Hepatitis B in Corrections: The Top End of the Northern Territory

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Hepatitis B in the NT non-prison population

Figure 1: Heat map of CHB prevalence, diagnosis, treatment, and care uptake by Primary Health Network, 2016 (green = lowest; red = highest)

	PREVALENCE	DIAGNOSIS	TREATMENT	CARE
	Proportion of the population living with CHB	CHB notification rate per 100,000	Proportion of people with CHB who received treatment	Proportion of people receiving CHB treatment or monitoring
Northern Territory	1.71%	45.8	4.9%	19.0%

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 Female % (95% CI)	57.8 (57.3-58.3)	53.7 (52.8-54.5)	60.5 (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)

1. MacLachlan J Cowie B. Hepatitis B Mapping Project: Australian Society for HIV, Viral Hepatitis and Sexual Health Medicine (ASHM); 2016.
Davies J et al.

NORTHERN TERRITORY GOVERNMENT

Corrections population

Top End - Darwin corrections

- The NT recorded the highest imprisonment rate in Australia (2016), at 958.1 prisoners per 100,000 adult population.
- This is 4.7 times the national rate of 204.7 prisoners per 100,000 adult population
- In the NT, Aboriginal and Torres Strait Islander people are imprisoned at 14.0 times the rate of non-Indigenous people (3,024.3 compared to 215.7)
- 1048 prisoner capacity
- 82% Aboriginal and Torres Strait Islander Peoples (snapshot mid 2017)

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Top End Viral Hepatitis Services

Top End (Darwin)

Population: 200,324

Viral Hepatitis Services:

- Royal Darwin Hospital viral hepatitis Service
- 0.6 Consultant FTE
- 1.4 CNC FTE
- 1 Fibroscan machine

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Prison Health Services, Pathology and Medical records

- Managed through Government run primary health services division
- Electronic health record (PCIS) shared with other government run primary health services (and now RDH viral hepatitis services)
- Public pathology provider through Public hospital
- Nurse given viral hepatitis portfolio in Darwin Corrections
- High staff turnover in prisons (especially medical)

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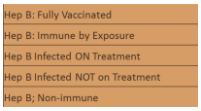
NT: Model of Care



Day 5 RN

HBV serology and sero-code documented

RN/Prison GP

Education and baseline investigations, referral

Specialist doctor
50% DNA rate

Specialist clinic assessment and treatment initiation

Prison CNC &
Specialist/Prison Doctor

Regular monitoring & review

Hospital CNC & Specialist Doctor/GP

Post prison care

Barriers/Challenges

1. Time/educational resources in language/Hep B specific knowledge/competing priorities
2. Logistics and resources needed for transfer to hospital clinics (2 prison guards for >3 hours)
   Fibroscan access
3. Loss to follow up at time of discharge from prison

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Solutions 1: Education Programs

Health care staff

- » ASHM HBV S100 prescriber course
- » ALA Advanced Liver disease course
- » Informal education from Specialist through telehealth consultations (Darwin)
- » Guidelines developed in sero-coding project apply

Prisoners

- » NT Aids and Hepatitis Council education program

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Solutions 1: prescribers and education

- S100 public hospital prescriptions by Specialist or GP S100 prescribers (trained in partnership with ASHM)
- Medication dispensed from Public hospital to Corrections pharmacy
- Daily supervised medications
- Care transferred to hospital service/clinic on release

Solutions 2 – the use of telehealth

Weekly clinic

Easier for the prison

Less DNA to hospital clinic appointments

Continuity through Dr Catherine Marshall and ability to follow up people who have been released.

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Solutions 2 - Fibrosis Assessment

Darwin

- Fibroscan
  - 1 portable machine, limited nurse outreach clinics
  - Available at hospital clinic for high risk
  - Screening with hepascore/APRI, Specialist assessment
- Nurse led fibroscan outreach trips to the Prison
  - Jaclyn Tate-Baker
  - Matthew Maddison

Solutions 3: Continuity of Care

- Minimal prison → prison transfers
- Prison → community
  - If known/planned release then care transferred to specialist service
  - Issues arise if unplanned release
    - Attempted follow-up by Specialist service CNC
    - Release with adequate medication supply an issue
  - Possibility of NTAHC employed peer support worker to take on this role

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Darwin Corrections: current snap shot of epidemiology – 2018

			Hep B Positive (%)	
Darwin 1100 people incarcerated	Hepatitis B not on treatment	70		
	Hepatitis B on treatment	13	15.1%	4.9%
	Hepatitis B overall	**83**	**7.5% (9.2% ATSI)**	**1.71%**
	Viral load done in last 12 months	74	89%	19.0%

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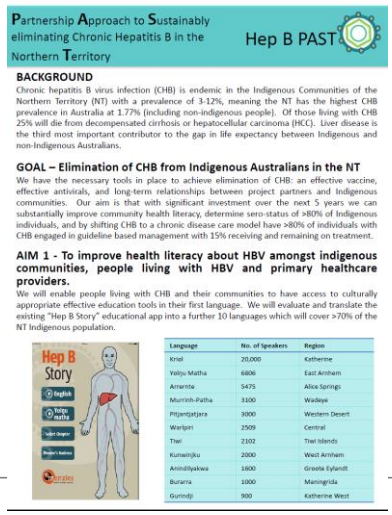
The Future



Partnership Approach to Sustainably eliminating Chronic Hepatitis B in the Northern Territory

Hep B PAST

BACKGROUND

Chronic hepatitis B virus infection (CHB) is endemic in the Indigenous Communities of the Northern Territory (NT) with a prevalence of 3-12%, meaning the NT has the highest CHB prevalence in Australia at 1.77% (including non-indigenous people). Of those living with CHB 25% will die from decompensated cirrhosis or hepatocellular carcinoma (HCC). Liver disease is the third most important contributor to the gap in life expectancy between Indigenous and non-Indigenous Australians.

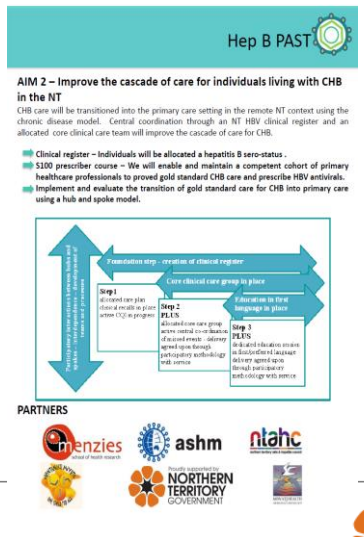
GOAL – Elimination of CHB from Indigenous Australians in the NT

We have the necessary tools in place to achieve elimination of CHB: an effective vaccine, effective antivirals, and long-term relationships between project partners and Indigenous communities. Our aim is that with significant investment over the next 5 years we can substantially improve community health literacy, determine sero-status of >80% of Indigenous individuals, and by shifting CHB to a chronic disease care model have >80% of individuals with CHB engaged in guideline based management with 15% receiving and remaining on treatment.

AIM 1 - To improve health literacy about HBV amongst indigenous communities, people living with HBV and primary healthcare providers.

We will enable people living with CHB and their communities to have access to culturally appropriate effective education tools in their first language. We will evaluate and translate the existing "Hep B Story" educational app into a further 10 languages which will cover >70% of the NT Indigenous population.

Language	No. of Speakers	Region
Kriol	20,000	Katherine
Yolŋu Matha	6806	East Arnhem
Arrernte	5475	Alice Springs
Murrinh-Patha	3100	Wadeye
Pitjantjatjara	3000	Western Desert
Warlpiri	2509	Central
Tiwi	2102	Tiwi Islands
Kunwinjku	2000	West Arnhem
Anindilyakwa	1600	Groote Eylandt
Burarra	1000	Maningrida
Gurindji	900	Katherine West



Hep B PAST

AIM 2 – Improve the cascade of care for individuals living with CHB in the NT

CHB care will be transitioned into the primary care setting in the remote NT context using the chronic disease model. Central coordination through an NT HBV clinical register and an allocated core clinical care team will improve the cascade of care for CHB.

- **Clinical register – Individuals will be allocated a hepatitis B sero-status .**
- **S100 prescriber course – We will enable and maintain a competent cohort of primary healthcare professionals to proved gold standard CHB care and prescribe HBV antivirals.**
- **Implement and evaluate the transition of gold standard care for CHB into primary care using a hub and spoke model.**

PARTNERS

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