Report on Hepatitis B Notifications in Quarter 3 2011

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 a smaller proportion of chronic cases.

Results

There were 145 notifications of hepatitis B in Q3 2011. This corresponds to a crude notification rate of 3.4 per 100,000 population. Quarterly trends since Q1 2007 are shown are in figure 1.

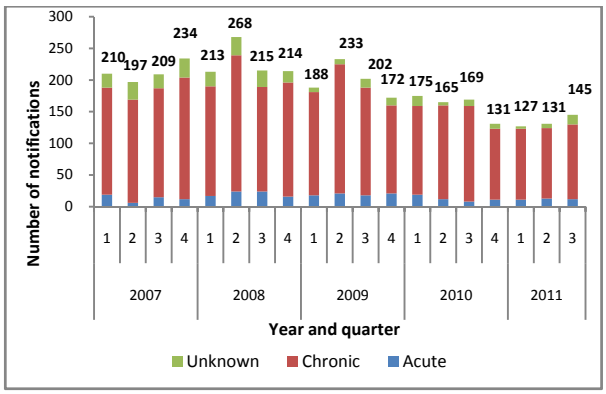

Figure 1. Number of cases of hepatitis B notified, by acute/chronic status, Q1 2007 to Q3 2011

Geographic distribution

The highest notification rates were in the HSE-East, which reported 63% of Q3 notifications (n=92, 6.1 per 100,000 population) (figure 2).

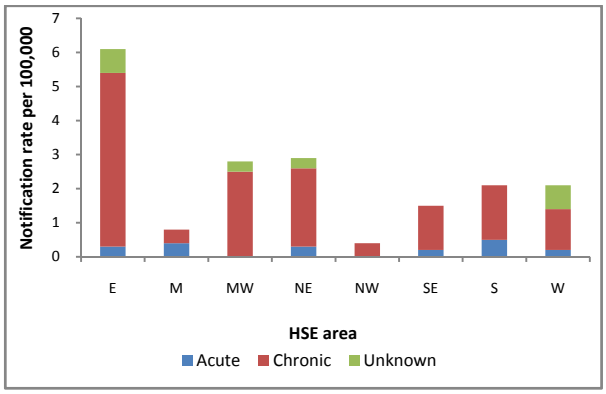

Figure 2. Hepatitis B notification rates, by HSE area and acute/chronic status, Q3 2011

Acute/chronic status

Ninety percent (n=130) of hepatitis B notifications in Q3 contained information on the acute/chronic status of the case. Of these, 91% (n=118) of cases were chronically infected (long-term infection) and 9% (n=12) were acutely infected (recent infection).

Acute cases

Age and sex

The age and sex specific notification rates for acute cases of hepatitis B in Q3 2011 are shown in figure 3. Eleven of the 12 acute cases (92%) were male. Fifty percent of cases were aged between 25 and 34 years (n=6) and 42% were aged over 34 years (n=5). The median age at notification was 30.5 years.

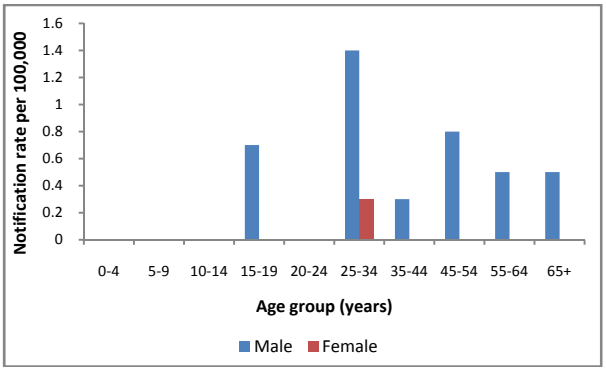

Figure 3. Age and sex specific rates per 100,000 population for acute cases of hepatitis B, Q3 2011

Risk factor and other enhanced data

Risk factor data were available for 83% (n=10) of acute cases notified in Q3 2011. Of these, 70% (n=7) were likely to have been sexually acquired. Four cases were men who have sex with men and three were heterosexuals.

Country of birth was specified for ten acute cases, six (60%) of whom were born in Ireland. Reason for testing was also known for ten cases, all of whom were tested because they were symptomatic.

Chronic cases

Age and sex

The age and sex specific notification rates for chronic cases of hepatitis B in Q3 2011 are shown in figure 4. Of the 118 chronic cases, 65 (55%) were male, 48 (41%) were female and the sex was not known for five

All data contained in this report are provisional (CIDR accessed 11th January 2012)

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cases. The median age at notification for males (31 years) was slightly higher than that for females (29 years). Eighty four percent (n=99) of chronic cases notified in Q3 were aged between 20 and 44 years.

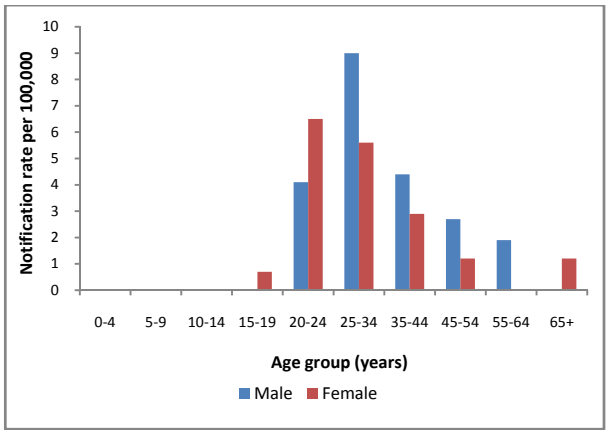

Figure 4. Age and sex specific rates per 100,000 population for chronic cases of hepatitis B, Q3 2011

Risk factor and other enhanced data

Enhanced data were limited for chronic cases notified in Q3 2011. Country of birth was known for 36 cases (31%). The most common countries were China (25%, n=9), Poland (14%, n=5), Nigeria (14%, n=5) and Ireland (11%, n=4). Where data were available, 28% of chronic cases were born in East Asia, 25% were born in Sub-Saharan Africa and 25% were born in Eastern or Central Europe.

The reason for testing was known for 30% of chronic cases (n=35). Of these, 29% (n=10) were identified through antenatal screening, 17% (n=6) through STI screening and 14% (n=5) through routine health screening.

Discussion

The number of hepatitis B notifications decreased by 13% in 2009 compared to 2008, and by 20% in 2010 compared to 2009. This pattern looks set to continue in 2011, with a 21% decrease in notifications for the first three quarters compared to the same time period in 2010.

The number of acute cases notified in Q3 remained relatively low. All except one of the acute cases were male and sexual exposure was the most commonly reported risk factor.

Enhanced data were limited for chronic cases, but where data were available, the majority were born in hepatitis B endemic countries and were likely to have been infected outside Ireland.

Hepatitis B notifications increased dramatically between 2000 and 2008 and have been decreasing since then. The increases were mostly attributable to large numbers of people immigrating to Ireland from hepatitis B endemic countries. Immigration to Ireland has decreased in recent years and this is likely to have contributed to the current decreasing trend in notifications.

Acknowledgements

HPSC would like to thank all those who provided data for this report - Departments of Public Health, laboratories and clinicians.

Report by Niamh Murphy & Dr Lelia Thornton, 26th January 2012

Case definition for hepatitis B (acute and chronic)

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

Laboratory criteria for diagnosis

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
Probable: 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