5.1 Hepatitis B

Summary

Number of cases, 2013: 429
Crude notification rate, 2013: 9.3/100,000 population
Number of cases, 2012: 566

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 decreased by 24% in 2013, with 429 cases (9.3/100,000 population) notified compared to 566 in 2012. This was a continuation of a general downward trend since peak levels in 2008 (n=902). Annual hepatitis B notifications since 1997 are shown in figure 1.

Notification rates were highest in HSE E (16/100,000 population, n=260) and HSE S (11/100,000 population, n=52). Geographic trends for the past four years are shown in figure 2.

All cases were laboratory confirmed and 99% (n=423) contained information on acute/chronic status. Where status was known, 8% of cases were acute (n=32, 0.7/100,000 population) and 92% were chronic (n=391, 8.5/100,000 population). Both acute and chronic cases of hepatitis B are notifiable in Ireland.

Acute cases (recent infections)
The number of acute cases of hepatitis B notified in Ireland is relatively low and decreased by 16% in 2013

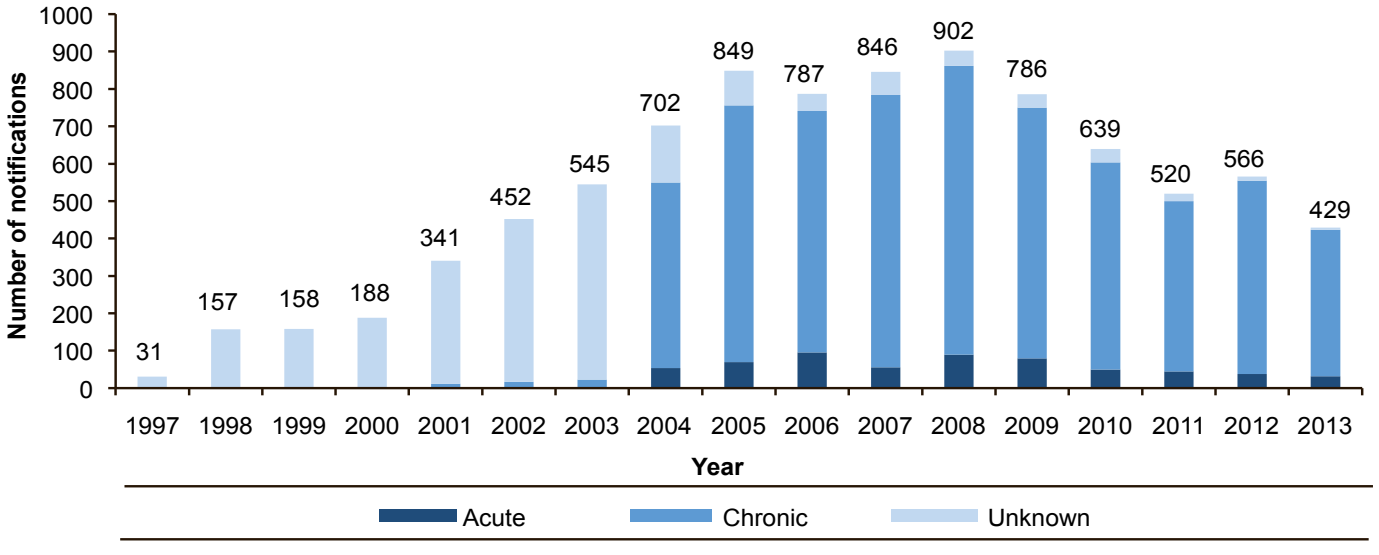

Figure 1. Number of hepatitis B notifications by acute/chronic status, 1997-2013

(n=32) compared to 2012 (n=38) (figure 3). The majority of acute cases of hepatitis B in Ireland are sexually acquired.

Of the 32 acute cases notified in 2013, 78% (n=25) were male and 22% (n=7) were female. The highest notification rates were in young to middle aged adults, with 91% (n=29) of acute cases aged between 20 and 54 years (figure 4). Males were older overall, with a median age of 40 years compared to 35 years for females. The median age at notification increased in 2013 compared to previous years (figure 3).

Information on risk factor was available for 81% (n=26) of acute cases. Of these, 81% (n=21) were likely to have been sexually acquired (12 heterosexual and 9 men who have sex with men), one case was likely to have been infected nosocomially in Ireland and another was likely to have been infected through dental procedures outside of Ireland. No risk factor was identified for remaining three cases despite public health follow up. Five further cases had no risk factor information but were known to have been born in hepatitis B endemic countries.

Country of birth was specified for all of the acute cases notified in 2013. Sixty nine percent (n=22) were born in Ireland and 16% (n=5) were born in Eastern or Central Europe. A further three cases were born in Asia, one case was born in Western Europe (excluding Ireland) and one case was born in Sub-Saharan Africa. Ninety percent of acute cases were tested because they were symptomatic.

Chronic cases (long-term infections)

There was a 24% decrease in chronic hepatitis B notifications in 2013 (n=391) compared to 2012 (n=517) (figure 5). This was a continuation of a significant downward trend in notifications of chronic hepatitis B 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

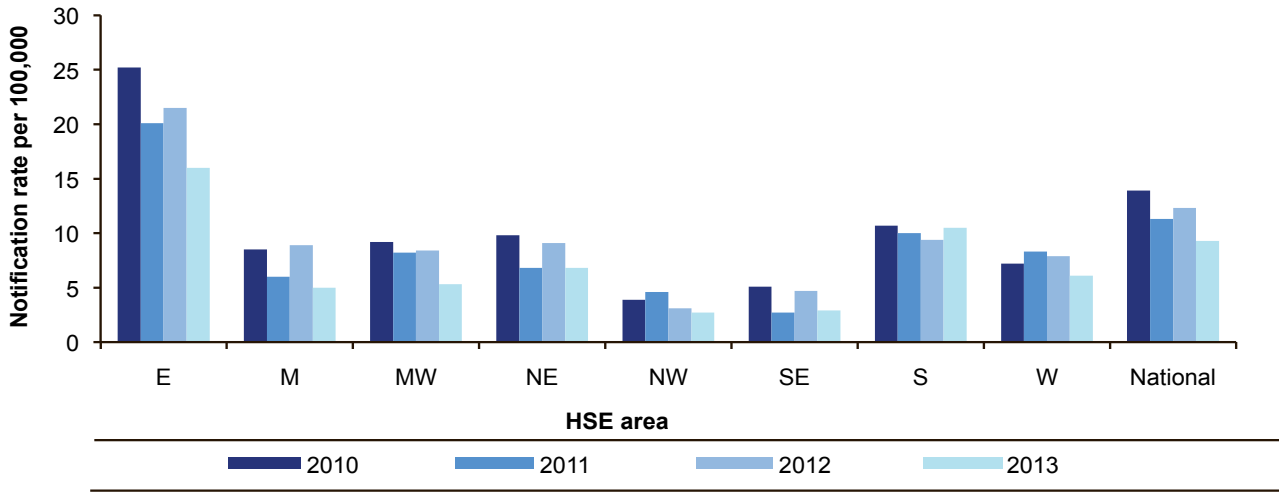

Figure 2. Hepatitis B notification rates/100,000 population, by HSE area, 2010-2013

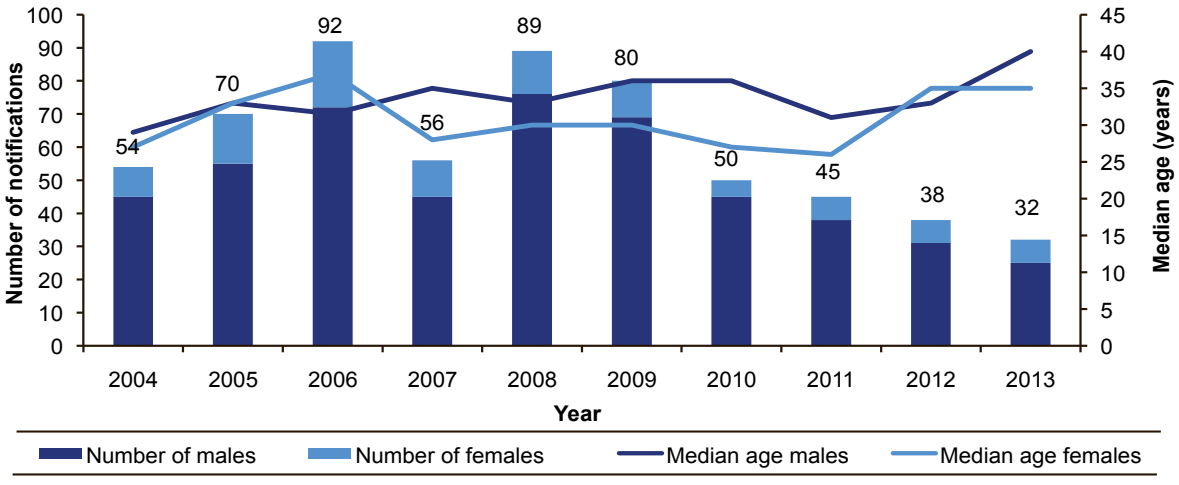

Figure 3. Number of acute cases of hepatitis B notified, by sex and median age, 2004 to 2013

to Ireland from hepatitis B endemic countries. The current economic climate has most likely contributed to reduced immigration to Ireland between 2009 and 2013, which correlates with an overall decrease in hepatitis B notifications over this time period.

Of the 391 chronic cases notified in 2013, 57% (n=221) were male, 42% (n=165) were female and sex was not reported for 1% (n=5). Eighty one percent (n=317) of chronic cases were aged between 20 and 44 years when notified (figure 6). Males were slightly older overall, with a median age at notification of 34 years compared to 30 years for females (figure 5).

Although risk factor was reported for a minority of chronic cases, some information on country of birth or asylum seeker status was available for 54% (n=212). Of these, 85% (n=180) 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 (51%, n=198), the most common birth countries were in Central or Eastern Europe (34%, n=68), Asia (25%, n=49), Sub-Saharan Africa (23%, n=46) and Western Europe (12%, n=24). Of those born in Western Europe, 17 were born in Ireland.

Risk factors for transmission were provided for 20% of the chronic cases notified in 2013. Where data were available, the most common risk factors were sexual exposure (50%, n=39), vertical transmission (14%, n=11), attending an intellectual disability institution (9%, n=7) and injecting drug use (9%, n=7). All of the cases with an intellectual disability were born in Ireland, but infection may have been acquired in the past and only diagnosed in 2013 as part of routine testing.

The reason for testing was known for 71% (n=279) of chronic cases. The main reasons were: antenatal

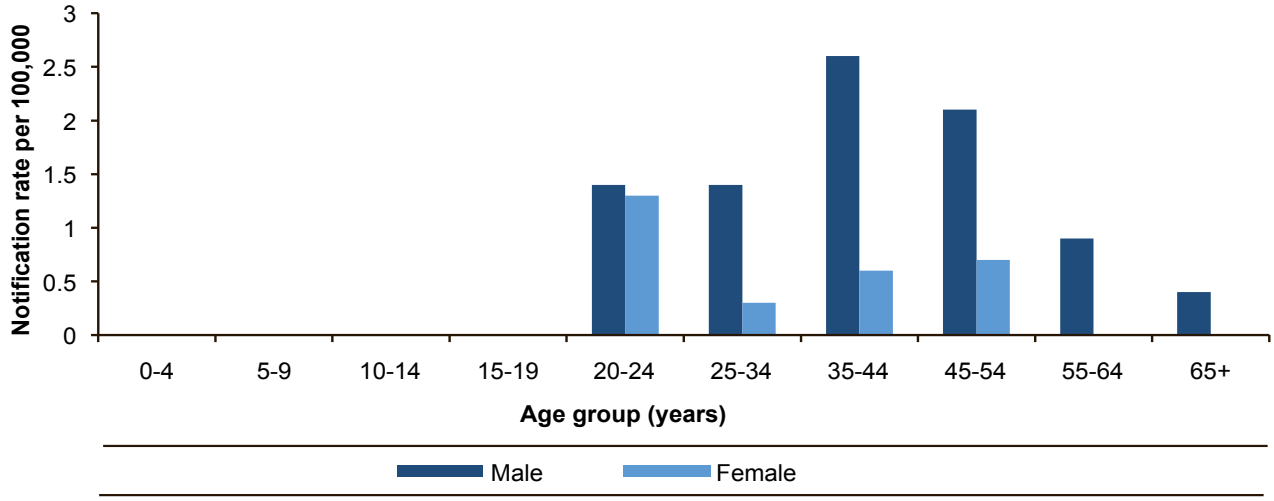

Figure 4. Age and sex-specific notification rates/100,000 population for acute cases of hepatitis B, 2013

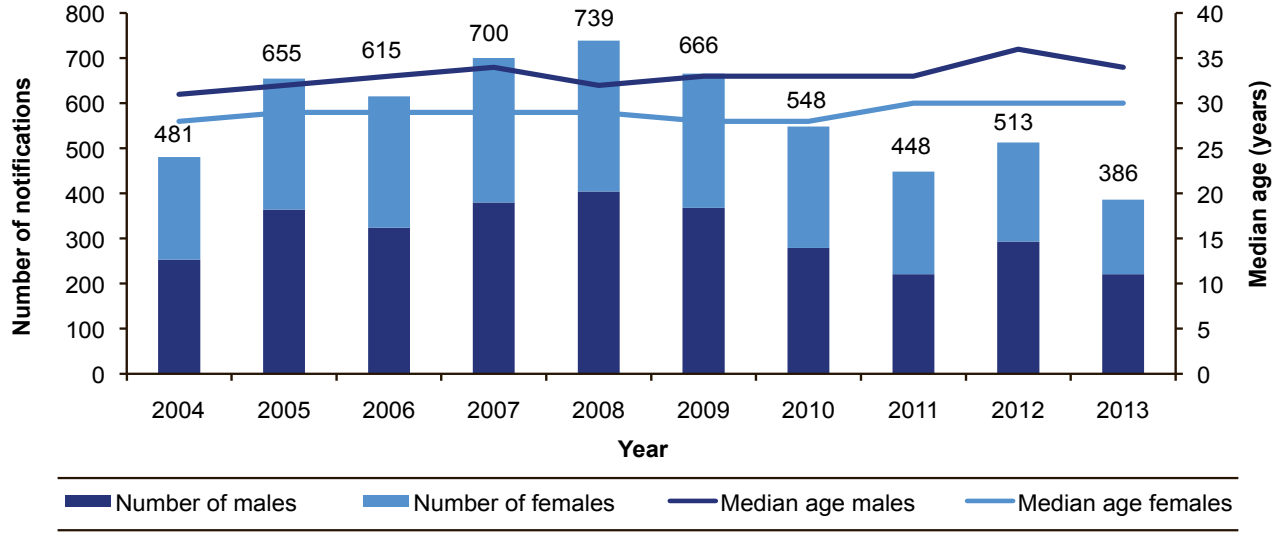

Figure 5. Number of chronic cases of hepatitis B notified, by sex and median age, 2004 to 2013

screening (23%, n=65), routine health screening (17%, n=46), STI screening (15%, n=43), re-testing of known cases (not previously notified) (13%, n=36) and asylum seeker screening (12%, n=33).

Co-infections

Co-infection 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. Seven of the cases of hepatitis B notified in 2013 were co-infected with HIV, two were co-infected with hepatitis C and one additional case was infected with HIV and hepatitis C.

The figures presented in this summary are based on data extracted from the Computerised Infectious Disease Reporting (CIDR) System on 17th September 2014. These figures may differ from those published previously due to ongoing updating of notification data on CIDR.

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.

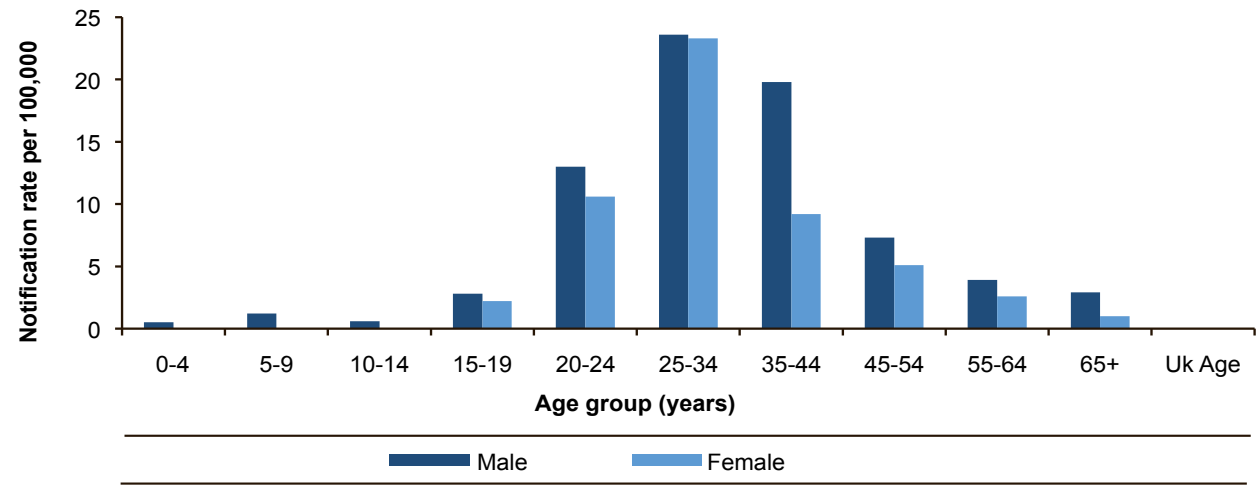

Figure 6. Age and sex-specific notification rates/100,000 population for chronic cases of hepatitis B, 2013