There is no cure for hepatitis B, but we have the technology to prevent the spread of this disease in Canada through the use of a safe and very effective vaccine. There will be significant costs involved in a coordinated program of disease prevention, but the failure to institute such a program will also have very high costs. This report discusses the issues associated with hepatitis B. The testimony is to be found in Issue Nos. 1-5 of the Sub-Committee on Health Issues of the Third Session of the Thirty-Fourth Parliament.

HEPATITIS B

Hepatitis is a term for a number of serious liver diseases: the word itself is derived from the Greek and means "inflammation of the liver". Hepatitis may be caused by a number of agents, including alcohol, drugs, or environmental chemicals, but is most often caused by one of a number of hepatitis viruses. The hepatitis B virus (HBV) is associated with a wide spectrum of liver disease, including acute hepatitis, chronic hepatitis, cirrhosis of the liver, and hepatocellular carcinoma or liver cancer.

The incubation period for hepatitis B is about 6 to 25 weeks. Some stages of the disease may be only mildly symptomatic, or there may even be no symptoms, and many people are in this latter category. More serious symptoms include loss of appetite, tiredness, and general feelings of weakness, symptoms similar to those caused by influenza. Jaundice, a yellowing of the skin, may occur, and a fever may also be present.

In very rare cases, fulminant hepatitis, the most serious acute form of the disease, may develop. This rapidly progressive form of the disease often results in death as massive sections of the liver are destroyed. Death occurs as a consequence of liver failure.

In most cases of hepatitis B, the disease runs its course in four to eight weeks, except in the elderly and in cases contracted through blood transfusion. In these cases, death rates may reach 10 to 15%. Chronic hepatitis may occur in 5 to 10% of HBV infections. Full-blown chronic active hepatitis may occur and eventually lead to cirrhosis. A subclinical chronic carrier state may develop in some patients, and this state reportedly is the one most likely to lead to liver cancer. Thus, it is important to realize that even mild symptoms of hepatitis can lead to serious complications in the affected person.

The likelihood of becoming a carrier of the virus varies inversely with the age at which infection occurs. For infants infected at birth by a carrier mother, the rate of carriage can be up to 90%. For children infected before five years of age, the probability of becoming a carrier is between 25% and 50%. In comparison, acutely infected adults have only a 5% to 10% probability of becoming carriers. The difference appears to be that the immune systems of the very young are less successful at eliminating the virus, after the disease has run its course, than are adult immune systems.

THE RISKS OF HEPATITIS B INFECTION

Persons infected with HBV carry the virus in all body fluids, including blood, semen, vaginal secretions, saliva, sweat, urine, and even tears. The disease is usually spread through exposure to the body fluids from infected individuals. Thus, health-care professionals, including dental professionals, are often at risk, particularly in surgery, or in emergency and rescue situations where bleeding is common. For the same reasons, police and firefighters and emergency/rescue personnel can be at higher risk. Students training for these professions are also at risk.