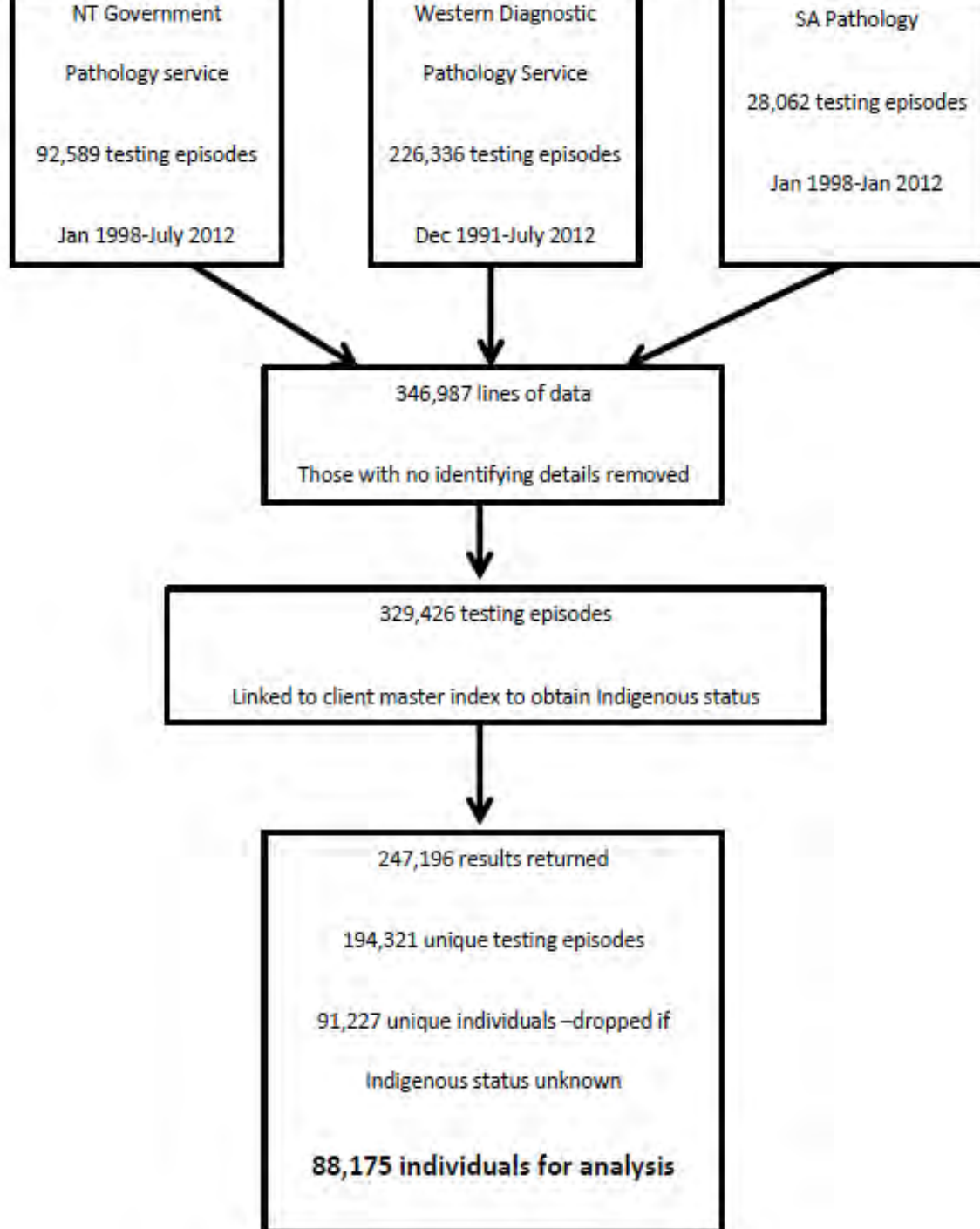
- 2010 to 2015
- Longitudinal clinical, laboratory and imaging data

Prospective
follow up

- 2016 onwards
- In conjunction with remote clinics and NT strategy



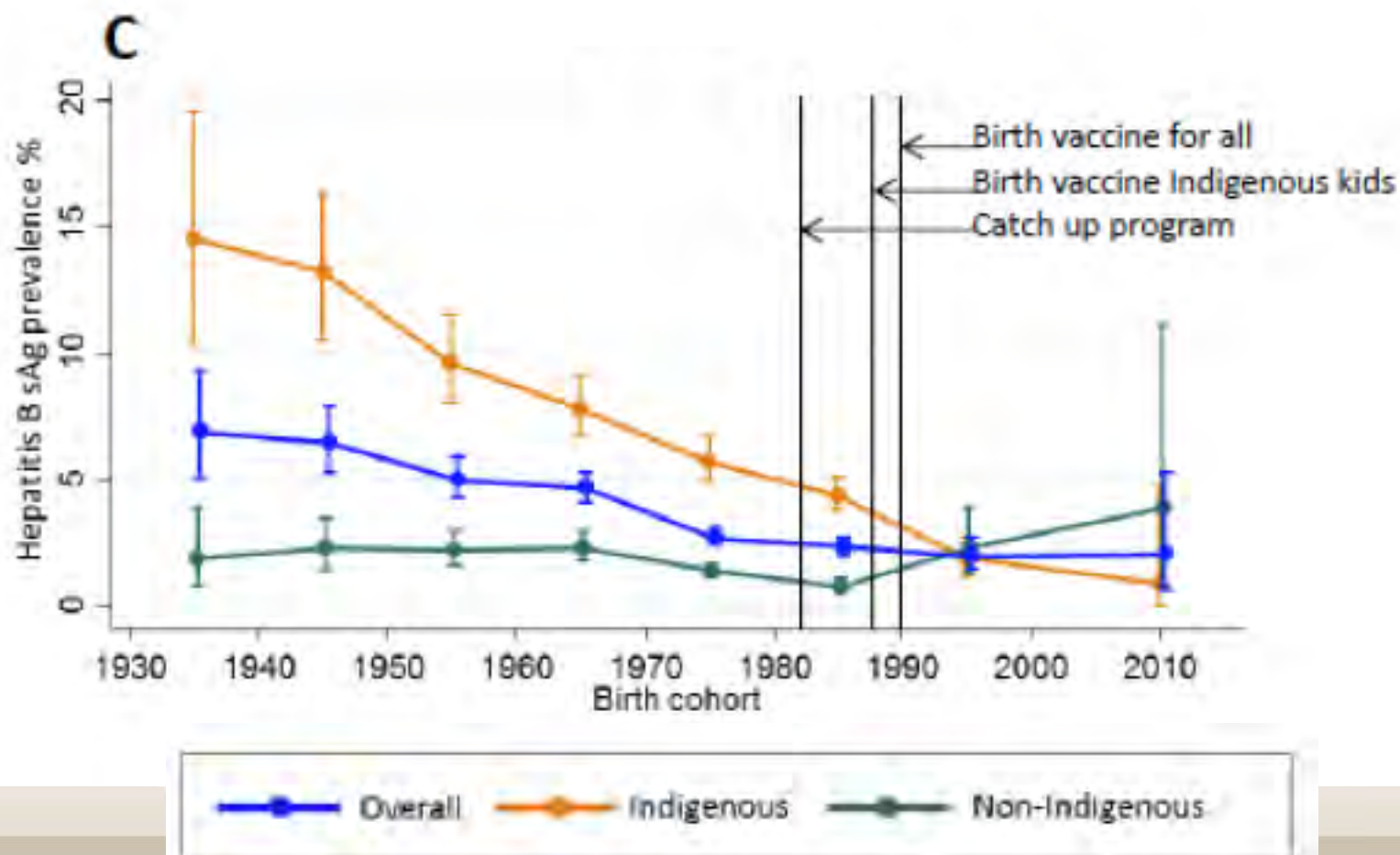
- ❖ Hanna et al – north Queensland
 - ❖ 239 fully vaccinated 16% no immunity & 6% past infection
- ❖ Wood et al – Northern Territory
 - ❖ 437 children in ABC study anti core positivity rate of 21%
- ❖ Malcolm et al – north Queensland
 - ❖ 10 of 14 fully vaccinated had prior infection, 4 active
- ❖ Dent et al - Northern Territory
 - ❖ 37 fully vaccinated adolescents 4 active infection, 7 past





Birth cohort analysis HBsAg positivity

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Headline results



Table 5.1 Summary of demographics and HBsAg, anti-HBs and anti-HBc positive results broken down by Indigenous status and sex.

2007-2011 inclusive	Overall N=35,633	Indigenous n=14,025 (39%)	Non-Indigenous n=21,608 (61%)
Median age in years at sample date (IQR)	32.4 (24.5-43.7)	30.8 (21.5-43.3)	33.2 (26.3-44.0)
Sex	57.8	53.7	60.5
Female % (95% CI)	(57.3-58.3)	(52.8-54.5)	(59.9-61.2)
HBsAg positive % (95% CI)	3.40 (3.19-3.61)	6.08 (5.65-6.53)	1.56 (1.38-1.76)
HBsAg positive men % (95% CI)	4.99 (4.59-5.40)	8.27 (7.53-9.05)	2.22 (1.86-2.62)
HBsAg positive women % (95% CI)	2.35 (2.13-2.59)	4.31 (3.83-4.84)	1.18 (0.99-1.40)
Anti-HBs >10IU/ml % (95% CI)	58.0 (57.3-58.7)	60.7 (59.7-61.6)	55.4 (54.4-56.3)
Anti-HBc positive % (95% CI)	25.2 (24.7-25.8)	38.3 (37.4-39.1)	11.7 (11.1-12.3)

Generally
asymptomatic

Low levels of
health literacy

Logistics of
remoteness

Mistrust in
health systems



Worldview

Language

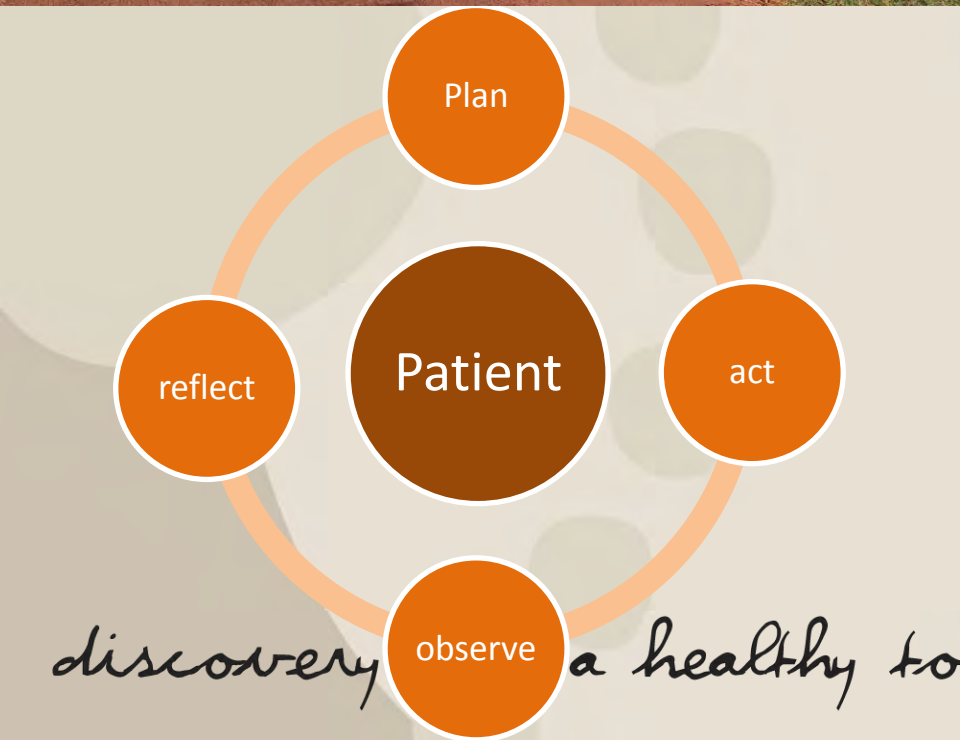
Lack of Hep B
resources

Communication

Social
determinants of
health

a head

ow



- ❖ 32 semi structured interviews
- ❖ Key informants (11)
- ❖ People living with chronic hepatitis B (12)
- ❖ Community members (9)
- ❖ 24 Aboriginal individuals
- ❖ Translator offered to all
- ❖ 17 carried out in Yolngu matha



Formal analysis

- ☐ Data immersion
- ☐ Deductive and inductive coding
- ☐ Inductive categories
- ☐ Inductive themes
- ☐ Cultural clarification
- ☐ Organised and managed in Nvivo 10 (QRS)

Development of resource

- ☐ True to the results of the analysis
- ☐ Story board
- ☐ Script
- ☐ Game component
- ☐ Multiple iterations
- ☐ Translation
- ☐ Voice overs
- ☐ Dreamedia

“Only your blood can tell the true story”

- ☐ Low levels of biomedical knowledge about Hepatitis B
- ☐ Health workers also find it a difficult subject
- ☐ Contextual translation demonstrated some understanding
- ☐ Many misconceptions

“Its like a silent killer I can drop dead any time so I take my tablets and pray”

- ☐ Serious disease “big sickness”
- ☐ The word silent
- ☐ Competing priorities
- ☐ Too complex a problem to tackle



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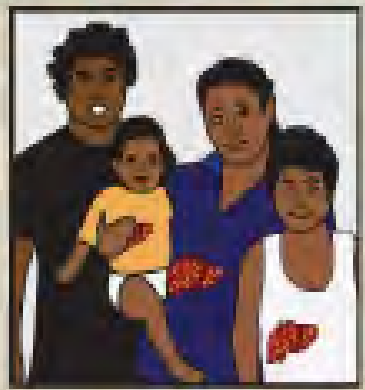
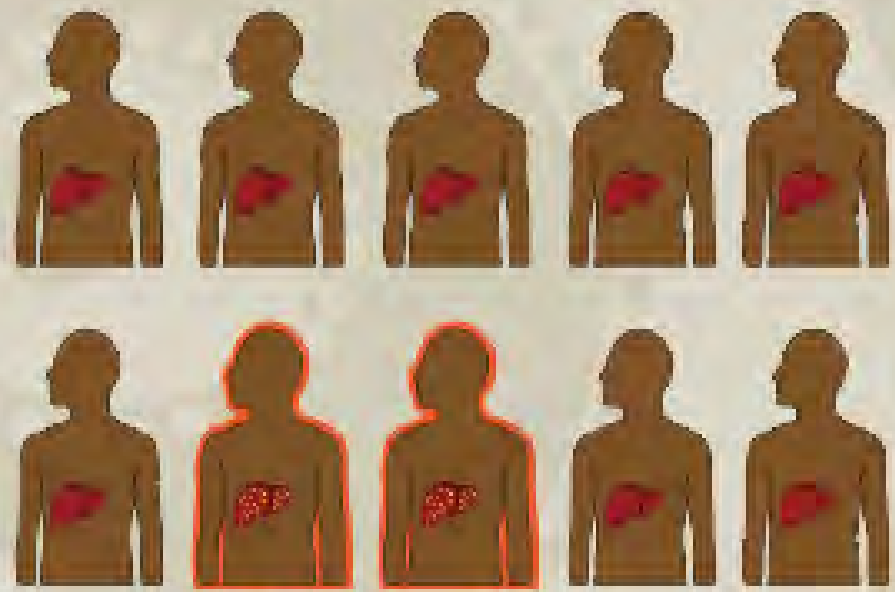
Experiences

“The words are big words, the numbers are not good, and the words are not good. Should be in language.”

- ☐ Overwhelmingly the most stressed aspect
- ☐ Communication
- ☐ Yolŋu matha “language”

- ❖ Visual
- ❖ Interactive
- ❖ The true story – enough detail
- ❖ Women's business
- ❖ http://www.menzies.edu.au/page/Resources/Hep_B_Story/

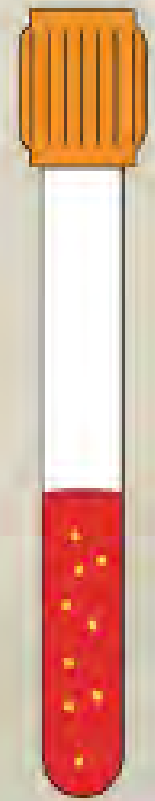
Dhuwali rerri Hep B marr'yun ga dhiyal NT-ny



Dhiyal NT dhuwali rerri Hep B ga marr'yun ga, bakany nhatun 50-yolqa male, qunhli qunakur wagganyha nhe dhu yolquny maj' maram qunhlinir rerri mir Hep B-mir. Dhamamir mir jurbun farile-qur nhe dhu maj' maram yan dhuwalil rerri Hep B, yar mirhinnedye maraya qayl dhu rerri dhuwalil ga maram qunhli yolqa-yulqas, qunhli walei badak yan dhuqanta yujamir male.



Nhunu gulan/mangun' yan dhawumirrnydja



Hep B rerri, shinan qayl dhu ga wikipumany nholi nambakumyde mir weyqumir. Ga biyidhi nhe dhu ga biyquny nhatun qunhli rerrihan ga marqil-bakamhamir male dhu maj'han nholi nambakur. Nhuqa biqiany dhu marqil miqlira. Wagganyha yan gagg'yumamirnydja ran, mir she dhu marqilhir, qul she ga qaytham dhuwal rerri yiku Hep B. Nhe dhu maram dijap qamakil'ya nholi magu'gur/galegur mir dhu maj' maram qunhli buwayak mawiri qunhli rerri Hep B-w. Dhiyay dhu maj' maram nhatun qunhli buwayak mawiri malay ga qoten nholi gulanqur/mangu'gur. Nholi gulanqur yan dhu yuwakke bakam dhuw.

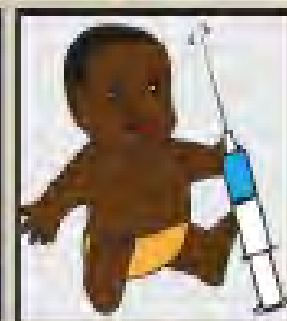


Nanitji

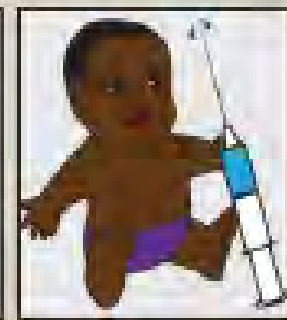


Njanitji-y ga kave-y dhu wirpany nikitman dhuwal limuruy yekuw biŋila. Njanitji nhe ga qaytham dhuwal neri Hep B nholal nambalqur/gulayur/bigilayur. Ga bulu nhe ga juta mirritjir qanjil ga kave, dhuwalit mayeli nholon nheyo ga bama malmamaynha qanjil-y ga kavey ga djasawa' dhuwal nholal nambalqur/gulayur buwayak mawiri neri yiku Hep B, bama nheyo ga biŋila. Dhuwalit maweli nholon nheyo dhu biŋilany' dhu bondin nikitir. Ga bondi'yane nhe ga nheqawuy che.

Dhukarr mirritjingu ga djakapgu



Walal dhu malmamam nyumakugine/nyopur qanjil-y buwayak mawiri qanjil-y Hep B-w, qanjil-y yothumirriwal miyakei, qanjil-y nholon marmak mirritjir waku ga qora qanjil-y yothum walakubakaw walal dhu marmagiljha galmamam qanjil-y neri Hep B nholal-y yothum mirritjintu qaji dhu yothum yaku malmam neri. Ga biy qaji dhu qanjil-y yothu dhuwal-guyaga, bala gan dhu malmam malmam djaljin, ga bulu dhuwal-bala malmam (2) qaladi dhu djaljhan, ga bulu qanjil-y dhuwal-bala (4) qaladi dhu djaljhan ga bulu yaku qanjil-y 6 qaladi dhu djaljhan, qaji dhu malmam djaljin.



Ga qaji nhe ga mirritjinydja garwarinydja namba qaytham buwayak mawiri Hep B nholal gulequr qanjil-y, nholal yothuminydja dhu malmam buwakha djaljin malmam qanjil-y ga bakaram dhuwal garwarayur. Ga nholon che dhu marmagiljha nheqawuy che, ga waga nholal, malm che dhu ga malmam mirritjin malmam tablet, bequr 28 weekur bakaraminy qanjil che yothumirriyir. Dhiyaguy dhu mirritjintu yamamam qanjil-y buwayak mawiri malmam nholal gulequr, yin bil waku nheyo dhu yothu dhuwal-guyaga. Dhiyagil-y ga mayut-lakam qanjil marmakha nheyo ga qora nholal-gaw yothu qaji yaku malmam qanjil-y neri Hep B. Yakan dhu che qagily garwarayur nheyo yothu qanjil-y neri Hep B.

Summary of the story so far.....

- ❖ Indigenous people in the Northern Territory with Hepatitis B are exclusively infected with the C4 sub-genotype
- ❖ Vaccine appears to prevent sAg positive disease and overall prevalence is falling
- ❖ For those born before 1990 prevalence of chronic hepatitis B is significant and Indigenous people are disproportionately affected
- ❖ Culturally appropriate educational tools in language are essential to improving the cascade of care for people living with chronic hepatitis B

Acknowledgements



- ❖ Steven Tong
- ❖ Krispin Hajkowicz
- ❖ Sarah Whiting
- ❖ Ben Cowie
- ❖ Scott Bowden
- ❖ Margaret Littlejohn
- ❖ Stephen Locarnini
- ❖ Tina Sozzi
- ❖ Kathy Jackson
- ❖ Ros Edwards

- ❖ Outreach & infectious diseases specialists and registrars at Royal Darwin Hospital
- ❖ Laboratory staff at NT government pathology service & VIDRL



The Hep B Story in the Northern Territory



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discovery for a healthy tomorrow