APPENDIX 2

Patient information – Natural history and transmission of HBV

What is HBV?	Hepatitis B virus (HBV) is a blood-borne virus that can cause hepatitis. Hepatitis means inflammation of the liver.
What does the liver do?	The liver is the second largest organ and plays an important role in many vital functions of the body. Some of the liver's many functions include: • acting as a filter to remove alcohol and other toxic substances from the body • processing and clearing drugs and medications • manufacturing the many chemical substances needed by the body.
How does HBV affect people?	When someone has HBV infection, his or her body produces tiny proteins called antibodies in an attempt to eliminate the virus. During the first 45–180 days (six weeks to six months), the person may feel slightly ill or off-colour and develop joint pains. Sometimes people with HBV develop typical symptoms of hepatitis (fatigue, yellowed skin or eyes). A very small number of people die within the first few weeks or months of hepatitis B infection. Most adults completely recover from hepatitis B infections, while most babies with the infection (children under one year of age) will develop chronic HBV infection. The appearance of particular antibodies is thought to indicate that HBV is eliminated from the body. Around 2–4% of adults with HBV infection develop chronic infection which can last for several decades. Chronic hepatitis B infection causes no symptoms in many people, but some will develop long-term liver inflammation, liver scarring and liver cancer. This can take decades to develop. The symptoms are mild for many people. However, for a minority of people, hepatitis B may be quite debilitating.
How many people have HBV?	There are no exact records of how many people are infected with HBV in Australia. However, it has been estimated that 0.5% of the population (100,000) is chronically infected. It is estimated that 50% of these cases are migrants from endemic HBV regions such as Asia. This rate is also higher among men who have sex with men and injecting drug users. Around 1–2% of people from Mediterranean countries, parts of Eastern Europe, and the former USSR have chronic HBV infection. This is as high as 10% in some Indigenous Australian, central African and South East and East Asian populations. First generation immigrants usually have similar rates to those of their country of origin.
How do people know what is happening to their liver?	A liver function test monitors the level of liver enzymes in the blood. If there is damage to liver cells, these levels may be raised. Liver function tests are often a poor indicator of illness outcome. People who want a more detailed and reliable indication of liver damage should consider a liver biopsy. This is a procedure where a small amount of liver tissue is taken using a needle.
How is HBV transmitted?	Transmission of the virus may occur following exposure of non-intact skin or mucous membranes to infected blood or, less efficiently, after exposure to infected body fluids. Transmission can occur through sexual contact (semen or vaginal secretions), the use of contaminated objects that pierce the skin (e.g. injecting drug use, tattooing, razorblades or acupuncture equipment) or the sharing of toothbrushes. If saliva that contains HBV pierces the skin or mucous membrane (e.g. by biting), transmission may occur. Mother-to-child transmission commonly occurs if vaccination and immunoglobulin are not administered.
How is HBV transmission prevented?	HBV is prevented through vaccination. HBV immunoglobulin is recommended for newborn infants of mothers with the infection, and vaccine for health care workers and high risk groups such as injecting drug users and men who have sex with men. In addition, the risk of HBV transmission is reduced by: • practising safe sex (Chapter 3) • safe injecting practices (Chapter 3 and Appendix 4) • avoiding sharing and reusing contaminated objects that pierce the skin • standard infection control precautions (Chapter 13)