

Epidemiology of Hepatitis B Virus (HBV)

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HBV infection is endemic in Singapore. The majority of infection is subclinical and infection occurs continuously in all age groups, about 50% of the population being infected by 40–49 and 100% in the > 60 age group. The frequency of HBsAg is highest in the <12 age group. HBV is responsible for about 50% of acute viral hepatitis in Singapore.

Besides horizontal transmission, subclinical HBV infection also occurs vertically and perinatally. Maternal–infant transmission is most likely to occur in HBeAg positive mothers and the majority of transmission occurs during the perinatal period. Perinatal transmission contributed about a quarter of the HBsAg carrier rate in children one year of age.

HBsAg carrier status is not only strongly associated with primary liver cancer but also in premalignant conditions of chronic hepatitis and non alcoholic cirrhosis. There is a direct relationship between carrier status and primary liver cancer incidence in both males and females of the three ethnic groups of Chinese, Malay and Indians. There are some indirect evidence to suggest that HBV infection by perinatal transmission may be more important than by acute clinical infection in subsequent development of primary liver cancer.