Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

hpsc

Hepatitis B

Summary

Number of cases, 2014: 445

Crude notification rate, 2014: 9.7/100,000 population

Number of cases, 2013: 425

Introduction

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 go on to 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, 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 5% in 2014, with 445 cases (9.7/100,000 population) notified compared to 425 in 2013. However, there has been a general downward trend in the number of notifications since peak levels in 2008 (n=901). Annual hepatitis B notifications since 1997 are shown in figure 1.

Notification rates were highest in HSE E (15.6/100,000 population, n=253) and HSE M (11/100,000 population, n=31). Geographic trends for the past four years are shown in figure 2.

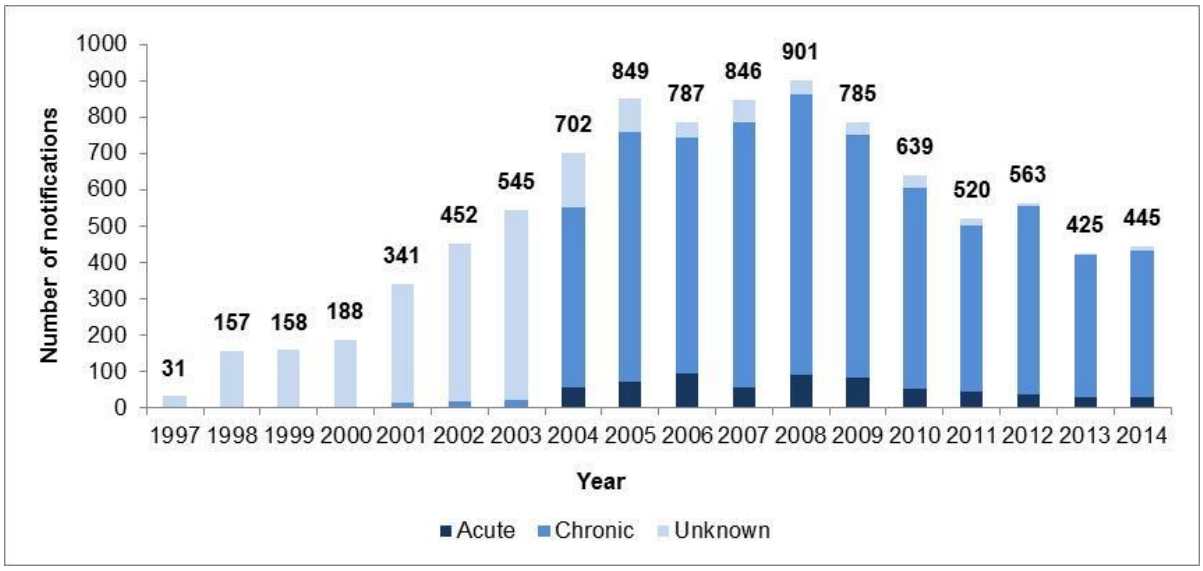

Figure 1: Number of hepatitis B notifications by acute/chronic status, 1997-2014

All cases were laboratory confirmed and 97% (n=431) contained information on acute/chronic status. Where status was known, 7% of cases were acute (n=29, 0.6/100,000 population) and 93% were chronic (n=402, 8.8/100,000 population). Both acute and chronic cases of hepatitis B are notifiable in Ireland.

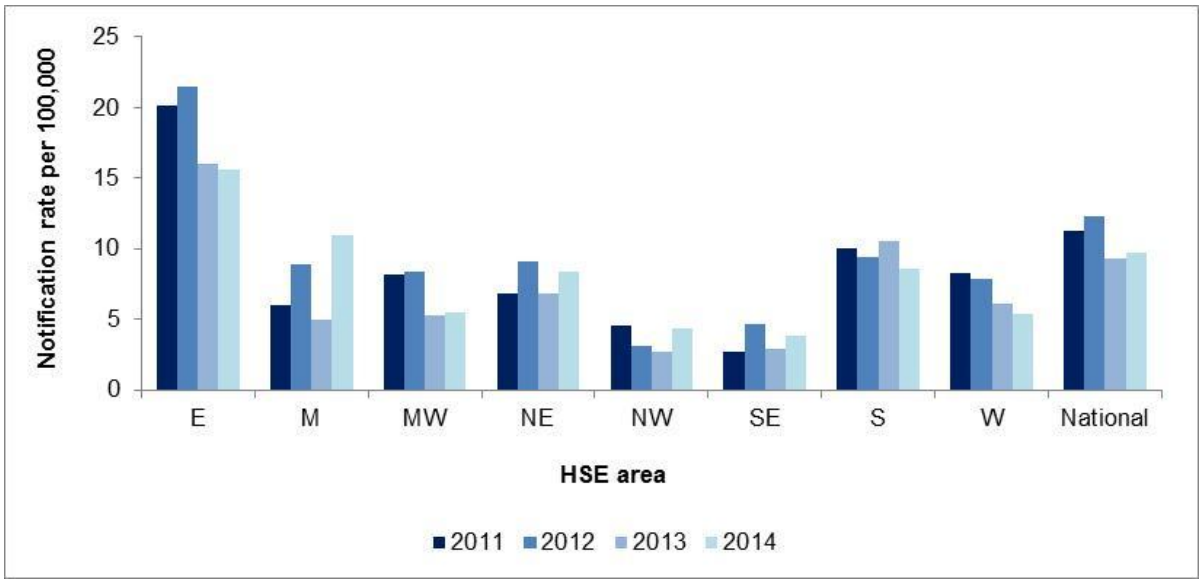

Figure 2: Hepatitis B notification rates/100,000 population, by HSE area, 2010-2014

Acute cases (recent infections)

The number of acute cases of hepatitis B notified in Ireland is relatively low and decreased by 3% in 2014 (n=29) compared to 2013 (n=30) (figure 3). The majority of acute cases of hepatitis B in Ireland are sexually acquired.

Of the 29 acute cases notified in 2014, 69% (n=20) were male and 31% (n=9) were female. The highest notification rates were in young to middle aged adults, with 90% (n=26) of acute cases aged between 20 and 54 years (figure 4). Males were older overall, with a median age of 38.5 years compared to 28 years for females. The median age at notification decreased in 2014 compared to previous years (figure 3).

Information on risk factor was available for 97% (n=28) of acute cases. Of these, 61% (n=17) were likely to have been sexually acquired (12 heterosexual and five men who have sex with men), one case was a household contact of an infected person in Ireland and another case was attributed to dental procedures. No risk factor was identified for six cases despite public health follow up. Three 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 83% (n=24) of acute cases notified in 2014. Fifty four percent (n=13) were born in Ireland and 17% (n=5) were born in Western Europe. A further two cases were born in Asia, two cases were born in Sub-Saharan Africa and there was one case born in each of Latin America and the Caribbean. Reasons for testing were available for 97% (n=28) of acute cases. Of these, 61% of cases reported being tested because they were symptomatic.

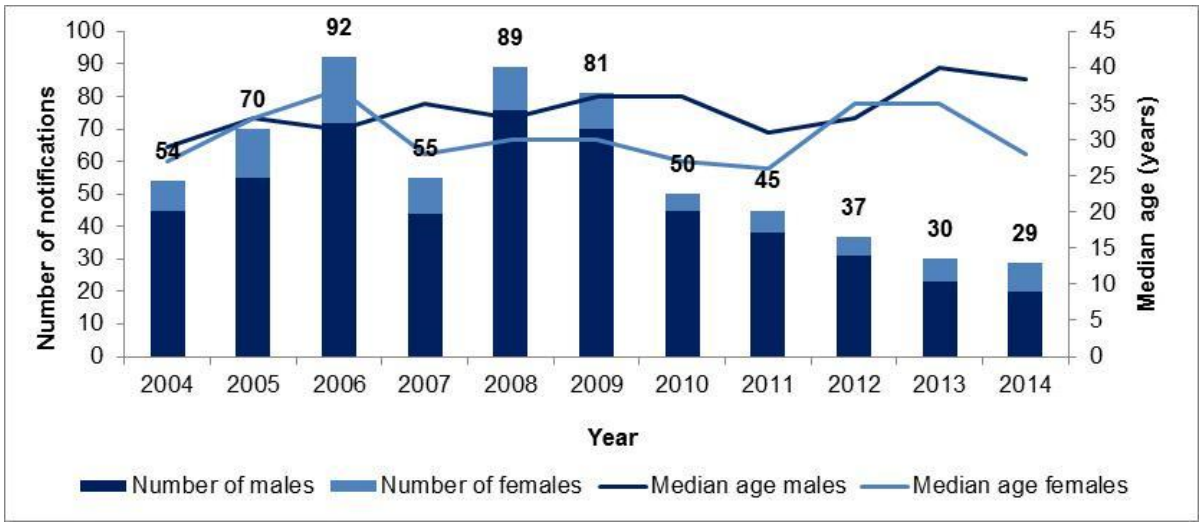

Figure 3: Number of acute cases of hepatitis B notified, by sex and median age, 2004 to 2014

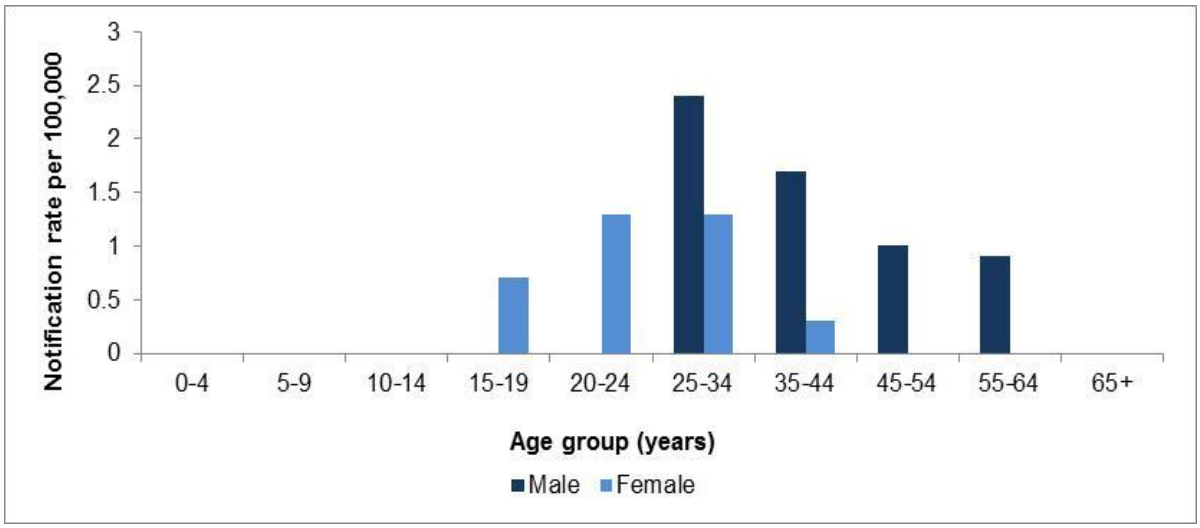

Figure 4: Age and sex-specific notification rates/100,000 pop. for acute cases of hepatitis B, 2014

Chronic cases (long-term infections)

There was a 3% increase in chronic hepatitis B notifications in 2014 (n=402) compared to 2013 (n=389) (figure 5). However, notifications have decreased significantly since peak levels in 2008. 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. Following a

drop in immigration numbers from 2009 to 2011, immigration has increased again each year from 2012 (52,700 immigrants) to 2014 (60,600), which could explain the slight increase in chronic hepatitis B in 2014.[2]

Of the 402 chronic cases notified in 2014, 59% (n=237) were male, 38.5% (n=155) were female and sex was not reported for 2.5% (n=10). Seventy nine percent (n=316) 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 36 years compared to 28 years for females (figure 5).

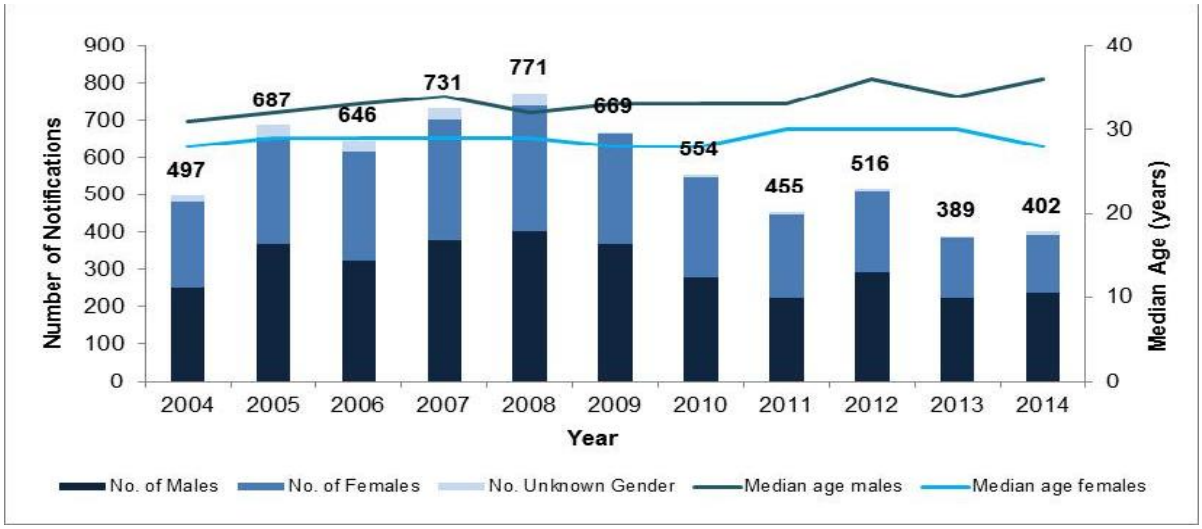

Figure 5: Number of chronic cases of hepatitis B notified, by sex and median age, 2004 to 2014

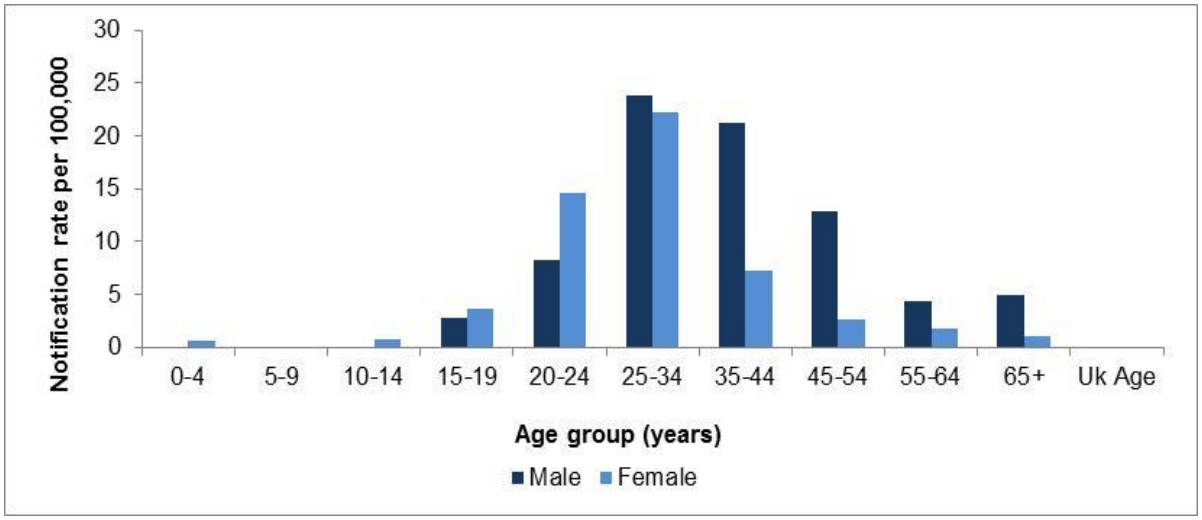

Figure 6: Age and sex-specific notification rates/100,000 pop. for chronic cases of hepatitis B, 2014

Although risk factor was reported for a minority of chronic cases, some information on country of birth or asylum seeker status was available for 60% (n=242). Of these, 86% (n=208) 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 (59%, n=236), the most common birth countries were in Central or Eastern Europe (37%, n=87), Asia (30%, n=70), Sub-Saharan Africa (21%, n=49) and Western Europe (10%, n=24). Of those born in Western Europe, 18 were born in Ireland.

Risk factors for transmission were provided for 15% (n=60) of the chronic cases notified in 2014. Where data were available, the most common risk factors were sexual exposure (28%, n=17), vertical transmission (20%, n=12), being a household contact of a case (10%, n=6), injecting drug use (7%, n=4) and attending an intellectual disability setting (7%, n=4). Three of the cases with an intellectual disability were born in Ireland, but infection may have been acquired in the past and only diagnosed in 2014 as part of routine testing.

The reason for testing was known for 66% (n=265) of chronic cases. The main reasons were: antenatal screening (21%, n=56), re-testing of known cases (not previously notified) (15%, n=41), routine health screening (13%, n=34), asylum seeker screening (11%, n=29) and STI screening (9%, n=24).

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. Eleven of the cases of hepatitis B notified in 2014 were co-infected with HIV. 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 13th August 2015. These figures may differ from those published previously due to on-going updating of notification data on CIDR.

References:

1. Heyman DL. Control of Communicable Diseases Manual. 19th Edition. Washington: American Public Health Association, 2008.
2. Central Statistics Office (2014) Immigrants (thousand) by country of origin. Accessed 21st August 2015. Available from: http://www.cso.ie/multiquicktables/quickTables.aspx?id=pea18_1