5.1 Hepatitis B

Summary

Number of cases, 2011: 525
Crude notification rate, 2011: 12.4/100,000 population
Number of cases, 2010: 645

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 19% in 2011, with 525 cases (12.4/100,000 population) notified compared to 645 in 2010 (figure 1). Sixty two percent (n=327) of notifications were from the HSE-E, corresponding to a notification rate of 19.2/100,000 population.

All cases were laboratory confirmed and 96% contained information on acute/chronic status. Where status was known, 9% of cases were acute (n=45) and 91% were chronic (n=460).

Acute cases (recent infections)
Of the 45 acute cases notified in 2011, 84% (n=38) were male and 16% (n=7) were female. The highest notification rates were in young to middle aged adults, and 62% (n=28) 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 26 years compared to 31 years for males.

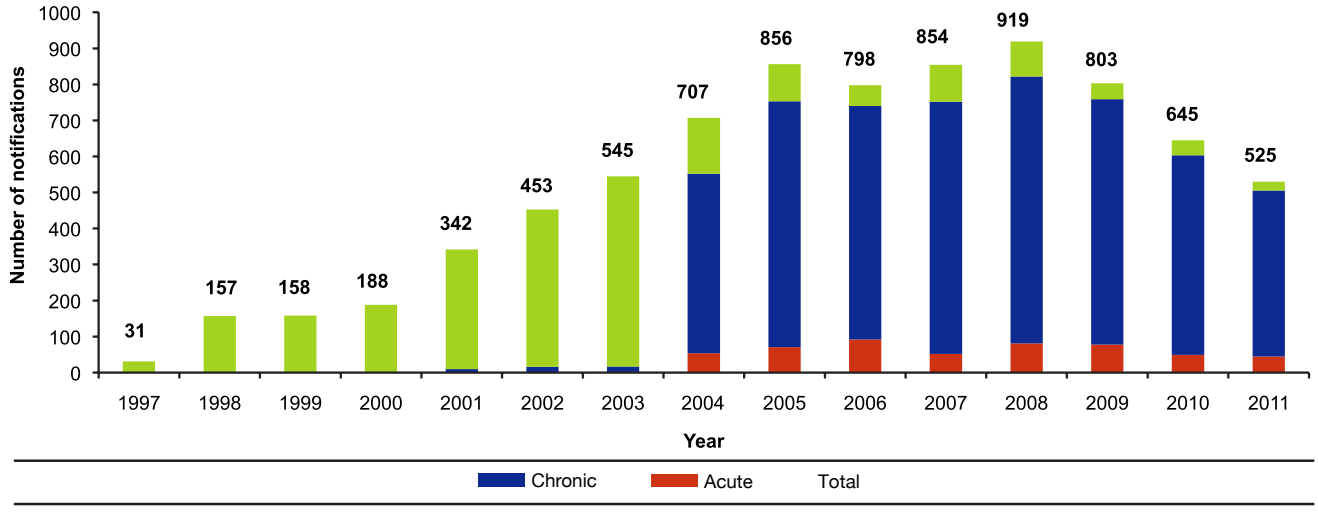

Figure 1. Number of hepatitis B notifications by acute/chronic status, 1997-2011

Information on risk factor was available for 89% (n=40) of acute cases. Of these, 78% (n=31) were likely to have been sexually acquired. Ten were men who have sex with men, ten were heterosexual and sexual orientation was not known for eleven cases. Four (10%) acute cases were acquired through surgical and/or tattoo body piercing procedures and two cases (5%) were born in hepatitis B endemic countries. No risk factors were identified for three cases (8%) despite follow up being carried out.

Country of birth was known for 89% (n=40) of acute cases. Of these, sixty eight percent (n=27) were born in Ireland, 15% (n=6) were born in Eastern or Central European countries, 5% (n=2) were born in Asia, 5% (n=2) were born in southern America and a further 5% (n=2) were born in western Europe. Where country of infection was known, 73% (n=22) of acute cases were infected in Ireland. Information on reason for testing was available for 42 acute cases (93%). Most were identified because they were symptomatic (81%, n=34) or through STI screening (12%, n=5).

The number of acute cases of hepatitis B notified in Ireland is generally relatively low and decreased by 8% in 2010 (n=45) compared to 2010 (n=49). 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 460 chronic cases notified in 2011, 50% (n=228) were female, 49% (n=224) were male and sex was not known for 1% (n=8). Eighty five percent (n=389) of chronic cases were aged between 20 and 44 years when notified (figure 2). The median age at notification for female cases was 30 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 40% (n=185) of the chronic cases notified in 2011. Of these, 71% (n=132) were born in hepatitis B endemic countries or were identified as asylum seekers.

Other risk factors included sexual acquisition (11%, n=21), recipient of blood or blood products (3%, n=5), vertical transmission (2%, n=3), tattoo/body piercing (2%, n=3) and household contact with a known case (1%, n=2). Despite follow up been carried out, no risk

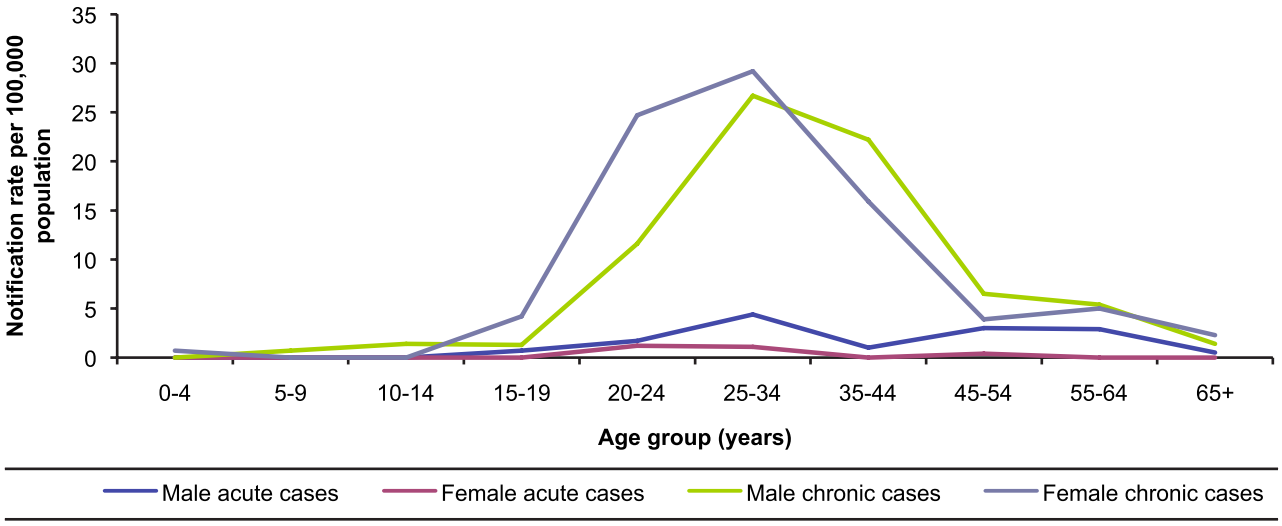

Figure 2. Age and sex-specific notification rates/100,000 population for hepatitis B by acute/chronic status, 2011

factor could be identified for 7% of these cases (n=13). Data on country of birth was available for 38% (n=173). The most common regions of birth were Eastern or Central Europe (44%, n=76), Asia (28%, n=48) and Sub-Saharan Africa (27%, n=46).

Reason for testing was known for 60% (n=275) of chronic cases. Thirty two percent (n=89) were identified through antenatal screening programmes,19% (n=52) were tested in STI settings, 17% (n=48) were diagnosed as a result of routine health screens and 11% (n=31) were identified through asylum seeker screening centres. Five per cent (n=15) represented cases that were previously diagnosed but not notified, 2% (n=6) were asymptomatic but had contact with a known case, 1% (n=4) were health care workers, 1% (n=3) were blood/organ donors, 1% (n=3) were vertically transmitted and 1% (n=3) were tested due to life assurance/mortgage policies.

Chronic hepatitis B notifications continue to decline in 2011 compared to other years, with 460 chronic cases in 2011 compared to 554 cases in 2010 and 683 cases in 2009. The large numbers of hepatitis B notifications between 1997 and 2008 (figure 1) were mostly attributed to increased numbers of people immigrating to Ireland from hepatitis B endemic countries. The current economic climate has most likely contributed to reduced immigration to Ireland between 2009 and 2011, which correlates with a steady decrease in hepatitis B notifications over the same time period. The figures presented in this summary are based on data extracted from the Computerised Infectious Disease Reporting (CIDR) System on 18th July 2012. 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.