Report on Hepatitis C Notifications Quarters 1&2 2014

Health Protection Surveillance Centre

Introduction

Hepatitis C became a notifiable disease under an amendment to the Infectious Diseases Regulations 1981, implemented on 1st January 2004 (S.I 707 of 2003). Prior to this, cases of hepatitis C could be notified as "viral hepatitis type unspecified".

Results

In Q1 and Q2 2014 there were 160 (3.5/100,000 population) and 157 (3.4/100,000 population) notifications of hepatitis C, respectively. This is a 24.5% decrease compared to the previous 6 months (n=420) and is a continuation of a recent downward trend in hepatitis C notifications (-16% in 2013 compared to 2012, and -19% in 2012 compared to 2011). (figure 1). Hepatitis C has declined by 45% between peak levels in 2007 (n=1,539) and 2013 (n=847).

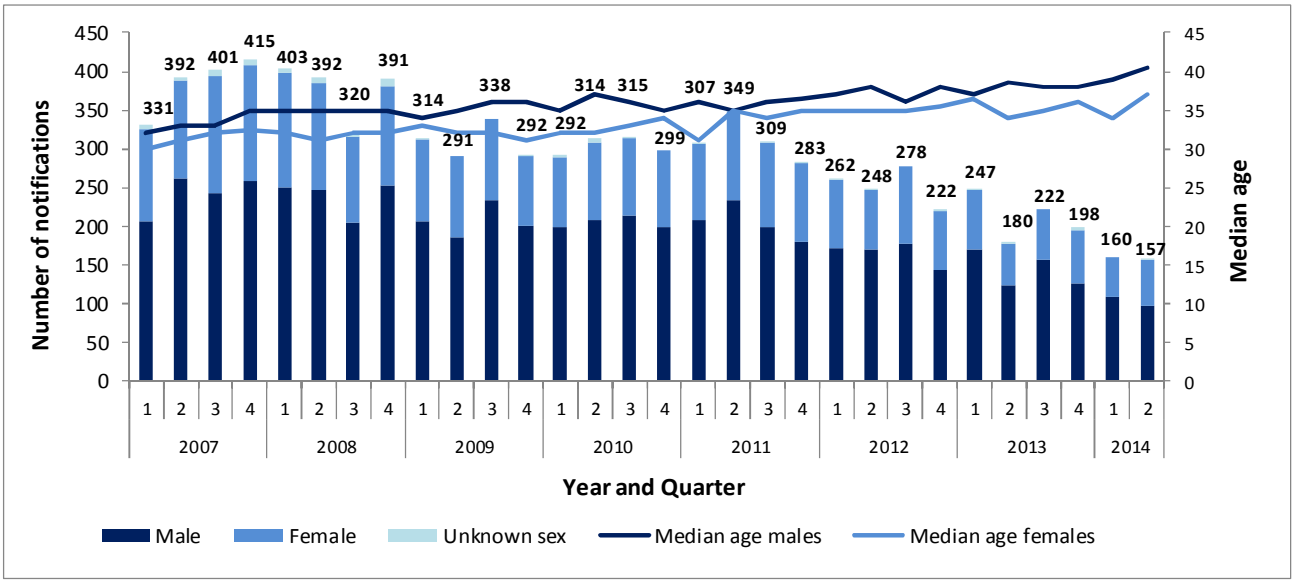

Figure 1. Number of notifications of hepatitis C and median age at notification, by sex, Q1 2007 to Q2 2014

Geographic distribution

Notification rates for each HSE area for the past four quarters are shown in figure 2. The notification rate was significantly higher in HSE-E compared to the rest of Ireland. Seventy percent (n=112, 6.9/100,000 population) of Q1 2014 cases, and 69% (n=108, 6.7/100,000 population) of Q2 2014 cases were reported by the HSE-East (figure 2)

Age and sex

Sixty five percent (n=206) of hepatitis C cases in Q1 & 2 2014 were male and 35% (n=110) were female. The sex of one case was not known. The median age at notification was 39.5 years for males and 36 years for females. Eighty four percent (n=266) of cases were aged between 25 and 54 years (figures 1&3).

Risk factor data

Some information on most likely risk factor was available for 59% (n=95) of cases in Q1 and 30% (n=47) of cases in Q2 2014. Sixty two percent (n=88) of these were injecting drug users, 16% (n=22) were born in hepatitis C endemic countries or were asylum seekers, 6% (n=9) were likely to have been infected sexually, 6% (n=9) were infected through contaminated blood/blood products and 3% (n=4) were children aged <2 years who were infected vertically (three born in Ireland, one born outside Ireland). Other exposures were reported for 4 cases and it was not possible to identify a risk factor for six cases despite follow up being carried out. Five of the cases infected through contaminated blood or blood products were infected outside of Ireland and the remaining four were infected in Ireland many years

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ago and notified for the first time in 2014. Figure 4 shows recent trends in most likely risk factor for hepatitis C in Ireland.

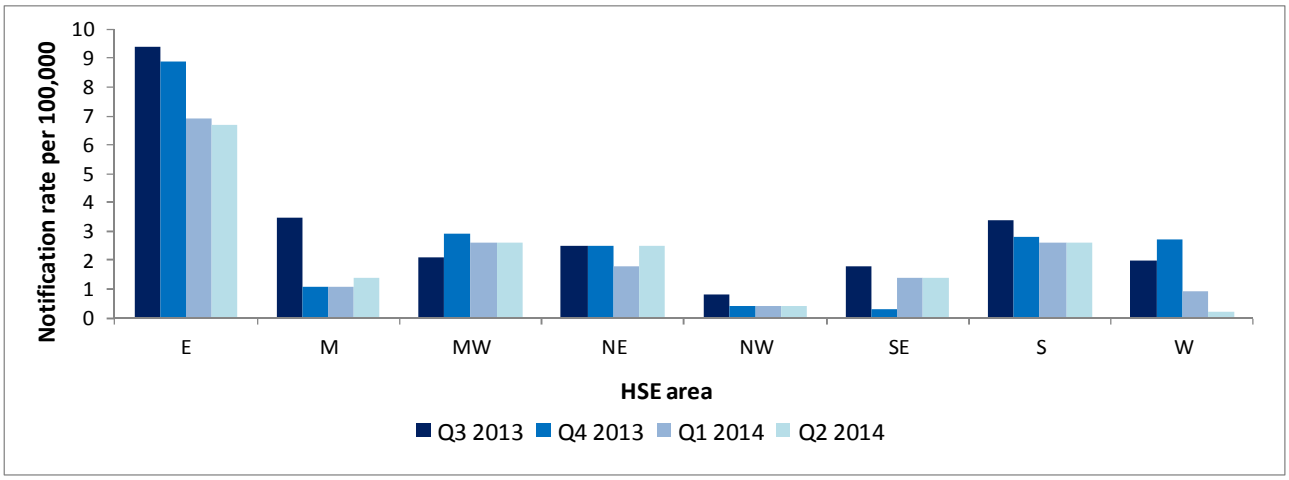

Figure 2. Hepatitis C notification rates per 100,000 population, by HSE area, from Q3 2013 to Q2 2014

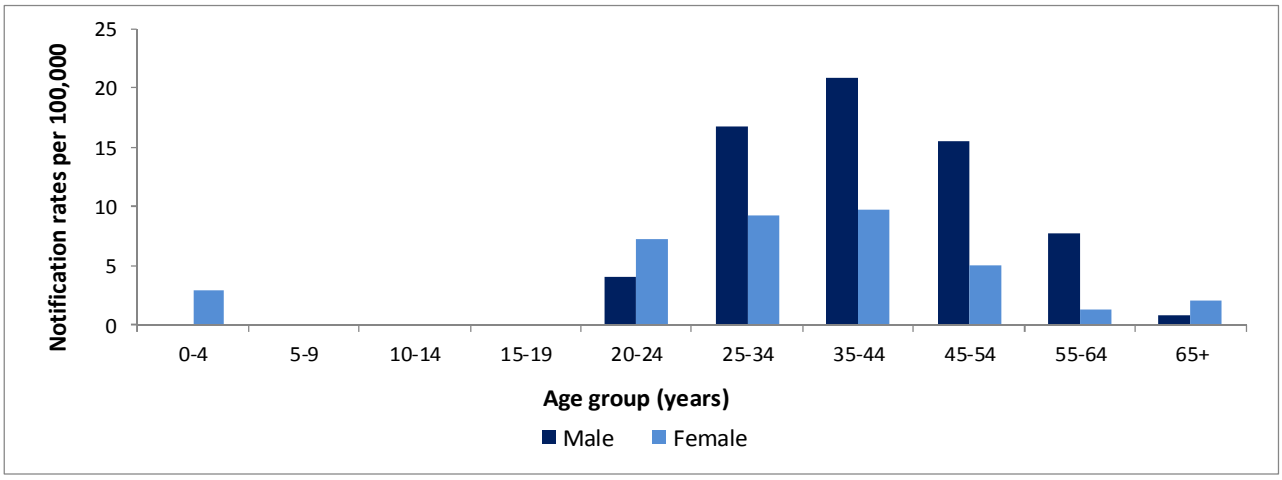

Figure 3. Age and sex specific rates per 100,000 population for hepatitis C notifications, Q1&2 2014

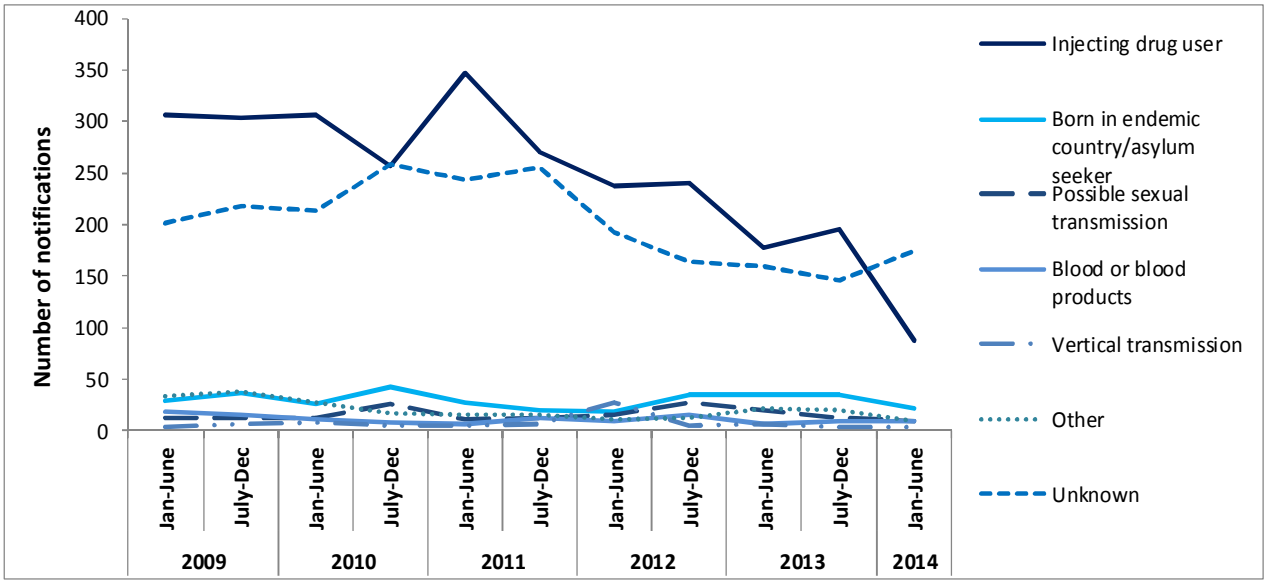

Figure 4. Number of hepatitis C notifications by risk factors, by six monthly time periods, January 2009 to June 2014

Country and region of birth

Data on country of birth were available for 30% (n=96) of cases of hepatitis C in Q1 and Q2 2014. Where information was available, the most common regions of birth were Western Europe (61%, n=58), Central or Eastern Europe (29%, n=28) and Asia (5%, n=5). The most common countries of birth were Ireland (54%, n=52), Poland (9%, n=9), Romania (8%, n=8), Pakistan (3%, n=3) and Russian Federation (3%,n=3). Figure 5 shows most likely risk factor by region of birth for the 96 cases where country of birth was known.

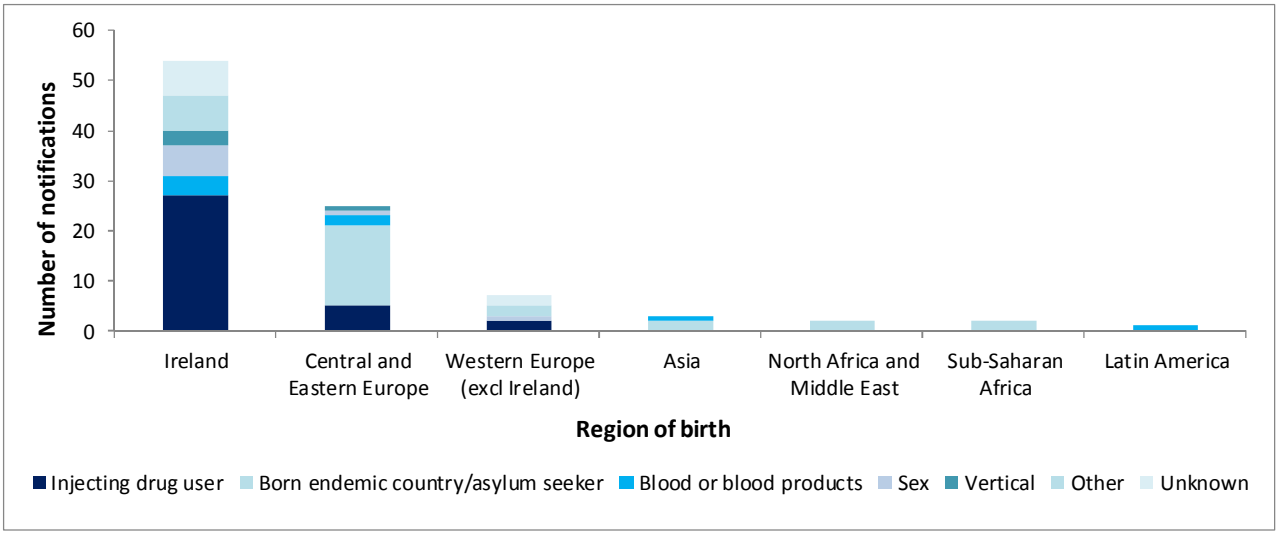

Figure 5. Number of hepatitis C notifications by risk factor and country/region of birth (where region of birth known, 30%, n=96), Q1 & Q2 2014

Genotype

Hepatitis C genotype data were collected retrospectively from the NVRL and the Molecular Diagnostic & Research Laboratory in University College Cork and were available for 36% of notifications between Q1 2013 and Q2 2014. Of these, 63% (n=265) were genotype 1, 29% (n=122) were genotype 3, 4% (n=18) were genotype 2, 3% (n=13) were genotype 4 and 0.5% (n=2) were genotype 6. Subtype was available for 92% (n=225) of genotype 1 cases and 75% were genotype 1a.

HIV and hepatitis B co-infections

Fifteen of the hepatitis C cases notified in Q1 & 2 2014 were co-infected with HIV and one was co-infected with hepatitis B.

Discussion

Hepatitis C notifications have been decreasing in recent years. Some of this decline may be explained by the introduction of new case definitions, explicitly excluding the notification of resolved cases, in 2012. Data completeness has also improved in recent years and this has facilitated better deduplication of notifications. However, overall indications are that the incidence of hepatitis C in Ireland is decreasing.

Where information on risk factor was available, 62% of cases were drug users who were likely to have been infected through unsafe injecting practices. Anecdotally, the proportion of drug users who are injecting is decreasing and the incidence of hepatitis C seems to be decreasing in this population.

Risk factor data were not available for 41% of cases of hepatitis C in Q1 and Q2 2014. The distribution of risk factors for these cases may differ from cases where data were available. We are currently exploring options for investigating a sample of cases with unknown risk factor in order to better understand the epidemiology of hepatitis C in Ireland.

Country of birth information was only available for 30% of cases and the risk factor attributed to most of these cases was the fact that they were born in an endemic country of were asylum seekers. Injecting drug use is likely to be a significant risk factor for cases from Eastern and Central Europe, in particular. Contaminated blood/blood products or other nosocomial exposures may play a larger role in cases born in African and Asian countries.

Acknowledgements

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Case definition for hepatitis C

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

Laboratory criteria for diagnosis

Hepatitis C (acute)

At least one of the following two:

- Recent HCV seroconversion (prior negative test for hepatitis C in last 12 months)
- Detection of hepatitis C virus nucleic acid (HCV RNA) or hepatitis C virus core antigen (HCV-core) in serum/plasma AND no detection of hepatitis C virus antibody (negative result)

Hepatitis C (chronic)

- Detection of hepatitis C virus nucleic acid (HCV RNA) or hepatitis C core antigen (HCV-core) in serum/plasma in two samples taken at least 12 months apart

Hepatitis C (unknown status)

Any case which cannot be classified according to the above description of acute or chronic infection and having at least one of the following three:

- Detection of hepatitis C virus nucleic acid (HCV RNA)
- Detection of hepatitis C virus core antigen (HCV-core)
- Hepatitis C virus specific antibody (anti-HCV) response confirmed by a confirmatory (e.g. immunoblot) antibody test in persons older than 18 months without evidence of resolved infection*

Case classification

Possible: N/A
Probable: N/A
Confirmed: Any person meeting the laboratory criteria

Note: Resolved infection should not be notified

*Resolved infection: Detection of hepatitis C virus antibody and no detection of hepatitis C virus nucleic acid (HCV RNA negative result) or hepatitis C virus core antigen (HCV-core negative result) in serum/plasma

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