Report on Hepatitis B Notifications Quarters 3&4 2014

Health Protection Surveillance Centre

Introduction

Acute and chronic cases of hepatitis B are notifiable under the Infectious Diseases Regulations 1981. Departments of Public Health, in conjunction with the HPSC, introduced enhanced surveillance of acute cases of hepatitis B from January 2005. Some enhanced data are also available for chronic cases.

Results

In Q3 and Q4 2014 there were 118 (2.6/100,000 population) and 124 (2.7/100,000 population) notifications of hepatitis B, respectively. This represents an increase of 15.8% compared to the previous six months (n=209). However, hepatitis B notifications have decreased significantly since peak levels in Q2 2008 (n=263). Quarterly trends since Q1 2007 are shown are in figure 1.

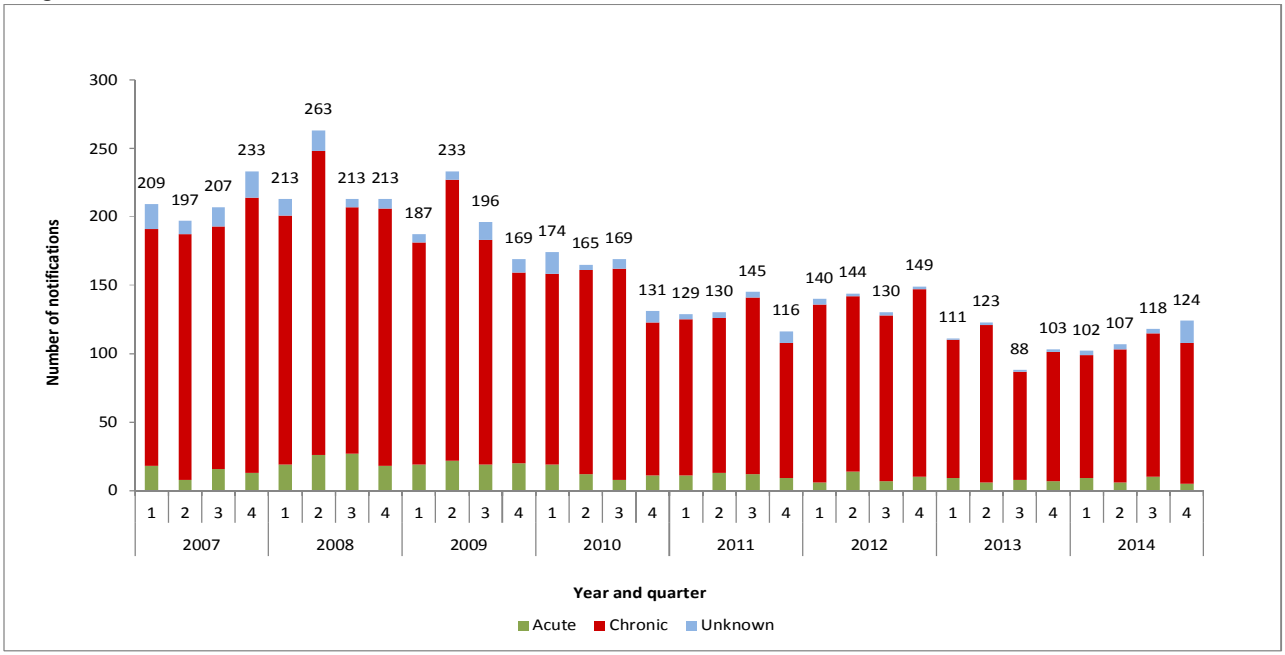

Figure 1. Number of notifications of hepatitis B, by acute/chronic status, Q1 2007 to Q4 2014

Geographic distribution

Notification rates for each HSE area for the past four quarters are shown in figure 2. Notification rates increased in Q4 2014 in the HSE-E, HSE-M, HSE-MW and HSE NE. However, the number of notifications remained relatively low (figure 3).

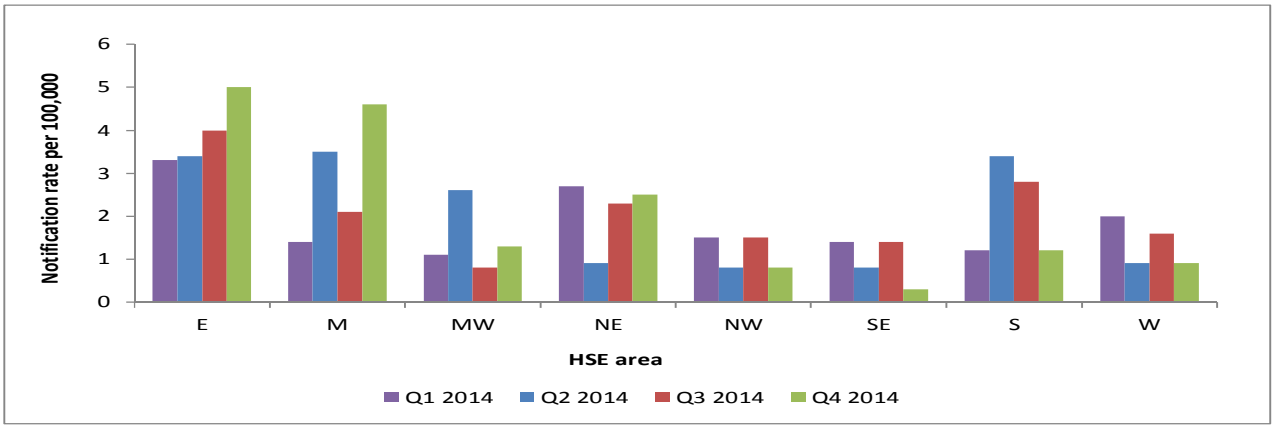

Figure 2. Hepatitis B notification rates per 100,000 population, by HSE area, from Q1 2014 to Q4 2014

All data contained in this report are provisional (CIDR accessed 6th March 2015)

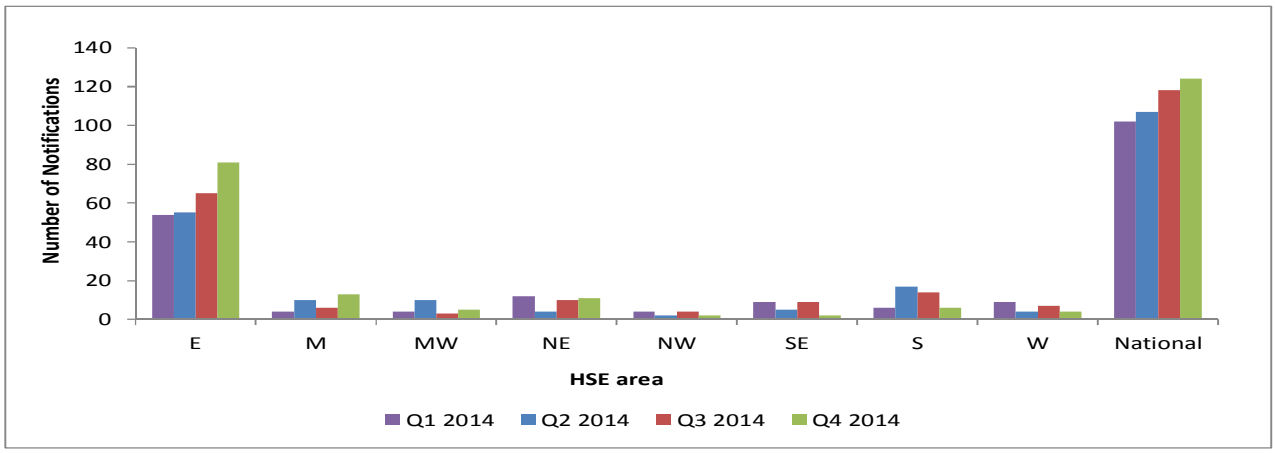

Figure 3. Number of notifications of hepatitis B, by HSE area, from Q1 2014 to Q4 2014

Acute/chronic status

Ninety two percent (n=223) of the 242 notifications of hepatitis B in Q3 and Q4 2014 contained information on the acute/chronic status of the case. Of these, 93% (n=208) were chronically infected (long-term infection) and 7% (n=15) were acutely infected (recent infection).

Acute cases

Age and sex

Eighty percent (n=12) of acute cases of hepatitis B notified in Q3 & 4 2014 were male. Notifications ranged in age from 25 to 53 years, with 80% (n=12) of acute cases aged between 20 and 44 years (figure 4). The median age for both males and females was 34 years. Trends since Q1 2010 are shown in figure 5.

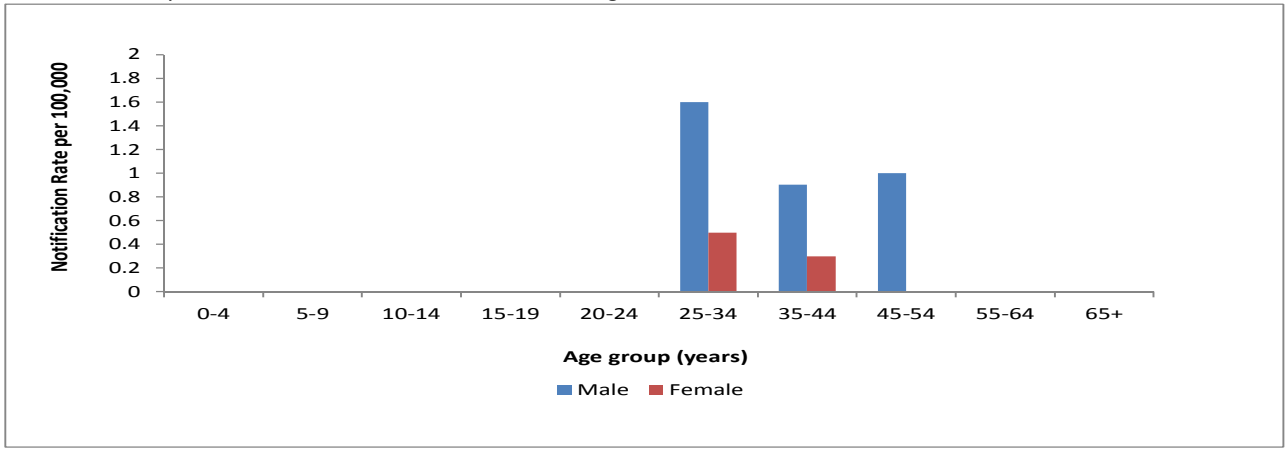

Figure 4. Age and sex specific rates per 100,000 population for acute cases of hepatitis B, Q3 and Q4 2014

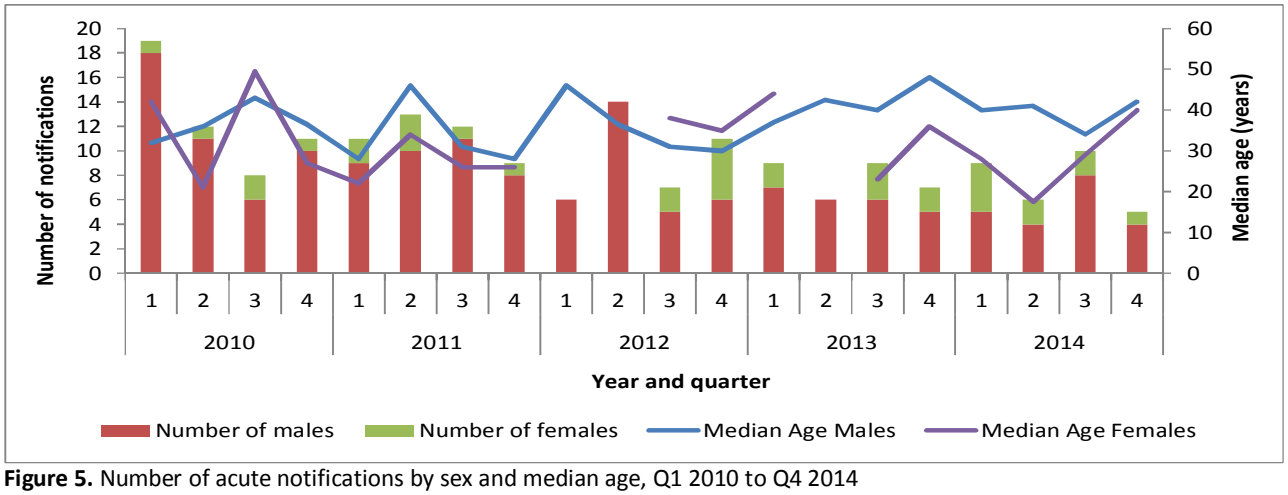

Figure 5. Number of acute notifications by sex and median age, Q1 2010 to Q4 2014

Risk factor and other enhanced data

Some risk factor data were available for 60% (n=9) of the acute cases notified in Q3 and 4 2014. Seventy eight percent (n=7) were likely to have been sexually acquired (four heterosexual and three MSM), one was born in a hepatitis B endemic country and was a household contact of someone with hepatitis B infection.

Country of birth was specified for seven acute cases, 57% (n=4) of whom were born in Ireland. Reason for testing was known for thirteen acute cases. The most common reasons were: experiencing symptoms (n=11, 87%) and STI screening (n=1, 8%).

Chronic cases

Age and sex

Sixty three percent (n=131) of chronic cases notified in Q3 & 4 2014 were male, 35% (n=73) were female and sex was not reported for 2% (n=4). Notifications ranged in age from 10 months to 82 years, with 81% (n=169) aged between 20 and 44 years (figure 6). Males were older overall, with a median age at notification of 36 years compared to 29 years for females. Trends since Q1 2010 are shown in figure 7.

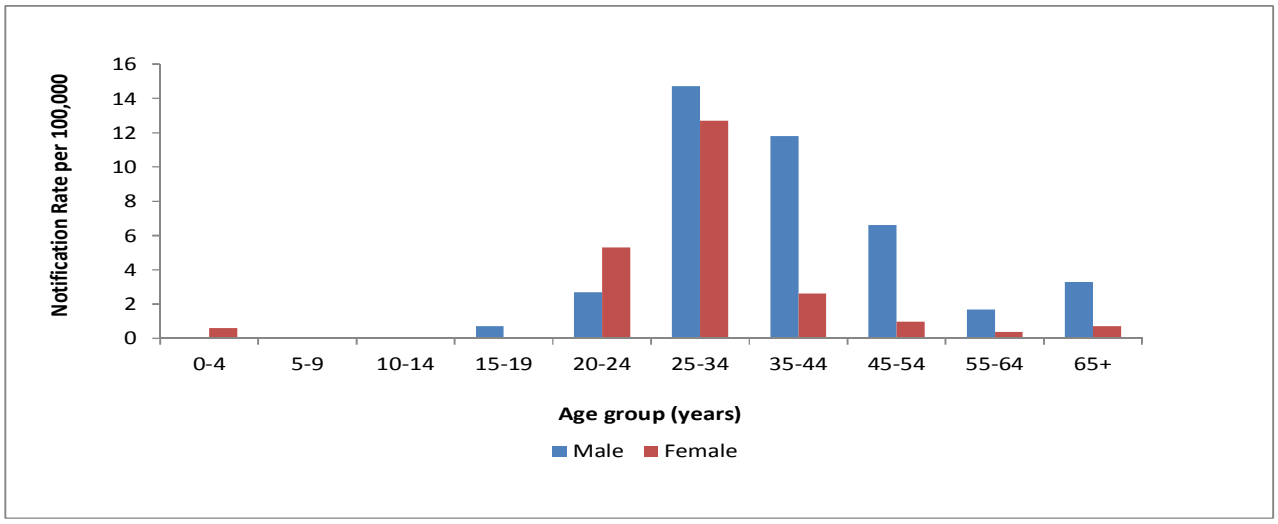

Figure 6. Age and sex specific rates per 100,000 population for chronic cases of hepatitis B, Q3 and Q4 2014

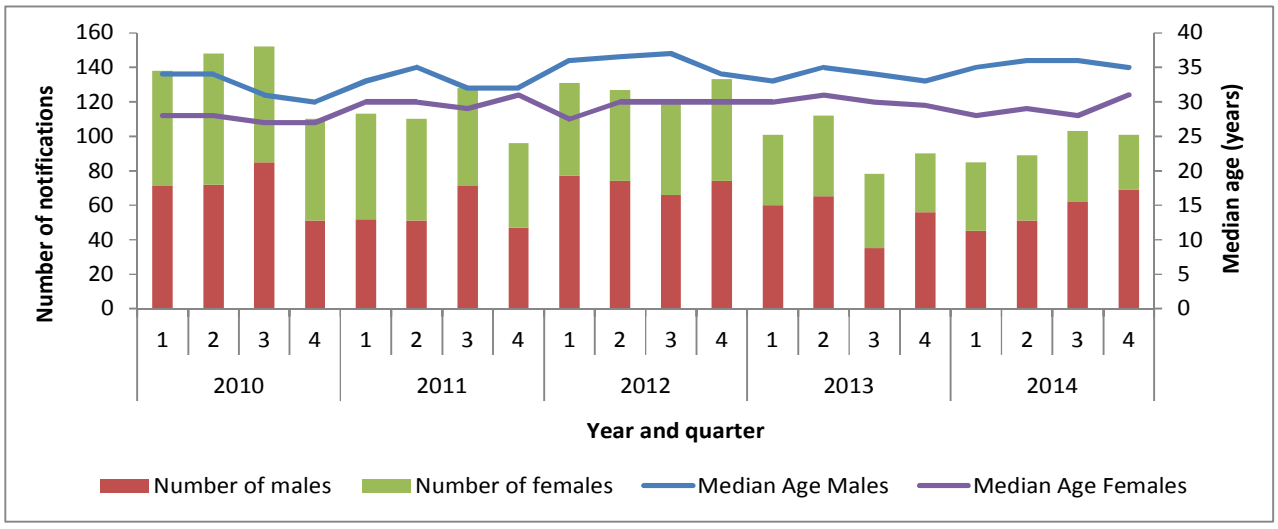

Figure 7. Number of chronic notifications by sex and median age, Q1 2010 to Q4 2014

Risk factor and other enhanced data

Although risk factor was reported for a minority of chronic cases in Q3 and 4 2014, some data on country of birth or asylum seeker status was available for 48% (n=99). Of these, 88% (n=87) were either born in hepatitis B endemic countries (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 in their country of origin is unknown for the majority. Where country of birth was available (47%, n=97), the most common birth countries were in Eastern or Central Europe (38%, n=37), Asia

(26%, n=25), Sub-Saharan Africa (25%, n=24) and Western Europe (10%, n=10). Of those born in Western Europe, eight were born in Ireland.

Risk factors for transmission were provided for 10% (n=21) of the chronic cases in Q3 & 4 2014. The most common risk factors reported were sexual exposure (n=5) and injecting drug use (n=4). The reason for testing was known for 54% (n=113). The main reasons were: antenatal screening (18%, n=20), routine health screening (16%, n=18), asylum seeker screening (10%, n=11), experiencing clinical signs and symptoms (9%, n=10) and STI screening (5%, n=6).

Co-infections

Hepatitis B and hepatitis C co-infection can lead to more severe liver disease and an increased risk of liver cancer. Two cases of hepatitis B in Q3 & 4 2014 were co-infected with hepatitis C. Nine were co-infected with HIV.

Discussion

Hepatitis B notifications increased by 16% in Q3 & 4 2014 compared to Q1 & 2 2014 and by 27% compared to the same two quarters in the previous year. This may be linked to an increase in immigration in recent years. However, overall there has been a significant decrease in hepatitis B notifications in Ireland in recent years (52% decrease between peak levels in 2008 and 2013). The number of acute cases notified has been low in recent years and this continued in Q3 & 4 2014 (n=15). Most acute cases are sexually acquired in Ireland.

Enhanced data were limited for chronic cases but, where data were available, most were born in hepatitis B endemic countries and were likely to have been infected outside Ireland. The higher notification rates seen in earlier years were mostly attributable to large numbers of people migrating to Ireland from hepatitis B endemic countries. Immigration peaked in Ireland in 2007 before steadily decreasing for a number of years, but began to increase once again in 2011.

Acknowledgements

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Case definition for hepatitis B (acute and chronic)

Clinical criteria Not relevant for surveillance purposes. *Epidemiological criteria* Not relevant for surveillance purposes.

Hepatitis B (acute)

At least one of the following three:

- Detection of hepatitis B core IgM (anti-HBc IgM)
- Detection of hepatitis B surface antigen (HBsAg) AND previous negative HBV markers less than 6 months ago
- Detection of hepatitis B nucleic acid (HBV DNA) AND previous negative HBV markers less than 6 months ago

Hepatitis B (chronic)

At least one of the following two:

- Detection of HBsAg or HBV DNA AND no detection of anti-HBc IgM (negative result)
- Detection of HBsAg or HBV DNA on two occasions that are 6 months apart

Hepatitis B (unknown status)

Any case which cannot be classified according to the above description of acute or chronic infection and having positive results of at least one of the following tests:

- Hepatitis B surface antigen (HBsAg)
- Hepatitis B e antigen (HBeAg)
- Hepatitis B nucleic acid (HBV DNA)

Case classification

Possible: N/A

N/A

Confirmed: Any person meeting the laboratory criteria

Note: The following combination of lab tests shall not be included or notified

- Resolved hepatitis – hepatitis B total core antibody (anti-HBc) positive and hepatitis B surface antigen (HBsAg) negative
- Immunity following vaccination – Hepatitis B total core antibody (anti-HBc) negative and hepatitis B surface antibody (anti-HBs) positive

Note: elevated levels of IgM in some chronic cases may result in misclassification which could over-estimate the number of acute cases

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