

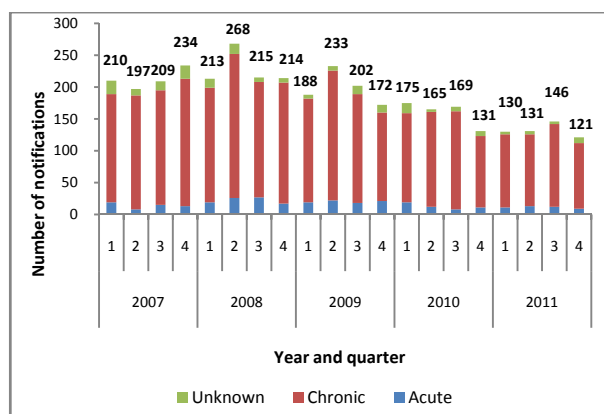
## Health Protection Surveillance Centre

### 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

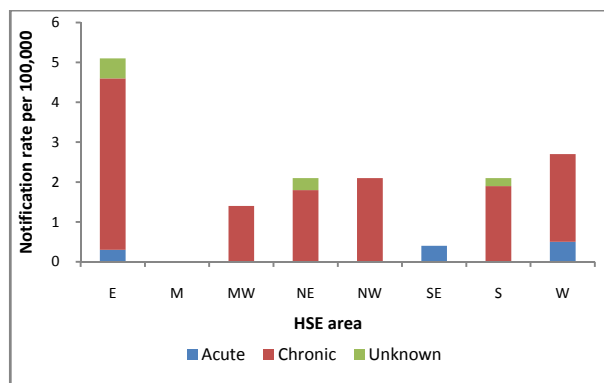
There were 121 notifications of hepatitis B in Q4 2011. This corresponds to a crude notification rate of 2.9 per 100,000 population. Quarterly trends since Q1 2007 are shown in figure 1.



**Figure 1.** Number of cases of hepatitis B notified, by acute/chronic status, Q1 2007 to Q4 2011

### Geographic distribution

The highest notification rates were in the HSE-East, which reported 64% of Q4 notifications (n=77, 5.1 per 100,000 population) (figure 2).



**Figure 2.** Hepatitis B notification rates, by HSE area and acute/chronic status, Q4 2011

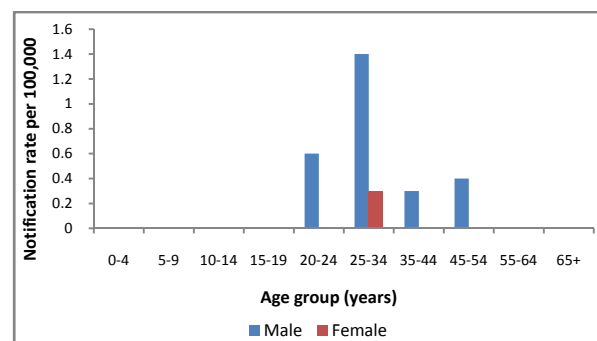
### Acute/chronic status

Ninety three percent (n=112) of hepatitis B notifications in Q4 contained information on the acute/chronic status of the case. Of these, 92% (n=103) of cases were chronically infected (long-term infection) and 8% (n=9) were acutely infected (recent infection).

### Acute cases

#### Age and sex

The age and sex specific notification rates for acute cases of hepatitis B in Q4 2011 are shown in figure 3. Eight of the nine acute cases (89%) were male. Sixty seven percent of cases were aged between 25 and 34 years (n=6). The median age at notification was 26 years.



**Figure 3.** Age and sex specific rates per 100,000 population for acute cases of hepatitis B, Q4 2011

### Risk factor and other enhanced data

Risk factor data were available for 78% (n=7) of acute cases notified in Q4 2011. Of these, 86% (n=6) were likely to have been sexually acquired. Five of the cases were heterosexual and one was a man who has sex with men (MSM).

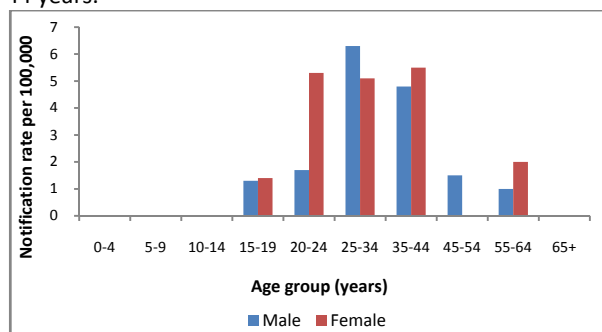
Country of birth was specified for eight acute cases, four (50%) of whom were born in Ireland. Reason for testing was known for all. The most common reasons for testing were symptomatic (42%, n=5) and STI screening (17%, n=2).

### Chronic cases

#### Age and sex

The age and sex specific notification rates for chronic cases of hepatitis B in Q4 2011 are shown in figure 4. Of the 103 chronic cases, 49% (n=50) were female, 48% (n=49) were male and sex was not known for four cases. The median age at notification for both males and females was 32 years. Eighty five percent (n=88) of

chronic cases notified in Q4 were aged between 20 and 44 years.



**Figure 4.** Age and sex specific rates per 100,000 population for chronic cases of hepatitis B, Q4 2011

### Risk factor and other enhanced data

Enhanced data were limited for chronic cases. Country of birth was known for 32 (31%), 31 of whom were born in hepatitis B endemic countries. The most common countries of birth were Poland (28%, n=9) and China (19%, n=6). Where data were available, 41% of chronic cases were born in Eastern or Central Europe, 31% were born in Sub-Saharan Africa and 25% were born in Asia.

The reason for testing was known for 45% of chronic cases (n=46). Of these, 22% (n=10) were identified through antenatal screening, 20% (n=9) through asylum seeker screening, 15% (n=7) through routine health screening and 11% (n=5) through STI screening.

### Annual summary, 2011 (provisional)

There were 528 notifications of hepatitis B in 2011 compared to 640 in 2010. This corresponds to a 17.5% decrease.

The number of acute cases notified in 2011 remained relatively low (n=45). Sixty two percent of acute cases

were aged between 20 and 44 years and 33% were aged between 45 and 64 years. Eighty four percent of acute cases were male. Where risk factor data were available (89% of cases), sexual exposure was the most commonly reported risk factor (n=31, 78%). Of the cases reported to have been acquired sexually, 19 were heterosexual, 11 were MSM and sexual orientation was not known for the remaining case.

Notifications of chronic cases of hepatitis B decreased by 17% in 2011 compared to 2010 (n=461 compared to n=555). The median age at notification for chronic cases was 31 years and 85% were aged between 20 and 44 years. Fifty percent of chronic cases were male. Enhanced data were limited, but where data were available, the majority of chronic cases were born in hepatitis B endemic countries and were likely to have been infected outside Ireland.

### Discussion

The number of acute cases of hepatitis B acquired in Ireland each year remains relatively low and sexual transmission continues to be the predominant mode of infection.

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 of chronic cases.

### 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, 23 April 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

All data contained in this report are provisional (CIDR accessed 17<sup>th</sup> April 2012)

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