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”. The 2016 census data are used for all data expressed as rates per 100,000 population in this report.

Results

In Q1 and Q2 2018 there were 172 (3.7/100,000 population) and 157 (3.4/100,000 population) notifications of hepatitis C, respectively. This was very similar to the previous 6 months. Hepatitis C notifications declined by 60% between peak levels in 2007 (n=1,537) and 2017 (n=620). However recent trends indicate that the notification rate is stabilising (figure 1).

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 six percent of Q1 2018 cases (n=131, 7.7/100,000 population), and 74% of Q2 2018 cases (n=116, 6.8/100,000 population) were reported by HSE-East.

Age and sex

Almost three quarters (73%, n=241) of hepatitis C cases in Q1 & 2 2018 were male and 27% (n=87) were female. The sex of one case was not reported. Eighty percent (n=263) of cases were aged between 25 and 54 years (figure 3). The median age at notification for cases of hepatitis C has gradually increased from 31 years in 2004 to 41 years in the first six months of 2018 (figure 1).
Risk factor

Some information on most likely risk factor was available for 41% (n=134) of cases of hepatitis C reported in Q1 & Q2 2018. Three quarters (75%, n=100) of these were people who inject drugs (PWID), 8% (n=11) were likely to have been infected sexually (four were men who have sex with men (MSM), three were heterosexual and sexual orientation was not known for the remaining four), 3% (n=4) reported their most likely risk factor as tattooing/body piercing and 2% (n=2) were infected through contaminated blood/blood products outside Ireland or in Ireland many years ago. Other exposures were reported for four cases and it was not possible to identify a risk factor for thirteen cases despite Public Health follow up. Figure 4 shows recent trends in most likely risk factor for cases of hepatitis C in Ireland.

The number of hepatitis C cases identified as MSM increased significantly in 2016 (n=31 compared to n=8 in 2015), but declined in 2017 (n=17). Cases of hepatitis C in MSM continued to be identified in the first two quarters of 2018. In addition to the four cases with MSM sexual exposure entered as their most likely risk factor for infection, five cases, with no information on risk factor for hepatitis C, had MSM entered as the mode of transmission for another infectious disease on CIDR or were notified by a health clinic for gay men. The risk of sexually transmitted hepatitis C appears to be particularly high in those who are co-infected with HIV. Sixty two percent (n=40) of the 65 hepatitis
C cases identified as MSM between January 2015 and the first half of 2018 were HIV positive at the time of HCV diagnosis. Over half (52%, n=34) had other recent sexually transmitted infections, particularly gonorrhoea, syphilis and chlamydia (figure 5).

Figure 4. Number of hepatitis C notifications by most likely risk factors, Q1 2007 to Q2 2018

Figure 5. Number of hepatitis C cases identified as MSM between 2012 and Q2 2018, by HIV status at the time of hepatitis C notification and other recent STI* infections

*Gonorrhoea, syphilis, chlamydia, lymphogranuloma venereum or genital herpes simplex in the same year as hepatitis C notification or in the year prior to hepatitis C notification

Country and region of birth
Data on country of birth were available for 36% (n=117) of cases of hepatitis C in Q1 and Q2 2018 and over a third (35%) were born in hepatitis C endemic countries (>2% anti-HCV prevalence). Where information on country of birth was available, 44% (n=51) of cases were Irish, 37% (n=43) were from Central or Eastern Europe, 7% (n=8) were Asian, 5% (n=6) were born in western European countries other than Ireland, 4% (n=5) were African, 3% (n=3) were from Latin America and the remaining case was from another region. However, information on country of birth is significantly more likely to be reported for non-Irish nationals and the actual proportion of hepatitis C cases that
were born in Ireland is likely to be higher than this. Figure 6 shows the most likely risk factor by region of birth for the 117 cases for whom country of birth was known.

![Diagram showing number of hepatitis C notifications by risk factor and country/region of birth](image)

**Figure 6.** Number of hepatitis C notifications by risk factor and country/region of birth (where region of birth known, 36%, n=117), Q1 & Q2 2018

*Possible sexual exposure includes MSM

**Genotype**

Hepatitis C genotype data were collected retrospectively from the National Virus Reference Laboratory and were available for one third (n=1516) of hepatitis C notifications between 2012 and Q2 2018. Of these, 60% (n=914) were genotype 1, 33% (n=500) were genotype 3, 3% (n=52) were genotype 2, 3% (n=47) were genotype 4 and 3 cases were genotype 6. Subtype was available for 93% (n=848) of genotype 1 cases, 76% of which were genotype 1a.

**Co-infections with HIV, hepatitis B and sexually transmitted infections**

Four percent (n=13) of the hepatitis C cases notified in Q1 & 2 2018 were co-infected with HIV. This is similar to most years between 2012 and 2017. One case of hepatitis C was also infected with hepatitis B and four cases had recently been diagnosed with other sexually transmitted infections.

**Discussion**

Hepatitis C notifications have decreased in recent years. The decline was fairly dramatic in 2012 but this may have been partially attributable to the introduction of new case definitions specifically excluding cases known to have resolved infection. While notifications have continued to decline each year since 2012, the rate of decline has slowed and notification rates are stabilising. Trends in hepatitis C notifications are difficult to interpret as cases are frequently asymptomatic or mildly symptomatic for some time, and most cases are diagnosed and notified as a result of screening in key risk groups such as PWID. Therefore, some cases may be diagnosed years after infection and notifications more accurately reflect trends in diagnoses rather than incidence of hepatitis C infection.

Risk factor data were available for less than half of cases of hepatitis C reported in the first half of 2018. Where information was available, three quarters of cases were people who inject drugs. There has been a gradual increase in the median age at notification of all cases of hepatitis C and of cases in PWID. This indicates that the incidence of hepatitis C is likely to be declining in younger people in Ireland. This is supported by data from National Drug Treatment Reporting System (NDTRS), which is maintained by the Health Research Board and is used to monitor treated problem drug use in Ireland. NDTRS data show that the proportion of treated drug users who have ever injected drugs has decreased in recent years and that newly treated drug users were significantly less likely to have ever injected drugs compared to those who were previously treated and returned to treatment in recent years. (https://www.drugsandalcohol.ie/28986/1/Drug%20Treatment%20in%20Ireland%202010%20-%202016%20Bulletin.pdf).
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Report by Niamh Murphy and Dr Lois O’Connor, 8th October 2018

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