

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

Hepatitis B notifications decreased by 11% in quarters 3 and 4 2009 compared to the first half of the year. There were 210 notifications of hepatitis B in Q3 2009 and 180 in Q4. These correspond to crude notification rates of 5.0 and 4.2 per 100,000 population. Quarterly trends since Q1 2004 are shown in figure 1.

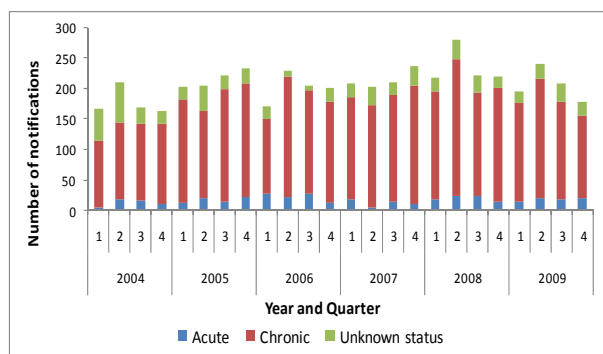


Figure 1. Number of cases of hepatitis B notified, by acute/chronic status, Q1 2004-Q4 2009

Geographic distribution

The highest notification rates were in the HSE-East, which reported 60% of Q3 notifications (n=125, 8.3 per 100,000 population) and 47% of Q4 notifications (n=84, 5.6 per 100,000 population) (figure 2).

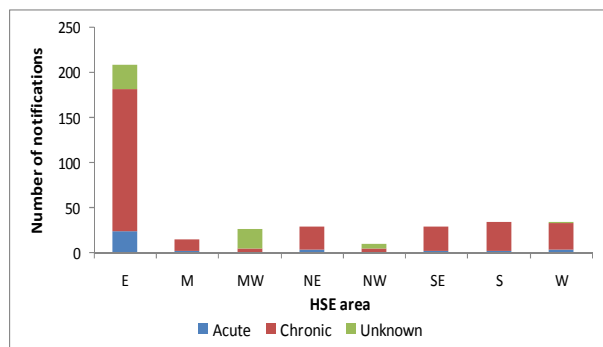


Figure 2. Number of hepatitis B notifications, by HSE area and acute/chronic status, Q3 & Q4 2009

Acute/chronic status

Eighty six percent (n=335) of hepatitis B notifications in Q3 & Q4 contained information on the acute/chronic status of the case. Of these, 88% (n=296) of cases were chronically infected (long-term infection) and 12% (n=39) were acutely infected (recent infection).

Acute cases

Age and sex

The quarterly age and sex specific notification rates for acute cases of hepatitis B in Q3 and Q4 2009 are shown in figure 3 (rates were averaged over the two quarters). Of the 39 acute cases, 87% (n=34) were male and 13% (n=5) were female. Most cases were in young to middle aged adults with 87% (n=34) of acute cases aged between 20 and 54 years. The median age at notification was much younger for females (23 years) than for males (37 years).

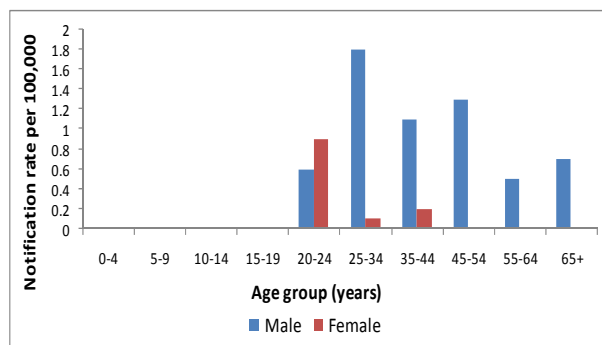


Figure 3. Quarterly age and sex specific rates per 100,000 population for acute cases of hepatitis B, Q3 & Q4 2009 (averaged over the two quarters)

Risk factor and other enhanced data

Some risk factor data were available for 77% of acute cases in Q3 and Q4 2009 (n=30). Of these, 60% (n=18) reported that their most likely risk factor was sexual exposure. Ten were men who have sex with men (MSM) and eight were heterosexual.

Country of infection was known for 19 acute cases. Of these, 79% were infected in Ireland (n=15). Country of birth was specified for 25. Fourteen (56%) were born in Ireland, 3 were born in Poland (12%) and 3 were born in Brazil (12%). Where reason for testing was known, 72% (n=21) of acute cases were tested because they were symptomatic.

Chronic cases

Age and sex

The quarterly age and sex specific notification rates for chronic cases of hepatitis B in Q3 and Q4 2009 are shown in figure 4 (rates were averaged over the two quarters). Of the 296 chronic cases, 54% (n=161) were male, 44% (n=129) were female and the sex was not known for 6. Eighty seven percent (n=258) were aged between 20 and 54 years. The median age at notification for males (33 years) was higher than that for females (29 years).

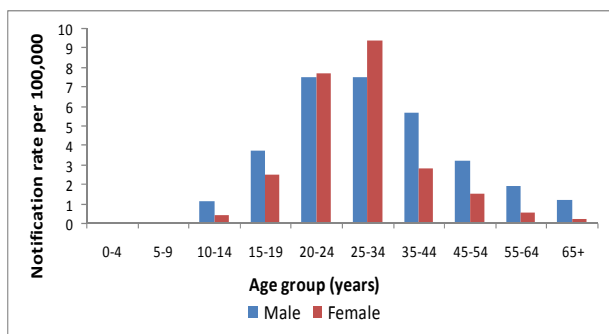


Figure 4. Quarterly age and sex specific rates per 100,000 population for chronic cases of hepatitis B, Q3 & Q4 2009 (averaged over the two quarters)

Risk factor and other enhanced data

Country of birth or asylum seeker status was known for 41% (n=111) of the chronic cases notified in Q3 and Q4. Of these, 87% (n=105) were born in hepatitis B endemic countries (hepatitis B surface antigen prevalence $\geq 2\%$) or were classified as asylum seekers. Where region of birth was known (n=108), the most common regions were Eastern and Central Europe (n=35, 32%), Sub-Saharan Africa (n=31, 29%) and Asia (n=26, 24%). Twelve chronic cases (11%) were born in Ireland.

The reason for testing was known for 159 chronic cases. Thirty seven percent (n=59) were identified through antenatal screening programmes, 16% (n=26) were diagnosed in STI settings and 15% (n=23) were identified through asylum seeker screening programmes.

Provisional summary of 2009 data

There were 828 notifications of hepatitis B in 2009 compared to 942 in 2008. Acute/chronic status was known for 88%. Of these, 90% (n=655) were chronically infected and 10% (n=75) were acutely infected. The overall number of hepatitis B notifications decreased by 12% in 2009, with acute cases decreasing by 9% and chronic cases decreasing by 14% compared to 2008.

Risk factor data were available for 73% of acute cases. Of these 64% were likely to have been sexually acquired.

Some enhanced data were available for 42% of chronic cases and 86% of these were born in a hepatitis B endemic country or were asylum seekers.

Discussion

In 2008 there had been a significant increase in the number of male acute cases and an increase in the proportion of males who reported that MSM sex was their most likely risk factor. The decline of acute cases in 2009 is mostly accounted for by a decline in MSM cases. Overall male acute cases decreased by 10% and where risk factor data were reported, male MSM acute cases decreased by 11%. However, most acute cases continue to be Irish born males who are likely to have acquired hepatitis B sexually.

Enhanced data were more limited for chronic cases, but the majority were born in hepatitis B endemic countries and were infected outside of Ireland. The decline in chronic cases in 2009 may be related to a decrease in immigration to Ireland in the past few years. Both the number of new asylum applications and the number of new work permits issued decreased between 2007 and 2009 (www.orac.ie, www.entemp.ie).

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, 25th March 2010

Case definition for hepatitis B (acute and chronic)¹

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.