

Hepatitis B Action Plan 2014-2017

Department for Health and Ageing



Government
of South Australia

SA Health

Title: Hepatitis B Action Plan 2014 - 2017 / Department for Health and Ageing, SA Health

ISBN: 978-1-74243-637-1

Subjects: Hepatitis B – South Australia – Prevention

Hepatitis B – Government policy – South Australia

Hepatitis B – treatment – South Australia.

Other Authors / Contributors: Department for Health and Ageing, SA Health

Foreword



Infection with hepatitis B virus is a significant health issue for all Australians, but particularly Aboriginal and Torres Strait Islander people and people born in countries with a high prevalence of hepatitis B.

This first *South Australian Hepatitis B Action Plan 2014-2017* addresses the public health challenges in both preventing and responding to hepatitis B infection and demonstrates the South Australian Government's commitment to improving the overall health and wellbeing of our community.

The *South Australian Hepatitis B Action Plan 2014-2017* follows the principles and objectives of the *National Hepatitis B Strategy 2010-2013* and reflects our commitment to this strategy. It acknowledges the significant achievements to date, builds on current activities and responds practically to the challenges before us. Most importantly, it sets out new approaches for government and community partnerships over the next three years.

I commend the many participants in the consultation process for their generosity and their dedication to minimising the personal and social impact of the hepatitis B virus.

A handwritten signature in black ink that reads "Jack Snelling". The signature is written in a cursive, flowing style.

Hon. Jack Snelling M.P.
Minister for Health

Acronyms

BBV	blood borne virus
CALD	culturally and linguistically diverse
CDCB	Communicable Disease Control Branch
GP	general practitioner
HCC	hepatocellular carcinoma
NGO	non-government organisation
PEP	post-exposure prophylaxis
PWID	people who inject drugs
STI	sexually transmissible infection

Definitions

Aboriginal	The term Aboriginal is inclusive of the terms Indigenous and Aboriginal and Torres Strait Islander people
acute hepatitis B	a new infection that lasts less than six months ¹
chronic hepatitis B	persistent infection for greater than six months ²
hepatocellular carcinoma	liver cancer
high hepatitis B prevalence	>8% of the population currently infected ³
intermediate hepatitis B prevalence	2-8% of the population currently infected ⁴
low hepatitis B prevalence	<2% of the population currently infected ⁵
prisoner health services	Prisoner health services are defined as health services providing healthcare within the adult South Australian Correctional System. This includes SA Prison Health Services (SAPHS), Mt Gambier Prison operators and their clinical sub-contractors. It is acknowledged that SAPHS works in partnership with SA Correctional Services who operate adult prisons. In the juvenile justice system health services are considered separately.

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Section 1: Overview

The first *South Australian Hepatitis B Action Plan 2014-2017* describes South Australia's approach to reducing the impact of the hepatitis B virus as a public health priority.

The responsibility for prevention, testing, treatment and management of hepatitis B in South Australia is shared between state and commonwealth, and among state government services, publicly funded hospitals, aboriginal health services, non-government agencies and GP practices.

Partnerships are therefore key to an effective statewide response to hepatitis B.

This Action Plan has been developed in consultation with key stakeholders and partners, therefore the detailed actions and agency responsibilities in Section 6 reflect the integration, teamwork and goodwill that will be needed to have a system-wide impact.

SA Health activity under this plan is expected to be funded within existing resources, so many of the actions build off existing relationships or existing work activities to create new capacity. Some activity may also need to find new funding streams if the objectives are to be achieved.

1.1 Priority action areas

The key action areas outlined in this plan mirror the *National Hepatitis B Strategy 2010-2013* and are:

- Action area 1: Building partnerships and strengthening community action
- Action area 2: Preventing hepatitis B transmission
- Action area 3: Optimising diagnosis and screening
- Action area 4: Clinical management of people with chronic hepatitis B
- Action area 5: Developing health maintenance, care and support for people with hepatitis B
- Action area 6: Knowledge transfer using surveillance and research
- Action area 7: Workforce and organisational development.

1.2 Purpose of this Action Plan

The *South Australian Hepatitis B Action Plan 2014-2017* is a statewide document that:

- > commits to local strategies and actions required to progress the national key action areas in the *National Hepatitis B Strategy 2010-2013*
- > identifies current partnerships and proposes new partnerships that need to be developed in order to achieve the actions
- > defines key performance indicators to monitor the effectiveness of the actions
- > is aligned with other relevant national strategies and state plans.

1.3 Priority populations

The priority populations for the Action Plan reflect those identified in the *National Hepatitis B Strategy 2010-2013*. They are divided broadly into two groups, those requiring primary prevention and those requiring secondary prevention actions. The groups are not mutually exclusive.

Priority populations:

- > Primary prevention of hepatitis B transmission:
 - children born to mothers with chronic hepatitis B (pregnant women)
 - people born in countries with high rates of endemic infection (that is, people born in countries with intermediate or high hepatitis B prevalence)

- Aboriginal and Torres Strait Islander people
 - unvaccinated adults at higher risk of infection (including men who have sex with men, sex workers, people who inject drugs, partners and other household and intimate contacts of people who have acute or chronic hepatitis B infection, people in custodial settings, people co-infected with HIV or hepatitis C, people about to start renal dialysis)
 - healthcare workers and emergency services workers
 - people travelling to and from high prevalence countries, particularly those visiting family and friends in their country of origin
 - vulnerable populations, including the homeless and people with mental health issues.
- > Secondary prevention of liver disease including liver cancer through monitoring, detecting and treating chronic hepatitis B, particularly for:
- people born in countries with high rates of endemic infection (i.e. people born in countries with intermediate or high hepatitis B prevalence)
 - Aboriginal and Torres Strait Islander people.

In Australia 65% of people living with chronic hepatitis B come from these two priority populations⁶:

The *National Hepatitis B Strategy 2010-2013* notes the need to ensure that by identifying and naming the specific population groups most affected by chronic hepatitis B, stigmatisation of these groups does not occur as this could further reduce access to health care and consequently increase the burden of chronic hepatitis B on the Australian community.

1.4 Guiding principles

The guiding principles underpinning Australia's response to viral hepatitis detailed in the *National Hepatitis B Strategy 2010-2013* are shared across the suite of national strategies for blood borne viruses (BBVs) and sexually transmissible infections (STIs).⁷

The *South Australian Hepatitis B Action Plan 2014-2017* is guided by these same principles:

- > The transmission of HIV, STIs, hepatitis B and hepatitis C can be prevented through adoption and maintenance of protective behaviours. Vaccination is the most effective means of preventing the transmission of hepatitis B. Vaccination, education and prevention programs, together with access to the means of prevention are prerequisites to the adoption and application of prevention measures. Individuals and communities have a mutual responsibility to prevent themselves and others from becoming infected.
- > The principles and actions described in the World Health Organization *Ottawa Charter for Health Promotion 1996* provide the framework for effective hepatitis B health promotion action and facilitate the active participation of affected communities and formulation and application of supportive public policy.⁸
- > Harm reduction principles underpin effective measures to prevent transmission of viral hepatitis (hepatitis B and hepatitis C), including needle and syringe programs and drug treatment programs.
- > People with hepatitis B have a right to participate in the community without the experience of stigma or discrimination and have the same rights to comprehensive and appropriate health care as other members of the community, including the right to the confidential and sensitive handling of personal and medical information.
- > An effective partnership of affected communities, government, non-government organisations, researchers and health professionals is characterised by consultation, cooperative effort, respectful dialogue and action to achieve goals. A partnership approach includes:
 - non-partisan support for the pragmatic social policy measures necessary to reduce the burden of hepatitis B
 - timely and high quality research and surveillance to provide the necessary evidence base for action
 - a skilled and supported workforce
 - the full cooperative efforts of all members of the partnership.

1.5 Links to other strategies

The *National Hepatitis B Strategy 2010-2013* was the first nationally coordinated hepatitis B strategy to be developed in Australia. It was released alongside four other national strategies designed to reduce the transmission of STIs and BBVs and the morbidity, mortality and personal and social impacts they cause.

The four other national strategies are the:

- > *Third National Aboriginal and Torres Strait Islander Blood Borne Viruses and Sexually Transmissible Infections Strategy 2010-2013*⁹
- > *Third National Hepatitis C Strategy 2010-2013*¹⁰
- > *Sixth National HIV Strategy 2010-2013*¹¹
- > *Second National Sexually Transmissible Infections Strategy 2010-2013*.¹²

The *National Hepatitis B Strategy 2010-2013* was developed in recognition of the increasing prevalence of the condition in Australia and associated increases in the prevalence of liver disease and liver cancer. Leaders in the field advocated for a national strategy to be written to guide the development of an effective public health response to hepatitis B, which includes access to antiviral treatment for people at high-risk of hepatocellular carcinoma or serious liver damage.^{13,14,15,16}

The *South Australian Hepatitis B Action Plan 2014-2017* is one of a suite of state action plans, which flow from national strategies, aiming to reduce transmission of STIs and BBVs and their related impacts.

The other related South Australian action plans are the:

- > *Hepatitis C Action Plan 2009-2013*¹⁷
- > *HIV Action Plan 2009-2012*^{18,i}
- > *Sexually Transmissible Infections Action Plan 2012-2015*.¹⁹

The *South Australian Hepatitis B Action Plan 2014-2017* also contributes to the realisation of a number of other commitments and initiatives of the South Australian Government and SA Health, including the:

- > *Aboriginal and Torres Strait Islander Companion Document to the Statewide Cancer Control Plan (2011-2015) and Cancer Care Pathway*²⁰
- > *Aboriginal Health Care Plan 2010-2016*²¹
- > *SA Health Primary Prevention Plan 2011-2016*²²
- > *South Australia's Health Care Plan 2007-2016*²³
- > *youthconnect: South Australia's Youth Strategy 2010-2014*²⁴
- > *South Australia's Strategic Plan 2011*.²⁵

The *South Australian Hepatitis B Action Plan 2014-2017* also draws from the *Australian Immunisation Handbook 10th Edition* and its recommendations for the Aboriginal community, migrants and other high-risk populations.²⁶

i Both the South Australian Hepatitis C Action Plan 2009-2013 and the HIV Action Plan 2009-2012 have been granted an extension by the SA Minister for Health and Ageing until the national strategies are renewed.

1.6 Goal and objectives

Goal

The goal of the *South Australian Hepatitis B Action Plan 2014-2017* is:

- > To reduce the transmission of, and morbidity and mortality caused by, hepatitis B and to minimise the personal, clinical and social impact of hepatitis B in South Australia.

Objectives

In line with the objectives of the *National Hepatitis B Strategy 2010-2013*, the objectives of the *South Australian Hepatitis B Action Plan 2014-2017* are to:

- > reduce the rates of newly acquired hepatitis B infection
- > reduce the proportion of people with chronic hepatitis B who have not been diagnosed
- > improve the health and wellbeing of people with chronic hepatitis B, through access to clinical services, treatment, education and support.

1.7 Roles and responsibilities of parties to this plan

A partnership approach will be central to the success of this Action Plan, and a broad range of partners and stakeholders will need to work together to achieve the goals and objectives of this plan.

Oversight of the Action Plan is provided by SA Health, working through the South Australian Sexually Transmissible Infection and Blood Borne Virus Advisory Committee (SASBAC), chaired by the Chief Public Health Officer.

SA Health provides overall strategic direction for the control and management of the hepatitis B virus. However, like its partners, SA Health has service responsibility for particular elements of the health system.

Key partners to an integrated response in South Australia includes tertiary centres, local health networks, Country Health SA, primary health networks and through services provided by non-government organisations, including Aboriginal Community Controlled Health Services, primary health care providers such as general practitioners and other community based non-government organisations.

Whilst Aboriginal Community Controlled Health Services, primary health networks and general practitioners are recognised as key partners within the Action Plan, SA Health also recognises they are separate and self-determining entities.

The main responsibilities of key partners to this plan are described below.

The South Australian Sexually Transmissible Infection and Blood Borne Virus Advisory Committee

- > Oversight of the implementation and monitoring of the *South Australian Hepatitis B Action Plan 2014-2017*.

The Communicable Disease Control Branch, SA Health

- > Development and oversight of the implementation of statewide health policy and action plans.
- > Disease surveillance and investigation.
- > Supply of vaccine for infants, children and adolescents under the National Immunisation Program Schedule.
- > Supply of vaccine for at-risk adults under the SA Health Access to Free Hepatitis B Vaccine policy.²⁷
- > Administration of funding to non-government organisations
- > Liaison with the Commonwealth and state and territory health departments
- > Facilitation of the mid-term review and final evaluation of the Action Plan.

Local Health Networks (including Country Health SA)

- > Implementation of statewide policy and programs.
- > Determination of local priorities and implementation of appropriate actions.
- > Provision of hepatitis B testing.
- > Provision of hepatitis B vaccination.
- > Delivery of specialist clinical services to priority populations as an effective part of the overall health service response.
- > Support for health services within their catchment areas.

Primary Health Networks

Primary Health Networks are responsible for leading local and regional health care system change and improvement by:²⁸

- > Making it easier for patients to navigate the local health care system.
- > Providing and promoting integrated, connected and coordinated care by working closely with a wide range of stakeholders.
- > Ensuring local general practitioners and primary health care services meet the needs and priorities of communities.
- > Making primary health care an effective part of the overall health system.
- > Developing population health information and identifying priority health issues.

Primary care services (general practitioners, migrant health, other primary health care clinical services)

- > Provision of hepatitis B testing for at risk populations.
- > Provision of hepatitis B vaccination.
- > Provision of information, support and referral to NGOs as appropriate.
- > On-going monitoring of people with chronic hepatitis B.
- > Appropriate referral of people with hepatitis B to specialists.
- > Shared care management of people with chronic hepatitis B between specialist reviews.

Local Government

- > Provision of childhood hepatitis B vaccination (in some locations)

Prisoner health services

- > Provision of hepatitis B testing.
- > Provision of hepatitis B vaccination.
- > On-going monitoring of people with hepatitis B between specialist reviews.
- > Appropriate referral of people with hepatitis B to specialists.

Non-government organisations

- > Provision of information and support to individuals and communities most affected by the virus.
- > Referral to clinical services.
- > Community development and education.
- > Workforce development and education.
- > Peer support.
- > Health promotion and prevention activities.

Research organisations

- > Attracting research funding.
- > Gathering new evidence and dissemination of research findings.

Section 2: Background to hepatitis B

This section describes the global impact of hepatitis B, primary modes of transmission, prevention through immunisation and the goals of antiviral treatment for hepatitis B. It also presents the most current Australian prevalence estimates and the impact of hepatitis B on demand for liver transplantation.

2.1 Hepatitis B worldwide

Infection with hepatitis B virus is a major global health problem and a leading cause of death.

Hepatitis B is a blood-borne and sexually transmissible viral infection that causes inflammation of the liver. In some people hepatitis B becomes a chronic infection that places them at high-risk of death from cirrhosis of the liver and liver cancer.

Internationally, chronic hepatitis B is the single most important risk factor in the development of liver cancer with 60-80% of the world's cases of primary liver cancer attributed to chronic hepatitis B.^{29,30}

Approximately 350 million people in the world are thought to be infected with chronic hepatitis B and approximately 600,000 people die each year due to the consequences of hepatitis B.^{31,32}

Most deaths from chronic hepatitis B occur in the Asia Pacific region, which currently contributes to two thirds of all migration to Australia.

Most people with hepatitis B in regions of high prevalence (>8%) will have contracted the virus from their mothers during delivery, with as many as 16-19%³³ of the adult population in some regions being chronically infected.

People born in regions with a high prevalence of chronic hepatitis B (>8%) are 6-12 times more likely to develop liver cancer than Australian-born people.³⁴

Chronic hepatitis B is highly prevalent in Vietnam, China and some other parts of Asia. High rates of chronic infection with hepatitis B also occur in some parts of Africa, the Amazon and the southern parts of eastern and central Europe. In the Middle East and Indian subcontinent, an estimated 2-5% of the population is chronically infected with the virus.

While less than 1% of the population in Western Europe and North America are chronically infected, just over 1% of Australians are estimated to have chronic hepatitis B infection.

Further detail on international prevalence estimates by country of birth is provided in Appendix A.

2.2 Transmission and prevention of hepatitis B

Hepatitis B transmission occurs by exposure, through punctured skin or the mucosa, to infectious body fluids such as blood, semen, vaginal secretions and any other body fluid containing blood.³⁵ In developing countries, the significant modes of transmission include:

- > perinatal (from mother to baby)
- > early childhood infections (infection through close interpersonal contact with infected household contacts)
- > unsafe injection practices within, and outside of medical practices
- > unsafe blood transfusions
- > unprotected sex.

Most people are asymptomatic during the acute infection phase. However, some people experience acute illness with symptoms that last several weeks, including yellowing of the skin and eyes (jaundice), dark urine, extreme fatigue, nausea, vomiting and abdominal pain.³⁶

In some people, the hepatitis B virus will develop into a chronic liver infection that can lead to cirrhosis of the liver or liver cancer.³⁷

Diagnostically, chronic disease is defined as hepatitis B surface antigen positivity for more than six months.^{38,39}

The risk of developing chronic hepatitis B is most pronounced when hepatitis B is acquired as an infant (80-90% likelihood of chronic infection) while healthy adults with normal immune function who are exposed to the virus have a 95% chance of clearing the infection (5% likelihood of chronic infection).

Most people with chronic hepatitis B will be asymptomatic.ⁱⁱ For others, the disease will progress slowly over decades with no symptoms for many years.⁴⁰ However, without routine monitoring and appropriate management, up to 25% of adults who develop chronic hepatitis B as an infant or child will die from hepatitis B related liver cancer or liver failure.^{41,42}

Liver cancer is currently the fastest growing cancer rate in Australia, and without preventative intervention, demand for cancer treatment is expected to increase almost five-fold by 2020.⁴³

Refer to Appendix B for further detail on Australian liver cancer projections from the Australian Institute of Health and Welfare.

Refer to Appendix C for South Australian liver cancer incidence rates, which show that the state has already experienced a 143% increase in liver cancer rates since the late 1970s.

2.2.1 Global immunisation programs

Hepatitis B vaccines are generally very effective, resulting in immunity in about 95% of people.^{44,45} Protection from vaccination lasts at least 20 years and, in most cases, confers life-long immunity.

In 1992, the World Health Assembly passed a resolution recommending global vaccination against hepatitis B. There are now 179 countries, including Australia, offering hepatitis B vaccine as part of their neonatal immunisation programs.⁴⁶

The World Health Organization (WHO) hepatitis B immunisation targets are:

- > reducing the prevalence of chronic hepatitis B to <2% among children aged five or over
- > reducing the prevalence of chronic hepatitis B to <1% at a year yet to be agreed.⁴⁷

Australia is located within the WHO Western Pacific Region, which overall, has the highest prevalence of hepatitis B of all WHO regions. While significant progress has been made within the Western Pacific Region in implementing WHO vaccination goals, there are still nine countries considered regional priorities for greater coverage of vaccination programs. Australia is not one of these priority countries due to our success with neonatal, childhood and adolescent vaccination programs.⁴⁸

In certain cases, after significant exposure to hepatitis B virus, the vaccine can also be administered after immunoglobulin as a post exposure prophylaxis (PEP).⁴⁹

2.2.2 Antiviral medication

Anti-viral medication for hepatitis B aims to reduce viral load in the blood and the related liver damage caused by the body's immune response. While hepatitis B is not cured by drug therapies, for many people it can suppress viral load to undetectable levels and significantly reduce the risk of liver disease and liver cancer.

Anti-viral medication is offered to patients depending on disease stage, individual health status and other psychosocial factors that may affect the patient's ability to adhere to a medication regimen, as non-adherence can lead to a flare of acute hepatitis.

Current treatment is either a daily oral anti-viral medication, which for most people will be life-long, or weekly interferon injections for a year. However, the rate of long-term viral suppression with interferon is low. Combination therapies involving both interferon and oral anti-viral medication are being trialled with promising results.

Chronic hepatitis B drug treatments are funded by the Australian Pharmaceutical Benefits Scheme through the Highly Specialised Drug Program and currently can only be prescribed by specialist medical practitioners affiliated with recognised hospital treatment facilities.ⁱⁱⁱ

ii Approximately 75%

iii The exception to this is GPs who have been accredited to prescribe s100 medications for HIV may also prescribe hepatitis B medications for people co-infected with HIV and chronic hepatitis B.

2.2.3 Co-infection or superinfection with hepatitis D

Hepatitis D is a rare but serious infection that is only found in people simultaneously infected with hepatitis B.⁵⁰ Infection with hepatitis D can occur either as:

- > a co-infection when contracted simultaneously with hepatitis B; or
- > a superinfection when contracted by a person with chronic hepatitis B.⁵¹

People co-infected with hepatitis B and D usually clear the disease with around 5% of people developing chronic hepatitis D infection. However, hepatitis D superinfection is often characterised by severe chronic liver disease, and accelerated cirrhosis and liver cancer in 80% of cases.

There is no vaccine for hepatitis D and it does not respond to current anti-viral medications.⁵²

Hepatitis D is found worldwide in countries that also have a high prevalence of hepatitis B. Between 2008 and 2012 there were 57 notifications of hepatitis D infection in South Australia.⁵³

2.3 Hepatitis B in Australia

In 2009 the Australian Centre for Economic Research on Health published epidemiological and economic projections for the 10-year period 2008-2017, which estimated:

- > the prevalence of chronic hepatitis B will increase by 67% from 186,755 to 312,235 infections
- > the number of cases of hepatitis B related liver cancer will increase by 320% from 500 to 1,600
- > the annual direct cost of managing and treating hepatitis B infection in Australia will increase by 79% from \$171.8M to \$307.9M^{54, iv}

These increases were forecast under current treatment patterns.

In Australia, current treatment patterns can be described generally as having the following features:

- > good vaccination coverage for people born in Australian hospitals after 1996
- > variable GP knowledge of testing, interpretation of test results and management (including referral and indications for treatment)
- > poor understanding of the need for GPs to routinely monitor all patients who have been diagnosed with chronic hepatitis B, including those who are asymptomatic
- > subsequently, low referral of people with chronic hepatitis B who may benefit from treatment, to specialists
- > low proportion of people with asymptomatic chronic hepatitis B in recall/active management through public hospital outpatient clinics
- > low proportion of people with chronic hepatitis B on antiviral treatment.

This treatment pattern would be understandable for health conditions that were both low prevalence and low impact however, for our priority populations hepatitis B is neither. While the first National Hepatitis B Strategy was released in 2010, Australia has yet to significantly invest in promoting screening for hepatitis B or improving GPs' capacity to routinely manage patients with chronic hepatitis B (particularly those who are asymptomatic) in the community.

2.3.1 Australian prevalence

The population rate of diagnosis (reflected in notification data) of hepatitis B infection from 2007-2011 was relatively stable at 32 per 100,000 people.⁵⁵ However, the most recent prevalence modelling estimates another 46% of all people with chronic hepatitis B still remain undiagnosed.⁵⁶

The most recent Australian modelling from 2011 estimates that 218,000 Australians were living with chronic hepatitis B representing an Australian population prevalence of 1.02%.^{57,58}

However, in Australia, prevalence increases significantly in specific communities based on country of birth and Aboriginality. Across Australia, the prevalence of chronic hepatitis B is highest among remote Aboriginal people (up to 19%) and people born in Vietnam (12.5%), China (12.3%), Taiwan (11.7%), Afghanistan (10.5%) and Cambodia (10.3%).⁵⁹

iv 2008 values

Victorian studies looking in to the difference between prevalence estimates and notifications suggest there is a deficit in diagnosis of non-humanitarian migrants from high prevalence countries upon entry into Australia. Since 2006, only humanitarian entrants and asylum seekers have been targeted for hepatitis B screening. India, Fiji and South Korea are in the top ten source countries for people with chronic hepatitis B arriving in Australia, however, they did not appear in the top ten countries of birth for Victorian notifications.⁶⁰

Research estimates of the prevalence within Aboriginal communities range from 3% to 19% depending on the community and the study. Generally, Aboriginal people born in rural and remote locations are found to have much higher rates of infection, compared with Aboriginal people born in metropolitan areas.^{61,62,63,64}

Other unvaccinated adults at high-risk of infection are also a population of interest for the prevention of hepatitis B. This population includes:

- > men who have sex with men
- > sex workers
- > people who inject drugs
- > partners and other household and intimate contacts of people who have acute or chronic hepatitis B infection
- > people in custodial settings
- > people with HIV and / or hepatitis C.

2.3.2 Hepatitis B and liver transplantation

Liver transplantation has been occurring in Australia since the mid-1980's with viral hepatitis (both hepatitis B and hepatitis C) being one of the primary causes of transplantation. Australia records liver transplantations through the Australian and New Zealand Liver Transplantation Registry. The registry shows, that since the mid 1980s, Australian and New Zealand hospitals have conducted 3,266 liver transplants. Of those patients receiving liver transplants, 372 (11.3%) were diagnosed with hepatitis B or hepatitis B related hepatocellular carcinoma.

Since commencement of liver transplantation in South Australia, in the early 1990s, 75 people with hepatitis B have been referred to the South Australian Liver Transplant Unit (10% of all referrals). Of these, 25 (30% of referrals) progressed to liver transplantation.⁶⁵

Section 3: Hepatitis B in South Australia

This section provides South Australian information on current prevalence estimates sorted by Medicare Local, known cases by Medicare Local and outlines specific issues and barriers for two primary target groups – Aboriginal people and people born in countries with moderate to high prevalence rates of hepatitis B.

This section also outlines the current services related to hepatitis B and the health services that still need to be developed. It also identifies the current gaps in the primary health care sector that will potentially impact on South Australia's ability to meet the targets set in this plan.

3.1 Hepatitis B prevalence in South Australia

In 2013 the WHO Regional Reference Laboratory for Hepatitis B at the University of Melbourne, Victoria estimated that 46% of hepatitis B cases remain undiagnosed in Australia.⁶⁶ Modelling for South Australia (using 2011 population census data) estimated that there are 14,440 people currently living with chronic hepatitis B in South Australia. This represents 0.9% of the population, which is slightly lower than the Australian prevalence of 1.02%.⁶⁷

Table 1 below shows the prevalence estimates of chronic hepatitis B for South Australia sorted by Medicare Local.

Table 1: Estimated prevalence of chronic hepatitis B (CHB) by Medicare Local in South Australia

Medicare Local	2011 Population	Number of people living with CHB	Prevalence (%)
Central Adelaide and Hills	493,517	5,388	1.09%
Northern Adelaide	388,894	4,036	1.04%
Southern Adelaide – Fleurieu, Kangaroo Island	386,422	2,753	0.71%
Country North SA	193,352	1,341	0.69%
Country South SA	130,720	882	0.67%
Total South Australia	1,596,570*	14,442*	0.90%

* Includes those with 'No Usual Address' in the 2011 Census

Data source: WHO Regional Reference Laboratory for Hepatitis B (MacLachlan J & Cowie B, May 2013)

The Medicare Locals with the highest estimated prevalence are Central Adelaide and Hills, and Northern Adelaide.

3.2 Known hepatitis B cases in South Australia

SA Health receives approximately 300-340 new notifications for hepatitis B infection each year.

Hepatitis B is a notifiable disease under the South Australian *Public Health Act 2011*. Data have been collected since 1996 and classified as:

- > newly acquired – which are usually acute cases of less than 24 months, where date of infection is approximately known, or
- > unspecified – where date of infection is unknown, so most likely to be greater than 24 months and therefore assumed to be a case of chronic infection.

Approximately 70% of known cases in South Australia are from Aboriginal people (7.3%) and people born outside Australia, with the primary countries of birth for cases being:

1. Vietnam (15%)
2. China (12%)
3. Afghanistan (8%)
4. Sudan (4%)

5. Sub-Saharan Africa (4%)

6. Philippines (3%)

7. Cambodia (3%)

8. Taiwan (2%)

Table 2 below shows all known cases for hepatitis B in South Australia since 1996 with the case rates for total known cases and known cases in Aboriginal people.

Table 2: Total known cases of hepatitis B in South Australia (newly acquired, unspecified) and notification rates 1996-2012

Year	Known cases (n)*	Notification Rate (n per 100,000 population)**	Known cases in Aboriginal people*	Case Rate in Aboriginal people (per 100,000 population)**
1996	269	18.84	23 (8.5%)	107.61
1997	265	18.56	28 (10.6%)	136.96
1998	224	15.69	14 (6.3%)	68.48
1999	220	14.99	19 (8.6%)	81.11
2000	267	18.20	23 (8.6%)	98.19
2001	254	17.31	30 (11.8%)	128.07
2002	227	15.47	14 (6.2%)	59.77
2003	205	13.97	23 (11.2%)	98.19
2004	223	14.78	24 (10.8%)	93.88
2005	277	18.36	21 (7.6%)	82.14
2006	262	17.36	23 (8.8%)	89.97
2007	328	21.74	18 (5.5%)	70.41
2008	282	18.69	12 (4.3%)	46.94
2009	304	19.08	9 (3.0%)	29.59
2010	283	17.76	14 (4.9%)	46.03
2011	320	20.08	27 (8.4%)	88.78
2012	343	21.48	14 (4.1%)	46.00
Total (N)	4,553		336 (7.4%)	

* since 1996, newly acquired/acute cases = 5.6% of total known cases.

** Denominator population are SA census population in years 1996, 2001, 2006 and 2011. The population in non-census years are standardised against the population of the census year as a midpoint within a 5-year bracket.

Data source: SA Health Communicable Disease Control Branch, October 2013

In addition to the 4,553 total known cases, approximately 2,000 notified cases were made prior to 1996. These cases have been excluded from Table 2 due to the limited associated demographic data available for them. However, they bring the total estimate of known cases in South Australia to 6,553.

As shown in Table 2, the South Australian notification rate per 100,000 people has remained relatively stable over the 17-year period.

While Aboriginal people account for 1.7% of the South Australian population, known cases for Aboriginal people account for 7.4% of all known cases.⁶⁸ Table 2 also indicates that Aboriginal people were between two and seven times more likely to be notified with hepatitis B during this period than the overall state population, although there is a downward trend in rates.

It is important to note that notification data do not include the 46% of cases estimated to remain undiagnosed.

3.3 Known hepatitis B cases by Medicare Local

To assist with the development of this Action Plan, the total number of known cases in South Australia were sorted by Medicare Local. Table 3 ranks each Medicare Local by the total number of known cases since 1986.

Table 3: Total known cases from 1996-2012 by Medicare Local

Medicare Local*	Total known cases	Total known cases in Aboriginal people
Central Adelaide and Hills	1,782	20 (1.1%)
Northern Adelaide	641	16 (2.5%)
Southern Adelaide, Fleurieu Kangaroo Island	606	11 (1.8%)
Country North	272	146 (53.7%)
Country South	133	6 (4.5%)
Unknown	1,119	137 (12.2%)
Total	4,553	336 (7.4%)

* Medicare Local boundaries have been determined using residential postcode information. Data are stored electronically for the first STI or BBV notification, and all subsequent infections remain linked to postcode at first notification. Where postcodes fall within more than one Medicare Local boundary, notification is only applied to one.

Data source: SA Health Communicable Disease Control Branch, October 2013

The table above shows the Medicare Locals with the highest number of known cases are Central Adelaide and Hills, Northern Adelaide and Southern Adelaide.

The table also shows that Aboriginal people in Country North Medicare Local have relatively high numbers of known cases.

3.3.1 Specific issues for Aboriginal people

Recent research estimating the prevalence of chronic hepatitis B in Aboriginal populations suggests that prevalence increases in communities with distance from metropolitan areas for example, Aboriginal people living in remote locations have higher rates of chronic hepatitis B than Aboriginal people living in metropolitan Adelaide.^{69,70,71}

However, even in metropolitan areas, Aboriginal people are estimated to have twice the prevalence of infection of non-indigenous Australian born people.⁷²

Factors (as discussed in the literature and gleaned through the Environmental Scan for Hepatitis B 2013⁷³) that are thought to contribute to higher prevalence of chronic hepatitis B for Aboriginal people include:^{74,75,76}

- > incomplete vaccination regimes or vaccine failure
- > lack of a systems approach to clinically managing the infection e.g. through a shared care model
- > variable knowledge about hepatitis B infection by the health workforce
- > competing or more urgent health priorities
- > the often asymptomatic nature of chronic infection
- > transient health workforce
- > lack of, or incomplete screening tests to facilitate accurate diagnosis
- > limited access to specialists due to distance to specialist consultations

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- > gap payments for some regional medical services
 - > comorbidities compromising treatment or outcomes
 - > later engagement by pregnant women with antenatal services, and earlier disengagement post-delivery
 - > cultural diversity, including the impact of men's and women's business on the mobility of individuals, making completion of vaccination schedules difficult.

3.3.2 Specific issues for people born overseas

The Australian Bureau of Statistics reports that approximately 22% of people residing in South Australia were born overseas.⁷⁷

Over the last 50 years, we have seen significant shifts in the region of birth for people re-settling in Australia. The shifts in region of birth are:

- > post World War II migration wave – people mainly born in European countries
- > post 'White-Australia' policy migration – people mainly from South East Asian countries⁷⁸
- > new communities of migrants – including people from North Africa, the Middle East and Asian region, with China now reported by the Department of Immigration and Citizenship as the top source country in 2009-2010.⁷⁹

Since the mid-2000s the proportion of people relocating to South Australia, who were born in countries with moderate to high hepatitis B prevalence, has been increasing, mainly due to increases in humanitarian arrivals.

Research tells us that upon settlement to a new country, newly arrived refugees experience varying levels of:

- > dislocation and confusion about systems and services
- > grief and loss for their country, culture and family left behind
- > specific medical ailments in higher rates than the general population
- > post-traumatic stress disorders
- > health literacy
- > English language proficiency
- > isolation, particularly women with small children.

It is well documented that health outcomes are directly linked to high levels of acculturation, therefore innovative approaches are needed to reduce the impacts of hepatitis B for people born overseas and their families.

Section 4: Hepatitis B services in South Australia

This section details the primary recommendations of the *Environmental Scan of Hepatitis B Activities 2013 (South Australia)*, outlines the current immunisation strategy and highlights current gaps in the primary health care system. This section also describes the key partnerships for effective testing, monitoring, treatment and support.

4.1 Hepatitis SA Environmental Scan

In South Australia there are no stand-alone hepatitis B services, although some services have begun to incorporate work related to hepatitis B into other blood borne virus related programs and services.

The *Environmental Scan of Hepatitis B Activities* was completed by Hepatitis SA in early 2013.

The purpose of the scan was to:

- > identify hepatitis B services
- > describe these services/activities
- > identify gaps in services
- > identify issues/barriers to implementation.

The scan revealed a number of areas that require greater focus or reallocation of existing resources to respond to hepatitis B. Many of these areas were largely consistent with *the National Hepatitis B Needs Assessment* completed in 2007 by the Australian Research Centre in Sex, Health and Society at La Trobe University that informed the development of the *National Hepatitis B Strategy 2010-2013*.^{80,81}

In summary, the primary recommendations made in the *Environmental Scan of Hepatitis B* were:

- > strengthening partnerships between communities and service providers
- > targeted community information, awareness and education
- > dedicated viral hepatitis (both hepatitis B and hepatitis C) funding to NGOs
- > targeted clinical education including promoting the National Hepatitis B Testing Policy
- > developing a hepatitis B service provider dataset to inform future planning
- > improving neonatal vaccination rates
- > improving vaccination uptake for young Aboriginal people
- > expanding the Patient Assistance Travel scheme to accommodate people who cannot afford co-payments or upfront payment to travel to Adelaide for specialist care
- > addressing systemic barriers to access to treatment for prisoners.

4.2 South Australian Immunisation Program

Vaccination for hepatitis B in South Australia is offered under two key program areas:

- > The National Immunisation Program funded by the Commonwealth government since 1996 for neonates and infants on an on-going basis and adolescents in Year 8 from 1 May 2000 until end of 2013⁸².
- > SA Health *Access to Free Hepatitis B Immunisation Policy* funded by the state and targeted at people falling through the gaps of the National Immunisation Program that are at high-risk of infection, including all Aboriginal people.

The Commonwealth funded program has been largely successful with vaccination coverage of 92% for children at 12 months of age. Due to the relationship between age of infection and progression to chronic hepatitis B and liver disease, particular gaps where a programmed response would still be cost-effective are:

- > children born in countries with high hepatitis B prevalence (and no hepatitis B neonatal immunisation program) and who were not covered by the Schools Program
- > all Aboriginal adults and children identified as still susceptible.

SA Health's *Access to Free Hepatitis B Immunisation Policy* provides access to free hepatitis B vaccine for people in the following high-risk groups:

- > children born overseas after May 2000
- > new arrival refugees and detainees
- > children and adults of Aboriginal or Torres Strait Islander descent
- > sexual contacts of people with hepatitis B
- > men who have sex with men
- > sex workers
- > household contacts of people with hepatitis B
- > people with chronic liver disease or chronic hepatitis C
- > HIV positive adults
- > inmates of long-term correctional facilities
- > people who inject drugs.

4.3 Testing, monitoring and treatment

In 2008, a *National Hepatitis B Needs Assessment* identified that the knowledge and skills of GPs to order the correct tests for and then diagnose chronic hepatitis B were highly variable and workforce development was required.⁸³ This was confirmed in the *Investigating General Practice and Hepatitis B Report 2012*.⁸⁴

In 2009-2010, the Gastroenterological Society of Australia (GESA) published the *Australian and New Zealand Chronic Hepatitis B Recommendations* to provide guidance for screening, evaluation and treatment of patients with chronic hepatitis B.⁸⁵

In 2012, the *National Hepatitis B Testing Policy* was developed and recommends all people in high-risk groups be tested for chronic hepatitis B prior to vaccination to ensure vaccination is necessary, identify chronic hepatitis B cases and carry out contact tracing, which includes descendants.⁸⁶

While care for each patient is individualised, difficulty in accessing all the elements of primary care that a person diagnosed with chronic hepatitis B (including those who are asymptomatic) may need in their lifetime is expected to impact on South Australia's ability to meet the national testing policy and adequately manage all diagnosed cases.

These elements are outlined in Table 4.

Table 4: Minimum primary care and specialist services potentially required to manage hepatitis B*

What service	Why	Clinician	At what interval	Current access**
Initial screening	<ul style="list-style-type: none"> > Know hepatitis B status > conduct contact tracing once notified > Improve outcomes > Prevent transmission 	GP	Opportunistically	MBS, any GP
Vaccination	<ul style="list-style-type: none"> > Protect person > Offer vaccination for contacts 	GP	Up to three injections spread over six months	MBS, any GP, vaccine free in SA for priority populations
Scan to determine liver stiffness (at diagnosis)	<ul style="list-style-type: none"> > At diagnosis to assess level of liver damage > Record baseline 	Currently specialist only	At diagnosis of CHB	Currently public hospital only*** (no MBS payment)
Specialist assessment for antiviral medications	<ul style="list-style-type: none"> > All people with CHB need monitoring > Level of disease activity can change over time > 15% likely to benefit from medication 	GP refers Specialist initiation of drugs only	On diagnosis of CHB or if disease activity changes (for some people, depending on blood test results)	Public hospital or private clinic
Maintenance medication	<ul style="list-style-type: none"> > Some people will need lifelong antiviral medicine 	Currently specialist only – s100 GPs trained in future	Three to six monthly	PBS s100 Highly Specialised Drugs Program – public hospital prescribers only use one community pharmacy
Abdominal Ultrasound	<ul style="list-style-type: none"> > Some (not all) people with CHB should be screened for hepatocellular carcinoma 	GP	Six monthly	MBS, any GP
Blood tests	<ul style="list-style-type: none"> > All people with CHB should be regularly monitored for liver function, viral load and immune response 	GP	Every 12 months (at least)	MBS, any GP
Scan to determine liver stiffness (as monitoring)	<ul style="list-style-type: none"> > All people with CHB should be considered for periodic assessment of changing liver damage 	Currently specialist only	Variable – every 18 months, or 24 months for some patients	Currently public hospital only*** (no MBS payment)

*This table excludes primary care coordination provided by community viral hepatitis nurses, and information, health education, and health promotion services such as Aboriginal Health Council of SA, Hepatitis SA, Relationships Australia South Australia.

**Note: MBS does not extend to prisoners

*** Currently liver stiffness scanning is available at Royal Adelaide Hospital, Flinders Medical Centre and The Queen Elizabeth Hospital and the Repatriation General Hospital and a small number of private practices.

Table 4 highlights some issues for South Australia's capacity to respond to chronic hepatitis B in particular those items related to GP clinical knowledge and access (darker blue) which are:

1. **GP workforce development.** A recent national report⁸⁷ looking at GP training needs has identified clinical knowledge gaps, with many GPs believing asymptomatic patients to be 'healthy carriers' and being unable to correctly interpret hepatitis B serology reports. Subsequently, some GPs are unaware of the need for lifelong monitoring of all people with chronic hepatitis B and the clinical indicators for specialist referral.
2. **Scans to determine liver stiffness.** While currently only available at tertiary centres, potential exists for this equipment to be routinely available on the Commonwealth Medicare Benefits Schedule through the private diagnostic imaging networks where GPs could refer their patients, should sufficient demand justify investment from this sector.

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3. **s100 maintenance medications.** Currently in South Australia, medication for hepatitis B can only be dispensed under the Pharmaceutical Benefits Schedule based on a specialist prescription or prescription from the single South Australian s100 HBV Accredited GP Prescriber. While s100 medicines prescribed by a public hospital specialist are available from any public hospital and a metropolitan community pharmacy, medicines prescribed by specialists in private practice can be dispensed from a private hospital or any community pharmacy that has access to a clinical pharmacist.

While the clinical assessment for initiation of treatment requires the input of a specialist, the on-going maintenance prescribing could be performed by accredited general practitioners in the primary care sector in shared care arrangements with specialists.

4. **Recall and reminder systems.** Recall of patients for review of chronic disease is already routine practice for general practitioners. With access to support for enhancing their current knowledge of caring for people with hepatitis B general practitioners could significantly increase the number of people in recall programs. However, lack of access to scanning in the primary care sector, limits their ability to fully work-up patients prior to specialist review.

Combined with the identified gap in GP's clinical knowledge, the gaps in the Commonwealth funded diagnostics in the primary health care system have significant implications for South Australia's ability to manage greater numbers of people with hepatitis B.

4.4 South Australia's capacity to respond

4.4.1 Specialists and tertiary centres

The SA Hepatitis C Nursing Support Program was established in recent years to engage people diagnosed with chronic hepatitis C into care (including shared care with GPs), however no similar targeted program exists for people with chronic hepatitis B.^v

Specialist assessment and some treatment services (which may include lifelong monitoring) for people with chronic hepatitis B are available through tertiary centres namely:

- > Royal Adelaide Hospital, through the Infectious Diseases Unit, and the Department of Hepatology / The Viral Hepatitis Centre (a collaboration between Infectious Diseases Unit and Hepatology) runs clinical trials in hepatitis B
- > The Queen Elizabeth Hospital, Infectious Diseases and Gastroenterology Units
- > Flinders Medical Centre, Department of Gastroenterology and Hepatology, and the Infectious Diseases Unit
- > Lyell McEwin Hospital Hepatology Clinics
- > Women's and Children's Hospital.

Clinical Nurse Consultants contribute much to the care coordination and management of patients on treatment for hepatitis C and make a significant contribution to preparing patients for specialist review and increasing medication compliance through the management of side effects. They are the link between the patient, their specialist and other healthcare providers. While most hepatitis C nurses will also support people with chronic hepatitis B, the majority of their caseloads are people entering care for hepatitis C treatment.

Section 6 of the Action Plan includes a commitment to strengthening shared care coordination services to support GPs responding to people with hepatitis B.

4.4.2 Section 100 Prescribers

The Australian Government provides funding for certain specialised medications under the Highly Specialised Drugs Program. Highly Specialised Drugs are medicines for the treatment of chronic conditions which, because of their clinical use or other special features, are restricted to supply through public and private hospitals having access to appropriate specialist facilities. To prescribe these drugs as pharmaceutical benefit items medical practitioners are required to be affiliated with specialist hospital units.

A GP or non-specialist hospital doctor accredited to prescribe hepatitis B medications may only prescribe Highly Specialised Drugs to provide maintenance therapy under the guidance of the treating specialist.⁸⁸

^v Also known as the Nurse Led Hepatitis C Model of Care.

The Australasian Society for HIV Medicine (ASHM) through the Commonwealth Department of Health has developed an accredited hepatitis B prescribers training program for GPs. This program has been piloted in New South Wales to accredit GPs or non-specialist prescribers to prescribe s100 medicines for the maintenance treatment of chronic hepatitis B.⁸⁹

Section 6 of this Action Plan includes a commitment to consider the development of similar arrangements to New South Wales in consultation with specialists.

4.4.3 Non-government organisations

Historically, non-government organisations delivering blood borne virus related services in South Australia have focussed on HIV and hepatitis C prevention, care and support. Non-government organisations make a significant contribution towards much of the education, information and support for people in priority populations and within the wider community. They are key providers of health information resources, used by both clinical services and other non-government organisations across the sexually transmissible infection and blood borne virus sector.

Non-government organisations also provide referral to clinical services, community development, education, peer support and other activities aimed at engaging with priority populations, for the purposes of prevention, health promotion and encouraging specific groups of people to engage with GPs for screening.

The reorientation of hepatitis C related non-government organisation services to include hepatitis B is already occurring. Section 6 of this Action Plan articulates the intention of the South Australian non-government organisation sector to continue to build capacity and dedicate resources to respond to hepatitis B, particularly for culturally and linguistically diverse and Aboriginal populations.

4.4.4 Primary health care partners

While SA Health is committed to reorienting services to respond to hepatitis B, significant change needs to occur in the primary health care sector for the work to be most effective.

Key opportunities for change in the primary health care sector include:

- > workforce development planning and implementation for GPs and nurses
- > the funding of scanning for liver stiffness under the Commonwealth Medicare Benefits Schedule
- > increasing hepatitis B care planning which includes regular re-call to GP practices for review
- > expansion of s100 prescriber accreditation
- > increased contact tracing (in conjunction with the Communicable Disease Control Branch).

Section 6 of this plan includes a commitment to liaise with the Commonwealth Department of Health and Primary Health Networks to assist in the identification of opportunities for change in the Commonwealth primary health care sector.

Section 5: Performance indicators and targets

Overall monitoring of the *South Australian Hepatitis B Action Plan 2014-2017* will be based on:

- > Performance indicators – selected from or with similarities to indicators articulated in the national strategy
- > State targets – established to monitor overall progress of the Action Plan
- > Output measures – relate to specific activities or projects within the Action Plan.

SA Health through the South Australian Sexually Transmissible Infection and Blood Borne Virus Advisory Committee has responsibility for monitoring the implementation of the Action Plan. Data collected against the state targets and output measures will contribute to a mid-term stocktake and final review of the Action Plan.

The mid-term stocktake will be conducted in 2015/2016. The aim of the stocktake report will be to:

- > provide a brief on any major changes to the epidemiological, social, economic, clinical and political context through an environmental scan
- > broadly describe the successes, difficulties and learning gained from the first part of the implementation process
- > assess the degree of completion of each of the seven priority action areas and related strategies
- > report on available state targets and selected output measures
- > recommend an updated set of priorities for the remaining life of the Action Plan
- > describe an agreed process for the final review of the Action Plan.

The performance indicators, state targets and their sources are outlined in Table 5. Detailed output measures are described against each activity in Section 6.

Table 5: Performance indicators and state targets for the SA Hepatitis B Action Plan 2014-2017

Performance Indicator	Reporting Frequency	Source	State Target
1) Coverage of hepatitis B vaccination among children and adolescents* (Essential Vaccines National Partnership Agreement)	Mid-term and final report	Childhood immunisation register	95% coverage (all SA) 95% coverage (Aboriginal people)
2) Estimated proportion of people with chronic hepatitis B who have not been diagnosed in SA	Not specified	WHO Regional Reference Laboratory for Hepatitis B, Victorian Infectious Diseases Research Laboratory	Reduce the estimated proportion of people who have not been diagnosed to 20%
3) Notifications of acute and unspecified hepatitis B	Mid-term and final report	STI & BBV Disease Surveillance and Investigation Section, SA Health	No target – expected to increase as more people are diagnosed
4) Proportion of people who die within 12 months of a hepatitis B diagnosis (notifications matched with death register)	Mid-term and final report	STI & BBV Disease Surveillance Section, SA Health	No target
5) Proportion of people with chronic hepatitis B dispensed drugs for hepatitis B infection through the Highly Specialised Drugs (s100) Program	Mid-term and final report	s100 prescription data; STI & BBV Disease Surveillance and Investigation Section, SA Health	10% of people with chronic hepatitis B to receive treatment

* Note: ACIR does not currently capture adolescent vaccinations reliably.

Section 6: Detailed strategies and actions

The priority action areas of the *South Australian Hepatitis B Action Plan 2014-2017* mirror the *National Hepatitis B Strategy 2010-2013* priority action areas:

Action area 1: Building partnerships and strengthening community action

Action area 2: Preventing hepatitis B transmission

Action area 3: Optimising diagnosis and screening

Action area 4: Clinical management of people with chronic hepatitis B

Action area 5: Developing health maintenance, care and support for people with chronic hepatitis B

Action area 6: Knowledge transfer using surveillance and research

Action area 7: Workforce and organisational development.

In the tables that follow, lead agencies have been identified against each action. The role of the nominated lead agency is to chair the interagency working group established to plan and implement a particular action. The lead agency determines the agenda, ensures cohesion and collaboration among the partners, and takes oversight over the implementation of any decisions of the group.

The following tables detail the South Australian strategies, actions, output measures, lead agencies and partners of the *South Australian Hepatitis B Action Plan 2014-2017*.

Action area 1: Building partnerships and strengthening community action

Strategy	Target populations	Action	Output measures	Lead agencies or partners
1.1 Develop new partnerships between BBV committees and organisations representing communities most at risk of chronic hepatitis B infection.	Aboriginal people CALD people High-risk groups	Develop new cross-sector or across government partnerships and collaborations, which enhance work with priority populations. Establish the Blood Borne Virus Health Promotion and Workforce Development Subcommittee of the South Australian Sexually Transmissible Infection and Blood Borne Virus Advisory Committee (SASBAC).	Subcommittee established. Evidence of new collaborative relationships, leading to greater access to clinical services and support for priority populations.	SA Health (Lead) Aboriginal Health Council SA Country Health SA Hepatitis SA Local Health Networks Migrant / new arrival / detention health services Other NGOs related to high-risk groups PEACE Multicultural Services Primary Health Networks Prisoner health services SIN (Sex Industry Network)
1.2 Further develop existing partnerships to be included in responses to chronic hepatitis B.	Aboriginal people CALD people High-risk groups	Build collaborative and supportive partnerships to increase access to information, screening, vaccination, care and treatment. Enhance relationships with target populations through existing community structures or settings (i.e. churches, mosques, CALD community groups).	SA Health, STI & BBV Section Hepatitis B Action Plan Communication plan implemented. Evidence of successful partnerships and stakeholder identification by NGOs through Annual Work Plans.	SA Health (Lead) Aboriginal Health Council SA Country Health SA Hepatitis SA Local Health Networks Migrant / new arrival / detention health services PEACE Multicultural Services Primary Health Networks Prisoner health services
1.3 Support Aboriginal communities and their health services to build capacity and expertise in hepatitis B.	Aboriginal people	Explore opportunities to support the sustainability of the Aboriginal BBV Coordination Program.	Evidence of capacity development, including the achievement of testing, vaccination, care and treatment targets for Aboriginal people.	SA Health (Lead) Aboriginal Health Council SA Country Health SA Hepatitis SA Local Health Networks Primary Health Networks Prisoner health services SIN

Action area 2: Preventing hepatitis B transmission

Strategy	Target populations	Action	Output measures	Lead agencies or partners
2.1 Promote national consistency in groups and communities eligible for funded vaccination, giving priority to communities at greatest risk of hepatitis B infection.	High-risk groups	<p>Continue both National Immunisation Program and SA Health free immunisation program for high-risk groups.</p> <p>Engage with national stakeholders to include high-risk populations (including those requiring catch-up, refugees and detainees) in National Immunisation Program.</p> <p>Ensure all service providers are aware of who is eligible for free vaccinations and offering/recommending vaccinations to those populations.</p>	<p>National Immunisation Program extended to high-risk populations.</p> <p>Consistency across service providers in relation to who is being offered free vaccinations.</p>	<p>SA Health – Immunisation Section (Lead)</p> <p>Antenatal services/midwives</p> <p>Hepatitis SA</p>
2.2 Confirm access to hepatitis B vaccination for priority populations.	<p>Aboriginal people</p> <p>CALD people</p> <p>High-risk groups</p>	<p>Review SA Access to Free Hepatitis B Vaccine Policy (including dispensing fees) to ensure coverage to priority populations and high-risk groups.</p> <p>Work towards enabling environments that allow sex workers and PWID to access vaccination without discrimination.</p>	<p>Increased vaccination rates.</p> <p>High-risk populations can access vaccinations without discrimination.</p>	<p>SA Health – Immunisation Section (Lead)</p> <p>SA Health – STI & BBV Section</p>
2.3 Increase uptake of hepatitis B vaccination among priority populations.	<p>Aboriginal people</p> <p>CALD people</p> <p>High-risk groups</p>	<p>Establish baseline vaccination data and implement activities which promote vaccination in collaboration with priority populations and high-risk groups:</p> <ul style="list-style-type: none"> > Aboriginal health services > Drug and alcohol services > Organisations providing services to all new arrivals (refugees, asylum seekers and skilled migrants) > General Practitioners > Maternity and child services > Peer based sex worker organisations. > Clean Needle Programs. 	<p>Vaccination promotion to high-risk populations.</p> <p>Increased uptake of free vaccinations among priority populations and high-risk groups.</p>	<p>SA Health – Immunisation Section (Lead)</p> <p>Country Health SA</p> <p>Drug and Alcohol Services</p> <p>Hepatitis SA</p> <p>Local Health Networks</p> <p>Migrant / new arrival / detention health services</p> <p>PEACE Multicultural Services</p> <p>Primary Health Networks</p> <p>Prisoner health services</p> <p>SA Aboriginal Health Council SA</p> <p>SA Health – STI & BBV Section</p> <p>SIN</p>

Action area 2 continued

Action area 2: Preventing hepatitis B transmission continued

Strategy	Target populations	Action	Output measures	Lead agencies or partners
2.4 Increase awareness of hepatitis B prevention through integrated health promotion interventions promoting safe sex and safe injecting. Improve access to information on hepatitis B vaccination for affected communities.	Aboriginal people CALD people High-risk groups	Implement activities to increase awareness of hepatitis B prevention (including vaccination) through sexual health services, the Clean Needle Program and related services. Support peer based organisations to deliver targeted health promotion to priority populations.	Vaccination promotion to high-risk populations. Increased uptake of free vaccinations among priority populations and high-risk groups.	SA Health – Immunisation Section (Joint lead) SA Health – STI & BBV Section (Joint lead) Drug and Alcohol Services SA (Joint lead) Aboriginal Health Council SA Country Health SA Hepatitis SA Local Health Networks Migrant / new arrival / detention health services PEACE Multicultural Services Primary Health Networks Prisoner health services SIN
2.5 Further develop care for mothers with chronic hepatitis B and their children.	Aboriginal people CALD people High-risk groups	Develop and implement guidelines for GP follow-up, contact tracing and monitoring of mothers with hepatitis B and their children. Enhance collaboration for the purposes of establishing GP follow-up, contact tracing and long-term monitoring of mothers with hepatitis B and their children.	Awareness increased in priority populations attending sexual health services and Clean Needle Programs.	SA Health (Lead) Aboriginal Health Council SA Antenatal services/midwives Hepatitis SA PEACE Multicultural Services

Action area 3: Optimising diagnosis and screening

Strategy	Target populations	Action	Output measures	Lead agencies or partners
3.1 Promote the <i>National Hepatitis B Testing Policy 2012</i> and <i>Interpreting Hepatitis B serology: recommended wording for national laboratories to report hepatitis B diagnostic test results</i> . Published by ASHM	GPs and other primary health care workers	Disseminate and promote the <i>National Hepatitis B Testing Policy 2012</i> . Disseminate and promote <i>Interpreting Hepatitis B serology: recommended wording for national laboratories to report hepatitis B diagnostic test results</i> .	<i>National Hepatitis B Testing Policy</i> disseminated and promoted. <i>Interpreting Hepatitis B serology: recommended wording for national laboratories to report hepatitis B diagnostic test results</i> disseminated and promoted.	SA Health (Lead) Aboriginal Health Council SA Country Health SA Hepatitis SA Local Health Networks Migrant / new arrival / detention health services Pathology laboratories Primary Health Networks Prisoner health services
3.2 Support General Practitioners and other primary health care workers in diagnosing, monitoring, referral and management of people with chronic hepatitis B.	GPs and other primary health care workers	Work with local clinicians to increase capacity for screening, vaccination, contact tracing, monitoring and treatment and consider: > the use of telehealth to increase capacity > CDCB Branch support through disseminating Hepatitis B Vaccination and Management information with Hepatitis B and C Medical Notification Form, and specialist services advice > the use of prompts embedded in pathology reporting system.	Increased hepatitis B related activity by General Practitioners.	SA Health (Lead) Aboriginal Health Council SA Country Health SA Hepatitis SA Local Health Networks Migrant / new arrival / detention health services PEACE Multicultural Services Primary Health Networks Prisoner health services SA Health – Disease Surveillance and Investigation Section
3.3 Promote contact follow-up for newly diagnosed chronic hepatitis B and acute hepatitis B cases with specific priority given to checking the vaccination profile and sero-status of household members (including second and subsequent generations).	GPs and other primary health care workers	Develop and implement an SA Health Hepatitis B Contact Tracing Policy. Ensure contact tracing policy is sensitive to the varying needs and sensitivities of individuals and does not create additional stigma and/or discrimination for priority populations.	SA Health policy reviewed and developed further in consultation with peer based organisations. Contact tracing activity enhanced.	SA Health (Lead) Aboriginal Health Council SA Country Health SA Gay Men's Health Hepatitis SA Local Health Networks Migrant / new arrival / detention health services PEACE Multicultural Services Primary Health Networks Prisoner health services SA Health Disease Surveillance & Investigation Section SHineSA SIN

Action area 4: Clinical management of people with chronic hepatitis B

Strategy	Target populations	Action	Output measures	Lead agencies or partners
4.1 Increase access to clinical services for people with hepatitis B to prevent liver disease and liver cancer.	Aboriginal people CALD people High-risk groups	Establish South Australian screening, contact tracing, vaccination, care and treatment baseline and targets (with reporting) for hepatitis B with detail for: <ul style="list-style-type: none"> > Aboriginal people in remote locations > Aboriginal people in the metropolitan area > people born in countries with moderate to high HBV prevalence and their descendants > specific high-risk groups > the use of telehealth consultation > setting / sector i.e. general practice or tertiary hospitals. 	Baseline targets established and achieved	SA Health (Lead) Aboriginal Health Council SA Cancer Council SA Country Health SA Hepatitis SA Local Health Networks Migrant / new arrival / detention health services Primary Health Networks Prisoner health services
4.2 Trial innovative approaches to increase access to on-going clinical services for Aboriginal groups with cultural, language or literacy barriers to access.	Aboriginal people	Develop culturally appropriate pathways to treatment for Aboriginal people with chronic hepatitis B. Develop pathways to treatment for Aboriginal people in remote communities particularly: <ul style="list-style-type: none"> > Kakarrara Wilurrara Health Alliance (Yalata, Oak Valley and Tjuntjuntjara) > Ceduna Koonibba Aboriginal Health Service (Ceduna and surrounds) > Umoona Tjutagku Health Service (Cooper Pedy and surrounds). 	Increase in numbers of Aboriginal people in treatment	Aboriginal Health Council SA (Lead) Aboriginal Health Services Country Health SA Hepatitis SA Local Health Networks Primary Health Networks Prisoner health services
4.3 Trial innovative approaches to increase access to on-going clinical services for CALD groups with cultural, language and or literacy barriers to access.	CALD people	Develop culturally appropriate pathways to treatment for people with chronic hepatitis B that were born in countries with moderate to high prevalence and their descendants. Ensure access to translated health promotion resources and the provision of CALD sex worker education.	Increase in numbers of CALD people in treatment	PEACE Multicultural Services (Lead) Country Health SA Hepatitis SA Local Health Networks Migrant / new arrival / detention health services Primary Health Networks Prisoner health services SA Health – STI & BBV Section SIN

Action area 4 continued

Strategy	Target populations	Action	Output measures	Lead agencies or partners
4.4 Ensure all patients diagnosed with chronic hepatitis B are in a screening program for cirrhosis and hepatocellular carcinoma.	All patients with chronic hepatitis B	Tertiary centres to work in partnership to improve on-going monitoring of people with chronic hepatitis B for example: <ul style="list-style-type: none"> > Developing agreed strategies for recall and review of all known hepatitis B patients. > Working with GPs in target locations, servicing priority populations to identify appropriate chronic hepatitis B patients for recall and review. 	Number and proportion of known cases of chronic hepatitis B receiving regular screening for cirrhosis. Number and proportion of known cases of chronic hepatitis B receiving regular screening for HCC.	SA Health (Joint lead) Cancer Council SA (Joint lead) Aboriginal Health Council SA Country Health SA Local Health Networks Migrant / new arrival / detention health services Primary Health Networks Prisoner health services
4.5 Improve access to hepatitis B treatment.	GPs People with chronic hepatitis B, particularly those living outside metropolitan area, in prison or detention	Develop a SA s100 Hepatitis B Prescriber Policy. Expand the s100 maintenance prescriber program in areas with no or limited access to specialist care. Explore barriers to expanding access to s100 Highly Specialised Drugs through community pharmacies.	Number of s100 HBV prescribers. Primary Health Networks with greater access.	SA Health – STI & BBV Section (Lead) Aboriginal Health Council SA Country Health SA Migrant / new arrival / detention health services Primary Health Networks Prisoner health services SA Health – Medicines and Technology Policy and Programs
4.6 Strengthen the Hepatitis C Nursing Model of Care to build support and shared care capacity to work with hepatitis B patients and primary care practitioners.	GPs Target communities People with chronic hepatitis B	Develop business case for expanding Hepatitis C Nursing Model of Care to increase access to hepatitis B services for priority populations through general practitioners.	Increased number of people in treatment.	SA Health (Lead) Aboriginal Health Council SA Country Health SA Local Health Networks Migrant / new arrival / detention health services Primary Health Networks Prisoner health services
4.7 Increase access to screening for liver disease and cancer.	Aboriginal people CALD people	Develop approaches to improve access to scanning for liver stiffness and ultrasound imaging particularly in rural and remote communities for people with chronic hepatitis B.	Number of people being recalled for imaging.	SA Health (Lead) Aboriginal Health Council SA Country Health SA Local Health Networks Primary Health Networks Prisoner health services

Action area 5: Developing health maintenance, care and support for people with chronic hepatitis B

Strategy	Target populations	Action	Output measures	Lead agencies or partners
5.1 Develop health promotion interventions for people with chronic hepatitis B and their families to build health literacy, create supportive environments in which it is safe to disclose infection, support their clinical and psychosocial health needs.	Aboriginal people CALD people High-risk groups	Target health promotion interventions to people in priority populations.	STI & BBV NGOs Annual Work Plan activities completed.	SA Health (Lead) Aboriginal Health Council SA Cancer Council SA Hepatitis SA Migrant / new arrival / detention health services PEACE Multicultural Services Primary Health Networks Prisoner health services
5.2 Develop accurate and culturally appropriate information for people with chronic hepatitis B to inform them about: <ul style="list-style-type: none"> > the impact of infection > its natural history > how to reduce their risk of developing liver disease and how to access specialist services > their responsibilities and legal rights > how to address barriers to adhering to monitoring and treatment. 	Aboriginal people CALD people High-risk groups	Improve information provision for people who require health interpreters or are not literate in their own language. Specific language or cultural groups to be considered include: <ul style="list-style-type: none"> > Western Desert languages > Vietnamese, Afghani, Mandarin, Cantonese, South Sudanese, Khmer 	Information provision strategies in place within the health system for key language or cultural groups of priority populations.	Hepatitis SA (Joint Lead) PEACE Multicultural Services (Joint Lead) Aboriginal Health Council SA Cancer Council SA
5.3 Improve access to information for affected communities.	CALD people Aboriginal people High-risk groups	Build capacity in the SA free statewide telephone information service to respond in a culturally appropriate way to people in the target populations plus their partners, families, carers, the health workforce, and the wider population. Explore options to increase consumer engagement with peers.	Improved access to telephone information for people with hepatitis B and affected communities. Increased consumer engagement with peers.	Hepatitis SA (Lead) Aboriginal Health Council SA PEACE Multicultural Services

Action area 5 continued

Strategy	Target populations	Action	Output measures	Lead agencies or partners
5.4 Ensure organisations working with communities with a higher prevalence of chronic hepatitis B are able to provide services, information, interpreter services and culturally and linguistically appropriate support.	Organisations working with target populations (including GPs)	Broaden organisational hepatitis B knowledge, skills and cultural competence to support provision of services, information and support.	Increased awareness and knowledge of hepatitis B among organisations to better support priority populations.	Hepatitis SA (Joint Lead) PEACE Multicultural Services (Joint Lead) Aboriginal Health Council SA Local Health Networks
		Work with partners to improve communication between service providers and priority populations to create a supportive environment for people to learn and debate lessons learnt by communities and service providers.	Increased awareness and knowledge of hepatitis B. Increased collaboration with affected communities.	Primary Health Networks Prisoner health services
		Hold one sector forum (which includes affected communities) each year to share lessons learned. Review the targeting of existing health information management strategies that incorporate changes to diet, exercise and alcohol intake for targeting of people with chronic hepatitis B.	Existing chronic disease strategies include people with chronic hepatitis B in target groups.	MOSAIC Services (Lead) Hepatitis SA PEACE Multicultural Services

Action area 6: Knowledge transfer using surveillance and research

Strategy	Target populations	Action	Output measures	Lead agencies or partners
6.1 Improve reporting on routine hepatitis B notifications.	Primary Health Networks Medical practitioners	SA Health improving data quality by refining collection and reporting processes by reviewing the <i>Hepatitis B Notification Form</i> to inform future public health programming in particular considering the: <ul style="list-style-type: none"> > Risk factors for infection > alignment of reporting areas (including Office of the Chief Public Health Officer reporting) > country of birth reporting and language spoken at home > notification setting e.g. perinatal, prisons and immigration detention > age of diagnosis. 	Updated form in use.	SA Health – Disease Surveillance and Investigation Section (Lead) SA Health – STI & BBV Section (in consultation with the sector) Hepatitis SA
6.2 Assist partners to plan for actions targeted at priority populations.	Organisations working with target populations	Develop routine STI & BBV Surveillance Reporting in formats that can inform the work of key partners, including: <ul style="list-style-type: none"> > Country Health SA > Primary Health Networks > Aboriginal Health Council SA > Local Health Networks (including antenatal services) > Aboriginal health services > CALD services > Prisoner health services. 	Reporting completed and shared with partners.	SA Health – Disease Surveillance and Investigation Section (Lead) SA Health – STI & BBV Section (in consultation with the sector)

Action area 7: Workforce and organisational development

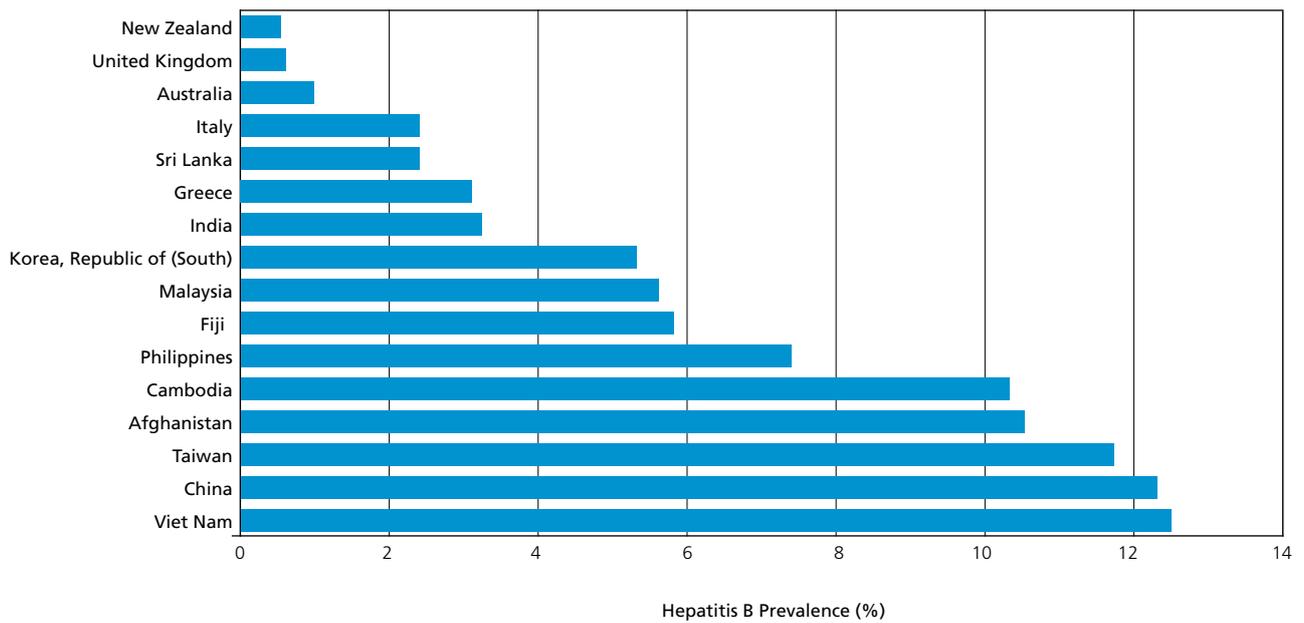
Strategy	Target populations	Action	Output measures	Lead agencies or partners
7.1 Develop education on chronic viral hepatitis B for medical practitioners, nurses, other healthcare workers, health interpreters, peers, volunteers and people working with target populations.	People working with target populations	SA programs to work with ASHM and support the rollout of nationally developed, culturally appropriate education materials that will enhance cross-cultural practice.	Evidence of improved cross-cultural practice at individual practitioner level.	Hepatitis SA (Lead) Country Health SA Detention health services PEACE Multicultural Services Primary Health Networks Prisoner health services
		Hepatitis B education embedded in health worker, volunteer and peer training, particularly those working in locations with priority populations (including Aboriginal Maternal Infant Care Workers, Aboriginal Health Workers, Aboriginal Hospital Liaison Officers, Aboriginal Patient Pathway Officers).	Hepatitis B foundation knowledge increased.	Aboriginal Health Council SA (Lead) Country Health SA Hepatitis SA

Appendices

Appendix A: Estimated prevalence by country of birth

Extract from *HIV, viral hepatitis and sexually transmissible infections in Australia: Annual Surveillance Report 2012*, The Kirby Institute, University of New South Wales.⁹⁰

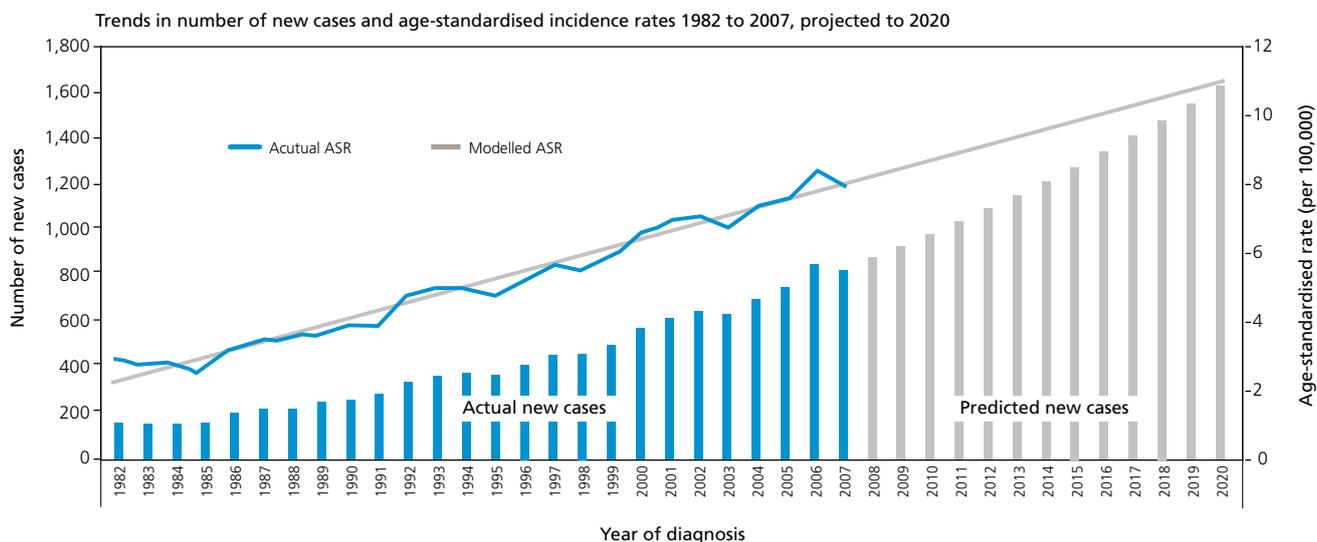
Figure 10: Estimated prevalence of chronic hepatitis B infection in Australia by country of birth



Appendix B: AIHW Liver Cancer Projections

The following graphs are extracts from the Australian Institute of Health and Welfare, *Cancer incidence projections: Australia, 2011-2020*, p47 published by the Australian Government.

Figure 3.9a: Liver cancer (C22), males, Australia: actual 1982-2007 and projected to 2020

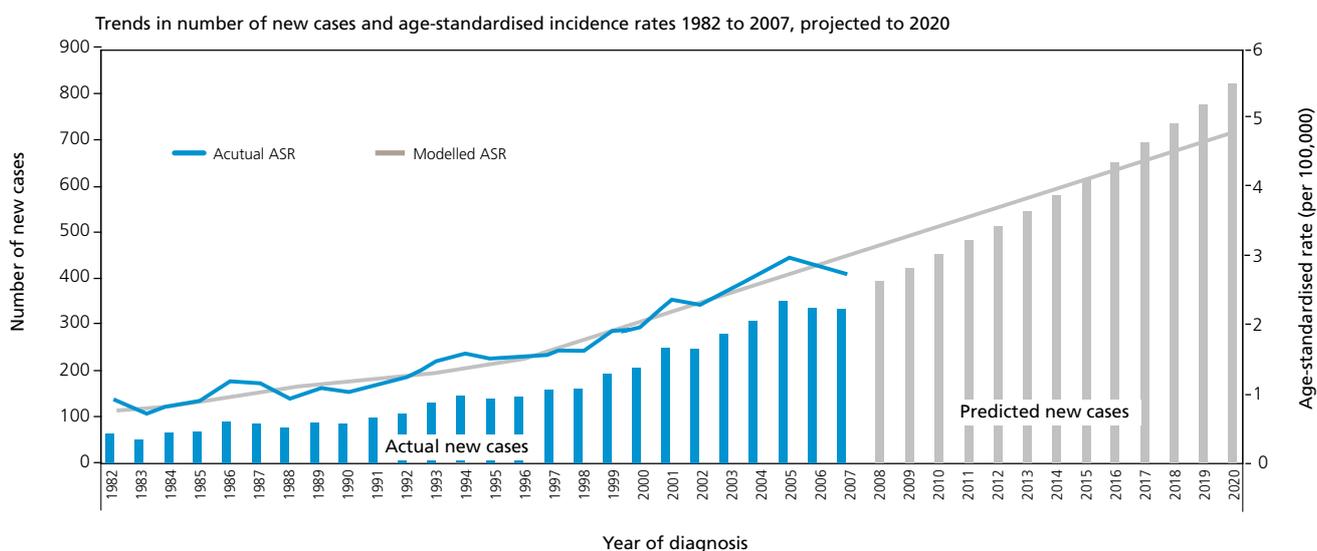


(a) Rates are expressed per 100,000 males.

(b) Age-standardised rates are age-standardised to the Australian population as at 30 June 2001.

Source: Australian Cancer Database (2007).

Figure 3.9b: Liver cancer (C22), females, Australia: actual 1982-2007 and projected to 2020



(a) Rates are expressed per 100,000 females.

(b) Age-standardised rates are age-standardised to the Australian population as at 30 June 2001.

Source: Australian Cancer Database (2007).

Appendix C: Liver cancer in SA

Extract from SA Hepatocellular Carcinoma (HCC) Cancer Care Pathway (draft July 2013).

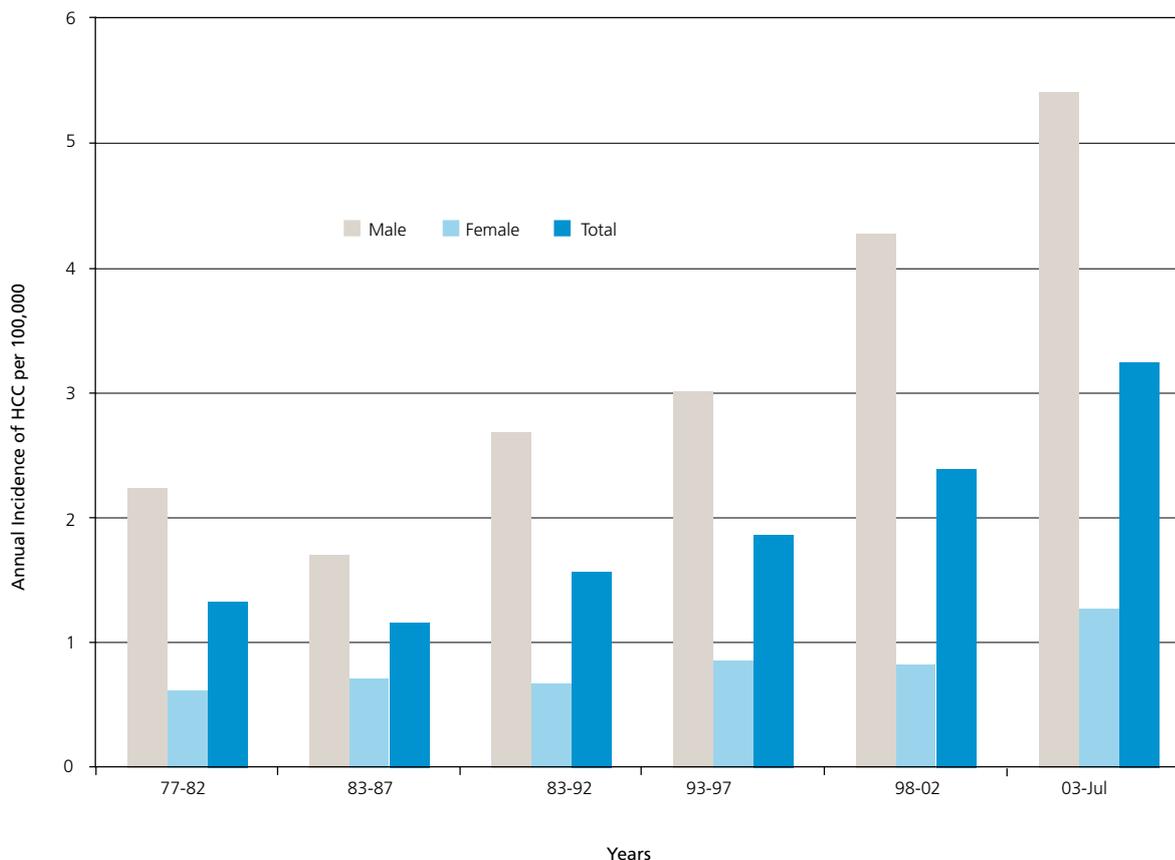
Table 1 and Figure 3 show the annual age-standardised incidence per 100,000 of HCC in South Australia. A number of observations deserve comment. Firstly, there has been a 143% increase in incidence between the era of 1977-82 (1.33 cases per 100,000) to the era 2003-2007 (3.3 cases/100,000). Another important observation is the much higher incidence of HCC in males, with 77% of all HCCs occurring in males.

Table 1: Annual Incidence of HCC per 100,000 population by calendar year and sex-age standardised

	1977-82 (n=89)	1983-87 (n=75)	1988-92 (n=109)	1993-97 (n=141)	1998-02 (n=199)	2003-07 (n=288)	Total (77-07)
Males (n=693)	2.24	1.71	2.69	3.02	4.29	5.42	3.20
Females (n=208)	0.61	0.71	0.67	0.85	0.83	1.28	0.82
Total (n=901)	1.33	1.16	1.57	1.85	2.39	3.23	1.9

Note: adapted from Luke C et al, APJCP, 2010

Figure 3: Annual Incidence of HCC per 100,000 population by calendar year and sex-age standardised



Note: adapted from Luke C et al, APJCP, 2010

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For more information

**Public Health and Clinical Systems
Department for Health and Ageing
11 Hindmarsh Square
Adelaide 5000
Telephone: (08) 8226 6403
www.sahealth.sa.gov.au**

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ISBN: 978-1-74243-637-1 FIS: 14003. July 2014.



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