5.1 Hepatitis B

Summary

Number of cases, 2012: 580
Crude notification rate, 2012: 12.6/100,000 population
Number of cases, 2011: 525

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%). 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 of intermediate (2-7%) or high (>8%) hepatitis B endemicity.

The number of hepatitis B cases reported in Ireland increased by 11% in 2012, with 580 cases (12.6/100,000 population) notified compared to 525 in 2011 (figure 1). However, the hepatitis B notification rate has been decreasing in Ireland in recent years and the 2012 figure was lower than the numbers reported annually between 2004 and 2010. Sixty two percent (n=361) of the 2012 cases were from the HSE-East, corresponding to a notification rate of 22/100,000 population. All cases were laboratory confirmed and 96% contained information on acute/chronic status. Where status was known, 7% of cases were acute (n=37) and 93% were chronic (n=522). Both acute and chronic cases of hepatitis B are notifiable in Ireland.

Acute cases (recent infections)

Of the 37 acute cases notified in 2012, 81% (n=30) were male and 19% (n=7) were female. The highest notification rates were in young to middle aged adults, and 95% (n=35)

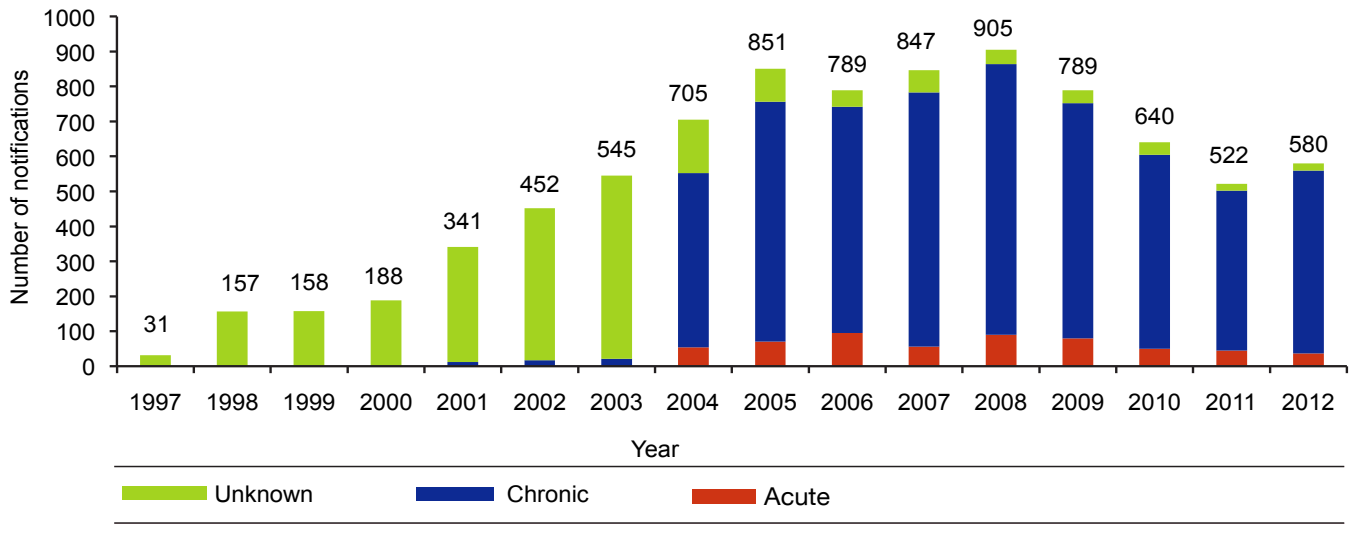

Figure 1. Number of hepatitis B notifications by acute/chronic status, 1997-2012

of acute cases were aged between 20 and 54 years when notified (figure 2). Male cases were younger than females overall, with a median age of 32.5 years compared to 35 years for females.

Information on risk factor was available for 97% (n=36) of acute cases. Of these, 78% (n=28) were likely to have been sexually acquired. Thirteen were heterosexual, nine were men who have sex with men and sexual orientation was not known for six cases. No risk factors were identified for five cases (14%) despite public health follow up being carried out. Where information on reason for testing was available (97%, n=36), most acute cases were identified because they were symptomatic (64%, n=23) or through STI screening (25%, n=9).

Country of birth was known for 87% (n=32) of acute cases. Of these, 66% (n=21) were born in Ireland and 13% (n=4) were born in Eastern or Central European countries. Country of infection was available for 73% (n=27) of acute cases. Most were infected in Ireland (63%, n=17), but a significant number were infected in Thailand (19%, n=5).

The number of acute cases of hepatitis B notified in Ireland is generally relatively low and decreased by 18% in 2012 (n=37) compared to 2011 (n=45).

Chronic cases (long-term infections)

Of the 522 chronic cases notified in 2012, 55% (n=290) were male, 42% (n=218) were female and sex was not reported for 3% (n=14). Eighty one percent (n=422) of chronic cases were aged between 20 and 44 years when notified (figure 3). The median age at notification for male cases was 33 years and the median age for females was 29 years.

Some data on risk factor, country of birth or asylum seeker status were available for 48% (n=250) of the chronic cases notified in 2012. Of these, 64% (n=161) were born in hepatitis B endemic countries or were identified as asylum seekers. No further detail is available on the actual mode of transmission in their country of origin. Risk factors identified in other cases included sexual acquisition (18%, n=44), vertical transmission (5%, n=13), attending an intellectual disability institution (2%, n=6) and injecting drug use (2%, n=5).

Data on country of birth were available for 44% (n=227). Of these, only 8% (n=17) were born in Ireland. The most common regions of birth were Eastern or Central Europe (35%, n=80), Sub-Saharan Africa (26%, n=59) and Asia (25%, n=57).

The reason for testing was known for 63% (n=326) of chronic cases. Of these, 30% (n=98) were identified through antenatal screening programmes, 16% (n=53) were tested in STI settings, 17% (n=54) were diagnosed as a result of routine health screens and 7% (n=24) were identified through asylum seeker screening centres.

There was a 14% increase in chronic hepatitis B notifications in 2012 (n=522) compared to 2011 (n=457). However the number of cases was similar to 2010 (n=555) and notifications of chronic hepatitis B and hepatitis B overall have been decreasing in recent years.

The large increase in hepatitis B notifications between 1997 and 2008 (figure 1) was mostly due 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 2012, which correlates with an overall decrease in hepatitis B notifications over this time period.

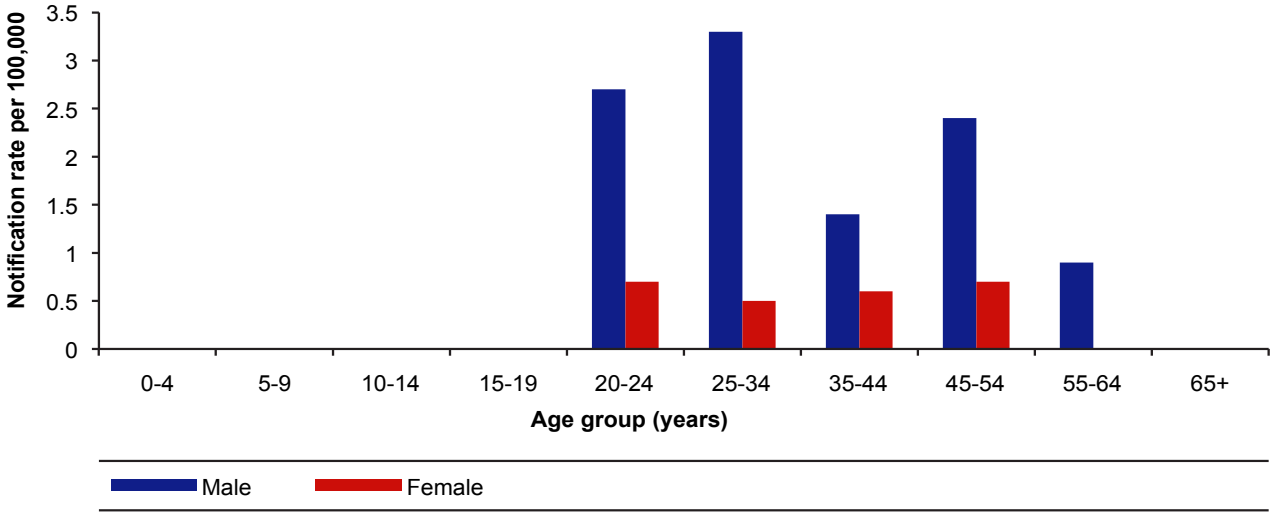

Figure 2. Age and sex-specific notification rates/100,000 population for acute cases of hepatitis B, 2012

Co-infections

Co-infections with HIV or hepatitis C can lead to more severe liver disease and an increased risk of liver cancer in people with hepatitis B infection. Fourteen of the hepatitis B cases notified in 2012 were also known to be infected with HIV. Two were born in Ireland and nine of the remaining twelve were born in countries in Sub-Saharan Africa. Seven hepatitis B cases notified in 2012 were also known to be infected with hepatitis C. Two cases had hepatitis B, hepatitis C and HIV infections.

The figures presented in this summary are based on data extracted from the Computerised Infectious Disease Reporting (CIDR) System on 29th August 2013. 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.

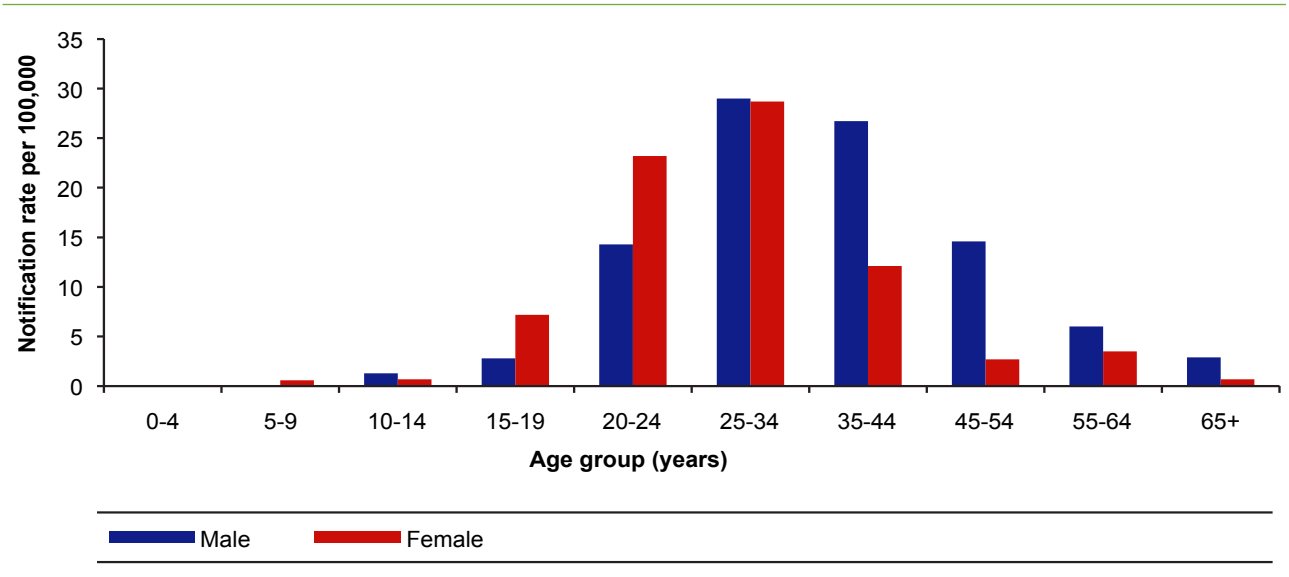

Figure 3. Age and sex-specific notification rates/100,000 population for chronic cases of hepatitis B, 2012