Report on Hepatitis B Notifications in Q4 2012 and Summary of 2012 data

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 153 notifications of hepatitis B in Q4 2012. This represents an increase of 11% compared to Q3 2012 (n=138). This corresponds to a crude notification rate of 3.6 per 100,000 population. Quarterly trends since Q1 2009 are shown are in figure 1.

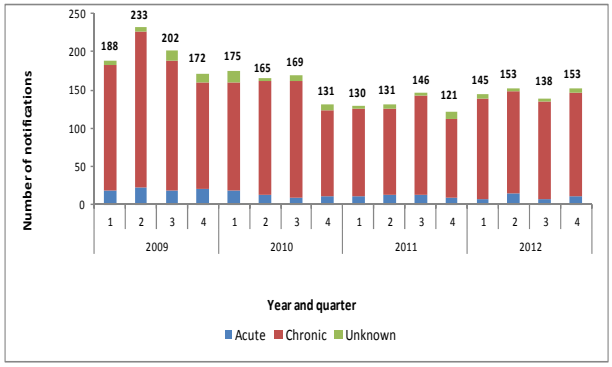

Figure 1. Number of cases of hepatitis B notified, by acute/chronic status, Q1 2009 to Q4 2012

Geographic distribution

The highest notification rate was in the HSE-East, which reported 62% of Q4 notifications (n=95, 6.3 per 100,000 population) (figure 2).

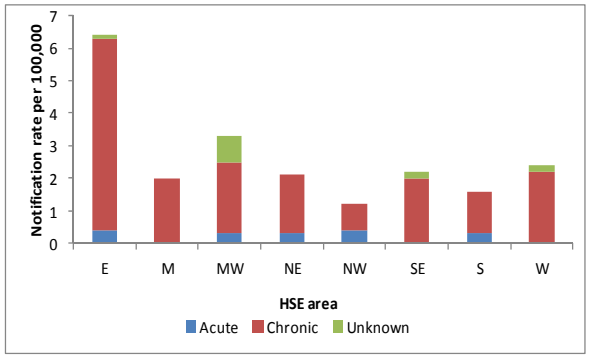

Figure 2. Hepatitis B notification rates, by HSE area and acute/chronic status, Q4 2012

Acute/chronic status

Ninety six percent (n=147) of hepatitis B notifications in Q4 contained information on the acute/chronic status of the case. Of these, 93% (n=136) of cases were chronically infected (long-term infection) and 7% (n=11) 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 2012 are shown in figure 3. Six cases (54%) were female and five were male (46%). The cases ranged in age from 21 to 53 years of age. The median age at notification was 33 years.

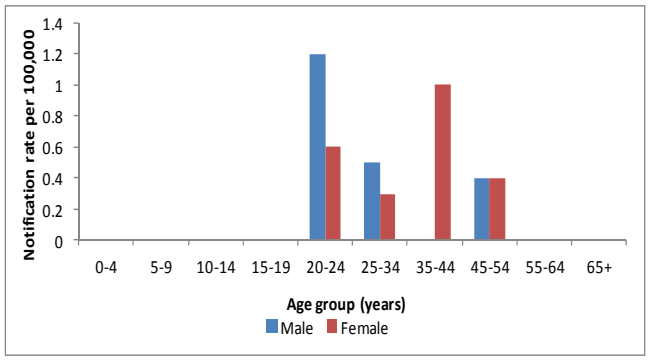

Figure 3. Age and sex specific rates per 100,000 population for acute cases of hepatitis B, Q4 2012

Risk factor and other enhanced data

Risk factor data were available for 73% (n=8) of acute cases notified in Q4 2012. Of these, 88% (n=7) were likely to have been sexually acquired.

Country of birth was specified for eight acute cases (73%), of whom five were born in Ireland, two in Asia and one in central Europe. Reason for testing was known for ten (91%) acute cases. The reasons for testing were STI screening (50%, n=5), symptomatic (30%, n=3) and antenatal screening (20%, n=2).

Chronic cases

Age and sex

The age and sex specific notification rates for chronic cases of hepatitis B in Q4 2012 are shown in figure 4. Of the 136 chronic cases, 44% (n=60) were female, 53% (n=72) were male and sex was not known for four cases. The median age at notification for males was 34 years compared to 30 years for females. Eighty six percent (n=117) of chronic cases notified in Q4 were aged between 20 and 44 years.

Risk factor and other enhanced data

Some risk factor and other enhanced data were available for 47% (n=64) of the chronic cases notified in Q4 2012. Of these, 64% (n=41) were born in hepatitis B endemic countries (hepatitis B surface antigen prevalence ≥ 2%) or were classified as asylum seekers. Additionally, 23% (n=15) were likely to have been acquired sexually.

Country of birth was known for 54 chronic cases. Where data were available, 41% (n=22) of chronic cases were born in Eastern or Central Europe, 30% (n=16) were born in Sub-Saharan Africa, 17% (n=9) were born in Asia, 9% (n=5) were

HSE-Health Protection Surveillance Centre (HPSC), 25-27 Middle Gardiner St, Dublin 1, Ireland, Tel: +353 1 8765300, Fax: +353 1 8561299, www.hpsc.ie

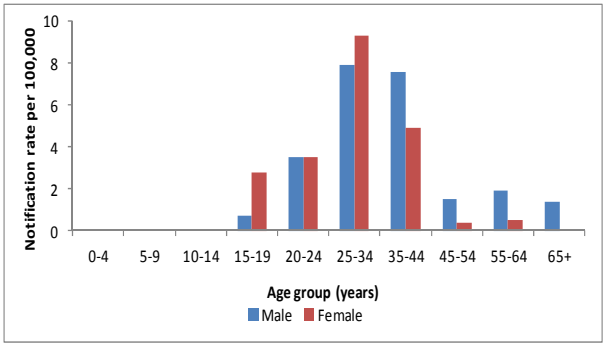

Figure 4. Age and sex specific rates per 100,000 population for chronic cases of hepatitis B, Q4 2012

born in Western Europe and 4% (n=2) were born in the Middle East.

The reason for testing was known for 69% of chronic cases (n=94). The reasons were antenatal screening (35%, n=33), routine health screening (19%, n=18), STI screening (14%, n=13) and asylum seeker screening (2%, n=2). Seventeen per cent (n=16) were previously known cases and 2% (n=2) were symptomatic.

Annual Summary, 2012 (provisional)

There were 589 notifications of hepatitis B in 2012 compared to 528 in 2011. This corresponds to a 12% increase.

The number of acute cases in 2012 remained low (n=37) and corresponds to a small decrease compared to 2011 cases (n=45). Seventy three per cent of acute cases were aged between 20 and 44 years (n=27) and 78% (n=29) of acute cases were male. Where risk factor was available (78% of cases), sexual exposure was the most commonly reported risk factor (n=26, 90%), of which seven were reported as men who have sex with men (MSM).

Chronic hepatitis B notifications increased by 15% in 2012 (n=531) compared to 2011 (n=461). The median age at notification for chronic cases was 32 years and 81% were aged between 20 and 44 years. Fifty six percent of chronic cases were male. Enhanced data were only available for 46% of chronic cases and the majority of chronic cases were born in hepatitis B endemic countries.

Hepatitis B co-infections

An estimated 10% of HIV-infected persons worldwide have chronic hepatitis B. HIV infection negatively impacts on the course of hepatitis B infection leading to increased rates of persistent infection, higher hepatitis B viral loads, increased cirrhosis and liver related mortality. There were 12 co-infections of chronic hepatitis B and HIV during 2012. Sixty seven per cent of these cases were male (n=8) and the median age at notification was 33 years. Country of birth was known for 92% (n=11) of these co-infections, of which 55% (n=6) were born in sub Saharan Africa, 18% (n=2) were born in South America, 18% (n=2) were born in Europe and the remaining case was born in North America. Risk factor information was available for 67% (n=8) of these cases, of which 88% (n=7) were born in countries with high hepatitis B endemicity. One case was acquired through sexual exposure.

Hepatitis B & hepatitis C co-infection can also lead to more severe liver disease and an increased risk of liver cancer. There were seven co-infections of hepatitis B and C. Eighty six per cent of these cases were male (n=6) and the median age at notification was 34. Enhanced data were limited for these cases. Country of birth was known for 3 cases, one case was born in central Europe, one in Ireland and one in Asia. Risk factor data were available for 2 cases, one of which was an injecting drug user, the other being acquired sexually. Two cases were co-infected with hepatitis C, B & HIV.

Acknowledgements

HPSC would like to thank all those who provided data for this report - Departments of Public Health, laboratories and clinicians.
Report by Joanne Moran & Dr Lelia Thornton, 5th March 2013

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

HSE-Health Protection Surveillance Centre (HPSC), 25-27 Middle Gardiner St, Dublin 1, Ireland, Tel: +353 1 8765300, Fax: +353 1 8561299, www.hpsc.ie