Hepatitis B in
Far North Queensland
with reference to
Aboriginal and Torres Strait Islander People –
A Summary

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Introduction

Hepatitis B prevalence remains four times higher in Aboriginal and Torres Strait Islander people than in the general Australian population (Graham et al., 2013) and indigenous people are about three times more likely to develop liver cancer than non-indigenous people with higher rates in remote than urban areas (Zhang, Condon, Rumbold, Cunningham, & Roder, 2011). Queensland was the first state or territory to introduce statewide antenatal hepatitis B screening and infant vaccination for Aboriginal and Torres Strait Islander people in 1985 (Sheridan, Donald, & Jamieson, 1989) before Australia’s universal infant vaccination program significantly reduced the rate of new infections since the year 2000 (Gidding et al., 2007; Graham et al., 2013). However, various factors have impacted optimal care and service delivery in Queensland, particularly for Aboriginal and Torres Strait Islander people living in remote areas. These include past vaccine failure and lack of follow-up (Malcolm, Ludwick, Brookes, & Hanna, 2000); knowledge gaps in the health care workforce (Preston-Thomas, Fagan, Nakata, & Anderson, 2013), lack of awareness and a coordinated approach (Wallace, Pitts, Ward, & McNally, 2014); and issues with infrastructure and other problems as outlined in Hepatitis B in Queensland: A Situation Analysis (Queensland Health, 2011).

Prevalence

Early prevalence studies report high rates of hepatitis B in Aboriginal and Torres Strait Islander people in Far North Queensland that vary widely between communities (Barrett, 1976; Sheridan et al., 1989) (see separate document on estimating prevalence). The latest Kirby Institute estimate for Aboriginal and Torres Strait Islander people is 3.9% across Australia (The Kirby Institute, 2016). Prevalence estimates based on notification data tend to underestimate the true prevalence in Aboriginal and Torres Strait Islander people due to under-reporting of Indigenous status. For example, in 2010, 66% of new notifications in Queensland failed to report ATSI status (Queensland Health, 2011, p. 27).

Prevalence reports within the Aboriginal and Torres Strait Islander population vary considerably between locations (Graham et al., 2013). For example, a prevalence study with pregnant women in the Northern Territory found a rate of 3.7% (Schultz, Romanes, & Krause, 2008) whereas in a similar study in an urban area in North Queensland (Townsville) reports only 0.5% (Panaretto, 2006). Estimates for Far North Queensland are limited. The latest report of the Australian hepatitis B mapping project (ASHM [Australasian Society for HIV Medicine], 2016) is based on Primary Health Networks established in 2015 which cover larger areas than the former Medicare Locals used in the previous version (ASHM...
The latest data specific to Far North Queensland suggests high prevalence and high rates of liver cancer but low treatment uptake. Data broken down to LGAs (local government areas) shows high notification rates in Indigenous communities, and highest in the Torres Strait Islands (ASHM [Australasian Society for HIV Medicine], 2015). The first mapping report states that almost half of all people living with hepatitis B in the then FNQ Medicare Local were Aboriginal or Torres Strait Islanders (ASHM [Australasian Society for HIV Medicine], 2013). In addition, a cancer data audit reveals that, compared to the overall FNQ population, Aboriginal and Torres Strait Islander people have a 5-fold incidence of hepatocellular carcinoma (HCC), younger age at diagnosis and worse survival time (Boyd, Ombiga, & Wintraaken, 2009).

Knowledge, attitudes and service delivery in FNQ

An excellent overview of hepatitis B service delivery in Queensland up to 2011, and related challenges, is provided in *Hepatitis B in Queensland: A situation analysis* (Queensland Health, 2011) as well as in a more recent presentation by Dr Josh Hansen which includes local statistics and general information about hepatitis B (slide show available in the CSHS common folder). Another situational analysis by Wallace et al. (2011) describes various barriers and challenges to hepatitis B care in the Torres Strait Islands. Based on the results, two critical issues were identified: 1) the absence of a systems-based approach to clinically managing the infection; and 2) variable knowledge about the infection in the health workforce (Wallace et al., 2014). The authors make recommendations for an agreed model of care to overcome the barriers. Carroll and Davis (2010) found that only half of the people in a remote indigenous community in North Queensland were screened for hepatitis B and, similarly, Rumbold et al. (2010) report that only a fifth of pregnant women from four Aboriginal health centers in North Queensland had been screened for HBV.

Preston-Thomas et al. (2013) conducted an audit of health records in the Torres Strait and Northern Peninsula area which revealed gaps in patient review, monitoring, follow up and specialist referral for the 365 affected Torres Strait Islander people in the area. They also surveyed 42 of these people and found that the majority (88%) did not know how they could have been infected, half were unaware that HBV affects the liver, and awareness of health protective measures was very low. Anderson, Ellard, and Wallace (2016) report on the same survey in more detail, adding that not one person was on treatment although - contrary to an earlier study – the people would be receptive to clinical treatment. Another study with remote living youths in North Queensland found that knowledge about hepatitis was much lower than knowledge about HIV and other STI but interestingly, it was not much different from a national sample (Fagan & McDonell, 2010). Hepatitis B health promotion work...
in the Yarrabah Aboriginal community near Cairns is ongoing (see presentation by Lewis & Mossman, available in the CSHS common folder).

Cross and Larkins (2011) report a lack of literature to help inform a hepatitis B guideline for remote areas such as the Torres Strait and stress the importance of considering issues specific to these areas. The Cairns Public Health Unit has devised a hepatitis B screening protocol with flowcharts specifically for Aboriginal and Torres Strait Islander adolescents and adults in North Queensland (Cairns Public Health Unit, 2011) as well as a business case to address hepatitis B in the area (available in the CSHS common folder).

**Immunization coverage**

An early account by a nurse describes the care given to Aboriginal mothers travelling from Cape York to Cairns Hospital to give birth and that the mothers were well informed about the importance of giving infants the full course of vaccination (Gray, 1986). However, there is evidence that immunization response is suboptimal in Aboriginal and Torres Strait Islanders. Two early studies into immunization coverage with vaccinated children in North Queensland found that only about half were protected (Hanna et al., 1995), and 18% remained unprotected even after a booster dose (Hanna, Faoagali, Buda, & Sheridan, 1997). A later study into a ‘cluster’ of vaccinated teenagers who tested positive for HBV found that a catch-up vaccination program had not been effectively delivered as more than half did not get all three courses of vaccination (Malcolm et al., 2000).

Olsen, Wallace, and Maher (2014) assessed Australia’s response to the National hepatitis B strategy in relation to Indigenous Australians. They conclude - amongst other things - that while uptake of HBV immunisation in Indigenous infants is high, there is room for improvement in the completion of the course, and no evidence of contact-tracing and large-scale screening and immunisation of susceptible people. Vlack et al. (2007) report that over 95% of indigenous children are fully vaccinated by 12 months and over 97% by 24 months of age. A hepatitis B vaccination guideline specific to Aboriginal and Torres Strait Islander people is included in part three of the Australian immunization handbook (Australian Government Department of Health, 2013)

Regarding adults, a retrospective analysis of health records from four indigenous communities (locations not specified) found that over 40% of the people remain susceptible to hepatitis B infection (Harrod et al., 2014). Another study into notifications of acute hepatitis B infections reports that the rate is significantly higher in indigenous Australians than non-indigenous Australians (Wattiaux et al., 2016). The authors predict that vaccinating half of non-immune indigenous adults over a 10-year period would prevent 527–549 new infections.
Northern Territory

Hepatitis B in Aboriginal and Torres Strait Islanders in the NT is well covered in the literature, not all of which will be relevant or relatable to Far North Queensland. However, the following references are included for reference as appropriate: Aratchige, Markey, Webby, and Krause (2012); Barrett (1976); Carroll, Page, and Davis (2010); Davies et al. (2015); Dent, Selvey, Bell, Davis, and McDonald (2010); Fisher and Huffam (2003); Liu et al. (2012); Schultz et al. (2008); Wan and Mathews (1994).
References


Cairns Public Health Unit. (2011). Screening protocol for hepatitis B in Aboriginal and Torres Strait Islander adolescents and adults in North Queensland.


