Epidemiology of hepatitis C in Ireland

Trends from 2004 to 2024

2024 data are undergoing validation and are provisional

May 2025

Acknowledgements

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- National Virus Reference laboratory (NVRL)
- HSE Regional Departments of Public Health
- HSE National hepatitis C Treatment Programme (NHCTP)
- St. James's Hospital emergency department viral screening (EDVS) team
- Irish Prison Service (IPS)
- Irish Blood Transfusion Service (IBTS)
- HSE Sexual Health Programme (SHP)
- HSE Social Inclusion, National Reception Centre (NRC) Balseskin, Safetynet Primary Care, International protection screening and support team, St Finbarr's Hospital, Cork.
- Consultants in Hepatology/Gastroenterology/Infectious Disease/Genitourinary Medicine
- GPs
- Health Advisors
- All other clinical staff involved in the provision of hepatitis data

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Hepatitis C in Ireland in 2024: key points

- **In 2024**, the hepatitis C notification rate was **9.0 per 100,000 (n=462),** a **13% decrease** since 2023
- Notification **rates have decreased** since 2007 (peak) aside from an increase after the COVID-19 pandemic
- The notification rate for males was almost double that for females
- The highest age specific notification rate was in 35–54 year olds, trends in age specific rates stable in past 3 years
- Rates were highest in the Dublin and Northeast, Dublin and Midlands and Mid-West health regions

Risk factors for cases known to have been born in Ireland (available for 84%)

79% **people who use drugs (PWUD)**

7% **sexual exposure**

5% other risk factors

9% no risk factor identified

Country of birth (available for 59% of cases)

- 41% **Ireland**
- 41% **Eastern Europe** ↑ **2022-2024 compared to earlier years**
- 9% Central Europe
- 3% Asia
- 3% Western Europe
- 1.5% Latin America
- 1.5% Other

75% of cases born outside Ireland were born in an endemic country (anti-HCV prevalence ≥2%)

Hepatitis C in Ireland: public health implications and actions

- **Hepatitis C is a curable disease,** the HSE's aim is to detect, treat and cure all cases
  - Highly effective directly acting antiviral treatments **(DAA)** that **eradicate the virus in more than 95%** of cases are available free of charge, overseen by the HSE National Hepatitis C Treatment Programme (NHCTP). Approximately **8,000 people** treated between 2012 and 2024
  - Diagnosed cases can be treated using DAA medicines in specialised hospital settings, in prisons and in community settings such as drug treatment centres, community pharmacies and by GPs who prescribe methadone

- **Hepatitis C notification rates more than halved between 2012 and 2024, but remained relatively high at 9 per 100,000 population in 2024**

  This is likely to be due to the following factors:
  - Better detection due to increased testing
  - Ongoing transmission in at-risk populations, particularly in people who use drugs (PWUD)
  - Reinfections post treatment in at-risk populations
  - An increase in inward migration of people from countries where hepatitis C is more common since early 2022

- **Testing/screening – increasing case ascertainment**
  - National Hepatitis C Screening Guidelines (2017) set out the key populations to test
  - Hepatitis C screening is routinely offered in drug addiction treatment settings, prison settings and to gay bisexual and other men who have sex with men (gbMSM) in publicly-funded sexual health clinics
  - Opt-in bloodborne virus screening is available free of charge for applicants seeking protection who are living in state-provided congregate accommodation via; Safetynet mobile health and screening unit (funded by HSE National Social Inclusion Office (NSIO)), NRC Balseskin and the International Protection Applicant Screening and Support Service (IPASSS) in Cork
  - Drugs, alcohol and Sexual health mobile unit (DASH) provides screening as well as sexual health, drug & alcohol information and support for at-risk populations in Cork and Kerry
  - St James's hospital Dublin has been carrying out hepatitis B, hepatitis C and HIV emergency department screening on an opt-out basis, for patients undergoing blood sampling since a successful pilot study in 2014
  - Hepatitis C home testing kits are available free of charge for those with self-reported risk factors

Hepatitis C virus

Hepatitis C virus (HCV)

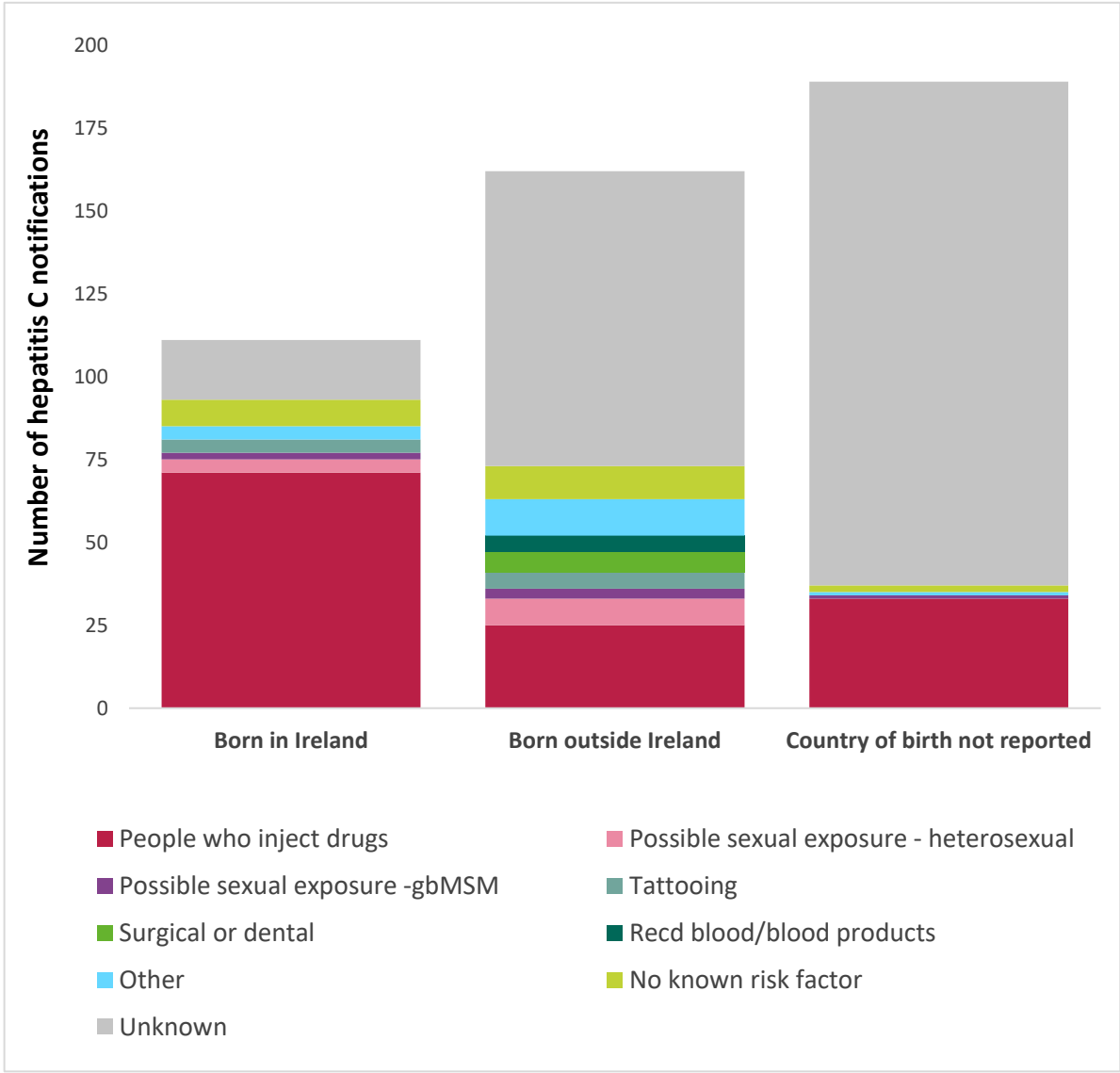
- The hepatitis C virus was first identified in 1989
- Transmitted through exposure to blood from an infected person
- Most newly diagnosed cases of hepatitis C, in countries like Ireland, are in people who use drugs (PWUD) and migrants from higher endemicity countries
- Hepatitis C can also be transmitted from an infected mother to her baby and sexually
  - These modes of transmission are less common
  - The risk of sexual transmission is higher in gbMSM, in people living with HIV and those with genital sores/ulcers from sexually transmitted infections
- Most cases are initially asymptomatic or mildly symptomatic - acute infection is rarely detected & there can be a long lag time between infection and diagnosis
- Approximately 70-75% of those infected develop chronic infection
- Chronic infection can cause liver inflammation, fibrosis, cirrhosis, liver cancer (hepatocellular carcinoma (HCC)), liver failure and death
- **Hepatitis C is curable:** **Free antiviral treatment** is available in Ireland through the HSE with a **>95% cure rate, ~8,000** people treated since 2012, leading to a significant decrease in the estimated prevalence of chronic infection (0.1%, 2021-2023)

Hepatitis C notifications in Ireland

Summary of hepatitis C notifications in Ireland, 2024

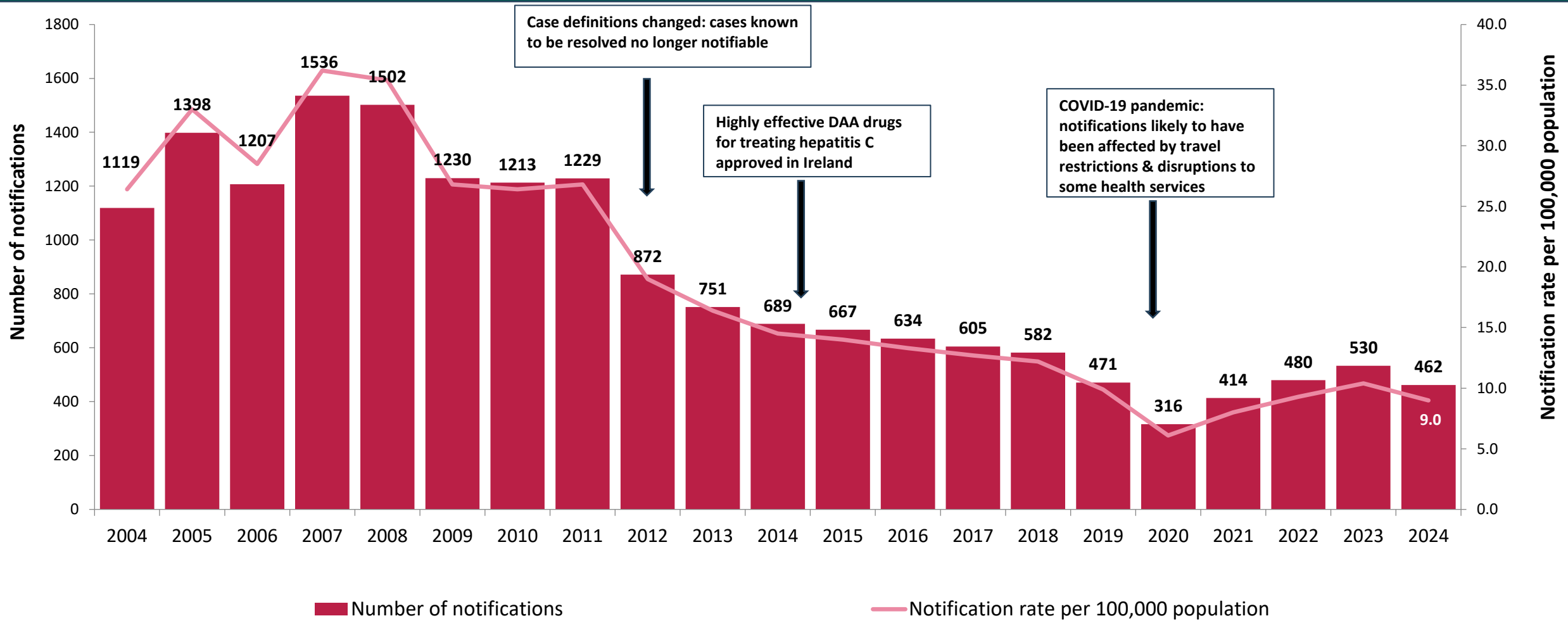
2024 cases	All	Born in Ireland	Born outside Ireland	Country of birth not reported
Total	**462**	**110**	**161**	**191**
Males	299 (65%)	69 (63%)	88 (55%)	142 (75%)
Females	162 (35%)	41 (37%)	73 (45%)	48 (25%)
Unknown sex	1	0	0	1
Median age all cases	**44**	**39**	**48**	**44**
Median age males	44	41	48	43
Median age females	44	37	49	44

- Risk factor information was reported for 84% of cases who were born in Ireland, with 76% reported to be people who inject drugs and 3% people who use drugs, but do not inject
- Risk factor data were reported for less than half of cases born outside Ireland, with 34% of cases attributed to drug use. Sexual and healthcare-associated exposures were more commonly reported compared to cases born in Ireland.
- Information on both country of birth and risk factor was not available for 33% of all cases
- Where country of birth was known, 75% of cases born outside Ireland were born in a country that is endemic for hepatitis C (≥2% anti-HCV prevalence)



Data source: CIDR, 12/05/2025

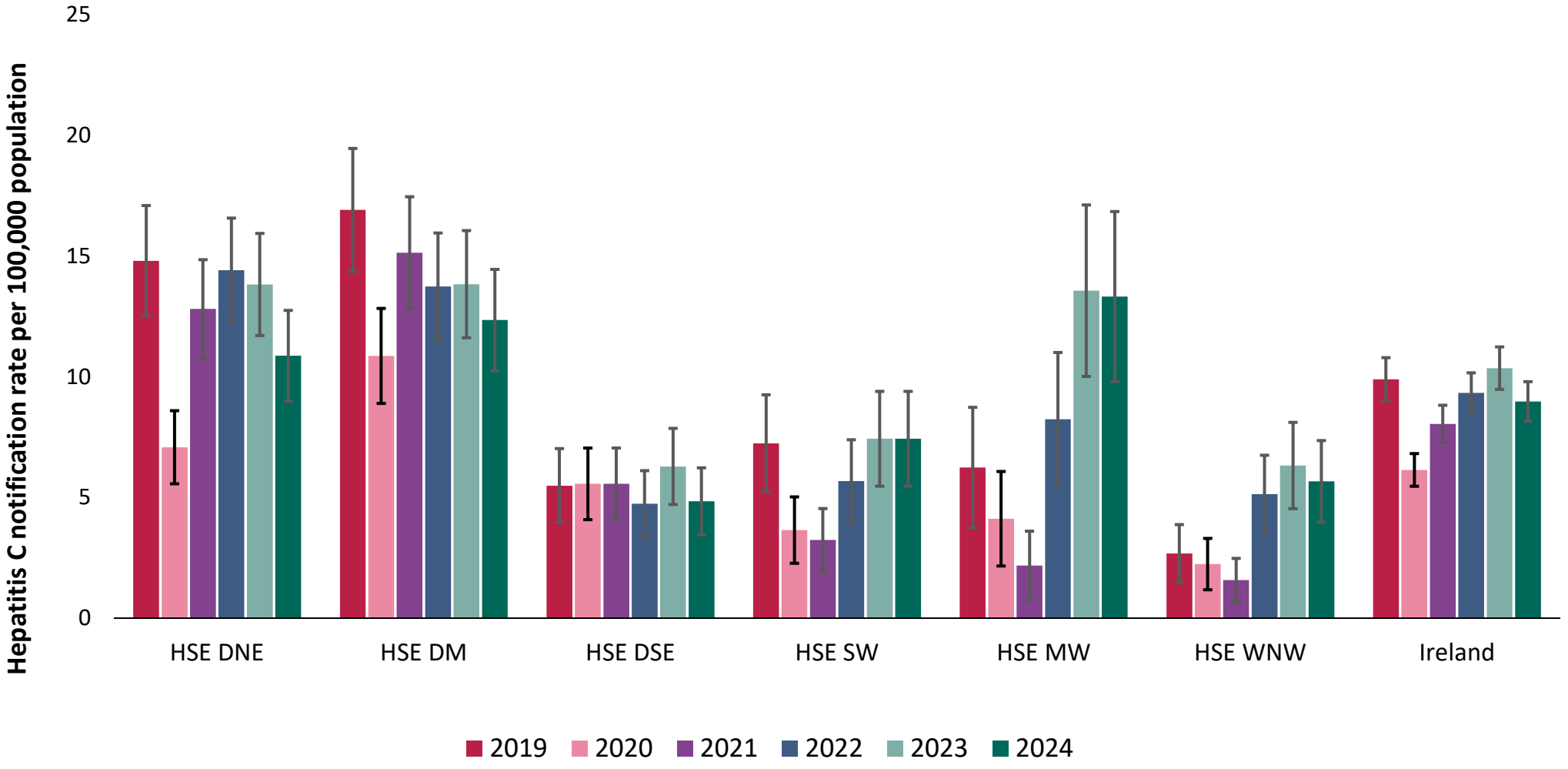
Number of hepatitis C notifications in Ireland and notification rate per 100,000 population, 2004-2024



- Hepatitis C notifications decreased by 47% between 2012 and 2024 (n=462 cases, 9.0 per 100,000 population)

Data source: CIDR, 12/05/2025

Hepatitis C notification rates per 100,000 population, by HSE health region, in Ireland, 2019-2024

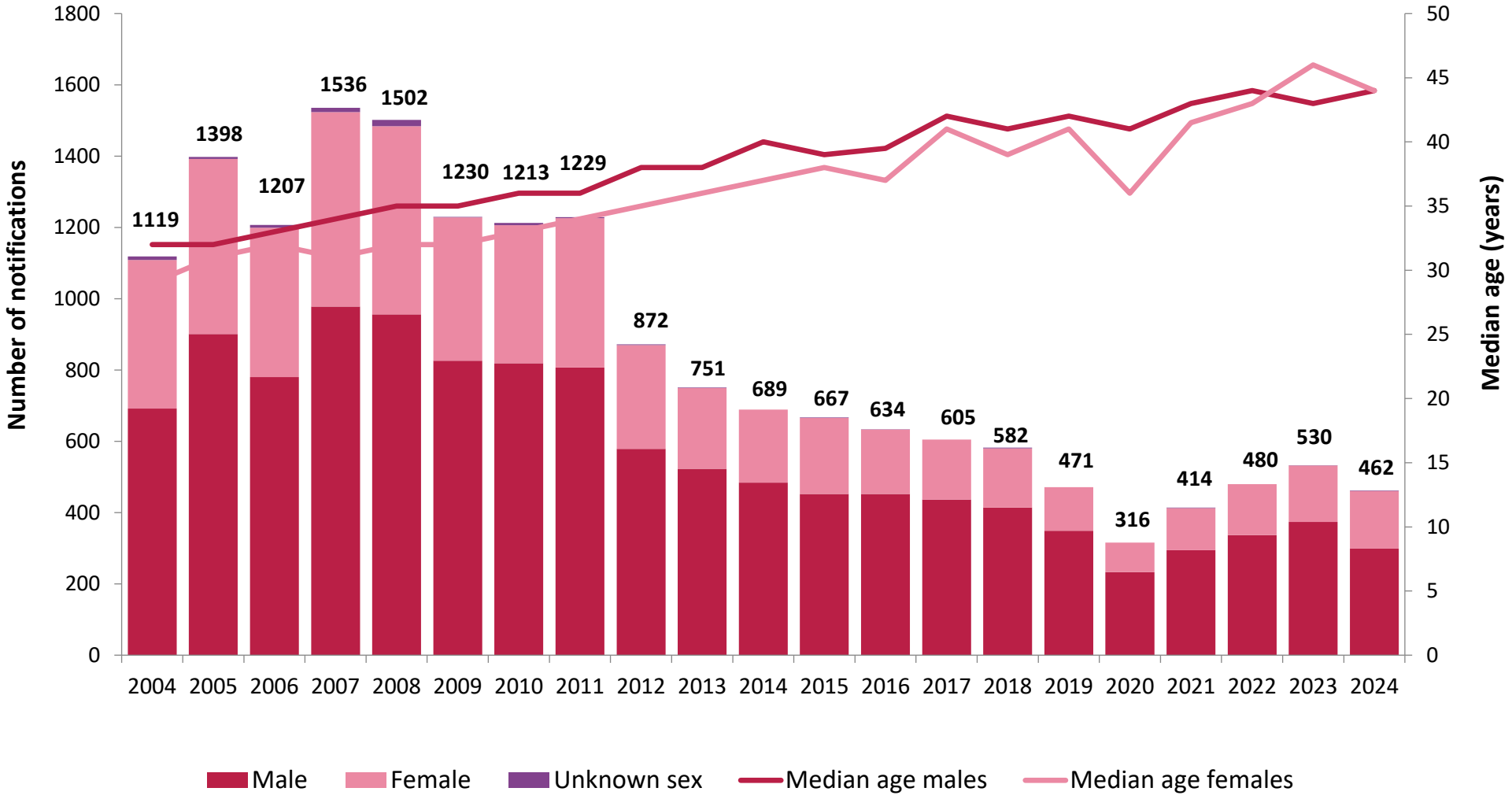


The highest notification rates in 2024 were in:

- HSE Dublin and North East
- HSE Dublin and Midlands
- HSE Mid West

Data source: CIDR, 12/05/2025

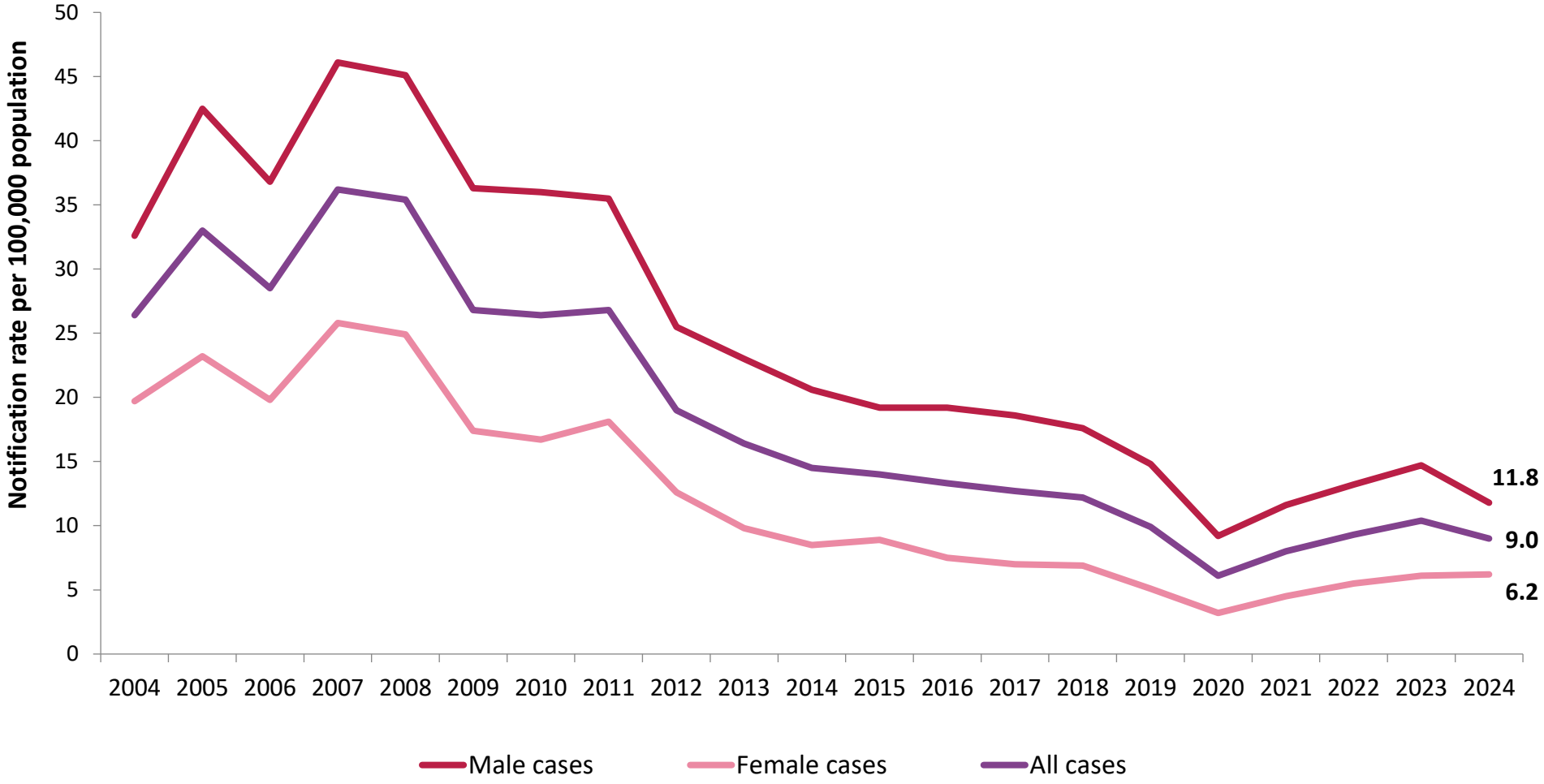
Trends in hepatitis C notifications, by sex and median age, 2004 – 2024, in Ireland



- The **median age** at diagnosis for hepatitis C cases has increased over time:
  31 years in 2004
  44 years in 2024
- In 2024, 65% of notified cases were male (299 males, 162 females, sex not reported for 1 case)
- On average, male cases were 2 years older than females when notified

Data source: CIDR, 12/05/2025

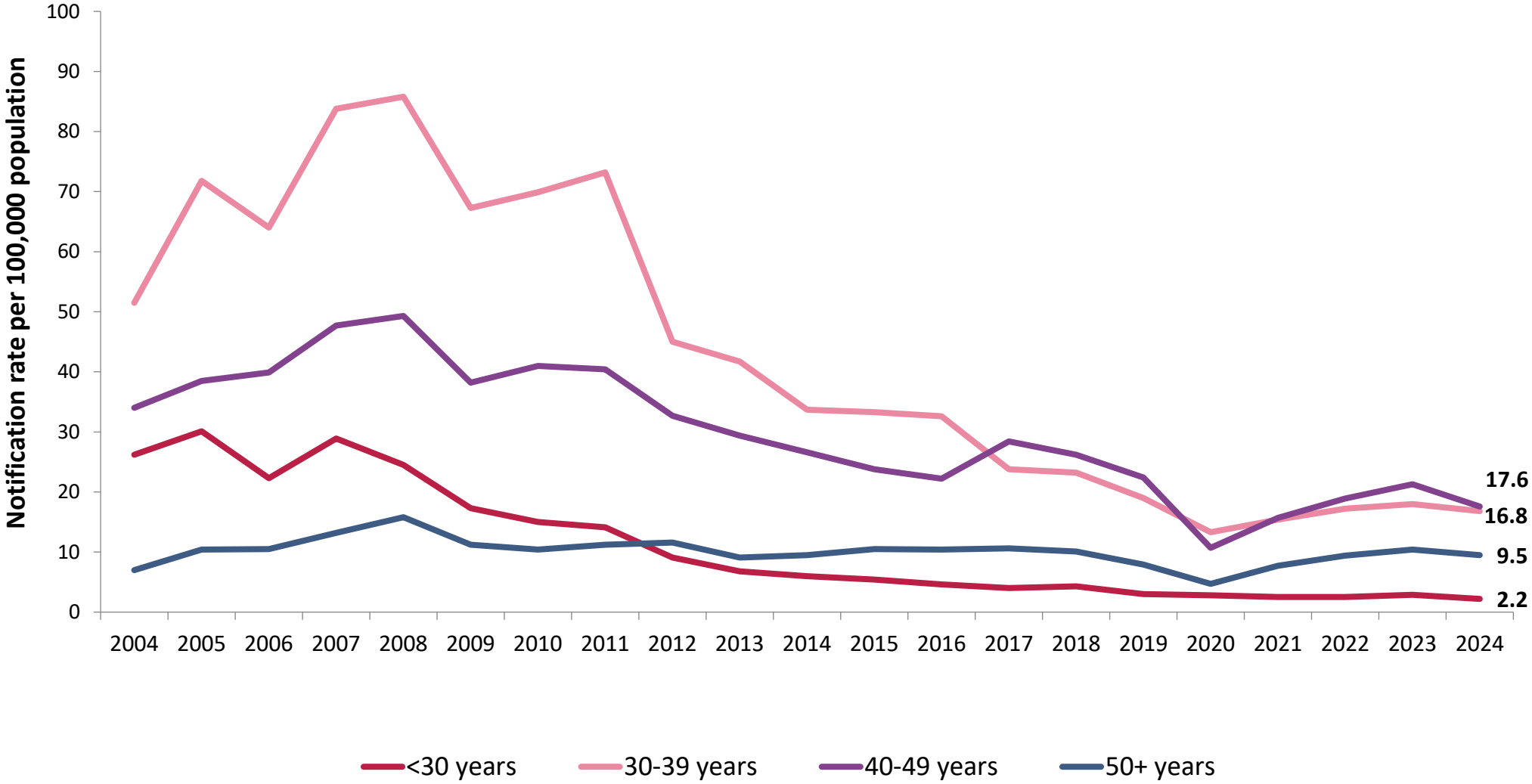
Trends in sex specific notification rates per 100,000 population for hepatitis C in Ireland, 2004 – 2024



- Hepatitis C notification rates are consistently higher in males compared to females
- Notification rates decreased significantly in both males and females between 2012 and 2024

Data source: CIDR, 12/05/2025

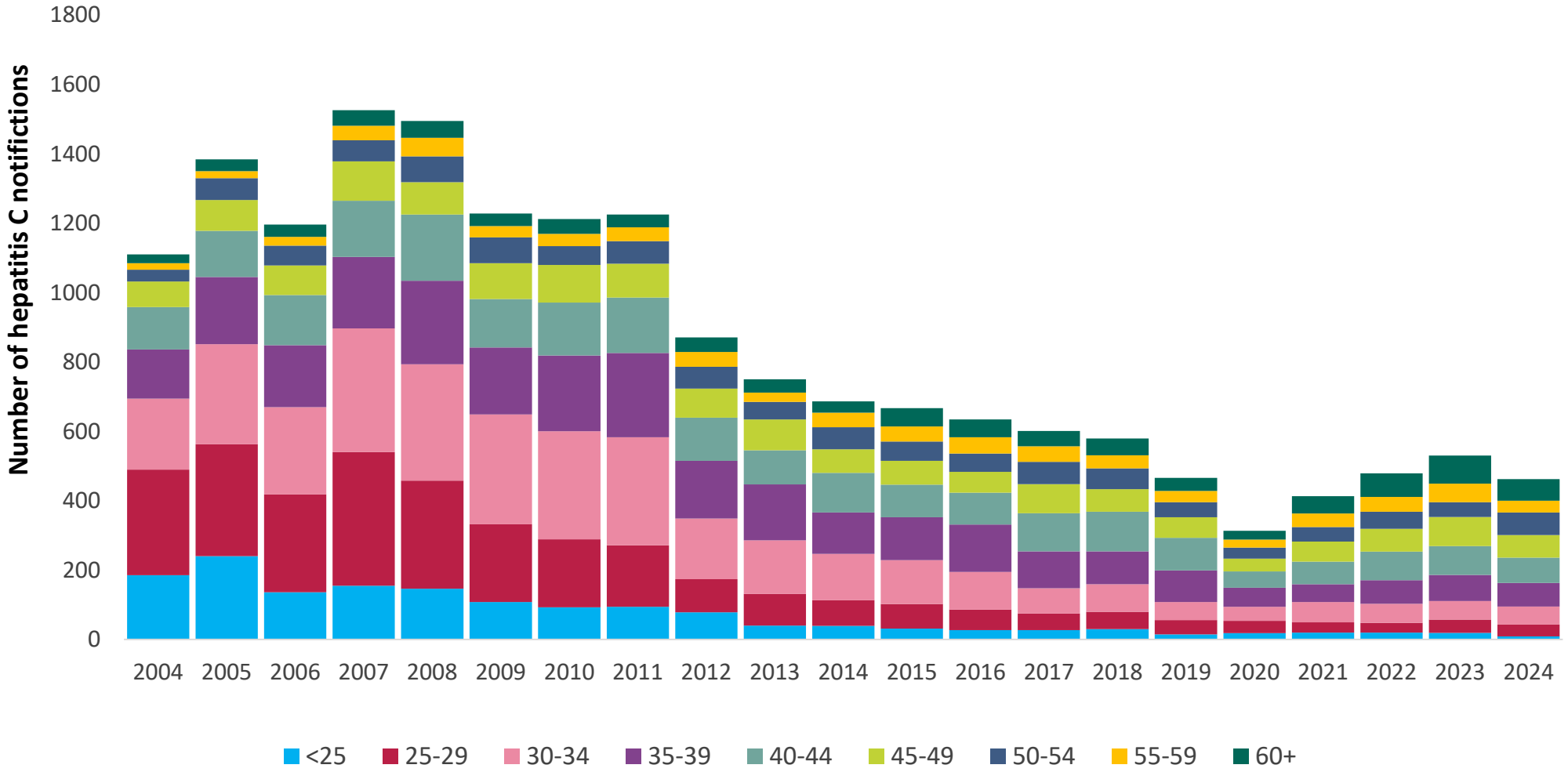
Trends in age specific notification rates per 100,000 population for hepatitis C in Ireland, 2004 – 2024



- The highest hepatitis C notification rates in 2024 were in people aged 30-49 years
- The notification rate was very low in those aged <30 years
- Age-specific notification rates were relatively stable between 2022 and 2024

Data source: CIDR, 12/05/2025

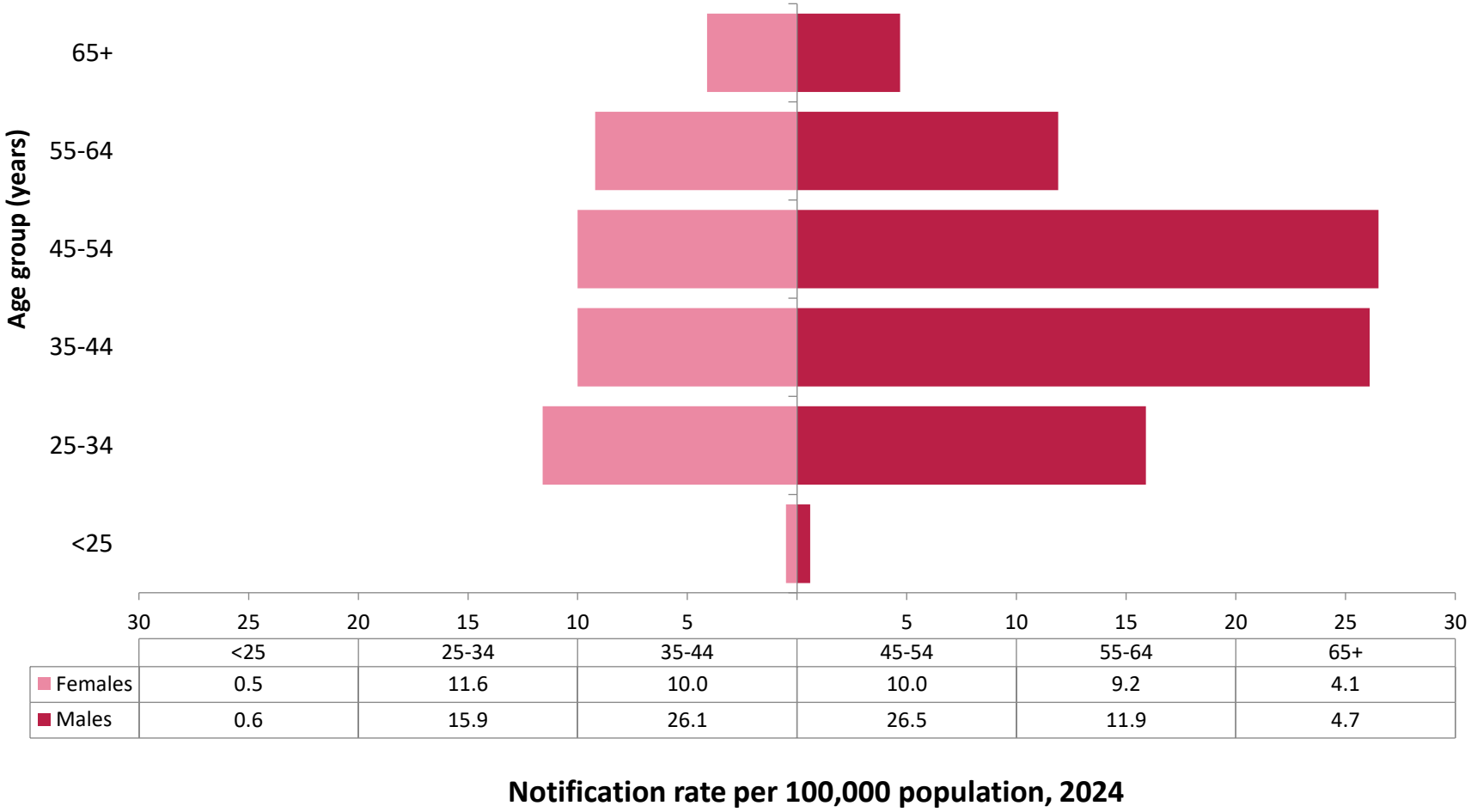
Number of hepatitis C notifications by age group (years) in Ireland, 2004 – 2024



- The age profile for hepatitis C notifications has gradually increased over time, most likely reflecting diagnoses in chronic cases detected through screening
- 91% of hepatitis C cases were 30 years or older in 2024 compared to 56% in 2004

Data source: CIDR, 12/05/2025

Hepatitis C notification rates per 100,000 population, by age and sex, 2024



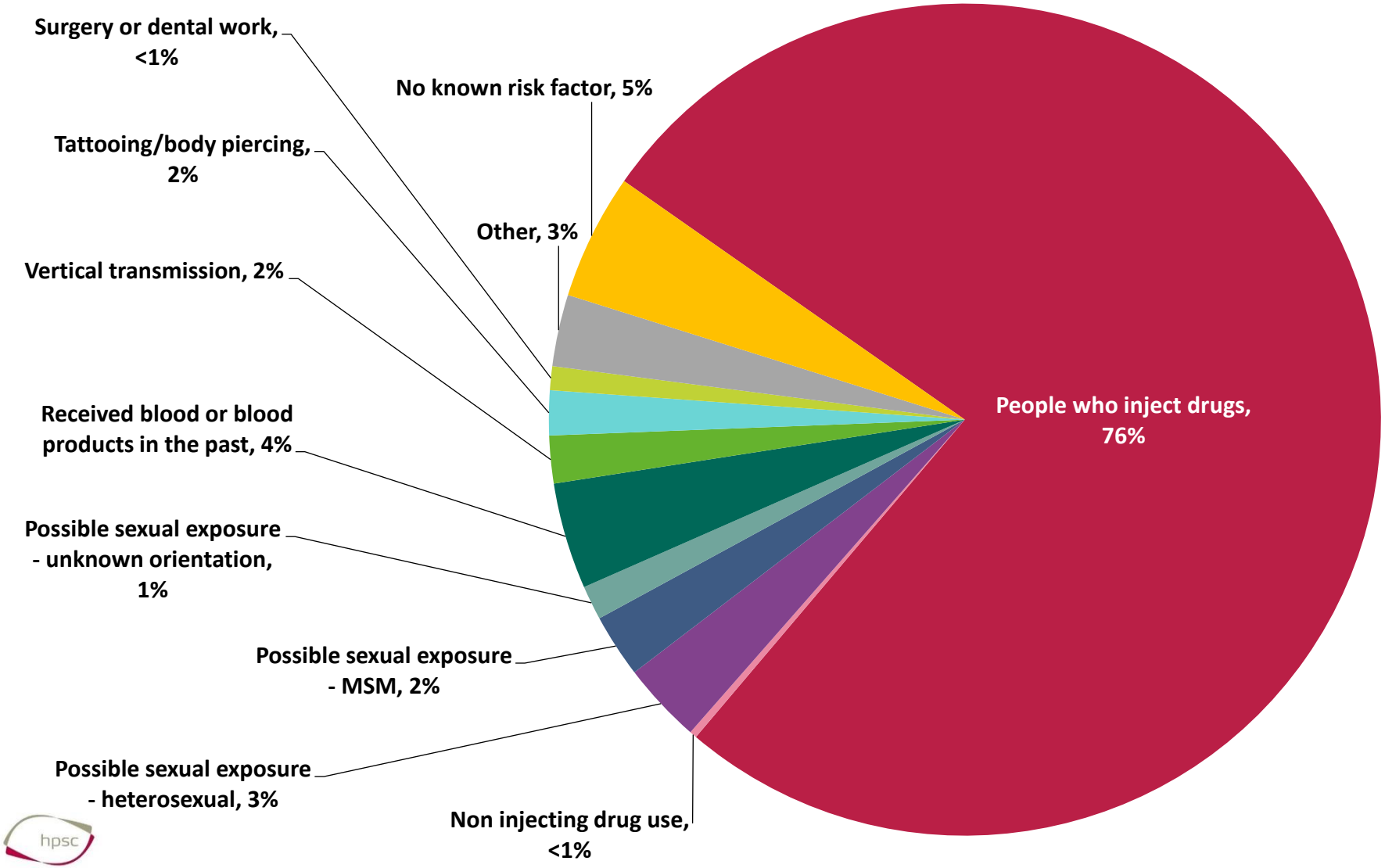
	<25	25-34	35-44	45-54	55-64	65+
Females	0.5	11.6	10.0	10.0	9.2	4.1
Males	0.6	15.9	26.1	26.5	11.9	4.7

Notification rate per 100,000 population, 2024

- The age and sex distribution for hepatitis C cases in 2024 was similar to 2023 with the exception of:
  - an increase in the notification rate for females aged 25-34 years (n=37, 12/100,000 vs n=20, 6/100,000 in 2023)
  - a decrease in the notification rates for males aged 55-64 years (n=34, 12/100,000 vs n=62, 22/100,000 in 2023)
- The highest notification rate in 2024 was in males aged 35-54 years (26 per 100,000 population)

Data source: CIDR, 12/05/2025

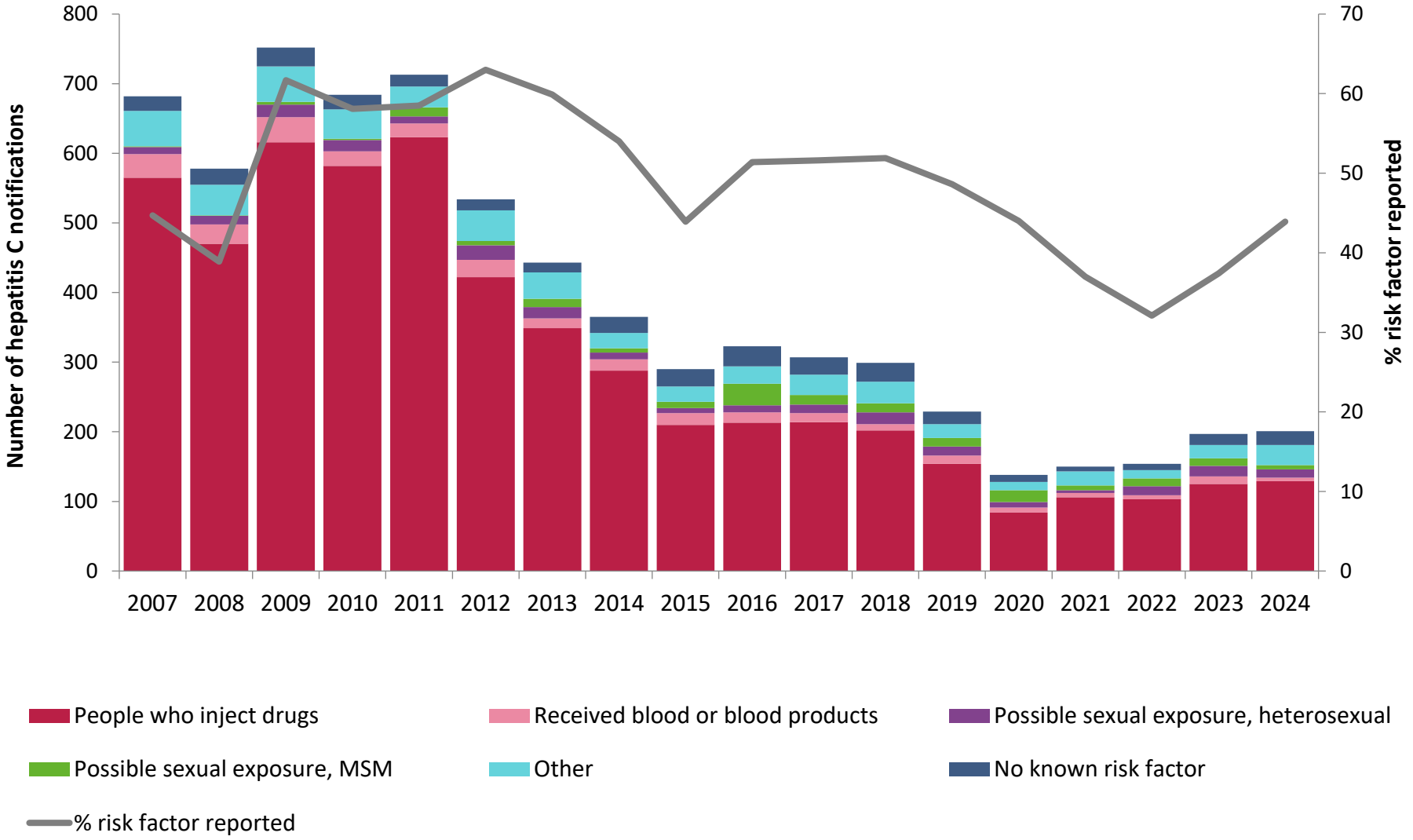
Most likely risk factor distribution for hepatitis C notifications in Ireland, 2007- 2024 (where data available - 50%, n = 7,134)



- Risk factor information was available for half of hepatitis C cases notified between 2007 and 2024
- Where most likely risk factor was reported, 76% of cases of hepatitis C were in people who inject drugs
- The risk of hepatitis C transmission through heterosexual sex is generally considered to be low, and this may be over-reported in the notifications data
- No known risk factor refers to cases that were followed up by the Department of Public Health but for whom a risk factor was not identified

Data source: CIDR, 12/05/2025

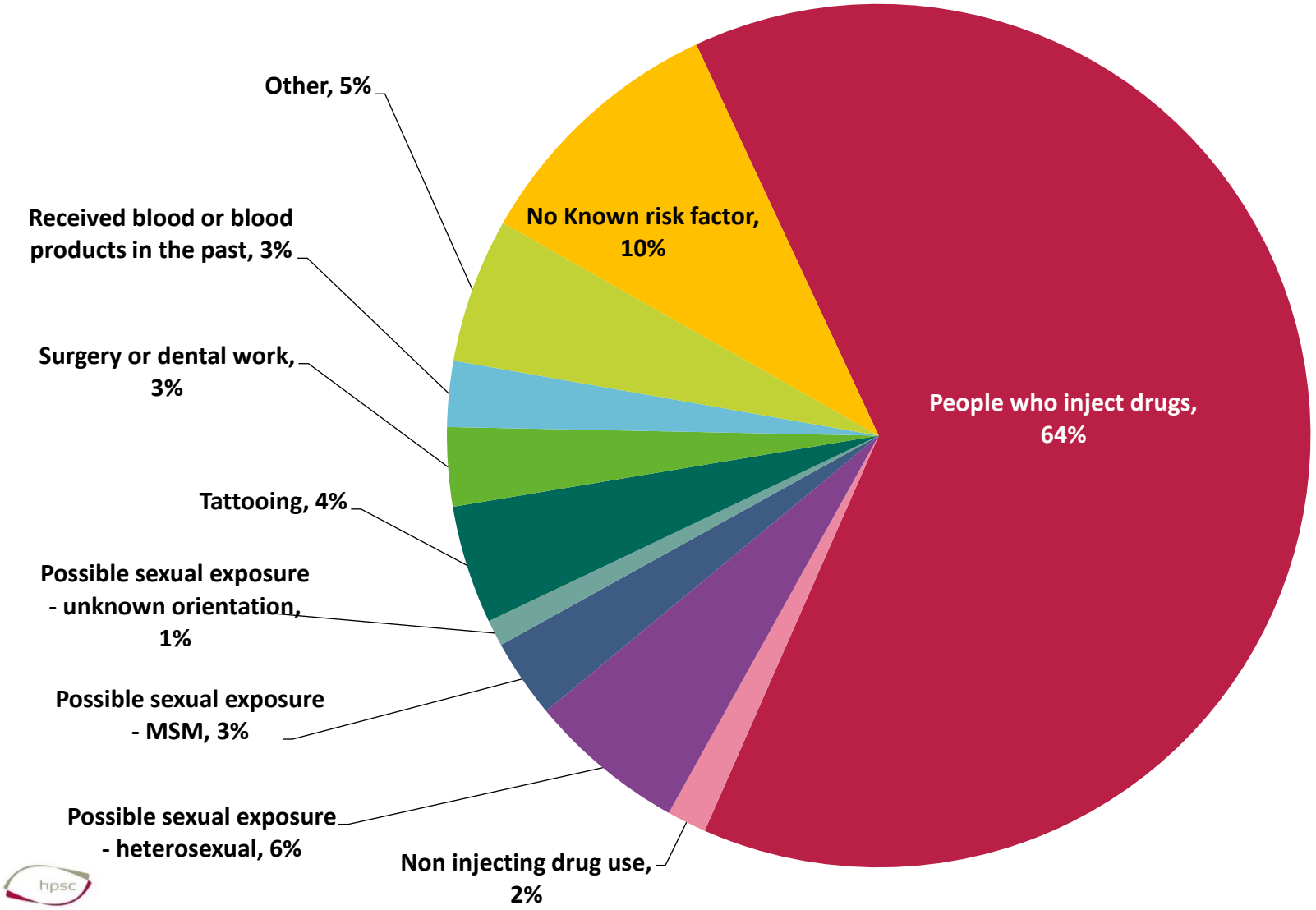
Trends in most likely risk factor for hepatitis C notifications in Ireland, 2007- 2024 (where data available - 50%, n = 7,134)



- Where risk factor data were reported, the predominant risk factor for hepatitis C in Ireland was injecting drug use
- No known risk factor refers to cases that were followed up by the Department of Public Health but for whom a risk factor was not identified
- **Note:** information on risk factor was not reported for a significant proportion of hepatitis C cases – this should be taken into consideration when interpreting trends in risk factor distribution

Data source: CIDR, 12/05/2025

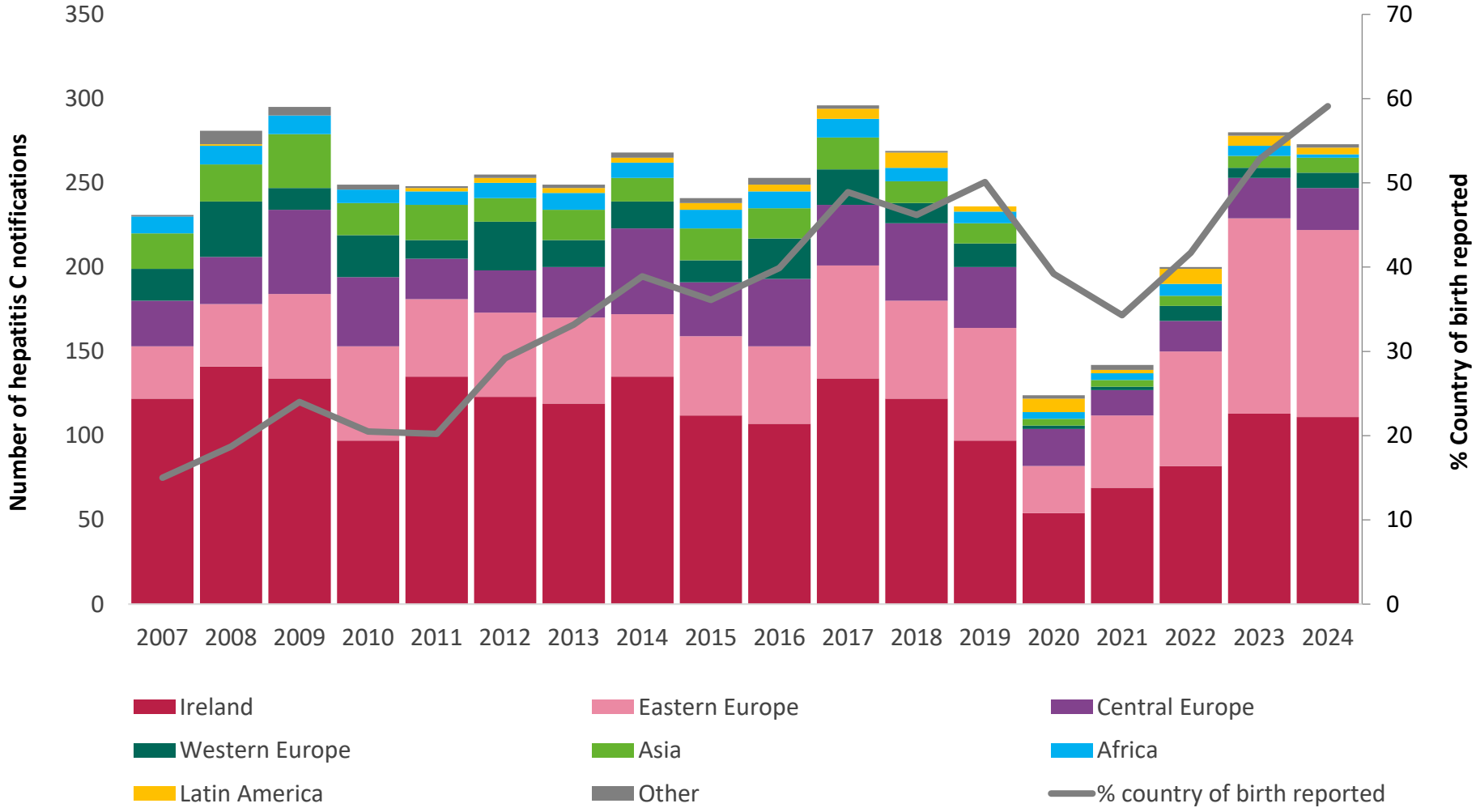
Most likely risk factor for hepatitis C notifications in Ireland, 2024 (where data available - 44%, n = 203)



- Most likely risk factor was reported for 44% of hepatitis C cases notified in 2024 and the distribution of risk factors is not likely to be representative of all cases
- Where information was reported, 64% of cases were in people who inject drugs and an additional 2% in people who use drugs but do not inject
- The risk of hepatitis C transmission through heterosexual sex is generally considered to be low, and this may be over-reported in the notifications data

Data source: CIDR, 12/05/2025

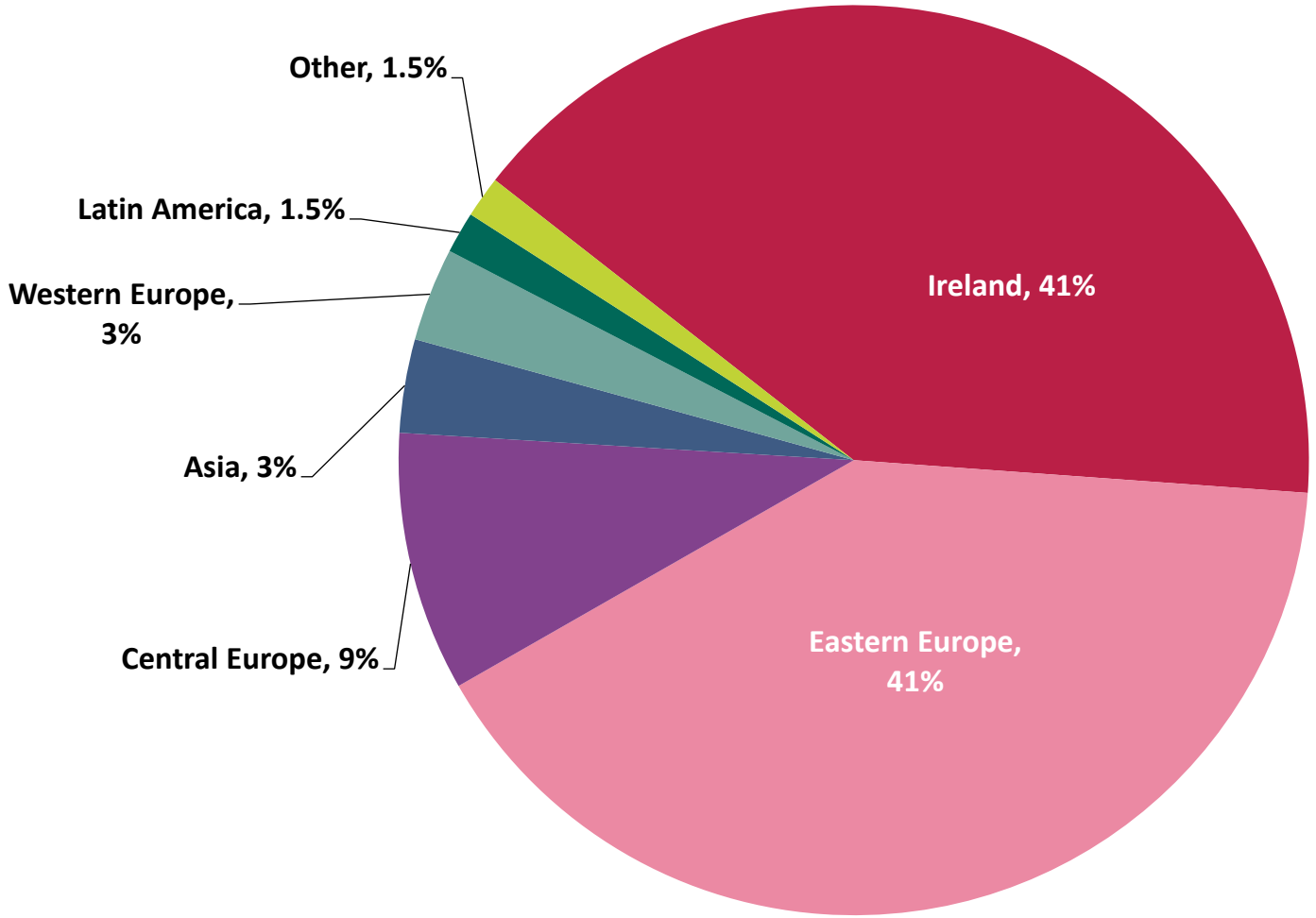
Trends in country/region of birth for hepatitis C notifications in Ireland, 2007- 2024 (where data available 31%, n= 4,390)



- Information on country of birth was reported for 31% of hepatitis C cases notified between 2007 and 2024. Data completeness increased over time.
- The proportion of notified hepatitis C cases born in eastern Europe increased from 30% in 2021 to 41% in 2023 and 2024
- Most countries in eastern Europe are considered endemic for hepatitis C (≥2% anti-HCV prevalence)
- Data completeness should be taken into consideration when interpreting trends in country of birth

Data source: CIDR, 12/05/2025

Country/region of birth for hepatitis C notifications in Ireland, 2024 (where data available 59%, n = 271)



- Information on country of birth was reported for 59% of hepatitis C cases notified in 2024
- Of these, 41% were born in Ireland, 41% were born in eastern Europe and 9% were born in central Europe
- 75% of the cases born outside Ireland were born in hepatitis C endemic countries (≥2% anti-HCV prevalence)
- The reported country of birth distribution may be not be representative of all cases
- Ethnicity was reported for 32% of cases in 2024. Where reported, 44% of cases were 'White Irish', 41% were 'White – any other background', 10% were 'White, not specified', 2% were 'Asian or Asian Irish' and <1% were 'Black or Black Irish' and 3% were reported as 'Other ethnicity'

Data source: CIDR, 12/05/2025

Hepatitis C prevalence in Ireland (people living with chronic infection)

- **Diagnosed cases: > 17,900 cases of hepatitis C were notified in Ireland between 2004 and 2024**
  - Includes some duplicates (full names not always provided/name variations)
  - Includes some spontaneously resolved cases pre-2012 (25-30% notifications 2004-2011 >2,600 cases)
  - Includes cases that were chronically infected when notified but have since been successfully treated (~ 8,000 cases in Ireland treated 2012-2024 (93% success rate), additional cases treated with previously available drugs)
  - A proportion of notified cases are also likely to have died – 34% of hepatitis C cases diagnosed in Scotland estimated to have died by the end of 2024, but drug-related and all cause mortality rates in Scotland are particularly high

- HPSC/NVRL study**:** National Virus Reference Laboratory residual sera **2014-2016**, estimated viraemic HCV prevalence was 0.57% in adults (95% CI: 0.4-0.8), 19,606 people (95% CI: 13,758-27,860)

- **More recent viraemic hepatitis C prevalence estimates**
  - **Emergency department screening - SJH EDVS programme:** (catchment population not representative of the general population) mid-2022 to mid-2023 **viraemic HCV infection 0.7%,** 3.6% anti-HCV positive
  - **International Protection Applicants, 2024**: NRC Balseskin, Safetynet MHSU & HSE SW Migrant Health team, >3000 tested**, 0.1%** positive
  - **2019 Modelling study**: viraemic HCV infection Ireland **0.21%** (95% CI: 0.13-0.35) or 7,844 individuals (95% CI: 4,711-13,035)
  - **2023 Antenatal screening data**: viraemic infection **0.06%** based on data from the 3 Dublin maternity hospitals (Coombe, Rotunda and the National Maternity Hospital (NMH) Holles St). Antenatal prevalence may differ in other regions.
  - **Seroprevalence study using specimens from 2021-2023**: viraemic HCV infection Ireland **0.1% prevalence** (3,500-5,000 people) based on >14,000 anonymised residual GP sera from a nationwide selection of hospital laboratories. 0.5% anti-HCV positive (high clearance rate, showing the impact of DAA treatment)

World Health Organization (WHO):

Elimination of hepatitis C as a public health threat by 2030

Progress towards hepatitis C elimination – ECDC and WHO indicators

WHO targets	2030 WHO target	Ireland 2022-2024
Percentage of HCV cases diagnosed	90%	St.James's Hospital emergency department screening data mid-2020 to mid 2023: 85% of HCV antigen/RNA positive cases were previously known cases. With ongoing emphasis on testing in risk-based settings and the availability of free home testing, the 90% diagnosis target is likely to be met by 2030 in Ireland.
Proportion of diagnosed chronic HCV cases on antiviral treatment	80%	National Hepatitis C Treatment Programme data: approximately 8,000 people treated 2012-2024. Based on treatment data, notifications data and prevalence estimates, over 70% of living diagnosed chronic cases are likely to have been successfully treated.
Absolute target for new infections per year	5 per 100,000 population	This target is likely to have been achieved in Ireland. The notification rate in 2024 was 9/100,000 population, but the notification rate for cases born in Ireland after adjusting for missing country of birth information was about 5 per 100,000 population. Annual notifications reflect diagnoses in Ireland and detected cases do not all reflect new infections.
Blood safety and haemovigilance	100%	100% of blood units are tested using nucleic acid amplification testing (highly sensitive) in Ireland

WHO/ECDC reports

- WHO interim guidance for country validation of viral hepatitis elimination, 2021
- Monitoring of the responses to the hepatitis B and C epidemics in EU/EEA countries, 2023

Hepatitis C in prison settings – opportunity for micro elimination

Irish prison studies

National prison study, 2014, Mountjoy prison study, 2017

	National prison study, 2014	Mountjoy prison study, 2017
Number participants	834	422
Selection method	Sampling	All eligible
Participation rate	50%	78%
History of heroin use	43%	47%
History of cocaine use	74%	N/A
Ever injected drugs	26%	33%
Hepatitis C antibody positive		
Overall prison population	13%	23%
People who ever injected drugs	42%	80%
Hepatitis C antigen/RNA positive (viraemic infection)	N/A	13% (58% of antibody positive cases)

ECDC published guidance on the prevention and control of blood-borne viruses in prison settings in 2018

It was recognised that incarceration provides an opportunity to address the healthcare needs of people who often belong to medically underserved communities e.g. PWUD and people who are homeless

Key recommendations for hepatitis B, hepatitis C and HIV

- Offer hepatitis B, hepatitis C and HIV testing on admission to a prison or place of detention (PPD) and throughout time in a PPD
- Offer hepatitis C treatment using DAA drugs to those who test positive for hepatitis C antigen/RNA (viraemic infection)
- Offer hepatitis B vaccine to those who are susceptible to infection (not previously infected/vaccinated) & those with unknown status
- Offer HIV treatment and care to all people living with HIV
- Use peer education and health promotion to increase testing and treatment uptake
- Provide opioid agonist treatment (OAT) to people experiencing opioid dependence
- Ensure continuity of care between PPDs and community healthcare services through active referrals and partnerships

ECDC/EUDA prison toolkit to support the elimination of hepatitis B & C in prisons

- A prison toolkit has been developed jointly by the European Centre for Disease Prevention and Control (ECDC) and the European Union Drugs Agency (EUDA)
- Representatives from the HSE National health Protection Office (NHPO) and the Irish Prison Service (IPS) were part of the Prison Toolkit Advisory Group
- It was recognised that people in prison have a relatively high burden of hepatitis C, and to a lesser extent hepatitis B
- Evidence suggests that hepatitis programmes in prisons are feasible, effective at reducing hepatitis C prevalence and incidence, cost effective and acceptable to people in prison and staff
- The toolkit incorporates test and treat strategies used successfully in Australia (SToP-C) and INHSU guidance on prevention, testing, treatment and advocacy

Key aspects of the toolkit

- **Prevention**: hepatitis B vaccination, opioid agonist treatment (OAT), information on harm reduction when using drugs
- **Screening and diagnosis:** based on testing guidance from EUDA, ECDC and WHO, includes key indicators for monitoring screening uptake and results
- **Treatment, monitoring and follow up:** recommends antiviral treatment with DAAs for hepatitis C, treatment assessment for hepatitis B and peer support initiatives, includes key indicators for monitoring treatment uptake and outcomes
- **Linkage to care post release:** recommends a strategy and defined pathways to ensure continuity of care in the community

Elimination of hepatitis C in prisons in Ireland: Test and Treat

Irish Prison Service (statistics, annual report)

- 13 prisons, 6,495 people incarcerated in 2023 (beyond designated operational capacity); 88% male, 65% aged 25-44 years, 79% born in Ireland
- Health needs assessment for the Irish Prison service, 2022 recommended:
  - Testing for hepatitis B, hepatitis C and HIV, and hepatitis B vaccination, for all people on entry to prison (voluntary)
  - Active hepatitis B, hepatitis C and HIV case finding in prisons
  - The implementation of a prison health surveillance system to monitor infectious diseases

Hepatitis C Test and Treat programme in Ireland

- Active promotion of screening, including peer to peer initiatives
- Clinical oversight provided by consultant hepatologists working with hepatitis C clinical nurse specialists (CNS)
- Antiviral treatment in prison offered to those who test positive, with continuity of care in the community
- Established in Mountjoy Prison, Mountjoy Female Prison (Dóchas) and Cork prison: In 2024, 432 people screened for hepatitis C, 33 (7.6%) tested positive for viraemic infection (antigen or RNA positive)
- Positivity varied by prison: Dóchas 9.8%, Mountjoy 7.3%, Cork prison 6.3% (viraemic prevalence reduced to 0.4% in mass screening carried out in Cork Prison in April 2025)
- Treatment status was available for 25 cases in Dóchas and Cork Prison: 21 successfully treated while in prison, 2 treated in the community,1 treated but relapsed and 1 did not wish to be treated
- Programme also initiated in Cloverhill prison and Wheatfield prison
- Funding has been approved to recruit a hepatitis C clinical nurse specialist to allow this programme to be rolled out nationally

Resources for advice on preventing hepatitis C infection and accessing testing and support

Free hepatitis C home testing is available from the HSE for those with self-reported risk factors. Approximately 10,000 test kits have been ordered in the past two years: **https://www2.hse.ie/services/order-a-hepatitis-c-test/**

HSE Social inclusion

Addiction services

- Information on where to access addiction support, including free testing for hepatitis B, hepatitis C and HIV and vaccination against hepatitis A and B
- Health Research Board (HRB) Interactive national map of drug and alcohol services (launched in 2024)
- https://drugs.ie/ provides information about drugs and emerging drug trends, advice on harm reduction and information on addiction treatment
- Ireland's first Medically Supervised Injection Centre opened in 2024, aiming to reduce drug injector deaths, bloodborne virus transmission, drug related litter and public injecting

Intercultural health

- Safetynet Primary Care provides medical services, including infectious disease testing to those without access to healthcare, including homeless people, people who use drugs (PWUD) and migrants
- Opt-in bloodborne virus and tuberculosis screening for people seeking international protection living in State-provided congregate accommodation is available via the MHSU, NRC Balseskin and the International Protection Screening and Support Service in Cork
- Irish Health System: A guide for migrants, Medical services and entitlements for International Protection Applicants

HSE Sexual Health Programme (SHP)

- Provides **free** supports for preventing sexually transmitted infections (STIs) including condoms and vaccinations
- STI testing, including hepatitis C for gbMSM and those with other risk factors, is provided free of charge in publicly-funded sexual health clinics
- Free home STI testing, including hepatitis C for gbMSM, is available nationally from the HSE
- Resources for gbMSM are available at www.man2man.ie

Irish Liver Foundation

The ILF provides expert advice and support to patients, their families and health professionals and promotes awareness of, and research into, liver disease

Limitations

- Hepatitis C became notifiable in Ireland in 2004. Notifications include some (but not necessarily all) cases diagnosed before 2004 and some duplicates (full names not reported for all notifications).
- Prior to 2012 the hepatitis C case definitions did not explicitly exclude cases that were known to be resolved (not viraemic at time of diagnosis) and hepatitis C antigen or RNA results were not commonly reported. It is likely that at least one quarter of cases notified 2004-2011 were past infections due to spontaneous resolution or successfully treatment.
- Because hepatitis C can be asymptomatic, or mildly symptomatic for some time, **cases may be infected for years before they are diagnosed** and notified.
- Most cases are identified through screening in high-risk settings and **notification trends do not represent trends in the incidence** of infection
- Hepatitis C notification data completeness is a barrier to understanding the current epidemiology of hepatitis C in Ireland – information on risk factor and/or country of birth were available for 67% of notified cases in 2024
- In 2015 the World Health Organization (WHO) published a global health sector strategy on viral hepatitis, and a corresponding Action plan for the European Region, with the aim of eliminating viral hepatitis as a public health threat by 2030
    - Ireland has implemented a lot of the WHO recommendations, but hepatitis C testing and mitigation measures are not being monitored in some settings, making it difficult to measure how well guidelines are being implemented and the impact of prevention and control policies.

Technical notes

1. Data are based on statutory notifications and were extracted from Computerised Infectious Disease Reporting (CIDR) system on 12th May 2025. Data are provisional and subject to ongoing review, validation and update. As a result, figures in this report may differ from previously published figures.
2. Data are presented based on date of notification to the Health Protection Surveillance Centre (HPSC).
3. Population data from Census 2006, 2011, 2016 and 2022 were from the Central Statistics Office (CSO)
4. Rates per 100,000 population were calculated using the 2006 census for notifications 2004-2008, the 2011 census for notifications 2009-2013, the 2016 census for notifications 2014-2019 and the 2022 census for notifications 2020-2023.
5. The COVID-19 pandemic (2020 and 2021) impacted hepatitis trends through reduced migration and a potential reduction in case ascertainment and in transmission for acute infections.
6. The counties covered by each of the six HSE Health Regions are as follows:
   - HSEDNE: HSE Dublin and North-East - North Dublin, Meath, Louth, Cavan, and Monaghan
   - HSEDM: HSE Dublin and Midlands - Longford, Westmeath, Offaly, Laois, Kildare, West Wicklow, parts of South Dublin
   - HSEDSE: HSE Dublin and South-East - Tipperary South, Waterford, Kilkenny, Carlow, Wexford, East Wicklow, parts of South Dublin
   - HSEMW: HSE Mid-West - Limerick, Tipperary and Clare
   - HSESW: HSE South-West - Kerry and Cork
   - HSEWNW: HSE West and North-West - Donegal, Sligo, Leitrim, West Cavan, Roscommon, Mayo, and Galway