

Addressing Hepatitis B

Hepatitis Australia position

A high number of people are chronically infected with hepatitis B in Australia. Despite the implementation of universal infant vaccination this number is expected to rise in coming years due to continued immigration from endemic regions and ongoing transmission.

Australia's response to hepatitis B has been limited to screening, universal vaccination programs and treatment. Reducing the incidence of hepatitis B and meeting the needs of those living with hepatitis B requires a more comprehensive approach.

Hepatitis Australia believes the following actions are necessary to address hepatitis B in Australia:

- **The development and implementation of a national strategy to address hepatitis B.** A national strategy is most likely to achieve a coordinated and comprehensive response to hepatitis B in Australia. A national strategy must move beyond testing, vaccinations and treatment and also address health promotion, health maintenance and support needs.
- **Development of health maintenance and support resources for people affected by hepatitis B.** The number of people treated for hepatitis B is low and treatment efficacy is poor. Health maintenance resources and support services to help those living with hepatitis B to manage the impact of the virus are required.
- **Further research to enable a greater understanding of the needs of people living with hepatitis B and the prevalence of hepatitis B in Australia, and to provide an assessment of vaccination coverage.** This is a necessary foundation for developing an effective response to hepatitis B in Australia. No assessment has been made of the needs of those living with hepatitis B. Estimates of the incidence and prevalence of hepatitis B are limited and dated. A more complete assessment of vaccination uptake in at-risk populations is required.
- **Development of the infrastructure to represent those living with hepatitis B.** People living with hepatitis B should be central in the process of planning a comprehensive response to the management of hepatitis B. Appropriate infrastructure must be put in place to enable this to happen.
- **A campaign to raise awareness of hepatitis B, vaccinations and treatment amongst the general population and populations with higher prevalence of hepatitis B.**

Hepatitis Australia is calling for:

- The development of a comprehensive national hepatitis B strategy.
- Dedicated funding for the development of health maintenance and support resources for people affected by hepatitis B.
- Dedicated funding to develop the infrastructure to represent those living with hepatitis B.

Background

Prevalence

Globally hepatitis B is of pandemic proportions with an estimated 350 million people living with chronic hepatitis B. An estimated 1 million deaths annually are directly related to chronic hepatitis B.¹

Definitive data on the prevalence and incidence of hepatitis B in Australia is difficult to obtain. Best estimates put the number of people living with chronic hepatitis B between 90,000- 160,000.²

People born in endemic regions constitute the majority of people living with chronic hepatitis B in Australia. 33% of those living with chronic hepatitis B in Australia were born in South East Asia and 16% in North East Asia. Aboriginal Australians, people who inject drugs and men who have sex with men are also disproportionately represented amongst those living with hepatitis B, comprising 16%, 5% and 8% of those with chronic hepatitis B respectively.³

The number of Australians living with hepatitis B is predicted to increase in the short term owing to:

- continuing immigration from areas where the virus is endemic;
- ongoing transmission amongst people engaging in high-risk behaviours; and,
- limited prevention programs amongst communities with high transmission risk.⁴

Natural history and treatment

Chronic hepatitis B can significantly affect quality of life and can result in death. The natural history of hepatitis B is heterogeneous and dependent on a range of factors, with age at exposure being significant. 80-90% of those exposed perinatally are expected to develop chronic infection, compared to less than 5% of those exposed as adults.⁵ An estimated 15-40% of those with chronic hepatitis B in Australia are expected to develop advanced liver disease complications.⁶

Treatment aimed at eliminating or suppressing viral replication and reducing the progression of liver disease is available. Treatment has been shown to decrease the risk of liver decompensation and carcinoma.⁷ Subsidised treatments- pegylated interferon, interferon, lamivudine, adefovir and entecavir - are available for people with chronic hepatitis B who have elevated liver enzymes and activity on liver biopsy. Treatment efficacy is relatively low -treatment with nucleoside analogues (lamivudine and adefovir) results in a significant sustained suppression of viral replication in approximately 30% of those treated- and the development of resistance to treatments is common.⁸ Treatment for adults with chronic hepatitis B infection is available in Australia at major hospitals through liver clinics and hepatology units.

The number of Australians with hepatitis B accessing treatment is believed to remain low, however this information is not collated nationally.

The Australian response

Australia's public health response to the hepatitis B epidemic has primarily focused on vaccination programs. Universal hepatitis B immunisation for infants was introduced in Australia in 2000. 'Catch-up' vaccinations of pre-adolescents are now in place across Australia and are expected to continue until those vaccinated as infants reach adolescence. Vaccination programs for adults considered at high-risk have also been introduced in some areas. Prisoners are offered hepatitis B vaccinations in all jurisdictions.⁹

The long-term benefits of this investment in childhood immunisation in terms of a reduction in morbidity and mortality associated with chronic liver disease are likely to be substantial and will continue to be realised over coming decades.

Evaluation of the impact of vaccination programs in reaching at-risk populations has been limited. The success of these programs is questionable. Hepatitis B vaccinations were introduced to many Indigenous Australian communities in the 1990s. Whilst there has been limited evaluation of these programs, one survey of vaccination status among adolescents in a Queensland community found that only 44% were fully vaccinated. More than 90% of those who had been incompletely vaccinated had been exposed to the virus.¹⁰

Rates of hepatitis B vaccination amongst people who inject drugs have also been shown to be low. A study of 400 people who inject drugs in Sydney found that only 37% reported being vaccinated. 32% were not aware that a vaccination was available.¹¹ Similarly, in a study of 377 young people who inject drugs in Sydney, only one quarter had been vaccinated. One third of people who inject drugs surveyed as part of the Australian NSP Survey between 2000-2004 reported never having been vaccinated.¹²

Uptake of hepatitis B vaccination rates amongst homosexual men appear to have improved, however a significant proportion of, particularly younger, homosexual men have not been vaccinated. One study of 900 homosexual men showed that close to 50% of those under 25 years were not vaccinated¹³

Vaccination does not appear to have achieved the coverage in high-risk populations that would enable it to effectively function as a singular prevention mechanism.¹⁴

Discussion

The current public health response is clearly limited and less than optimal. As prevalence of the virus is expected to rise, implementation of prevention programs is necessary to effectively address hepatitis B in Australia. As the coverage of vaccination programs in at-risk populations is questionable, more complete assessment of vaccination uptake in select populations is required and further studies to illuminate and address barriers to vaccination may be necessary.

Australia's current public health response pays scant attention to the needs of those living with hepatitis B. As rates of participation in treatment are consistently low and treatment efficacy remains poor, health maintenance resources to support those living with hepatitis B in managing the impact of the virus and strategies to address barriers to treatment access are required. People from culturally and linguistically diverse backgrounds and Indigenous communities are disproportionately represented amongst those living with hepatitis B. Culturally-appropriate services and resources are needed.

Information to inform a planned response to the hepatitis B epidemic is limited and patchy. Difficulties have been encountered in estimating the true incidence and prevalence of the virus. There has been limited research regarding knowledge of hepatitis B and vaccinations amongst the general population and groups with higher hepatitis B prevalence. No assessment has been made of the needs of those living with hepatitis. This information should be sought as a first step in developing a more comprehensive approach to hepatitis B.

A comprehensive national strategy needed

In Australia effort has been made to pursue a comprehensive and coordinated approach to the management of HIV/AIDS and hepatitis C through the development and implementation of multi-pronged national strategies. National strategy documents have been shown to advance the government response and promote broad partnership approaches.¹⁵ No overarching strategy has been developed to address the hepatitis B epidemic.

The ACT-HBV (Advancing the Clinical Treatment of Hepatitis B Virus) has outlined a potential framework for a hepatitis B strategy. The recommendations of the ACT-HBV include:

- development of a more complete understanding of the current state of play relating to hepatitis B in Australia, including more research into vaccination uptake in at-risk populations;
- a focus on increasing awareness of hepatitis B and related risks;
- implementation of projects aimed at reducing transmission rates;
- support services for at-risk communities;
- development of a national HBV testing policy;
- research into the barriers to testing and treatment uptake; and,
- development of hepatitis B training programs for health workers.¹⁶

There is limited infrastructure to support a representative mechanism through which affected communities can participate in the planning and implementation of strategies to address hepatitis B. This situation must be redressed.

References

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13. Jin, F et al. (2004), 'Hepatitis A and B infection and vaccination in a cohort of homosexual men in Sydney', *Sexual Health*(1); 227-237.
14. In addition to vaccination the Australian public health response to hepatitis B does currently includes screening of blood donors and the blood supply and screening of women antenatally.
15. Dore et al., [Hepatitis B in Australia](#)
16. Dore et al., [Hepatitis B in Australia](#)