

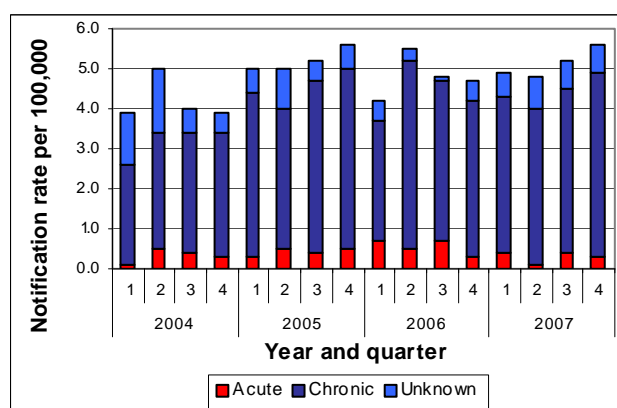
## Health Protection Surveillance Centre

### 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 minority of chronic cases.

### Results

There were 239 notifications of hepatitis B in Q4 2007. This was an increase compared to the number of cases for the previous quarter (n=217) and for Q4 2006 (n=201). Figure 1 shows crude notification rates by quarter since 2004.



**Figure 1.** Crude quarterly notification rates per 100,000 population for hepatitis B, 2004-2007

### Acute/chronic status

Eighty seven percent (n=208) of notifications of hepatitis B in Q4 contained information on the acute/chronic status of the case. Of these, ninety five percent (n=197) of cases were chronic and 5% (n=11) were acute.

### Geographic distribution

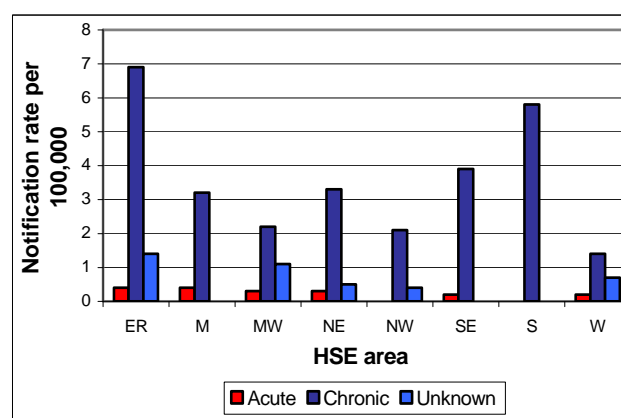
The rates per 100,000 population for Q4, by HSE area and acute/chronic status, are shown in figure 2. The highest rates were in the HSE-E and HSE-S, which reported 54% (8.7 per 100,000 population) and 15% (5.8 per 100,000 population) of all Q4 cases, respectively.

### Age and sex

Age and sex specific notification rates for acute and chronic cases of hepatitis B are shown in figures 3a and

3b, respectively. Of the eleven acute cases, eight (73%) were male and three (27%) were female. Eighty two percent were aged between 20 and 44 years.

The sex distribution of the chronic cases was more even. Fifty three percent of cases were male (n=104), 42% were female (n=82) and sex was not specified for 11 cases. The age distribution for males was slightly older than that for females. Eighty two percent (n=162) of all chronic cases notified in Q4 were aged between 20 and 44 years.



**Figure 2.** Crude notification rates per 100,000 population for hepatitis B cases notified in Q4 2007 by acute/chronic status and HSE area

### Risk factors

Some enhanced surveillance data were entered on CIDR for 91% of acute cases (n=10) and 43% of chronic cases (n=85) in Q4.

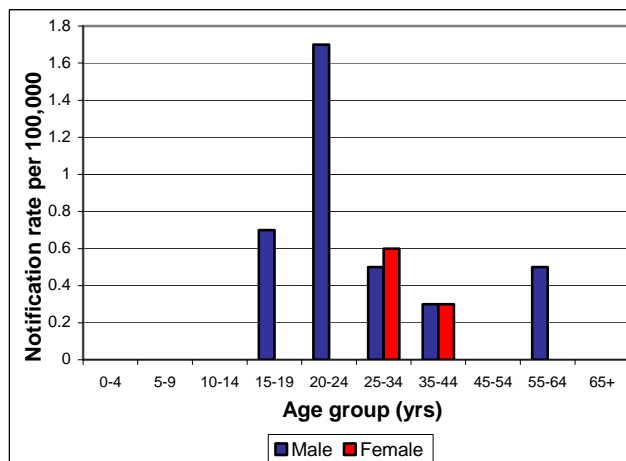
Seven acute cases were likely to have been associated with sexual exposure. Four of these were heterosexual, one was a man who had sex with men and sexual orientation was not identified for the remaining two. Two further cases were born in an endemic country and one of these indicated that the infection was likely to have been sexually acquired.

County of birth was specified for ten acute cases, seven of whom were born in Ireland. Reason for testing was also known for ten cases. Seven were tested because they experienced symptoms.

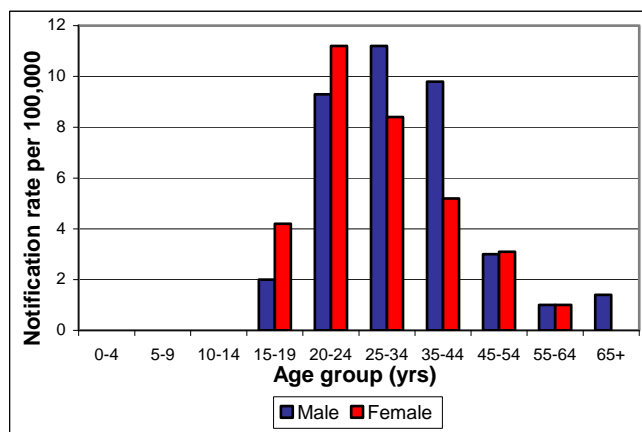
The number of chronic cases for whom risk information was available was limited. Data on asylum seeker status or country of birth were available for 83 cases, 78% of whom were asylum seekers or were known to have been born in a country with high ( $\geq 8\%$ ) or intermediate (2-

7%) hepatitis B endemicity. Country of birth was identified for 76 cases. Where this was available, the most common regions of birth were Eastern and Central Europe (29%, n=22) and Sub-Saharan Africa (24%, n=18). Thirteen chronic cases were born in Ireland.

The reason for testing was known for 85 chronic cases. Thirty one percent (n=26) were identified through antenatal screening and 22% (n=19) were identified as a result of asylum seeker screening.



**Figure 3a.** Age and sex specific rates per 100,000 population for acute cases of hepatitis B notified in Q4 2007



**Figure 3b.** Age and sex specific rates per 100,000 population for chronic cases of hepatitis B notified in Q4 2007

## Discussion

Where acute/chronic status was known, 95% of Q4 hepatitis B notifications were chronic. The limited data that were available indicate that most chronic cases were born in countries of intermediate or high hepatitis B endemicity. However, the proportion of patients for whom this information was available was low and data may not be representative. The number of acute cases was relatively low and sexual acquisition remained the predominant mode of transmission.

### Provision annual summary for 2007

Hepatitis B data for 2007 have not yet been fully validated. However, provisional data show a slight increase in the annual number of hepatitis B notifications, with 873 cases notified compared to 813 cases in 2006. Overall in 2007, 80% of cases were chronic (n=702), 6% were acute (n=51) and status was not known for 14%. Sixty percent of all 2007 cases were notified by the HSE-E (n=524, rate=35 per 100,000 population).

#### Acute cases

Seventy eight percent of acute cases were male (n=40), 20% were female (n=10) and sex was not known for 1 case. Eighty six percent were aged between 20 and 54 years and the median age at notification was 29.5 for females and 28.5 for males. Where risk factor was known, 63% of acute cases were thought to have been sexually acquired (n=24). A further 16% were born in an endemic country (n=6).

#### Chronic

Fifty one percent of chronic cases were male (n=356), 44% were female (n=369) and sex was not known for 37 cases. Ninety percent were aged between 20 and 54 years (n=630) and the median age at notification was 30 for females and 34 for males. For chronic cases whose country of birth was known, over 87% were born in an country of intermediate or high hepatitis B endemicity.

### 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, 2<sup>nd</sup> April 2008

### Case definition for hepatitis B (acute and chronic)<sup>1</sup>

**Clinical description** In symptomatic cases, clinical picture compatible with hepatitis, i.e. discrete onset of symptoms and/or jaundice or elevated serum aminotransferase levels. Asymptomatic cases are common.

#### Hepatitis B (acute)

##### Laboratory criteria for diagnosis

One of the following:

- IgM antibody to hepatitis B core antigen (anti-HBc) positive
- Detection of hepatitis B virus (HBV) nucleic acid in serum

##### Case classification

Possible:

N/A

Probable:

A symptomatic case that is HBsAg positive and has a clinical picture compatible with an acute hepatitis

Confirmed:

A case that is laboratory confirmed

#### Hepatitis B (chronic)

##### Laboratory criteria for diagnosis

One of the following:

- Hepatitis B surface antigen (HBsAg) positive **and** antibody to hepatitis B core antigen (anti-HBc) positive **and** IgM antibody to hepatitis B core antigen negative
- Persistence for more than 6 months of either HBsAg or HBV nucleic acid in serum.

##### Case classification

Possible:

N/A

Probable:

N/A

Confirmed:

A case that is laboratory confirmed

1. Case definitions for notifiable diseases. Infectious Diseases (Amendment) (No. 3) regulations 2003 (SI NO. 707 of 2003). National Disease Surveillance Centre, February 2004.