5.1 Hepatitis B

Summary

Number of cases, 2015: 549
Crude notification rate, 2015: 12/100,000 population
Number of cases, 2014: 442

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. After acute HBV infection, the risk of developing chronic hepatitis B declines with increasing age.[1] Approximately 90% of infants infected at birth will develop chronic infection, compared to 20-50% of children infected between the ages of one and five years. Only 1-10% of those infected as older children or adults will develop chronic hepatitis B. An estimated 15-25% of those who develop chronic infection with die prematurely of either cirrhosis of the liver or hepatocellular carcinoma.

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, sexual or household 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 increased by 24% in 2015, with 549 cases (12/100,000 population) notified compared to 442 in 2014. Hepatitis B notifications had been generally decreasing since their highest levels in 2008 (n=899, 21.2/100,000 population), but recent trends indicate that this decline is not continuing. Annual hepatitis B notifications since 1997 are shown in figure 1.

The highest notification rates were in HSE E (21.4/100,000 population, n=346) and HSE NE (15.4/100,000 population, n=68) and the increase in notifications in 2015 was mostly due to higher numbers of cases in these two areas. Geographic trends for the past four years are shown in figure 2.

All cases were laboratory confirmed. Ninety six percent (n=528) of the 549 notifications contained information on acute/chronic status. Of these, 5% (n=26, 0.6/100,000 population) of cases were acutely infected and 95% (n=502, 10.9/100,000 population) were chronically infected. Both acute and chronic cases of hepatitis B are notifiable in Ireland.

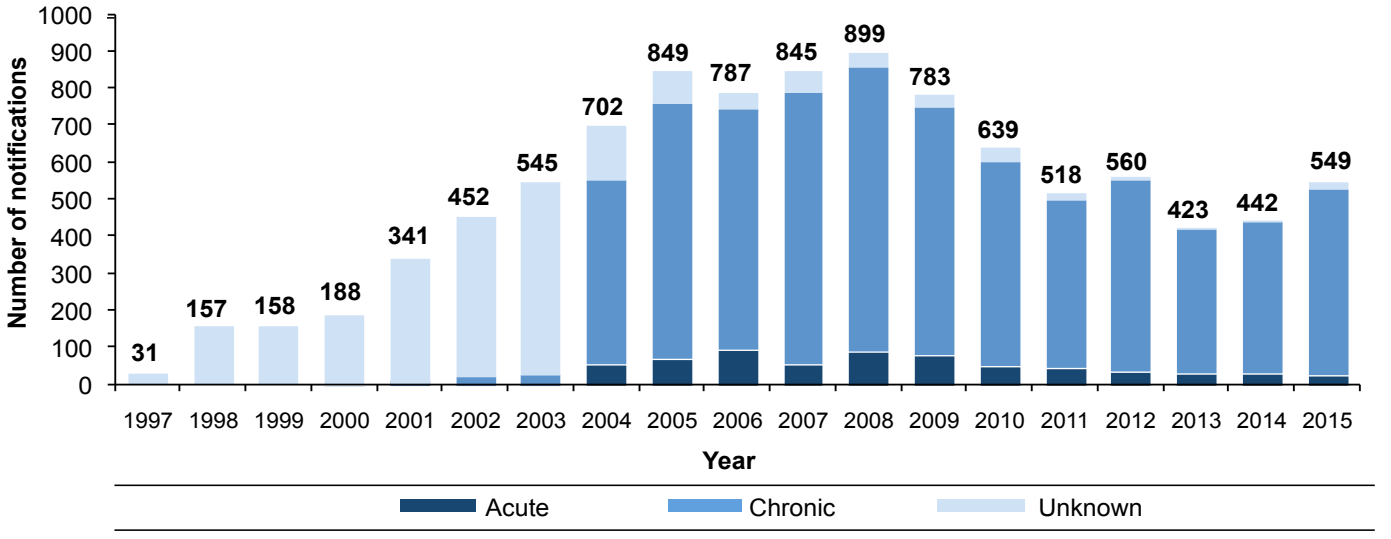

Figure 1. Number of hepatitis B notifications by acute/chronic status, 1997-2015

Acute cases (recent infections)
The number of acute cases of hepatitis B notified in Ireland is relatively low and decreased slightly in 2015 (n=26) compared to 2014 (n=29) (figure 3). This is the lowest number of acute infections reported since acute/chronic case definitions were introduced in 2004.

Eighty five percent (n=22) of acute cases notified in 2015 were male. The age at notification ranged from 21 to 78 years, with a median age of 41.5 years. Notification rates for older age groups were higher than observed in previous years (figures 3 & 4).

Information on risk factor was available for 88% (n=23) of the acute cases notified in 2015. Of these, 74% (n=17) were likely to have been sexually acquired (eight heterosexual, six men who have sex with men and three of unknown sexual orientation). No risk factor was identified for four cases despite public health follow up.

Country of birth was specified for 92% (n=24) of acute cases, 79% (n=19) of whom were born in Ireland. The reason for testing was known for 25 cases and most were tested because they were experiencing symptoms (n=15, 60%) or because they requested STI screening (n=4, 16%).

Chronic cases (long-term infections)
There was a 22% increase in chronic hepatitis B notifications in 2015 (n=502) compared to 2014 (n=411) (figure 5). However, chronic notifications have decreased significantly since peak levels in 2008 (n=769).

Of the 502 chronic cases notified in 2015, 59% (n=297) were male, 40% (n=203) were female and sex was not reported for 2 cases. Seventy eight percent (n=392) of chronic cases were aged between 20 and 44 years when notified and the median age at notification was 34 years (figures 5 & 6).

Although primary risk factor was reported for a minority of chronic cases in 2015, data on country of birth or asylum

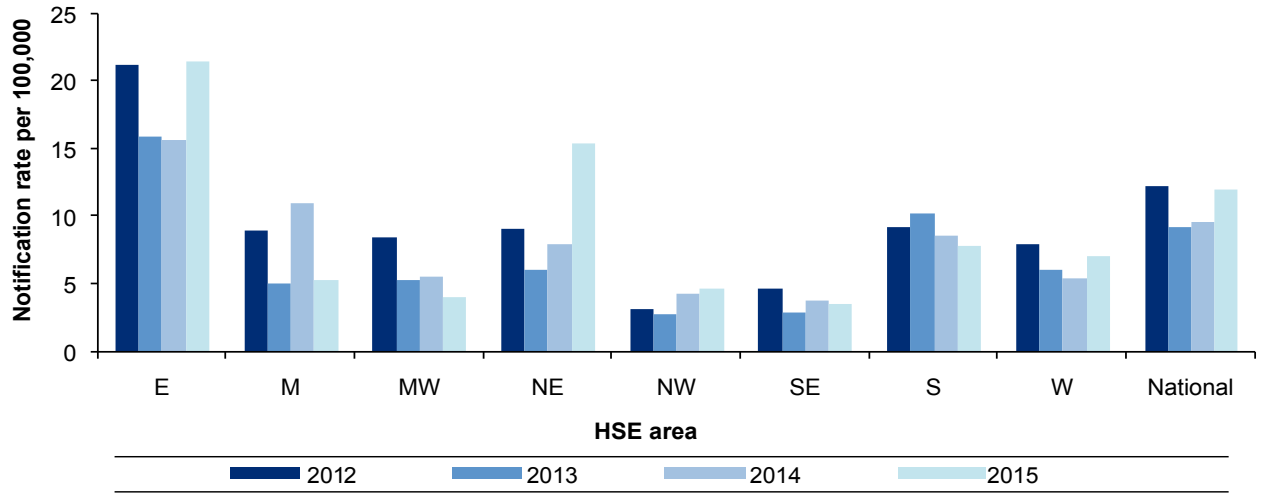

Figure 2. Hepatitis B notification rates/100,000 population, by HSE area, 2012-2015

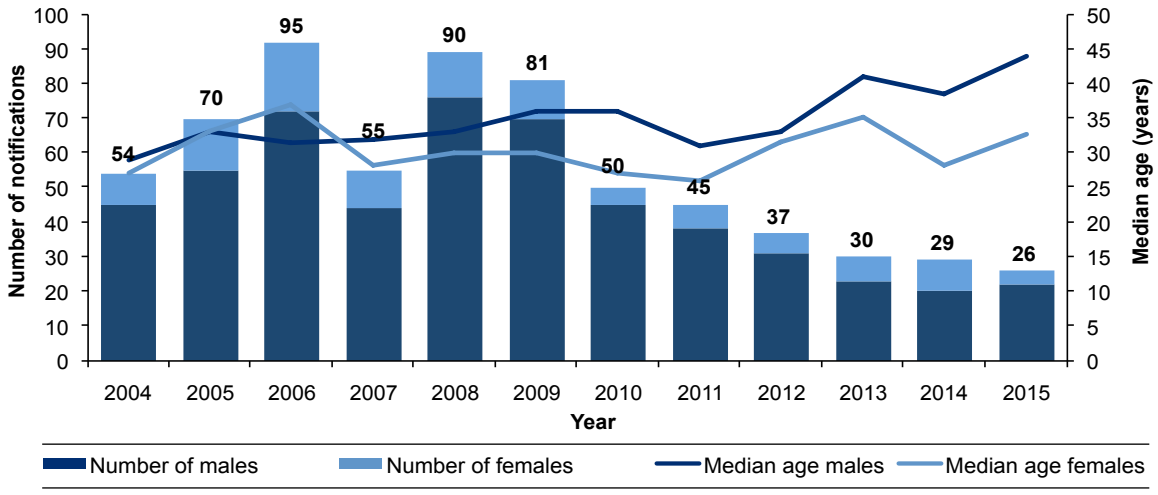

Figure 3. Number of acute cases of hepatitis B notified, by sex and median age, 2004-2015

seeker status was available for 50% (n=251). Of these, 90% (n=225) were either born in a hepatitis B endemic country (hepatitis B surface antigen prevalence >2%) or were asylum seekers. Most of these cases are likely to have been infected outside Ireland, but the actual mode of acquisition of infection is unknown for the majority. Where country of birth was available (45%, n=227), the most common birth countries were in Central or Eastern Europe (38%, n=87), Asia (33%, n=75), Sub-Saharan Africa (19%, n=44) and Western Europe (7%, n=16). Of those born in Western Europe, twelve were born in Ireland.

The reason for testing was known for 60% (n=301) of chronic cases. The main reasons were: antenatal screening (20%, n=59), STI screening (18%, n=54), asylum seeker screening (16%, n=47) and re-testing of known cases (not previously notified) (13%, n=38).

Immigration and hepatitis B notifications

Hepatitis B notifications are likely to be influenced by trends in immigration to Ireland. The large increase in the number of hepatitis B cases between 1997 and 2008 (figure 1) coincided with significant numbers of people migrating to Ireland from hepatitis B endemic countries. The economic downturn, in 2008, lead to a decline in both immigration and hepatitis B notifications. The subsequent economic recovery has resulted in increased immigration in recent years and this is likely to have contributed to the recent increase in hepatitis B notifications. Figure 7 shows trends in hepatitis B notifications alongside immigration trends.[2]

Co-infections

Co-infection with other blood-borne viruses can lead to more severe liver disease and an increased risk of liver cancer in people with hepatitis B infection. Eleven of the cases of hepatitis B notified in 2015 were co-infected with HIV. Three other cases were infected with hepatitis C.

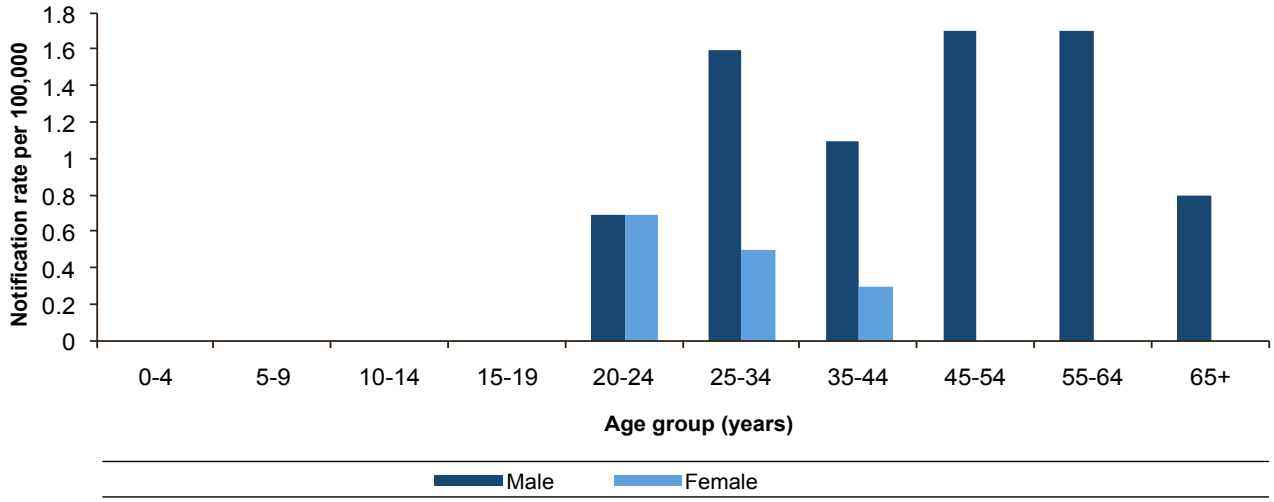

Figure 4. Age and sex-specific notification rates/100,000 population for acute cases of hepatitis B, 2015

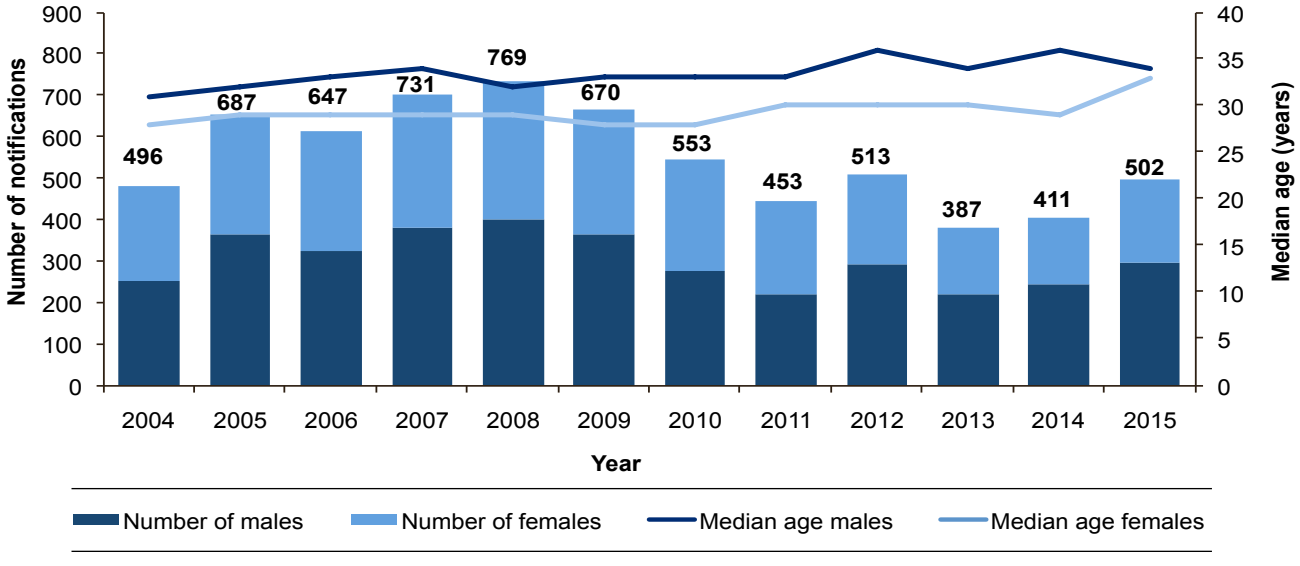

Figure 5. Number of chronic cases of hepatitis B notified, by sex and median age, 2004 to 2015

The figures presented in this summary are based on data extracted from the Computerised Infectious Disease Reporting (CIDR) System on 5th September 2016. These figures may differ from those published previously due to ongoing updating of notification data on CIDR.

1. Heyman DL. Control of Communicable Diseases Manual. 19th Edition. Washington: American Public Health Association, 2008.
2. Central Statistics Office (2016) Immigrants (thousand) by country of origin. Accessed 20th September 2016. Available from: http://www.cso.ie/multiquicktables/quickTables.aspx?id=pea18_1

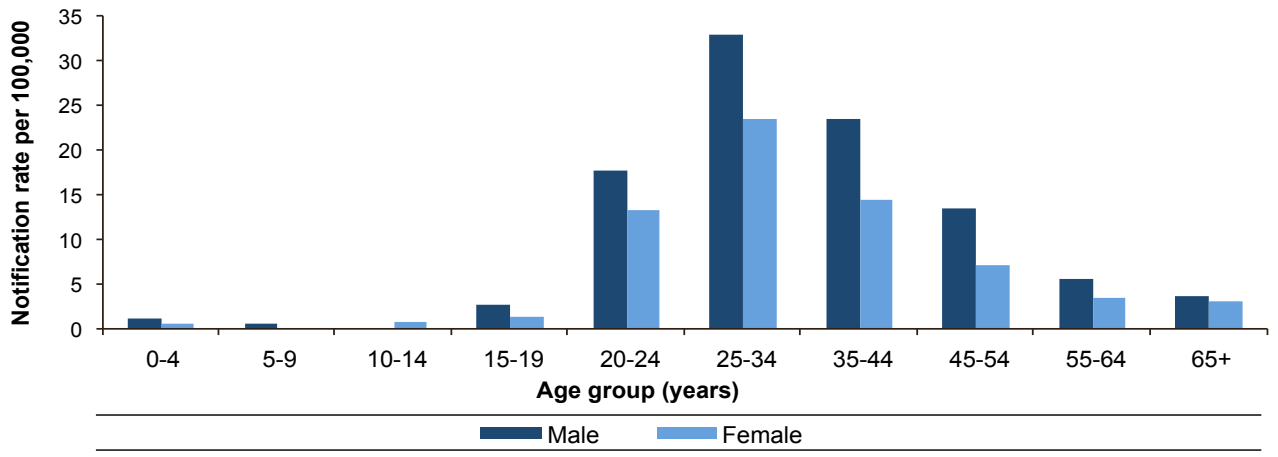

Figure 6. Age and sex-specific notification rates/100,000 population for chronic cases of hepatitis B, 2015

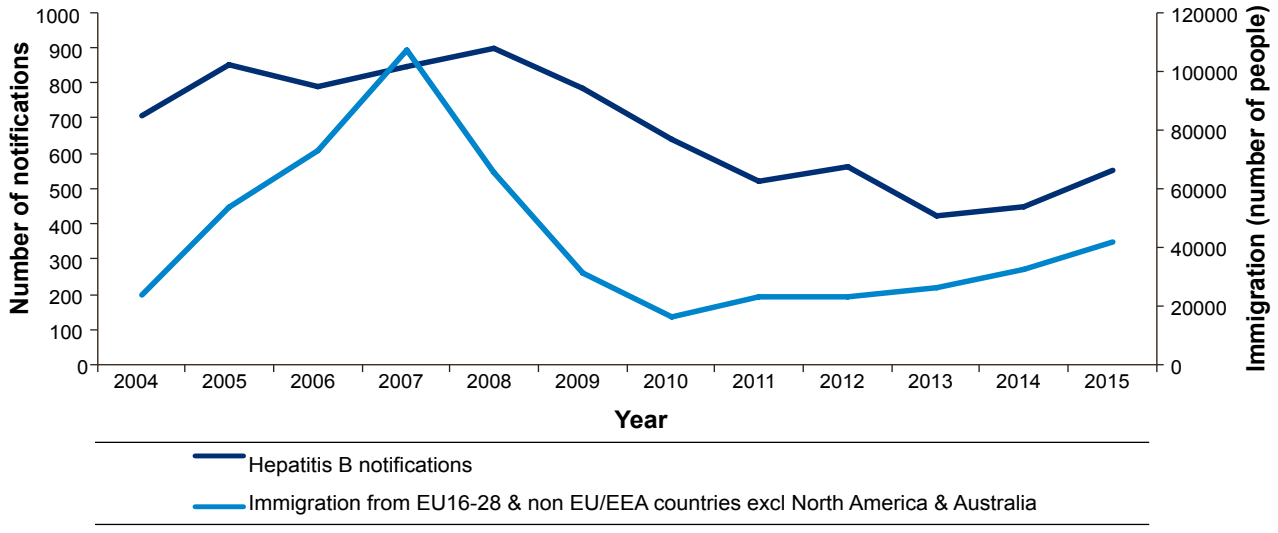

Figure 7. Number of hepatitis B notifications and number of immigrants from EU16-28 & non EU/EEA countries (excluding North America and Australia)