5.1 Hepatitis B

Summary

Number of cases, 2010: 645
Crude notification rate, 2010: 15.2/100,000
Number of cases, 2009: 803

Hepatitis B is a vaccine preventable disease caused by the hepatitis B virus. It is transmitted through percutaneous or mucocutaneous contact with the blood or body fluids of an infected person. Over 90% of people infected in late childhood and adulthood clear the virus within a year of infection, but there is a high probability of developing chronic infection if hepatitis B is acquired in infancy (approx. 90%) or when aged under five years (approx. 30%).[1] Between 15 and 40% of people with chronic infection ultimately develop cirrhosis, liver failure or hepatocellular carcinoma (liver cancer).[2]

The prevalence of hepatitis B in the general population in Ireland is low (less than 1%) and most cases fall into defined risk groups such as people with multiple sexual partners, household or sexual contacts of known cases, injecting drug users and people who were born in countries with intermediate (2-7%) or high (≥8%) hepatitis B endemicity.

The number of hepatitis B cases reported in Ireland decreased by 20% in 2010, with 645 cases (15.2/100,000 population) notified compared to 803 in 2009 (figure 1). Sixty four percent (n=412) of notifications were from the HSE-E, corresponding to a notification rate of 27.5/100,000 population.

All cases were laboratory confirmed and 93% contained information on acute/chronic status. Where status was known, 8% of cases were acute (n=49) and 92% were chronic (n=554).

Acute cases (recent infections)
Of the 49 acute cases notified in 2010, 90% (n=44) were male and 10% (n=5) were female. The highest notification rates were in young to middle aged adults, and 71% (n=35) of acute cases were aged between 20 and 44 years when notified (figure 2). Female cases were younger than males overall, with a median age of 27 years compared to 36.5 years for males.

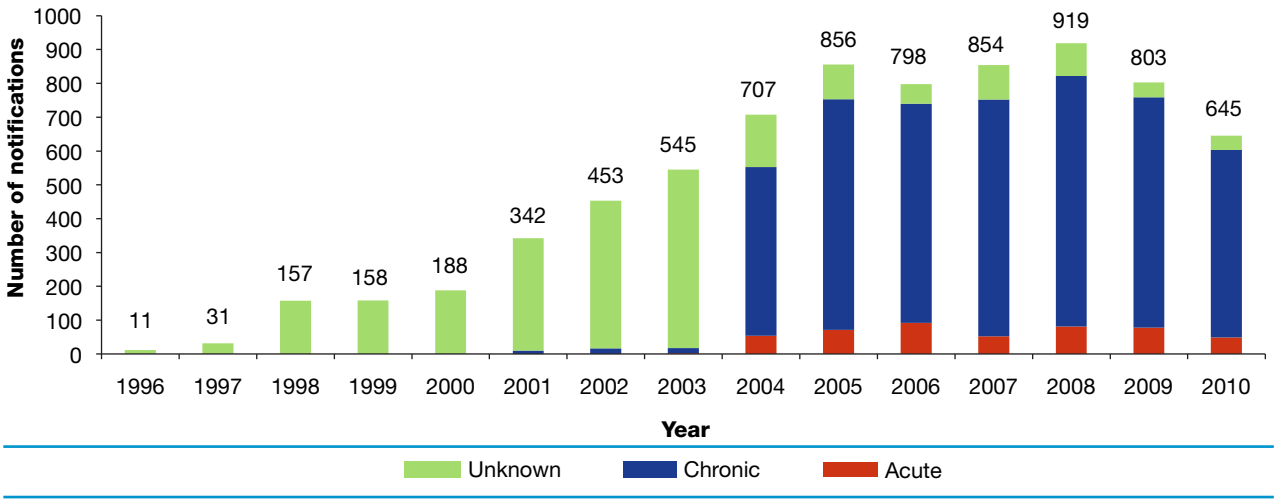

Figure 1. Number of hepatitis B notifications by acute/chronic status, 1996-2010

Information on risk factor was available for 84% (n=41) of acute cases. Of these, 66% (n=27) were likely to have been sexually acquired. Fourteen were men who have sex with men, eleven were heterosexual and sexual orientation was not known for two cases. No risk factors were identified for twelve cases (29%) despite follow up being carried out.

Country of birth was known for 92% (n=45) of acute cases. Seventy three percent (n=33) were born in Ireland and 16% (n=7) were born in Eastern or Central European countries. Where country of infection was known, 80% (n=24) of acute cases were infected in Ireland. Information on reason for testing was available for 47 acute cases. Most were identified because they were symptomatic (75%, n=35) or through STI screening (17%, n=8).

The number of acute cases of hepatitis B notified in Ireland is generally relatively low and decreased by 37% in 2010 (n=49) compared to 2009 (n=78). The decrease is mostly attributable to decreases in sexually acquired cases of acute hepatitis B in both men who have sex with men and heterosexuals.

Chronic cases (long-term infections)

Of the 554 chronic cases notified in 2010, 50% (n=276) were male, 49% (n=272) were female and sex was not known for 1% (n=6). Eighty five percent (n=468) of chronic cases were aged between 20 and 44 years when notified (figure 2). The median age at notification for female cases was 28 years and the median age for males was 33 years.

Some data on risk factor, country of birth or asylum seeker status were available for 47% (n=261) of the chronic cases notified in 2010. Of these, 66% (n=172) were born in hepatitis B endemic countries or were identified as asylum seekers. Data on country of birth was available for 42% (n=233). The most common regions of birth were Eastern or Central Europe (31%, n=73), Sub-Saharan Africa (30%, n=69) and Asia (29%, n=67). Other risk factors included sexual acquisition (14%, n=37), vertical acquisition (5%, n=13), household contact with a known case (4%, n=10) and being a resident of an intellectual disability institution (3%, n=8).

Reason for testing was known for 64% (n=357) of chronic cases. Thirty six percent (n=130) were identified through antenatal screening programmes, 15% (n=54)

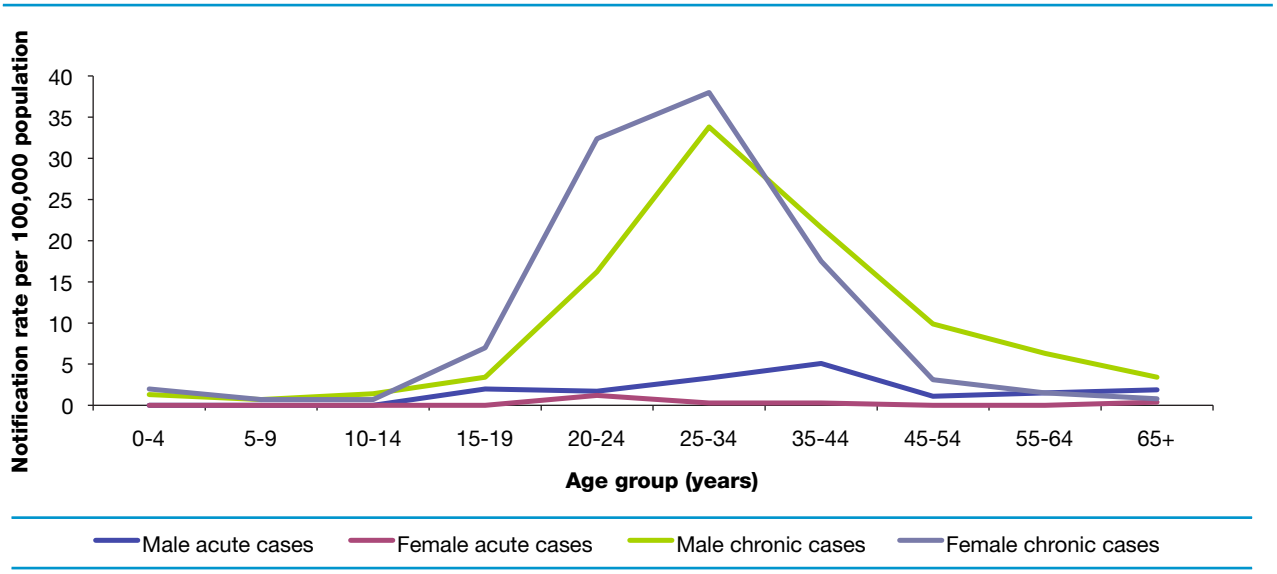

Figure 2. Age and sex-specific notification rates/100,000 population for hepatitis B by acute/chronic status, 2010

were identified through asylum seeker screening programmes, 10% (n=36) were tested in STI settings, 9% (n=32) were cases that were previously diagnosed but not notified and 9% (n=31) were diagnosed as a result of routine health screens.

The dramatic increases in hepatitis B notifications between 1998 and 2008 were mostly attributable to large numbers of people immigrating to Ireland from hepatitis B endemic countries. Between 2000 and 2010, 95% of asylum applicants, and 73% of new work permit recipients, were from countries with intermediate or high hepatitis B endemicity. Immigration to Ireland has decreased in recent years and this is likely to have contributed to the 19% decrease in chronic hepatitis B notifications in 2010. (Data on work permits and asylum applications received via personal communications from Department of Enterprise, Trade and Innovation and the Office of the Refugee Applications Commissioner).

The figures presented in this summary are based on data extracted from the Computerised Infectious Disease Reporting (CIDR) System on 13th October 2011. These figures may differ from those published previously due to ongoing updating of notification data on CIDR.

References

1. Goldstein ST, Zhou F, Hadler SC, Bell BP, Mast EE, Margolis HS.A mathematical model to estimate global hepatitis B disease burden and vaccination impact. Int J Epidemiol. 2005 Dec;34(6):1329-39.
2. Wright TL. Introduction to chronic hepatitis B infection. Am J Gastroenterol. 2006;101 Suppl 1:S1-6.