Immunization programs are expensive, however, both in terms of the cost of the vaccines and the technical and administrative costs associated with their delivery. The possible dollar costs of a universal neonate immunization program for hepatitis B can be crudely estimated simply by multiplying the current cost of vaccine by the number of neonates born in Canada each year.

In 1989, there were 392,505 live births in Canada. At present, the cost of hepatitis B vaccine is about \$70 for a course of three doses. The annual cost to immunize all neonates would thus be about \$27.5 million, for vaccine alone. If a catchup program involving 10-year olds were instituted at the same time, the vaccine costs would double to about \$55 million for each year that the dual program was in effect. It is essential to note, however, that high quality hepatitis B vaccine is being sold in some countries, notably New Zealand, at prices much lower than the current price in Canada. The Sub-Committee firmly believes that the vaccine can be acquired at much lower prices than we are currently experiencing.

Since the first introduction of the vaccine in 1982, immunization has been restricted to designated highrisk groups. The effectiveness of this strategy has been questioned by several witnesses before the Sub-Committee. Even among the most astute and concerned high-risk group, the health-care professionals, immunization programs reportedly have achieved only a 50-70% success rate. Part of the difficulty is that immunization requires a course of three injections (four, in some exceptional cases) over a period of six months, and the full course of doses is necessary to ensure that immunity is achieved.

In August 1991, the National Advisory Committee on Immunization (NACI) issued a statement on a program of universal immunization against hepatitis B. The NACI noted that, in spite of the targeted immunization program, the incidence of the disease has continued to increase. With the possible exception of health-care professionals, high-risk groups, including those that account for the majority of cases of hepatitis B, have been difficult to reach and bring into the immunization program.

The NACI statement notes that there is "an emerging consensus among experts in the field that universal immunization during childhood is the key to the control of hepatitis B virus infection in North America". The NACI has recommended, following a review of the evidence, that "to achieve significant control of hepatitis B in Canada, universal immunization should be implemented. This is in addition to the present high-risk group strategy."9

Several witnesses testified to the Sub-Committee on the desirability of a universal immunization program for hepatitis B. Although the Sub-Committee does not believe that hepatitis B is a major health problem in Canada generally at the present time, except in certain groups and communities, we are persuaded that the potential exists for this disease to become a major problem in the future. We agree with the NACI recommendation that a universal immunization program against hepatitis B is desirable.

We also believe that, to make the program effectively universal, the federal government should take the lead, not only in policy development, but in providing funding to the provinces and territories. In the case of the ten provinces and the Northwest Territories, that funding should cover at least 50% of the program's costs. In the case of the Yukon, the federal government should fund 100% of the costs of the hepatitis B immunization program, in accordance with current funding arrangements with the Yukon for other immunization programs. We make the following recommendation.

⁹ Canada Diseases Weekly Report, 3 August 1991, p. 165.