

5.2 Hepatitis C

Summary

Number of cases, 2016: 645
 Crude notification rate, 2016: 13.5/100,000 population
 Number of cases in 2015: 674

Hepatitis C is a major cause of liver disease worldwide. The hepatitis C virus (HCV) is primarily transmitted through sharing contaminated equipment when injecting drugs or through receipt of unscreened blood or blood products (this is no longer a risk in Ireland).^{1,2} Sexual, occupational and vertical transmission can also occur but are less common. The risk of sexual transmission is increased in men who have sex with men (MSM), particularly those who are HIV positive or have other sexually transmitted infections.³

Infection is initially asymptomatic in most cases, but approximately 75% of those infected fail to clear the virus and develop chronic infection. Between 5 and 20% of chronically infected individuals develop cirrhosis of the liver after 20 years of infection. Of those with cirrhosis, 1.5 to 2.5% will go on to develop hepatocellular carcinoma (liver cancer) each year.¹ There have been major advances in the treatment of hepatitis C in recent years. The latest generation of direct-acting antivirals (DAAs) can cure more than 90% of patients using all-oral drug regimes, which have fewer side effects than previous treatments.⁴

The overall prevalence of chronic hepatitis C in Ireland is estimated to be between 0.4 and 0.8%⁵ and is comparable

to other northern European countries (0.1-0.6%).⁶ Most cases fall into defined risk groups such as people who inject drugs (PWID) and people who received unscreened blood or blood products in the past.⁷

There were 645 notifications of hepatitis C in 2016 (13.5/100,000 population). This is a slight decrease compared to 2015 (n=674, 14.2/100,000 population) (figure 1). Notifications have declined by 58% since peak levels in 2007 (n=1538). However recent trends indicate that the rate of decline is slowing and levels are stabilising. Notification rates for each HSE area for the past four years are shown in figure 2. Seventy percent of notifications in 2016 were from HSE E (n=450, 26.3/100,000 population).

More than two thirds of the cases of hepatitis C reported in 2016 were male (71%, n=460), 28% (n=182) were female and sex was not reported for three cases. The highest notification rates were in young to middle aged adults, with 80% (n=519) of cases aged between 25 and 54 years. The median age at notification has gradually increased from 31 years in 2004 to a high of 39 years since 2014 (figures 1&3).

Risk factors

Information on most likely risk factor was reported for 49% (n=313) of the cases of hepatitis C notified in 2016 (figure 4). Almost two thirds (66%, n=206) of cases were PWID. The proportion of cases attributed to injecting drug use has decreased in recent years (80% in 2014, 72% in 2015), but risk factor data completeness varies from year to year so this trend must be interpreted with caution (figure 4).

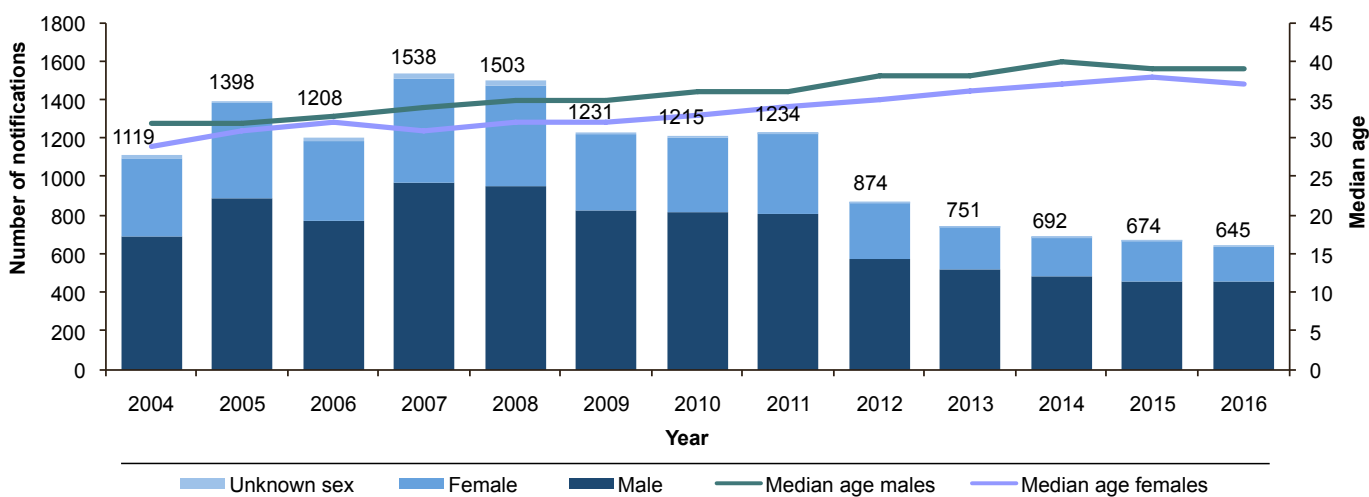


Figure 1. Number of notifications of hepatitis C and median age at notification, by sex, 2004-2016

Twelve percent (n=36) of cases were likely to have been infected sexually (24 were MSM, 9 were heterosexual and sexual orientation was not reported for the remaining 3 cases). There were five additional cases of hepatitis C identified as MSM in 2016, but sexual acquisition was not reported as their risk factor for infection. Two of these cases also injected drugs and this was reported as their most likely source of infection. The remaining three MSM cases currently have risk factor entered as unknown on CIDR. There was an increase in the number of hepatitis C cases identified as MSM in 2016 (n=29 compared to 8 in 2015 and 4 in 2014). A significant proportion of these cases were co-infected with HIV and had multiple other sexually transmitted infections (STIs), indicating that sexual transmission of hepatitis C is likely to be occurring in a particularly high risk cohort (figure 5). Of the 29 MSM cases, 66% (n=19) were HIV positive and 58% (n=11) of these cases had at least one diagnosis of gonorrhoea, syphilis, chlamydia, lymphogranuloma venereum or genital herpes simplex virus in 2015 or 2016. Half of the 10 HIV negative MSM cases had also recently been diagnosed with one or more sexually transmitted infections (figure 5). Nineteen of the MSM cases of hepatitis C were acute (new) infections, 2 were chronically infected at diagnosis and the acute/chronic status was not known for the remaining 8 cases.

Other reported risk factors for hepatitis C cases included contaminated blood or blood products (4%, n=13), tattooing or body piercing (3%, n=8) and vertical (mother to baby) transmission (2%, n=5). No risk factor was identified for 28 cases despite Public Health follow up. Six of the cases infected through blood or blood products were infected in Ireland. The exposure had occurred many years in the past, but these cases were notified for the first time in 2016. Figure 4 shows recent risk factor trends for hepatitis C in Ireland.

Country of birth

Data on country of birth were available for just over a third of hepatitis C cases (34%, n=219) in 2016. Where information was available, 40% (n=87) of cases were born in Ireland, 35% (n=76) were central or eastern European, 11% (n=23) were born in other western European countries, 7% (n=16) were Asian, 5% (n=10) were African, 2% (n=4) were from Latin American countries and 1% (n=3) were born in North America. Just under a third of cases with information on country of birth or asylum seeker status were born in a hepatitis C endemic country ($\geq 2\%$ anti-HCV prevalence) or were asylum seekers. However, information on country of birth is more likely to be reported for non-Irish nationals and the actual proportion of hepatitis C cases born in Ireland is likely to be higher than this. Figure 6 shows the most likely

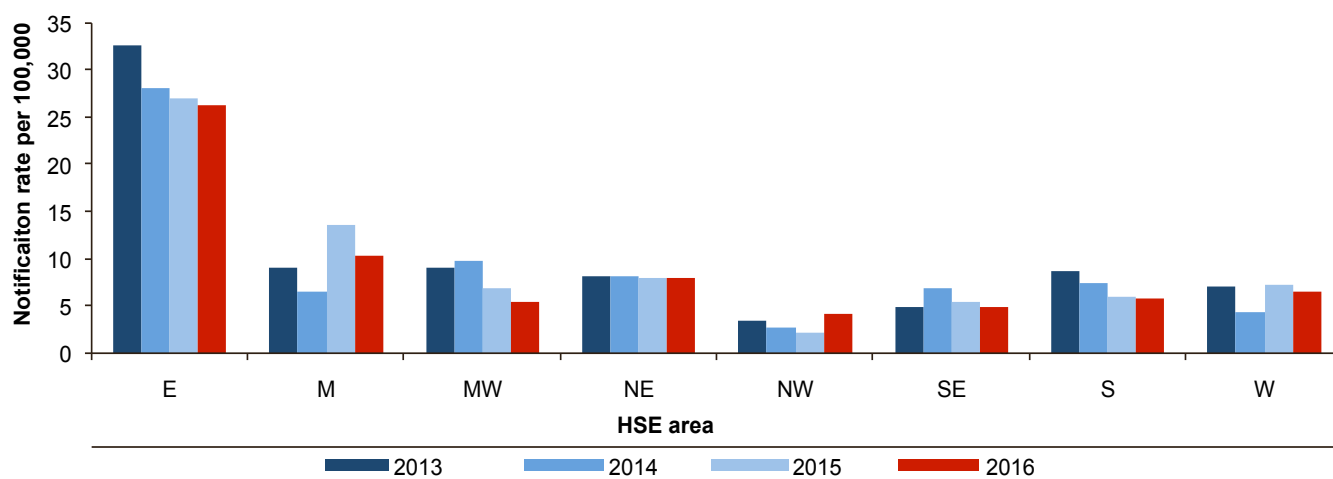


Figure 2. Notification rates/100,000 population for hepatitis C by HSE area, 2013-2016

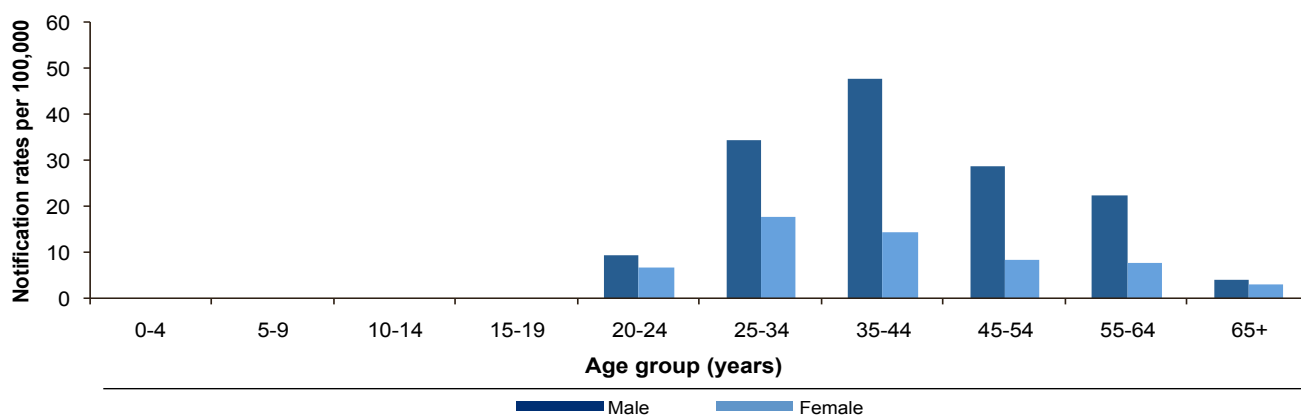


Figure 3. Age and sex-specific notification rates/100,000 population for hepatitis C, 2016

risk factor for infection by region of birth for the 219 cases where country of birth was known.

Genotype

Hepatitis C genotype data were collected retrospectively from National Virus Reference Laboratory and were available for 23% (n=146) of notifications in 2016. Of these, 62% (n=91) were genotype 1, 30% (n=44) were genotype 3, 6% (n=8) were genotype 2 and 2% (n=3) were genotype 4. Subtype was available for 95% (n=86) of genotype 1 cases, 79% of which were genotype 1a. This may not be representative as genotype data were very incomplete in 2016. Genotype was available for 52% of hepatitis C cases notified between 2013 and 2015. Over this period 60% of cases with data were genotype 1, 33% were genotype 3, 4% were genotype 2 and 3% were genotype 4.

Co-infections

Co-infection with HIV can increase the risk of acquiring hepatitis C sexually, and both HIV and hepatitis B co-infections can lead to more severe liver disease and an increased risk of liver cancer in those with hepatitis C infection. The number of hepatitis C cases who were HIV positive at diagnosis doubled to 38 in 2016 (6% of all cases). The increase was particularly evident in MSM. Of those with

information on risk factor or sexual orientation, 18 were MSM (53%), 15 were PWID (44%) and one was an MSM who also injected drugs (3%). In contrast, of the 19 HIV co-infected cases in 2015 with risk factor information, 9 (64%) were PWID, 4 (29%) were MSM and 1 (7%) was an MSM who also injected drugs.

Five of the cases of hepatitis C notified in 2016 were co-infected with hepatitis B. Two were born in countries which are endemic for both hepatitis B and C and no enhanced data were available for the remaining three.

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 is slowing. Trends in notifications of hepatitis C are difficult to interpret as acute and chronic infections are frequently asymptomatic and most cases diagnosed and notified are identified as a result of screening in risk groups. Therefore, notification patterns are heavily influenced by testing practices which

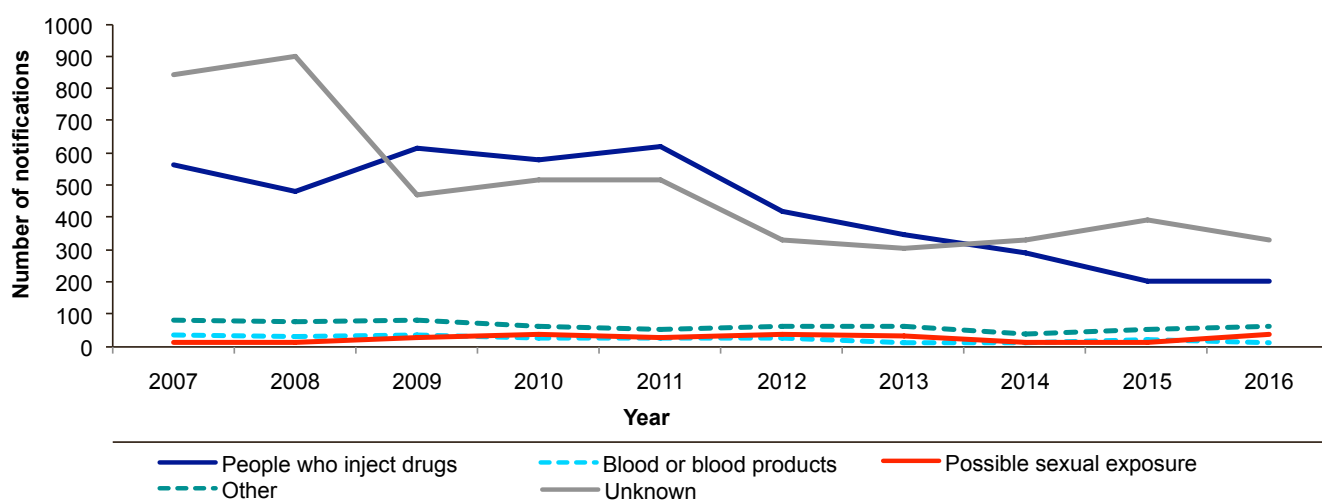


Figure 4. Number of hepatitis C notifications by most likely risk factor (where risk factor known, 52%, n=5,422) 2007-2016

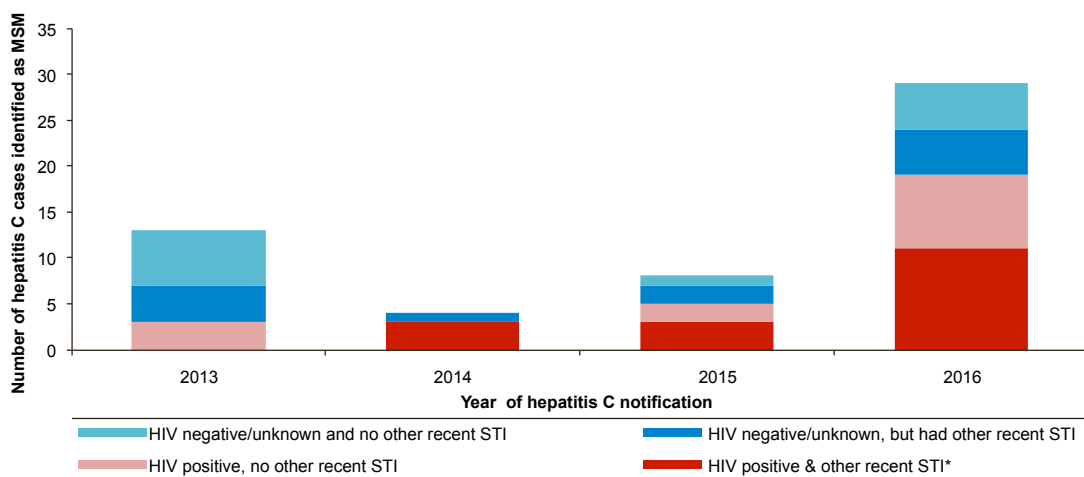


Figure 5. Number of hepatitis C cases identified as MSM between 2013 and 2016, by HIV status at the time of hepatitis C notification and other recent STI* status.

*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

may vary over time and thus may not accurately reflect incidence.

Risk factor data were available for almost half of the cases of hepatitis C notified in 2016. The distribution of risk factors for these cases may differ from cases where data were not available. Where information on risk factor was available, approximately two thirds of cases were PWID 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 appears to be decreasing in this population. This is supported by a reduction in the proportion of hepatitis C notifications attributed to drug use in recent years. The proportion of sexually acquired cases of hepatitis C has increased in the last 18 months, particularly amongst MSM. Increases in HIV and other sexually transmitted infections were also identified in MSM in 2015 and 2016 and a national multidisciplinary outbreak response group was established in early 2016 to develop an action plan for Public Health intervention (www.hpsc.ie/a-z/specificpopulations/menwhohavesexwithmenmsm/).

The figures presented in this summary are based on data extracted from the Computerised Infectious Disease Reporting (CIDR) System on 5th October 2017. These figures may differ from those published previously due to ongoing updating of notification data on CIDR. Notification rates are expressed per 100,000 population and are calculated using the 2016 census.

Acknowledgements

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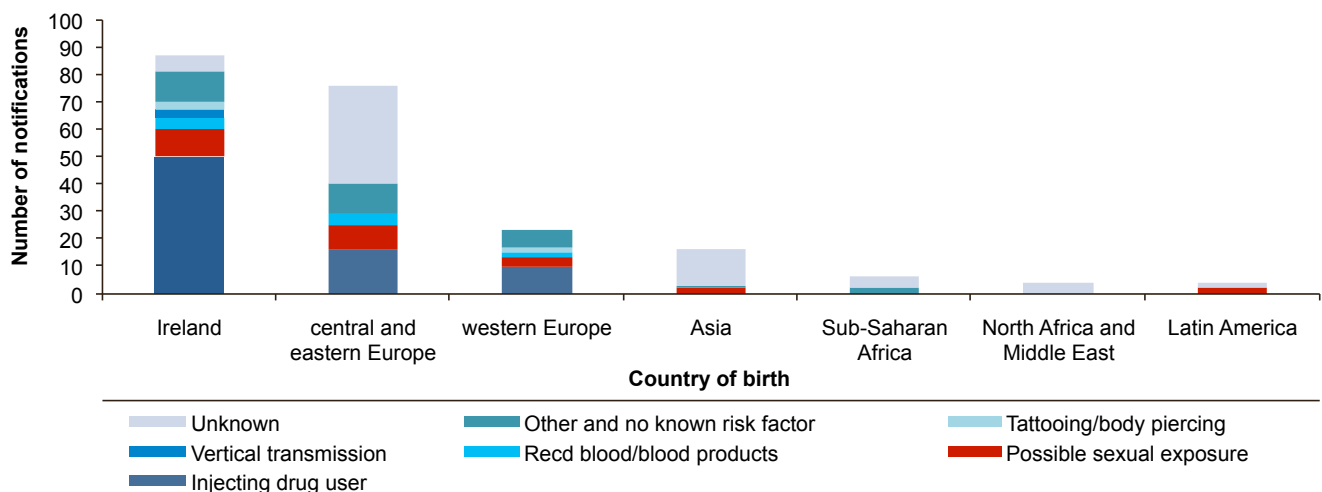


Figure 6. Number of hepatitis C notifications by most likely risk factor and country/region of birth (where country of birth known, 34%, n=219), 2016