Report on Hepatitis B Notifications Quarters 1&2 2015

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 Q1 and Q2 2015 there were 111 (2.4/100,000 population) and 145 (3.1/100,000 population) notifications of hepatitis B, respectively. This represents an increase of 7.5% compared to the previous six months (n=238). 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.

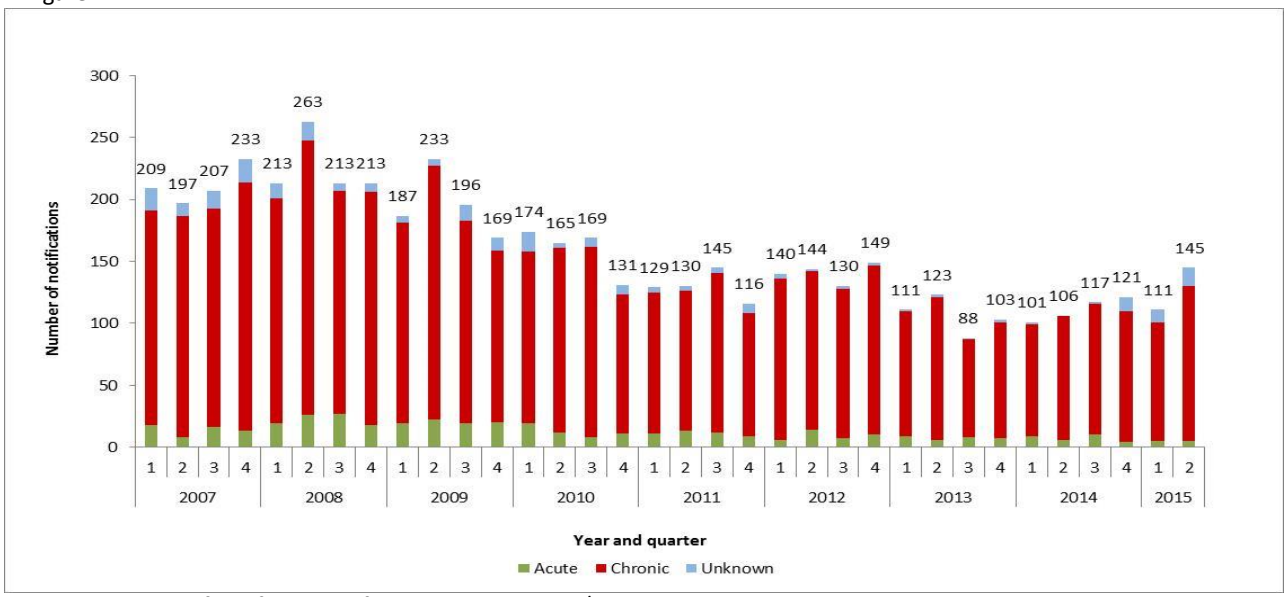

Figure 1: Number of notifications of hepatitis B, by acute/chronic status, Q1 2007 to Q2 2015

Geographic distribution

Notification rates for each HSE area for the past four quarters are shown in figure 2. Notification rates increased in Q2 2015 in all HSE areas except for HSE-NW and HSE-SE. The largest increase in rates was seen in HSE-NE which increased from 1.1 cases per 100,000 population in Q1 2015 to 5.4 cases per 100,000 population in Q2 2015. However, the number of notifications remained relatively low (figure 3).

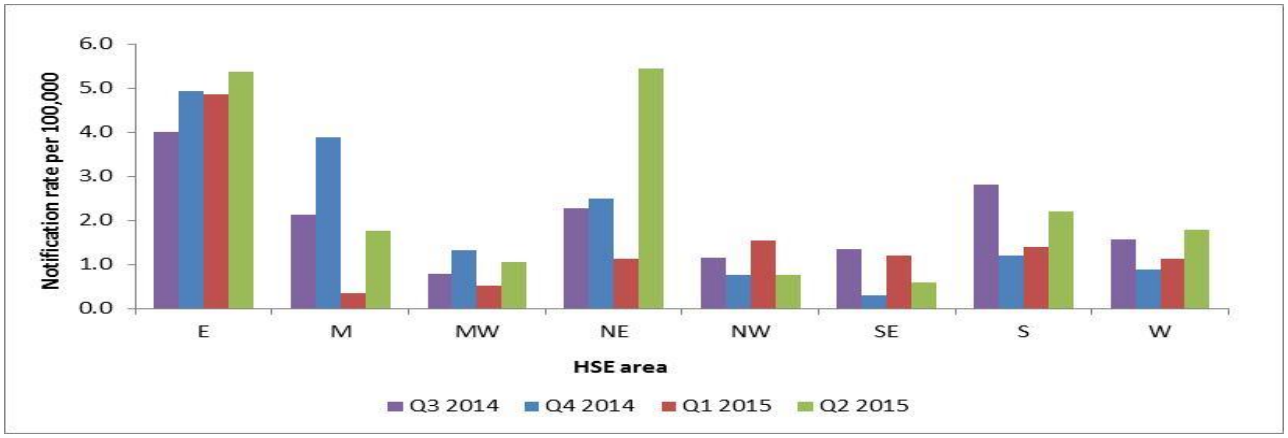

Figure 2: Hepatitis B notification rates per 100,000 population, by HSE area, from Q3 2014 to Q2 2015

All data contained in this report are provisional (CIDR accessed 17th September 2015)

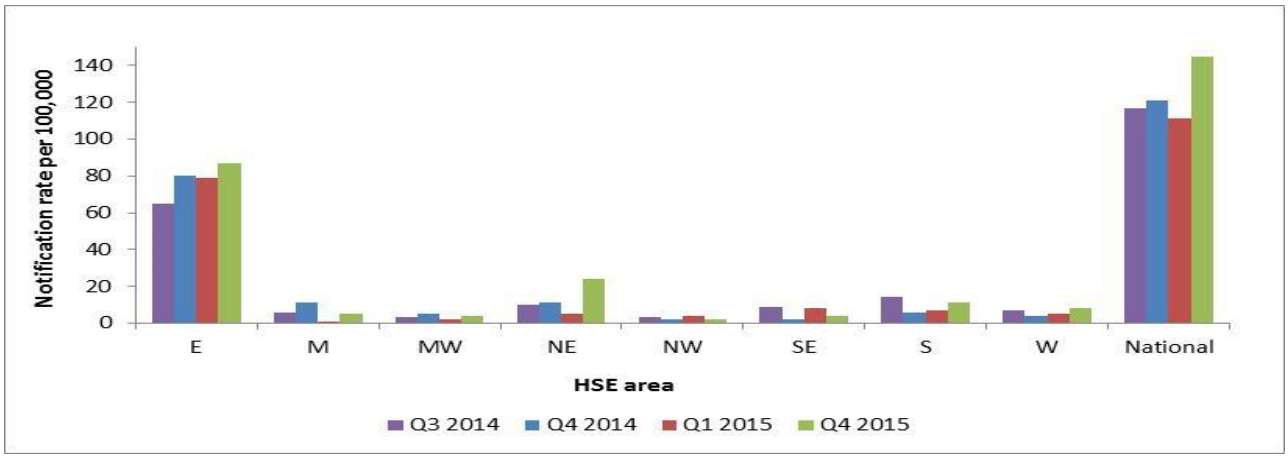

Figure 3: Number of notifications of hepatitis B, by HSE area, from Q3 2014 to Q2 2015

Acute/chronic status

Ninety percent (n=231) of the 256 notifications of hepatitis B in Q1 and Q2 2015 contained information on the acute/chronic status of the case. Of these, 96% (n=221) were chronically infected (long-term infection) and 4% (n=10) were acutely infected (recent infection).

Acute cases

Age and sex

Eighty percent (n=8) of acute cases of hepatitis B notified in Q1 & 2 2015 were male. Notifications ranged in age from 28 to 62 years, with 70% (n=7) of acute cases aged between 20 and 44 years (figure 4). The median age for males was 42 years compared to 38 years for females. Trends since Q1 2010 are shown in figure 5.

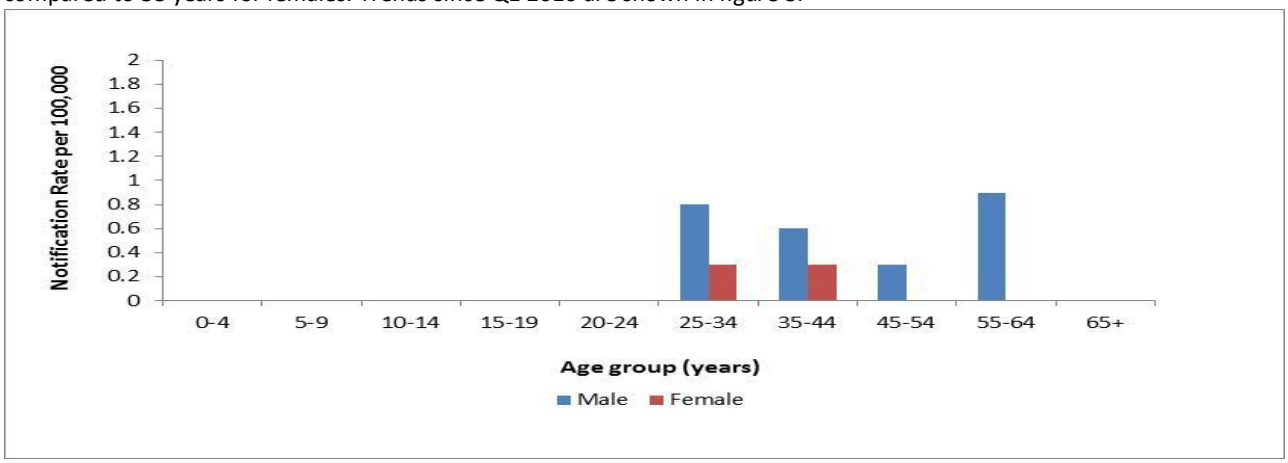

Figure 4: Age and sex specific rates per 100,000 population for acute cases of hepatitis B, Q1 and Q2 2015

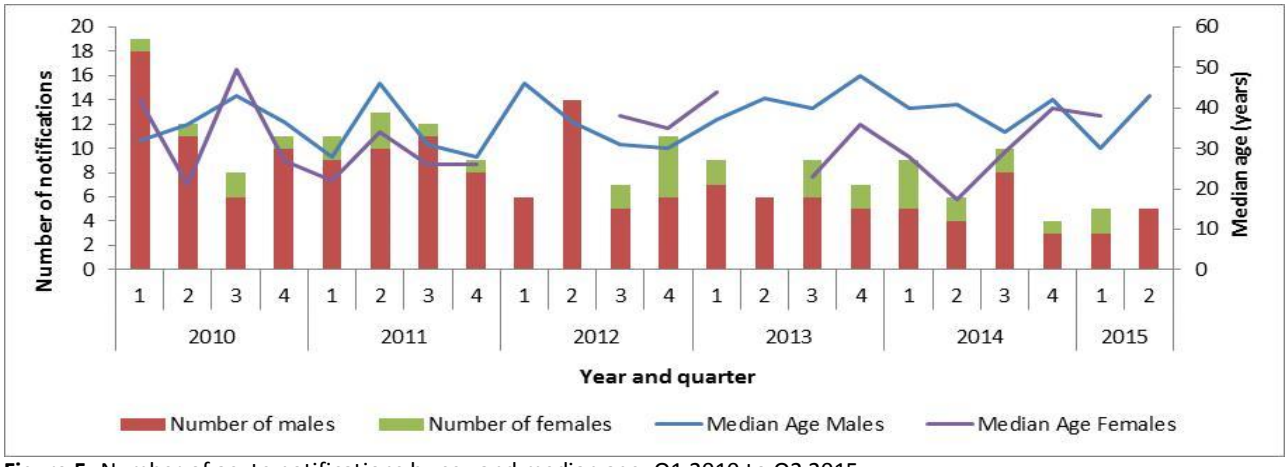

Figure 5: Number of acute notifications by sex and median age, Q1 2010 to Q2 2015

Risk factor and other enhanced data

Risk factor data were available for 60% (n=6) of the acute cases notified in Q1 and Q2 2015. Of those, eighty three percent (n=5) were likely to have been sexually acquired.

Country of birth was specified for all 10 acute cases, 70% (n=7) of whom were born in Ireland. Reason for testing was known for nine acute cases of which the most common reason was experiencing symptoms (n=6, 67%).

Chronic cases

Age and sex

Fifty eight percent (n=129) of chronic cases notified in Q1 & Q2 2015 were male, 41% (n=90) were female and sex was not reported for 1% (n=2). Notifications ranged in age from 21 months to 71 years, with 81% (n=179) aged between 20 and 44 years (figure 6). Males were older overall, with a median age at notification of 34 years compared to 32.5 years for females. Trends since Q1 2010 are shown in figure 7.

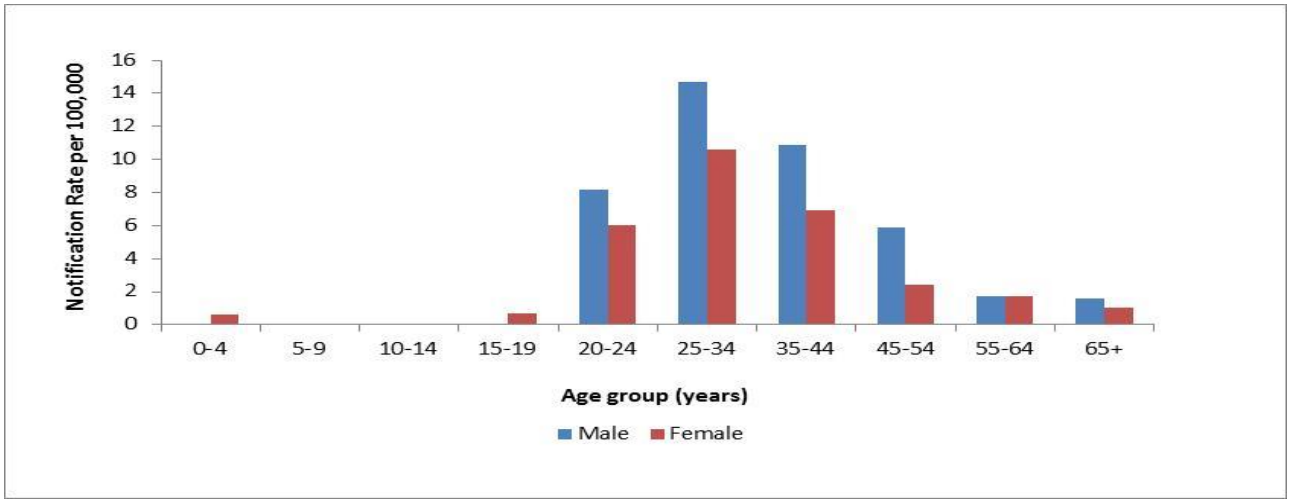

Figure 6: Age and sex specific rates per 100,000 population for chronic cases of hepatitis B, Q1 and Q2 2015

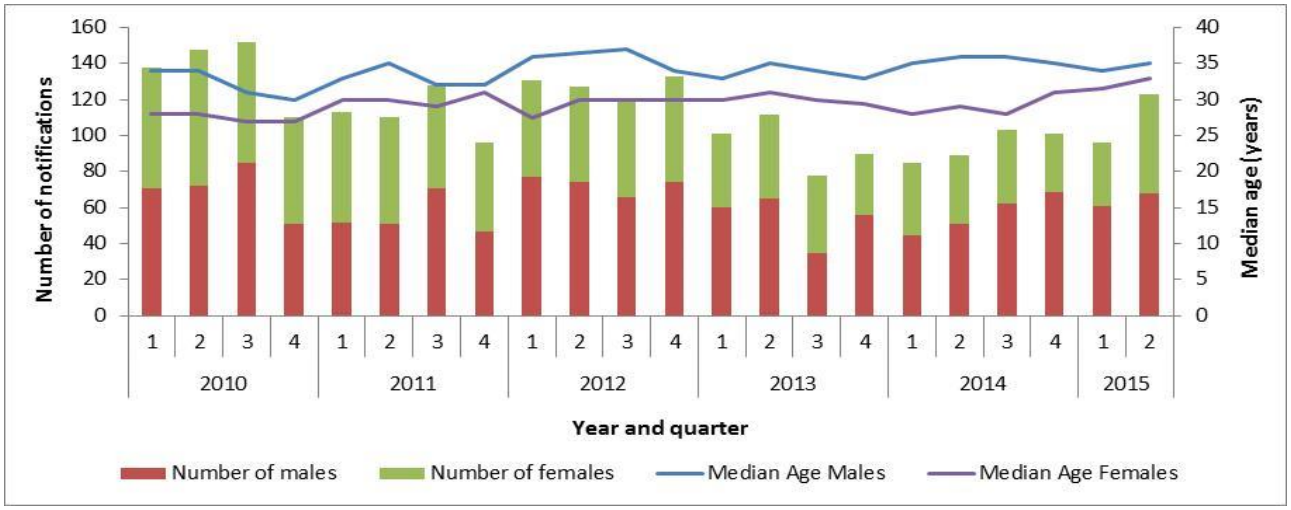

Figure 7: Number of chronic notifications by sex and median age, Q1 2010 to Q2 2015

Risk factor and other enhanced data

Although risk factor was reported for a minority of chronic cases in Q1 and 2 2015, data on country of birth or asylum seeker status was available for 50% (n=110). Of these, 81% (n=89) were either born in hepatitis B endemic countries (hepatitis B surface antigen prevalence ≥ 2%) or were reported to be 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 (50%, n=110), the most common birth countries were in Eastern or Central Europe (39%, n=43), Asia (33%, n=36), Sub-Saharan Africa (18%, n=20) and Western Europe (6%, n=7). Of those born in Western Europe, five were born in Ireland.

Co-infections

Hepatitis B and hepatitis C co-infection can lead to more severe liver disease and an increased risk of liver cancer. There were no cases of hepatitis B in Q1 & 2 2015 co-infected with hepatitis C but two cases were co-infected with HIV.

Discussion

Hepatitis B notifications increased by 7.5% in Q1 & 2 2015 compared to Q3 & 4 2014 and by 23% 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 the number of hepatitis B notifications recently, with figures falling 46% for Q1 and Q2 2015 compared to the same period in 2008. The number of acute cases notified has been low in recent years and this continued in Q1 & 2 2015 (n=10). 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 of 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