



(HIV and) STI in Europe- where are we now

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Vigo, 1 February 2019

Overview



Epidemiology of bacterial STI in Europe

- Chlamydia
- Gonorrhoea (including antimicrobial resistance)
- Syphilis
- LGV
- HIV-coinfections

HIV epidemiology

HIV pre-exposure prophylaxis (PrEP) in Europe

EU agency dedicated to the prevention and control of communicable diseases



- Operational since May 2005
- Director Andrea Ammon
- Covers 28 EU States, plus Iceland, Liechtenstein, Norway
- Located in Stockholm, Sweden

- ECDC's mission: to identify, assess and communicate current and emerging threats to human health posed by infectious diseases

- Operate under European legislation which defines mandate
- Core functions:
 - Disease surveillance
 - Epidemic intelligence and Response support
 - Risk assessment
 - Scientific advice and guidance
 - Preparedness
 - Training and capacity strengthening

Co-ordination of European STI surveillance



- ECDC coordinates STI surveillance in EU/EEA countries since 2009
- STI surveillance network (epidemiologists, microbiologists)
 - Epidemiological surveillance
 - European gonococcal antimicrobial surveillance programme (Euro-GASP)
- Common case definitions (EC decision 2018/945)
 - chlamydia, gonorrhoea, syphilis, congenital syphilis and LGV
- Annual data collection, online reporting
- Note: surveillance responsibility of member states (ie consider differences in healthcare, public health and surveillance systems)
- Data presented from [Annual Epidemiological Report 2017](#)
- Data accessible from [ECDC surveillance atlas](#)

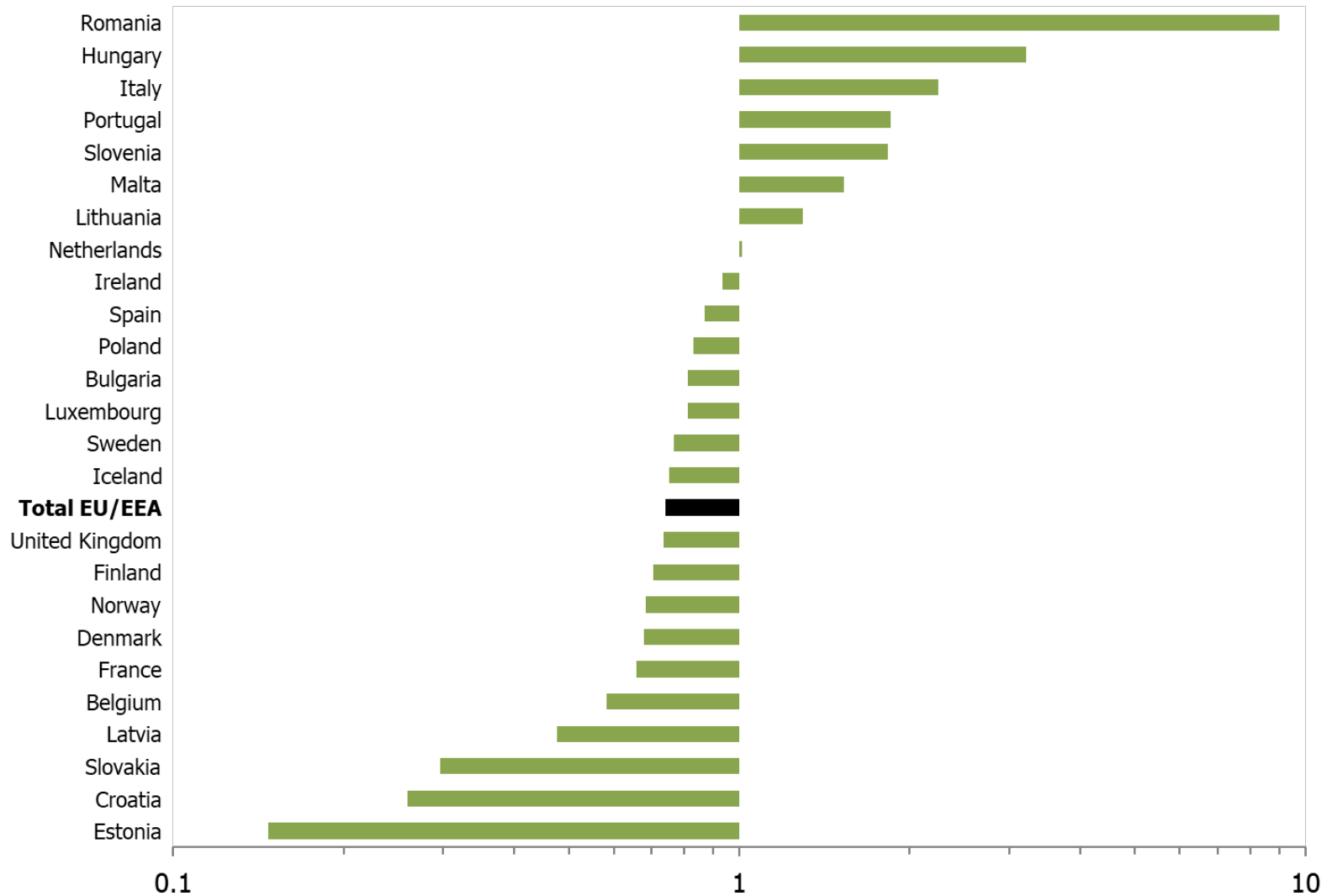
Chlamydia

Chlamydia

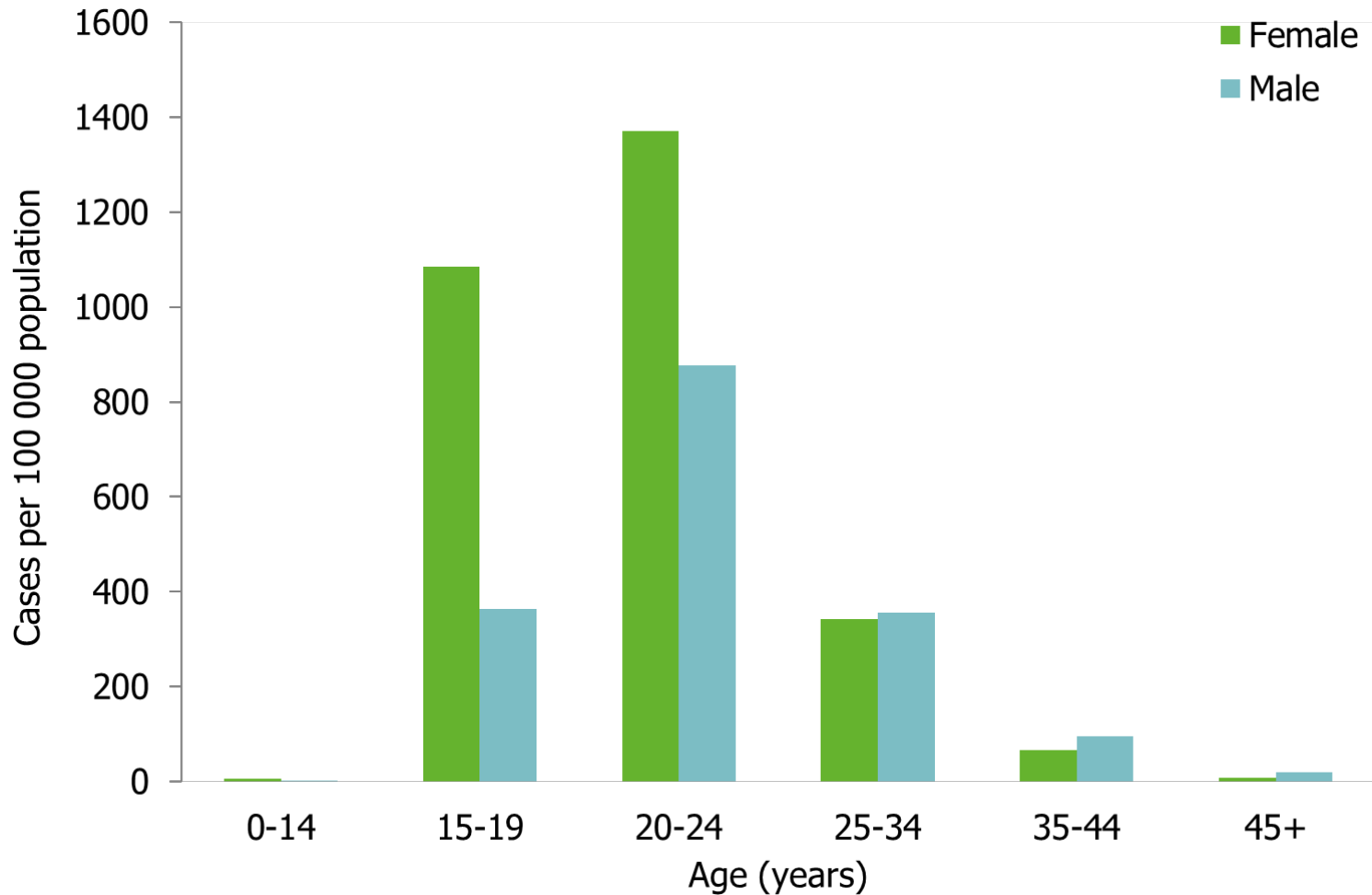


- In 2017, 409 646 cases of chlamydia infection were reported in 26 EU/EEA Member States.
- The overall notification rate was 146 per 100 000 persons.
- Highest country-specific rate (Iceland: 650) >6 000 times the country with the lowest rates (Cyprus, Romania: 0.1).
- Notification rates continue to be highest among young adult women and heterosexuals.
- The overall trend appears stable over recent years, both at the European and at the country level.

Chlamydia male-to-female ratio, 25 EU/EEA countries, 2017

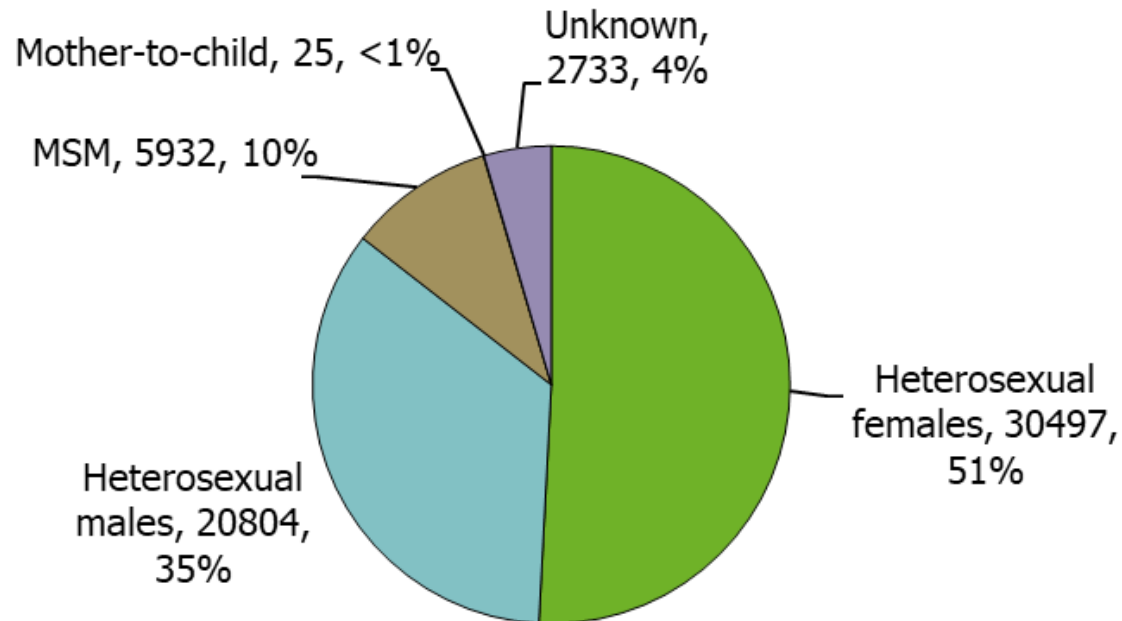


Chlamydia cases per 100 000 population, by age group and gender, EU/EEA, 2016



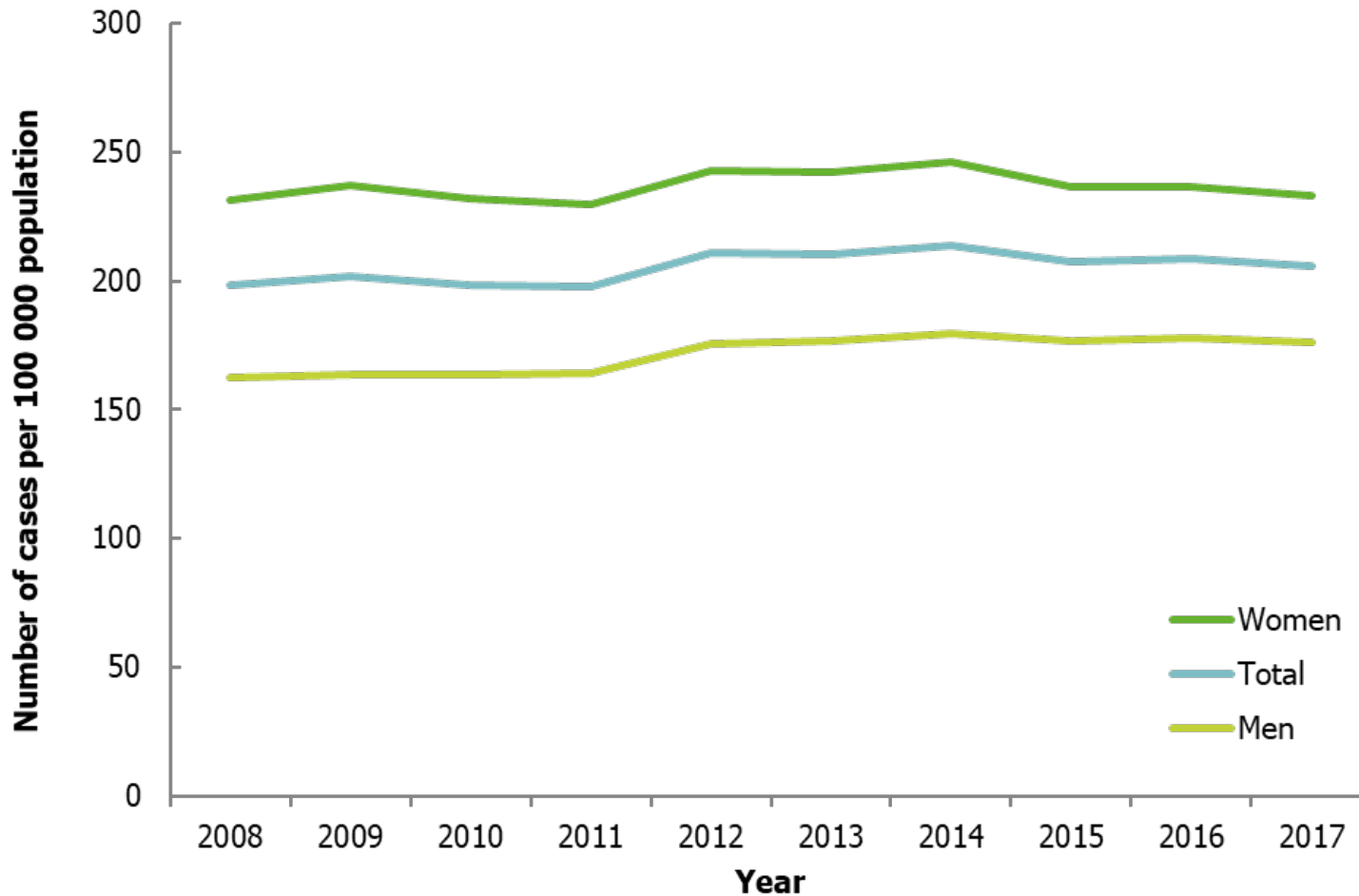
Source: Country reports from Bulgaria, Croatia, Cyprus, Denmark, Estonia, Finland, Hungary, Iceland, Ireland, Latvia, Lithuania, Luxembourg, Malta, Norway, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

Chlamydia infections by transmission category and gender (n=59 991), EU/EEA, 2017



Data from countries reporting transmission category for more than 60% of cases: Hungary, Italy, Latvia, Lithuania, Malta, the Netherlands, Portugal, Romania, Slovakia, Slovenia and Sweden.

Confirmed chlamydia cases per 100 000 population by year, EU/EEA countries reporting consistently, 2008–2017



Source: Country reports from Cyprus, Denmark, Estonia, Finland, Iceland, Ireland, Latvia, Lithuania, Luxembourg, Malta, Norway, Poland, Romania, Slovakia, Slovenia, Sweden and the United Kingdom.

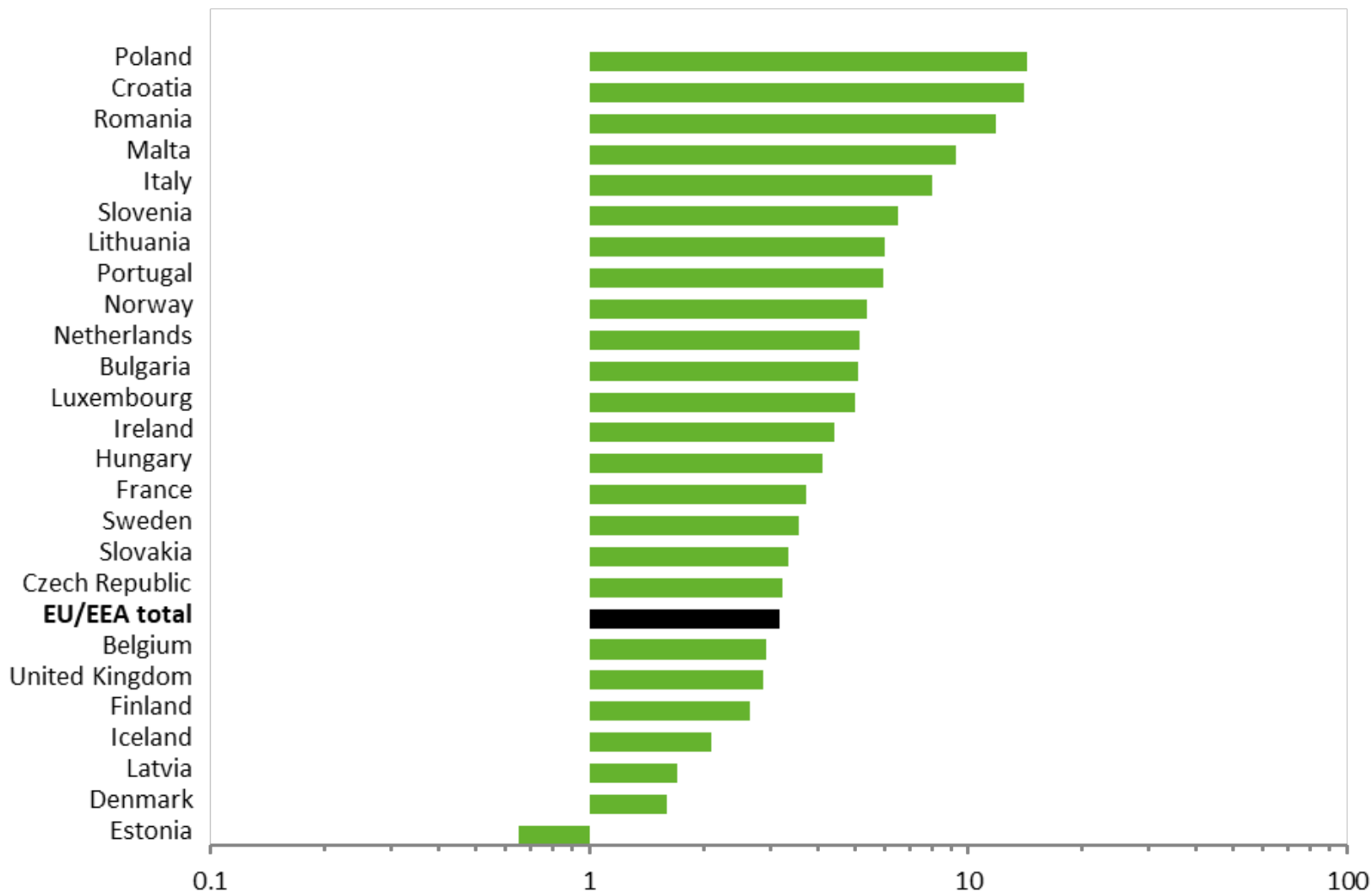
Gonorrhoea

Gonorrhoea

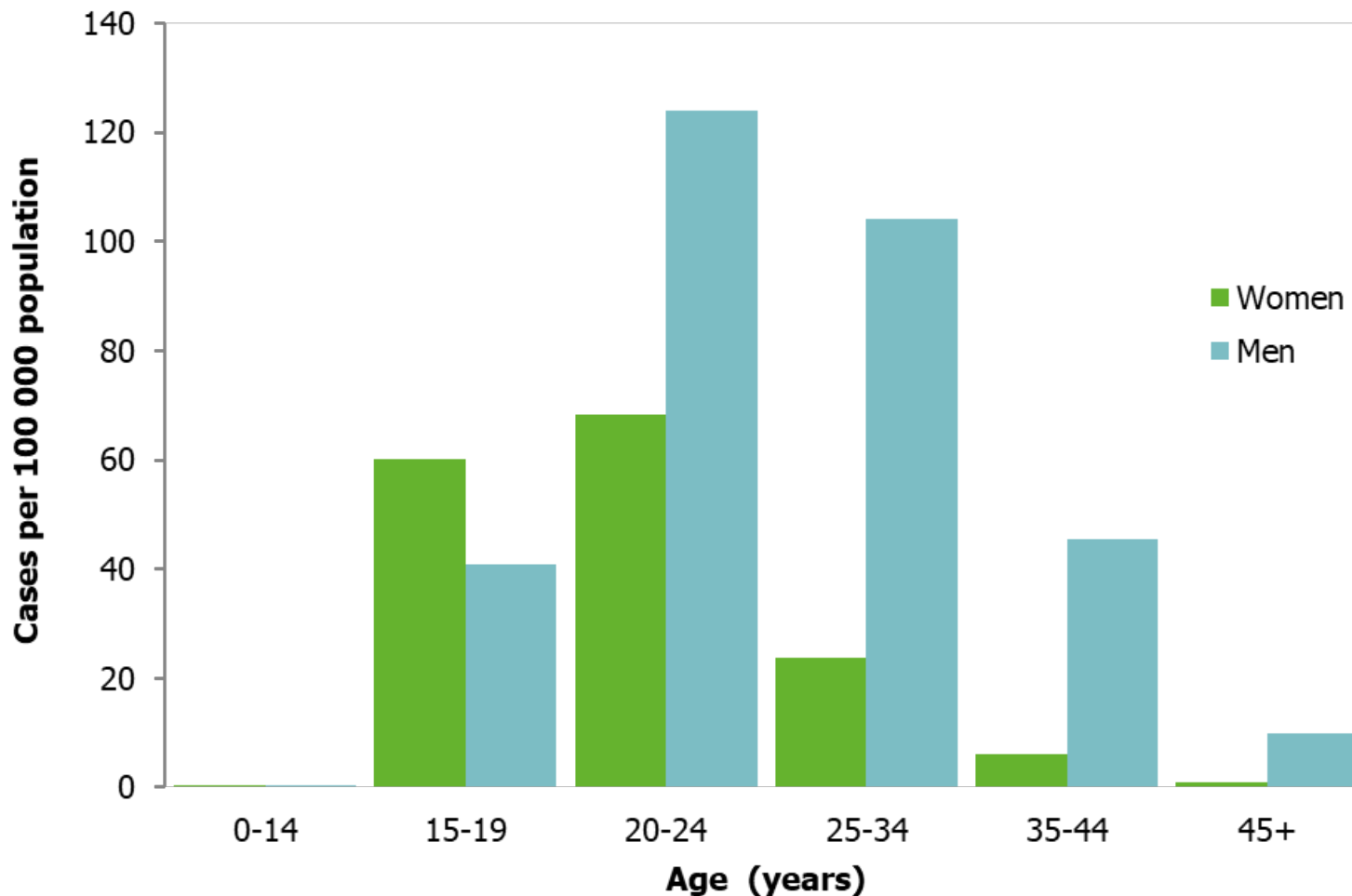


- 89 239 cases of gonorrhoea were reported by 27 EU/EEA Member States for 2017.
- The overall notification rate was 22.2 cases per 100 000 population.
- Rates of reported gonorrhoea infection vary considerably across Europe, with higher rates reported in northern Europe.
- Men who have sex with men (MSM) accounted for almost half of reported cases (47%) in 2017.
- The number of reported cases increased in 2017 after a slight reduction in 2016.

Gonorrhoea male-to-female ratio in 25 EU/EEA countries, 2017

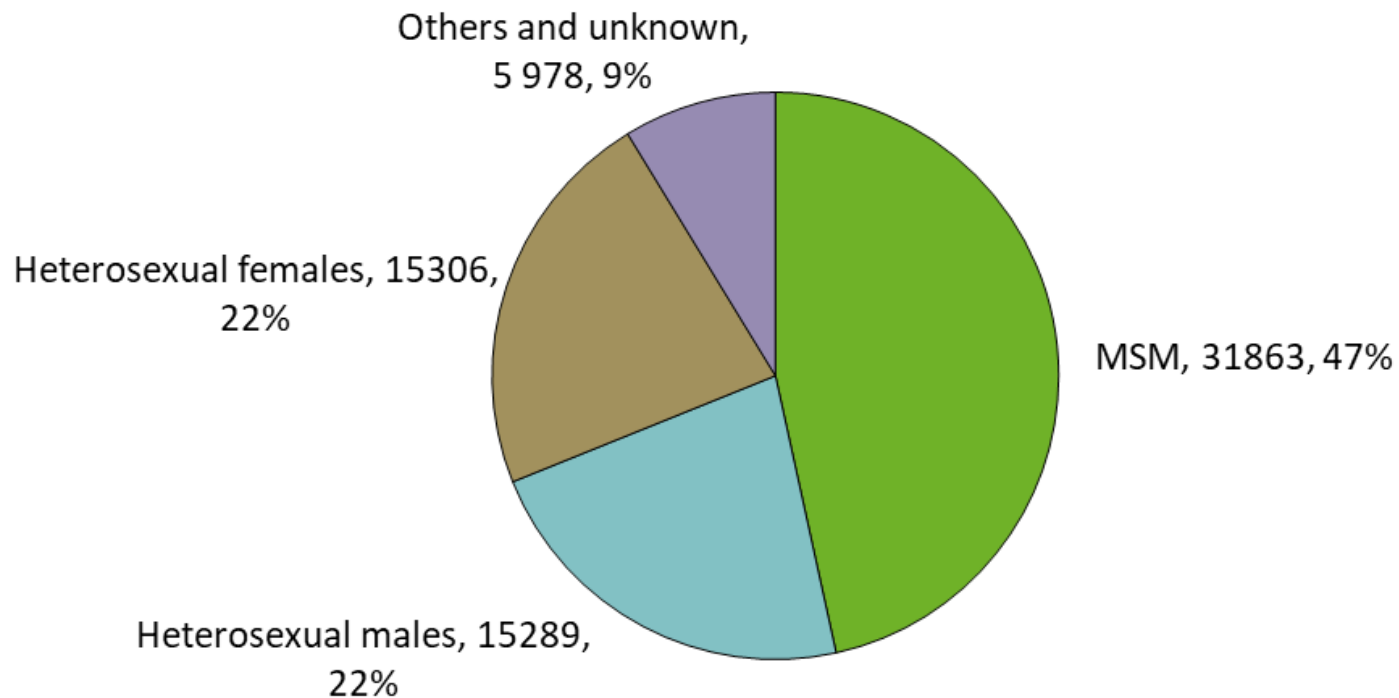


Rate of confirmed gonorrhoea cases per 100 000 population, by age and gender, EU/EEA, 2017



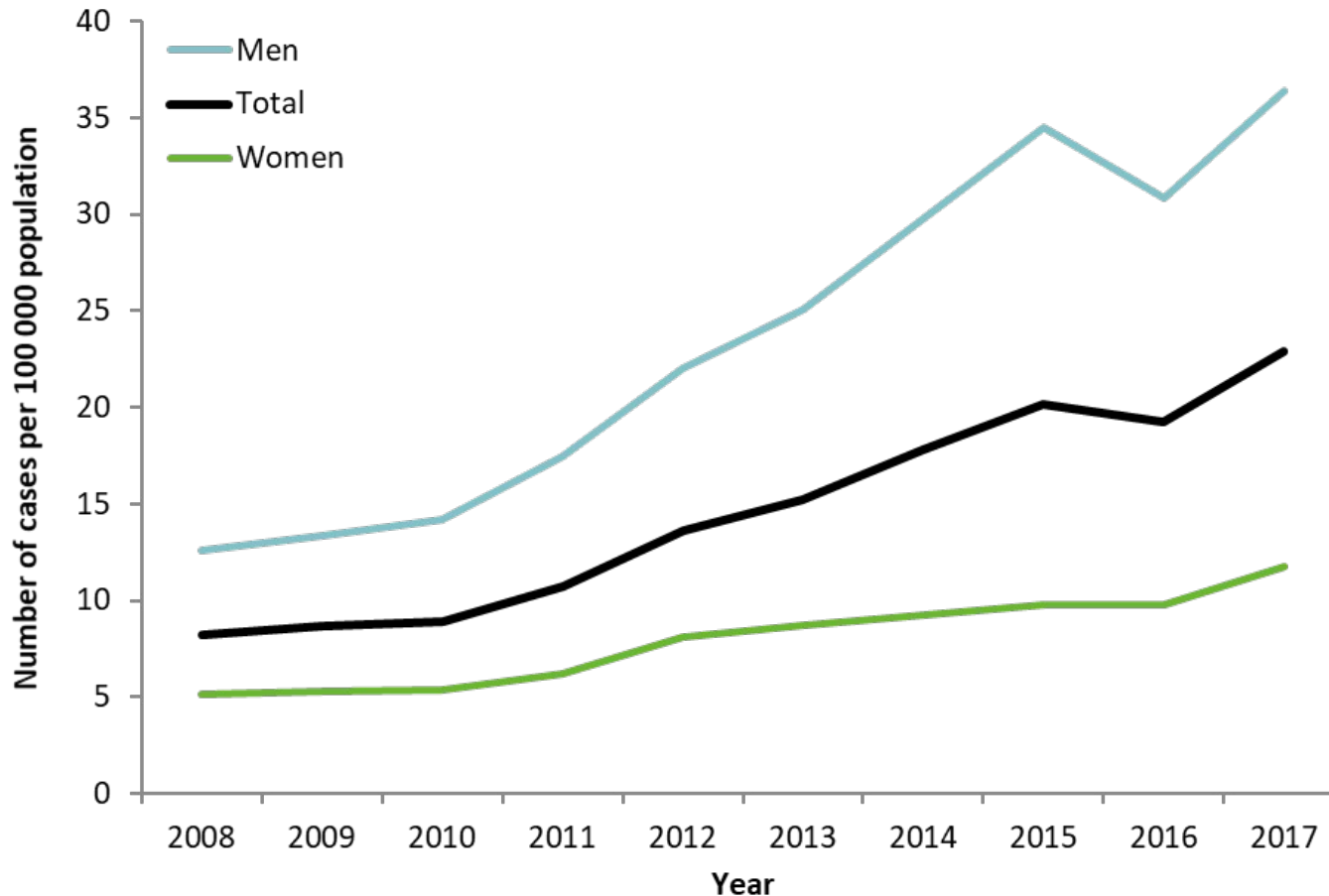
Source: Country reports from Cyprus, Croatia, the Czech Republic, Denmark, Estonia, Finland, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Norway, Portugal, Romania, Slovakia, Slovenia, Sweden and the United Kingdom.

Percentage of gonorrhoea infections by transmission category and gender (n=68 436), EU/EEA, 2017



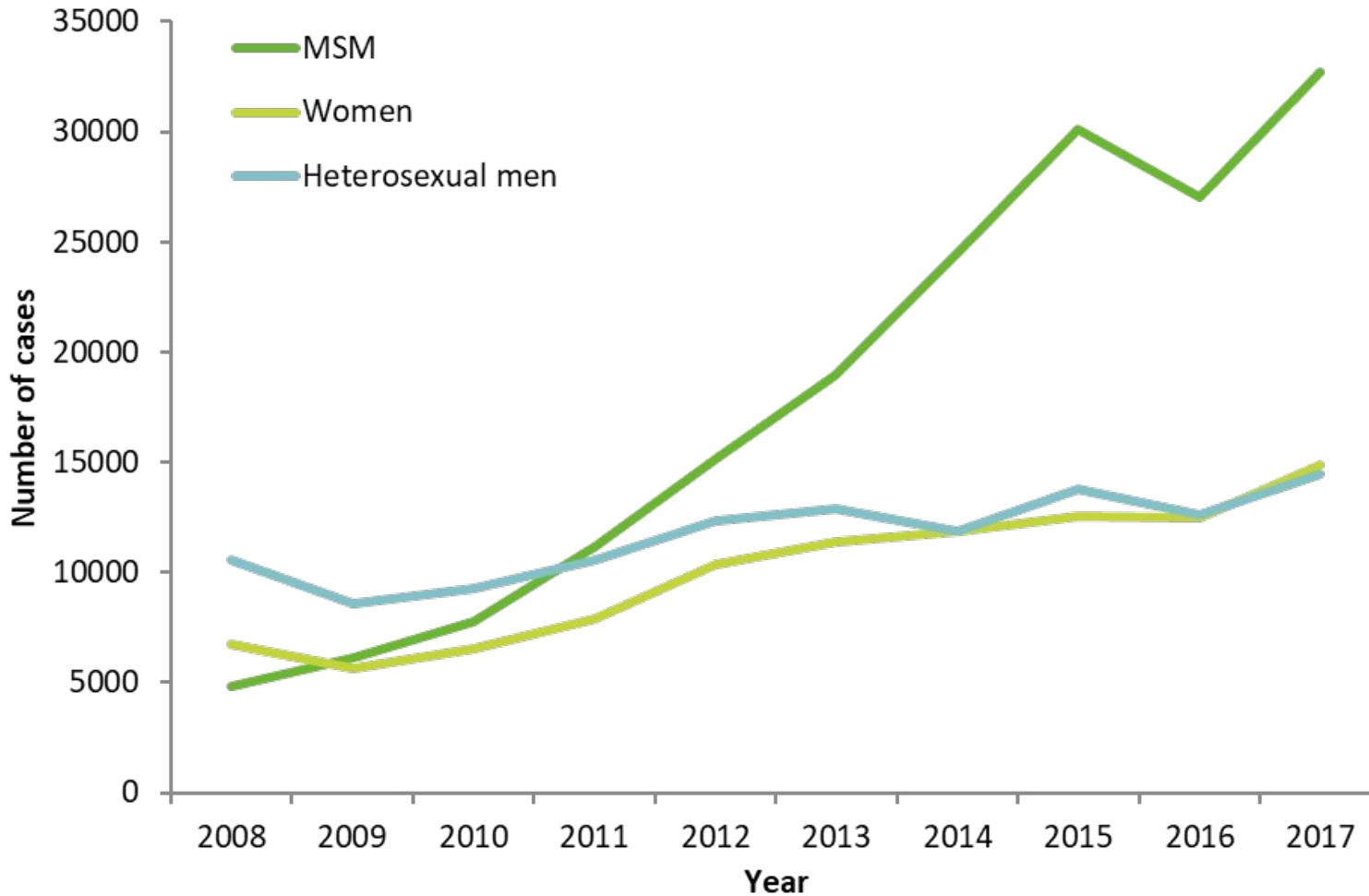
Data from countries reporting transmission category for more than 60% of cases: Czech Republic, Denmark, Finland, Hungary, Iceland, Ireland, Latvia, Lithuania, Malta, the Netherlands, Norway, Portugal, Romania, Slovakia, Slovenia, Sweden and the United Kingdom.

Rate of confirmed gonorrhoea cases per 100 000 population by year, EU/EEA countries reporting consistently, 2008–2017



Source: Country reports from the Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

Number of confirmed gonorrhoea cases by gender, transmission category and year, EU/EEA countries reporting consistently, EU/EEA, 2008–2017



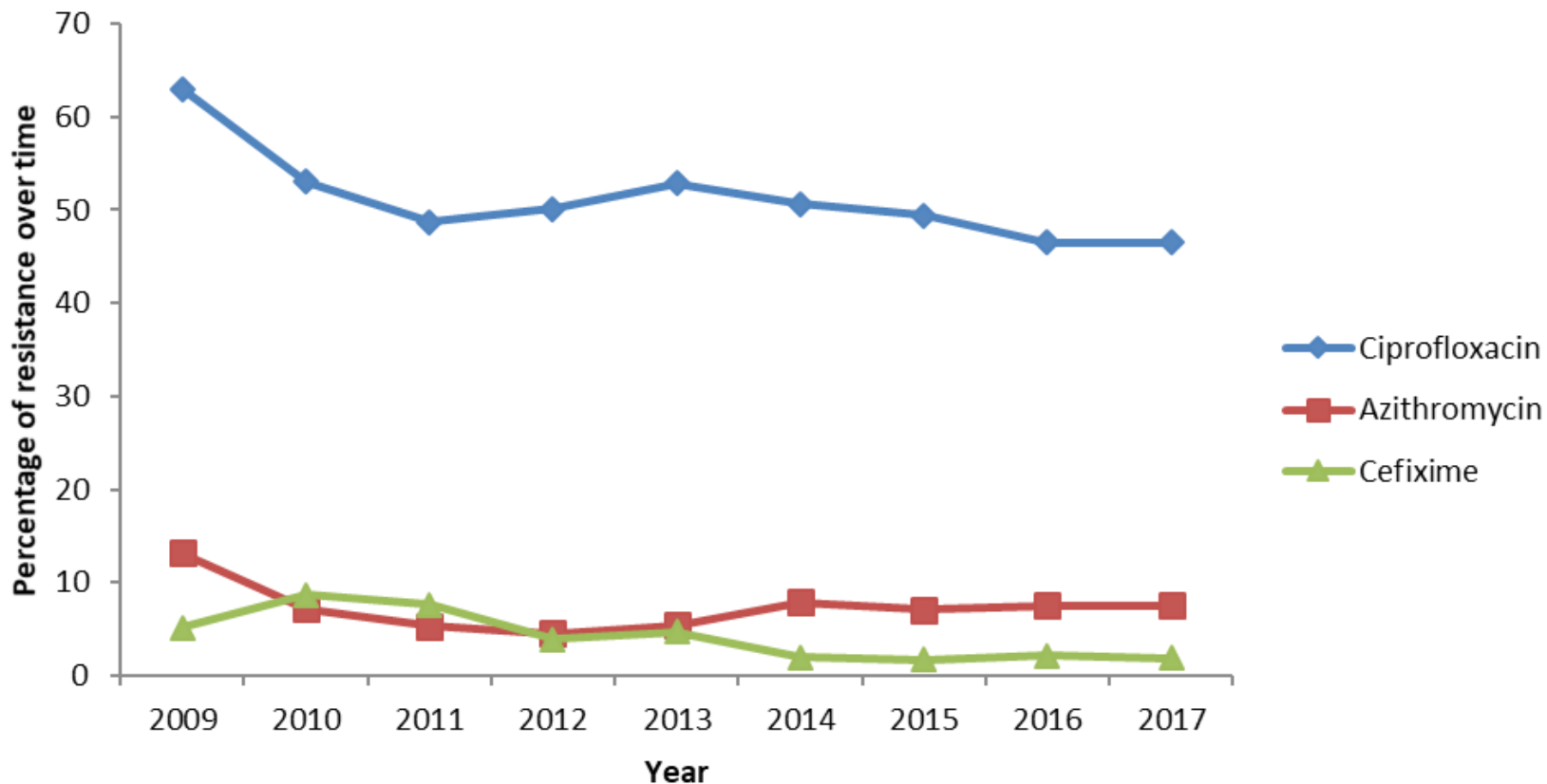
Source: Country reports from the Cyprus, the Czech Republic, Denmark, France, Latvia, Lithuania, Malta, the Netherlands, Norway, Romania, Slovenia, Sweden and the United Kingdom.

***Neisseria gonorrhoeae* antimicrobial resistance**



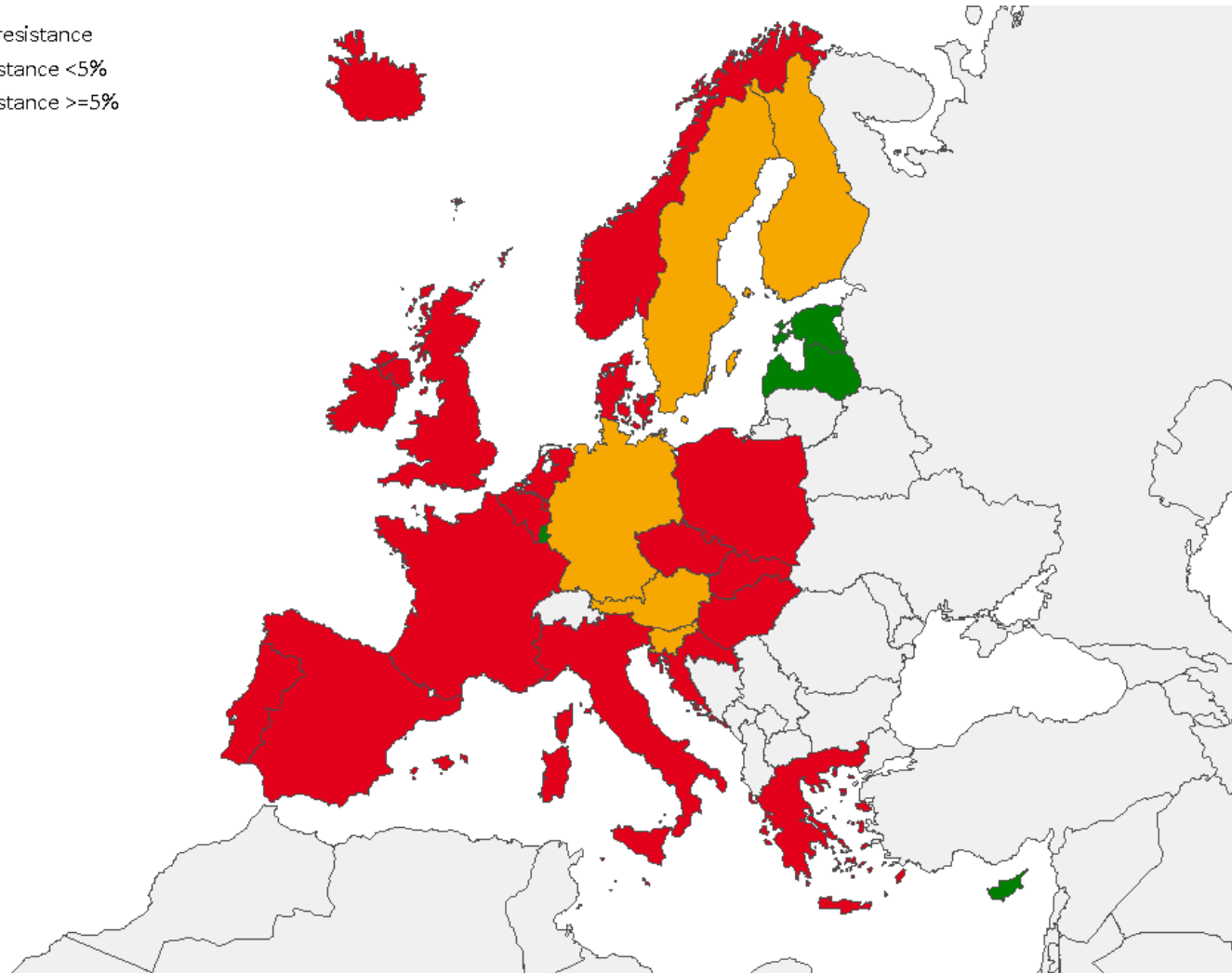
- In 2017, 27 EU/EEA Member States participated in the European Gonococcal Antimicrobial Surveillance Programme (Euro-GASP), 21 through decentralised testing.
- A total of 3 248 isolates were collected and tested, covering 4% of the gonorrhoea cases reported by routine surveillance.
- In 2017, antimicrobial resistance to cefixime, azithromycin and ciprofloxacin remained stable (1.9%, 7.5% and 46.5% respectively) compared to 2016 (2.1%, 7.5% and 46.5%).
- As in 2016, no isolates with ceftriaxone resistance were detected, compared to one in 2015, five in 2014 and seven in 2013.

Percentage of resistant *Neisseria gonorrhoeae* by antimicrobial and year, Euro-GASP, 2009–2017



Proportion of isolates with azithromycin resistance in Europe, 2017

- No azithromycin resistance
- Azithromycin resistance <5%
- Azithromycin resistance ≥5%



Syphilis

Syphilis



- In 2017, 33 193 syphilis cases were reported in 28 EU/EEA Member States (data were not available from Austria, Greece and Liechtenstein), at a rate of 7.1 per 100 000 population. Reported syphilis rates were eight times higher in men than in women.
- The majority of cases were reported in people older than 25 years, with young people between 15 and 24 years of age accounting for 13% of cases.
- Two-thirds (67%) of the syphilis cases with information on transmission category were reported in men who have sex with men (MSM).
- Trends since 2011 show that syphilis rates have been increasing, particularly among men, mainly due to an increase among MSM.
- Rates among women have been slowly increasing since 2015.

Rate of confirmed syphilis cases per 100 000 population by country, EU/EEA, 2017



Notification rate (N/100000)

<3.0

3.0–8.9

≥9.0

Not calculated

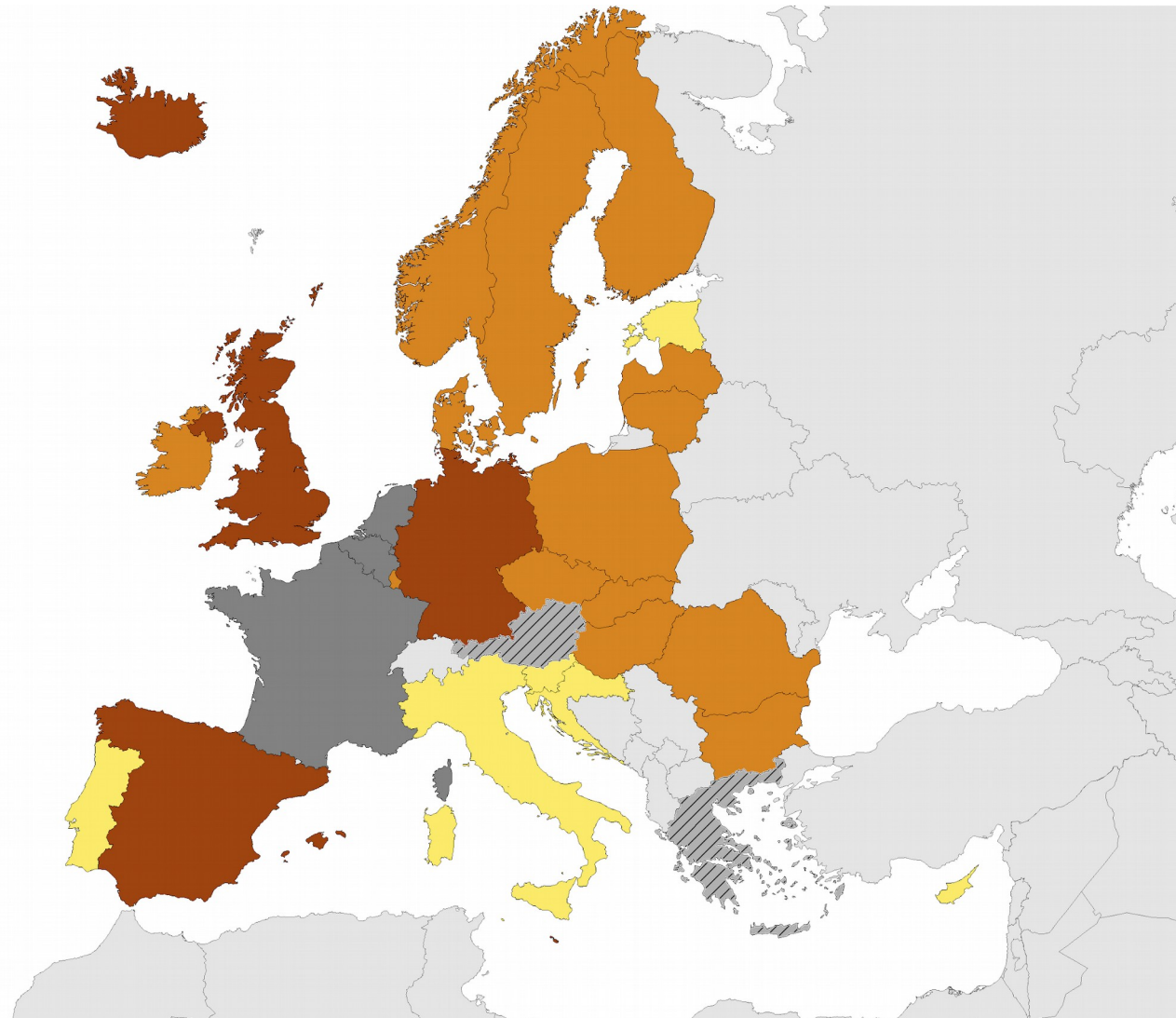
No data reported

Not included

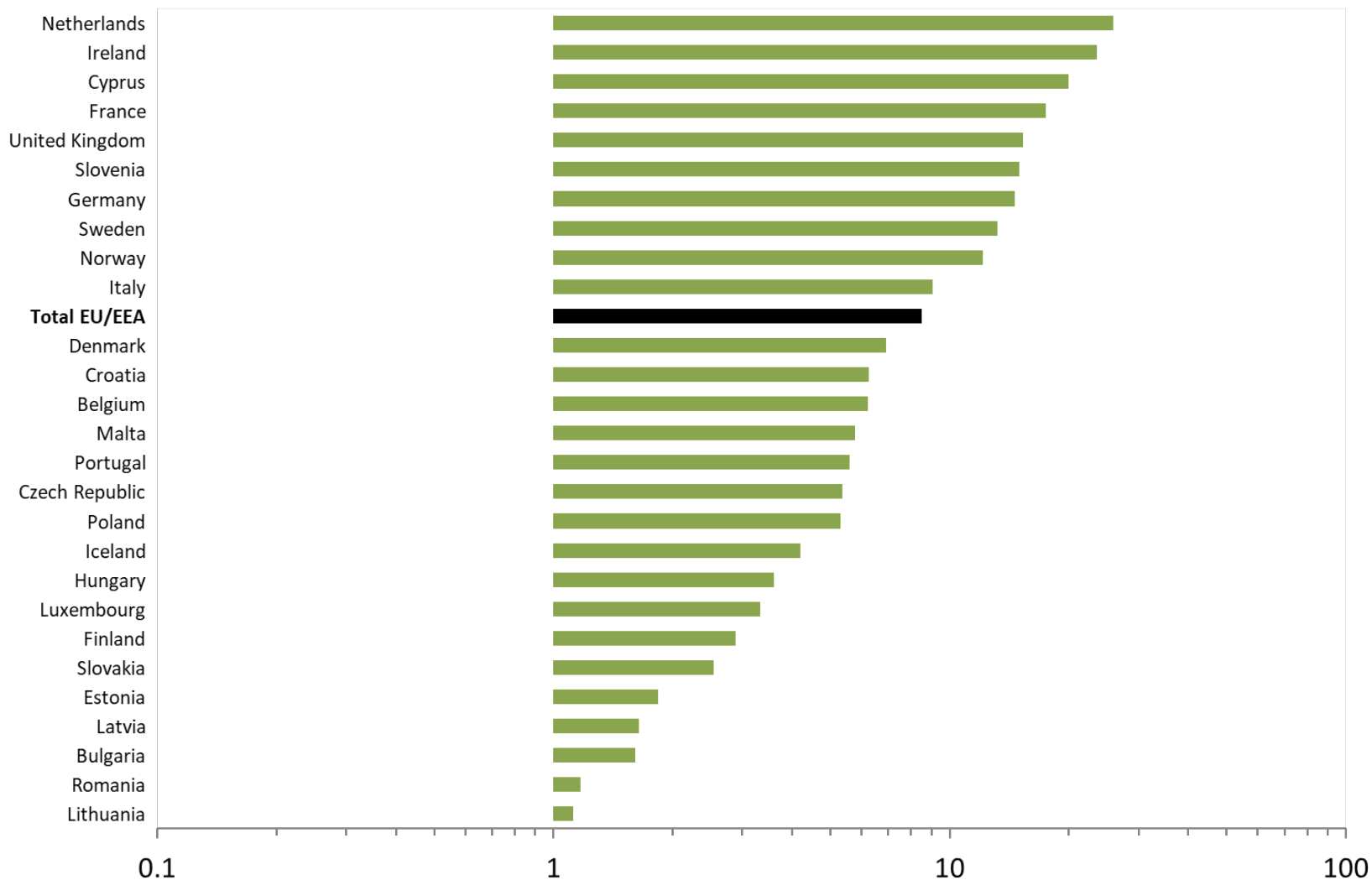
Countries not visible
in the main map extent

Luxembourg

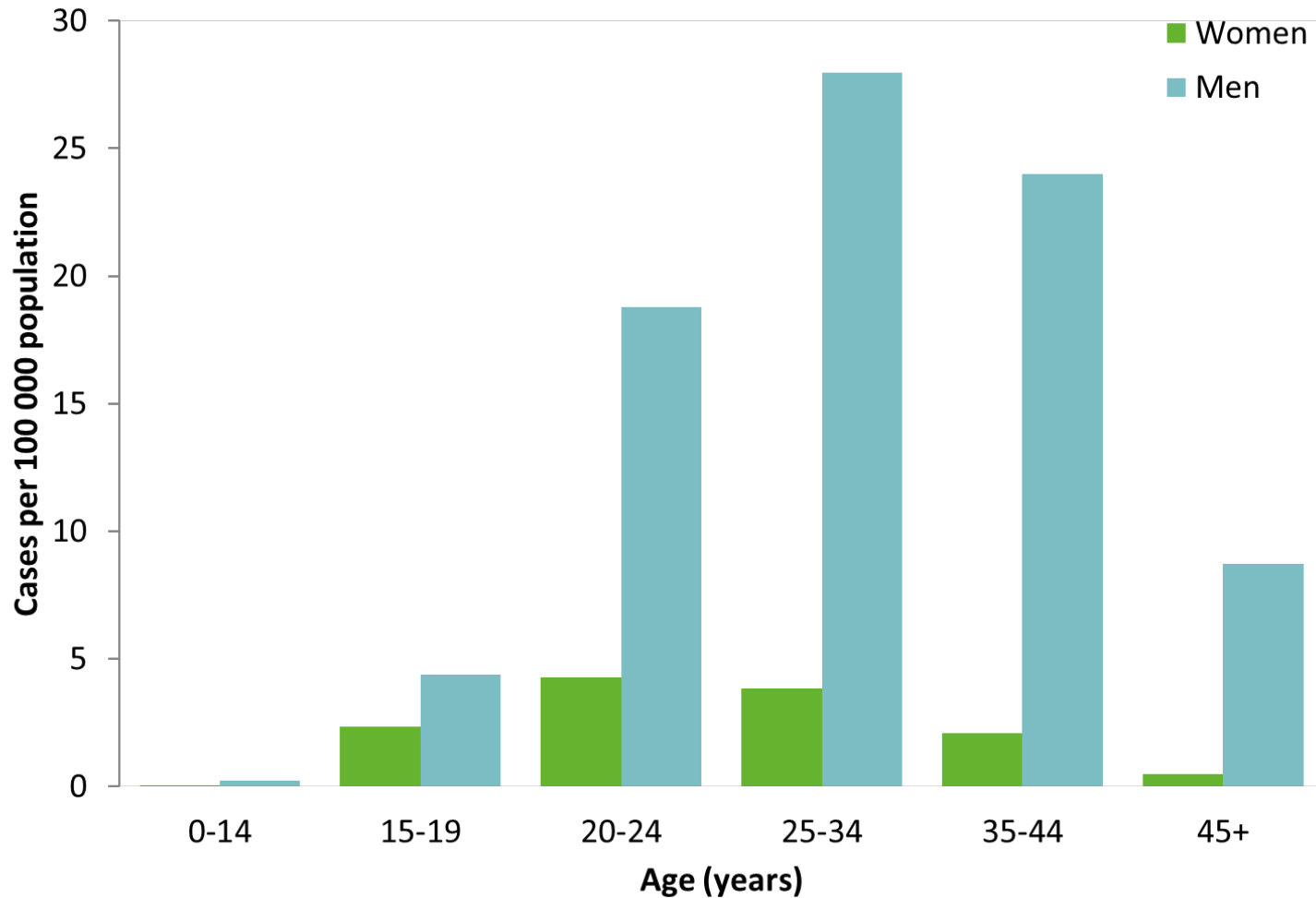
Malta



Syphilis male-to-female ratio in 27 EU/EEA countries, 2017

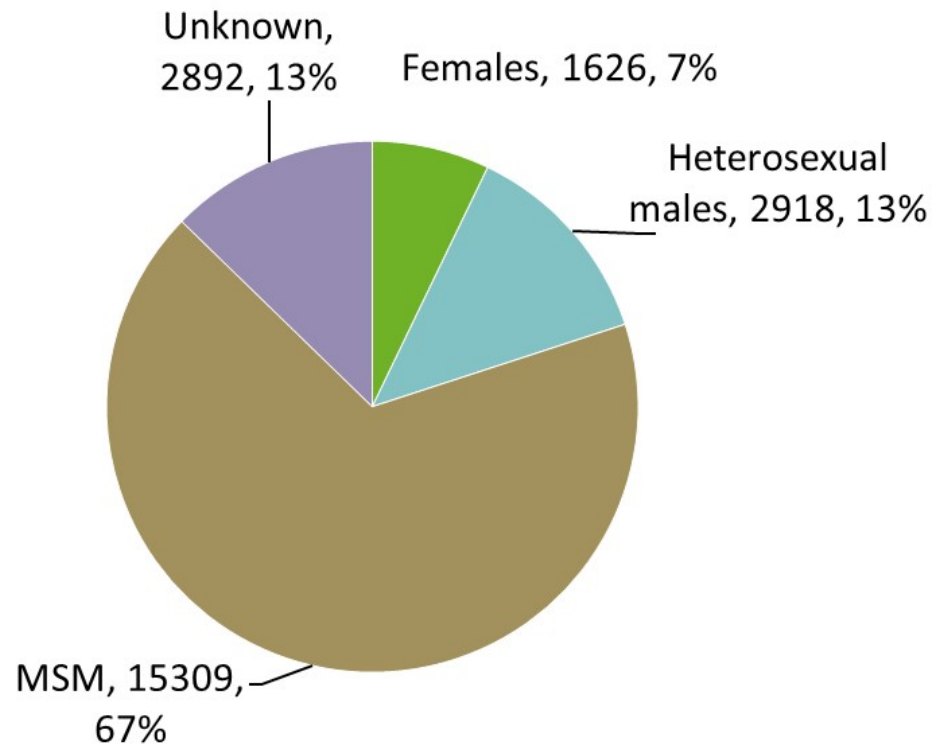


Rate of confirmed syphilis cases per 100 000 population, by age and gender, EU/EEA, 2017



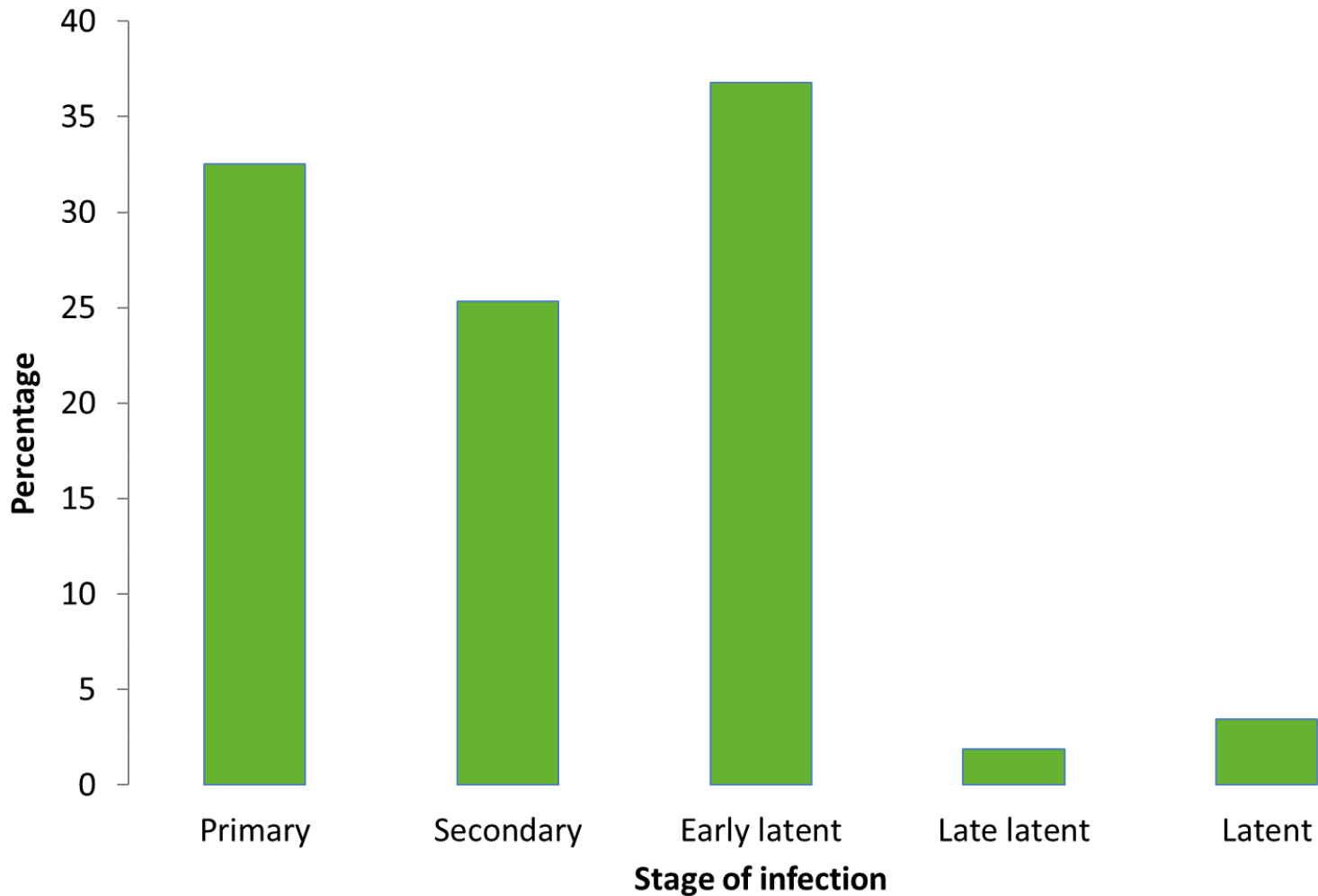
Source: Country reports from Cyprus, the Czech Republic, Denmark, Estonia, Finland, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Norway, Portugal, Romania, Slovakia, Slovenia, Sweden, and the United Kingdom.

Percentage of syphilis infections by transmission category and gender (n=22 745), EU/EEA, 2017



Data from countries reporting transmission category for more than 60% of cases: Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Latvia, Lithuania, Malta, the Netherlands, Norway, Portugal, Romania, Slovakia, Slovenia, Sweden and the United Kingdom.

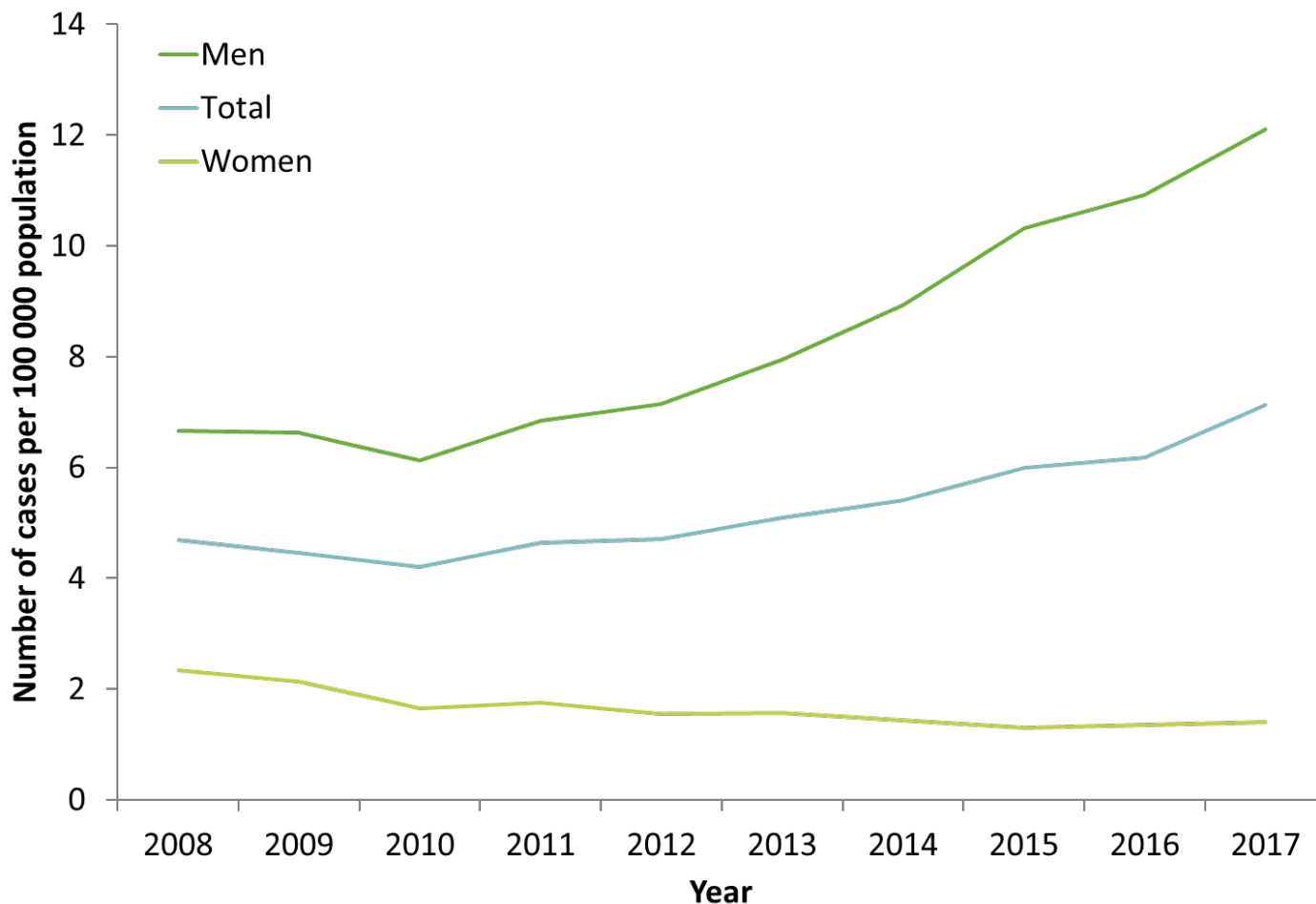
Distribution of reported syphilis infection stages, EU/EEA, 2017



Source: Country reports from the Czech Republic, Estonia, France, Hungary, Iceland, Ireland, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Portugal, Romania, Slovakia, Slovenia, Sweden and the United Kingdom.

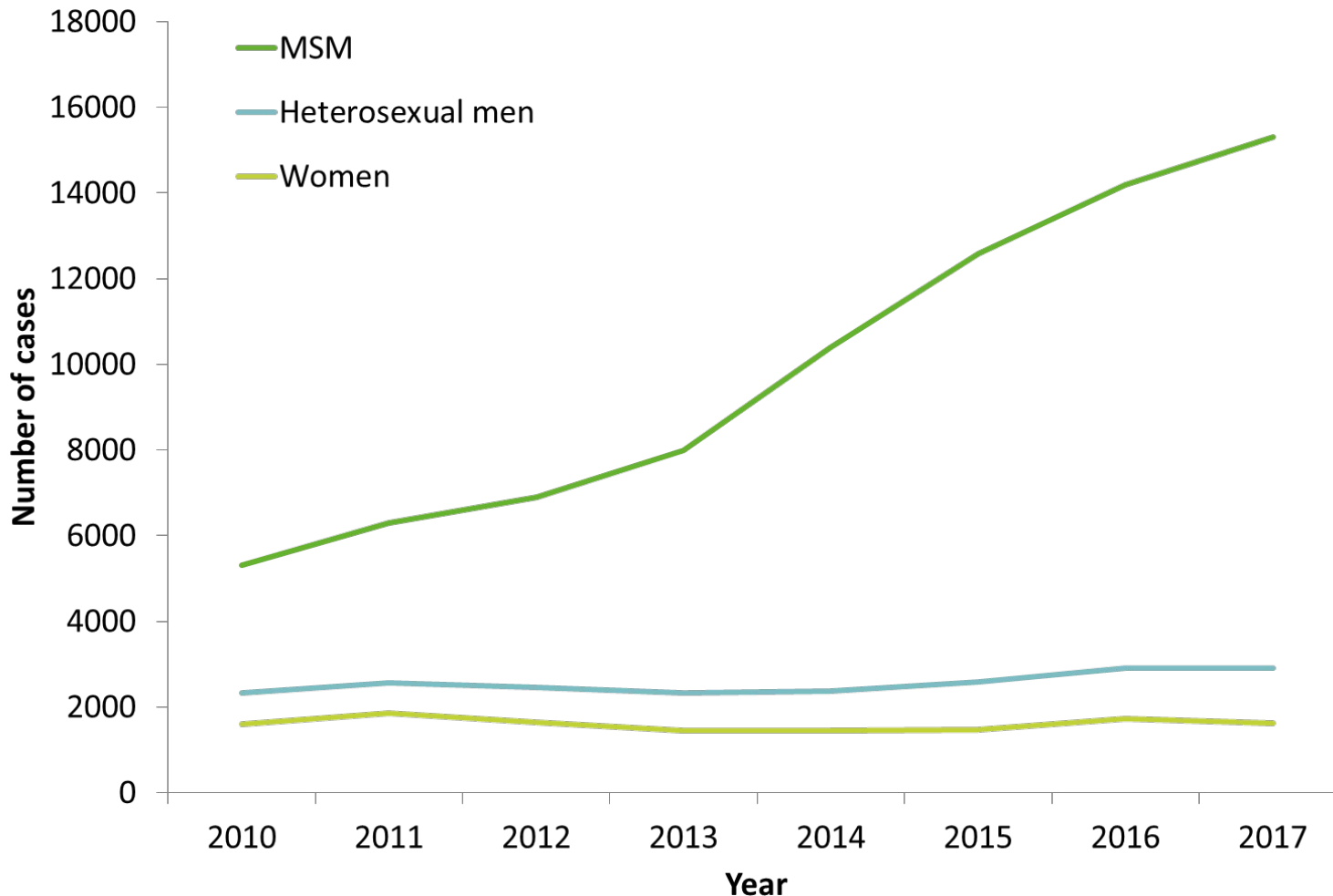
Rate of confirmed syphilis cases per 100 000 population

by year, EU/EEA countries reporting consistently,
2008–2017



Source: Country reports from the Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Germany, Ireland, Italy, Latvia, Luxembourg, Malta, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Sweden and the United Kingdom.

Number of confirmed syphilis cases by gender, transmission category and year, EU/EEA countries reporting consistently, EU/EEA, 2010–2017



Source: Country reports from the Czech Republic, Denmark, Finland, France, Germany, Hungary, Iceland, Ireland, Latvia, Lithuania, Malta, the Netherlands, Norway, Portugal, Romania, Slovakia, Slovenia, Sweden and the United Kingdom.

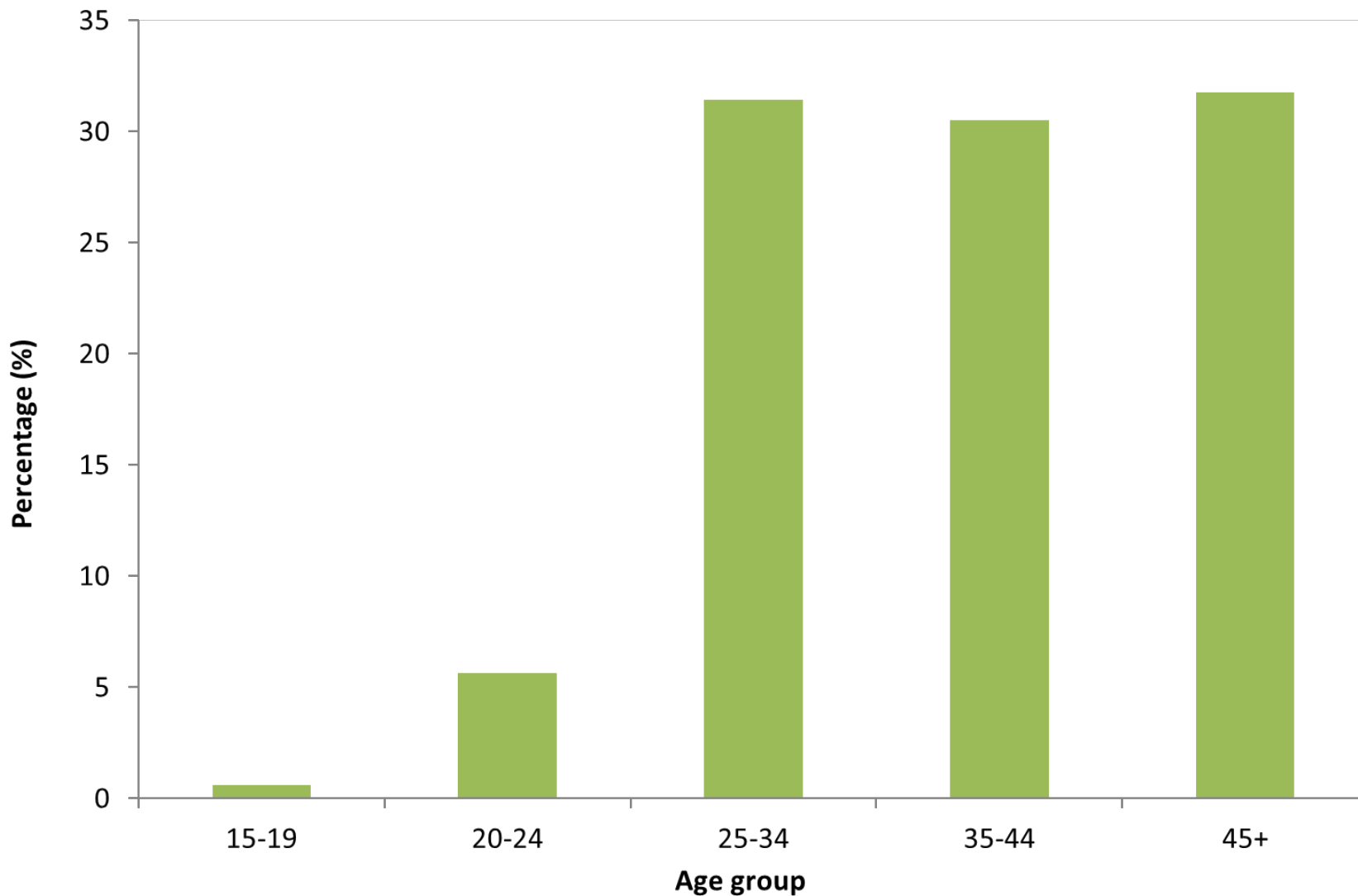
Lymphogranuloma venereum

Lymphogranuloma venereum

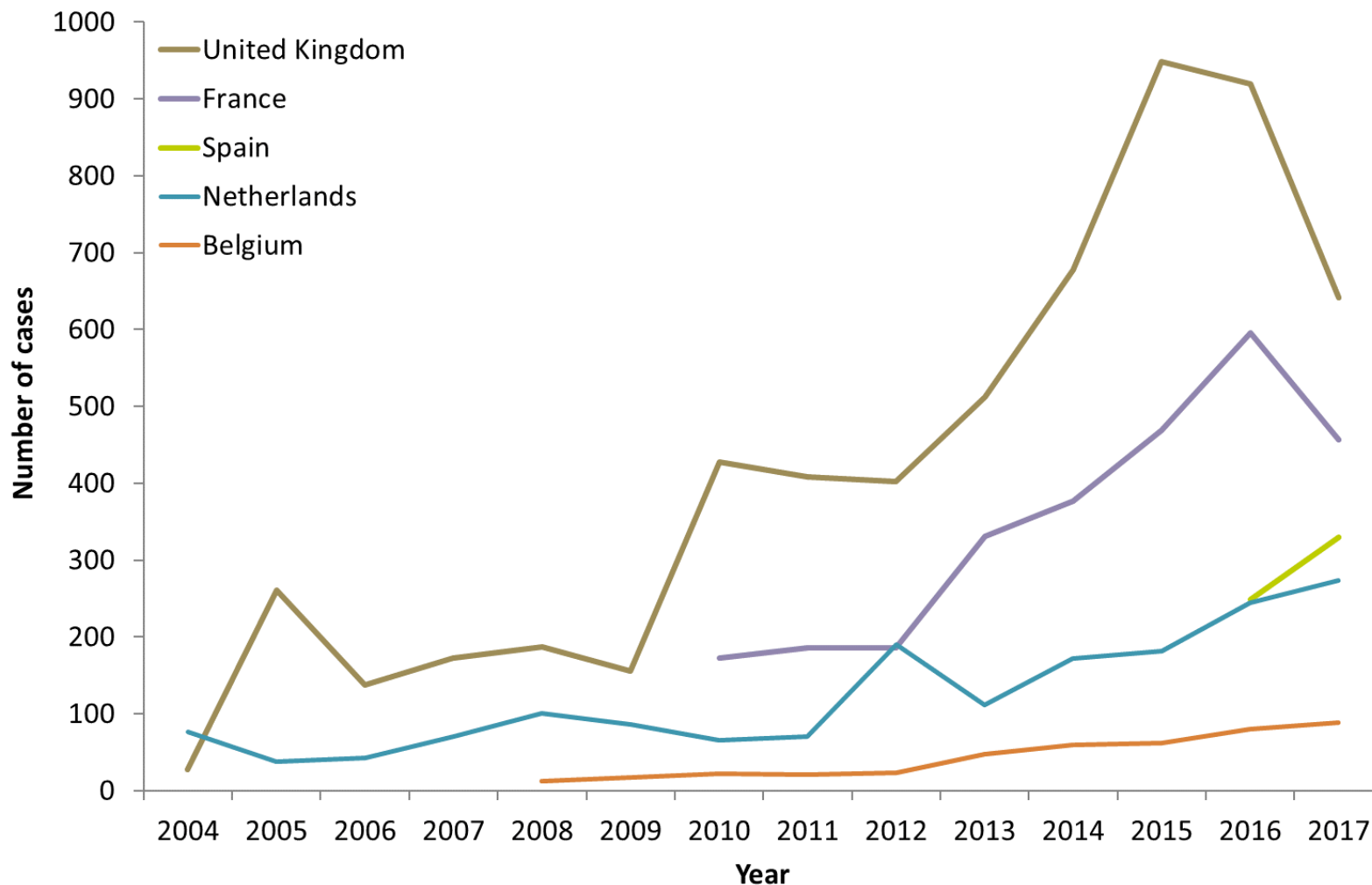


- In 2017, LGV data were reported by 24 countries, out of which 15 reported 1 989 cases.
- Four countries (France, the Netherlands, Spain and the United Kingdom) accounted for 84% of notified cases.
- Almost all cases were reported among men who have sex with men; in those cases with known HIV status, 63% were HIV positive in 2017.
- The number of reported cases decreased by 16% compared to 2016. This was the first decrease in reported cases since 2009.
- A number of countries have not reported LGV cases over the years, suggesting significant underdiagnosis and underreporting.

Age distribution of confirmed LGV cases, EU/EEA, 2017

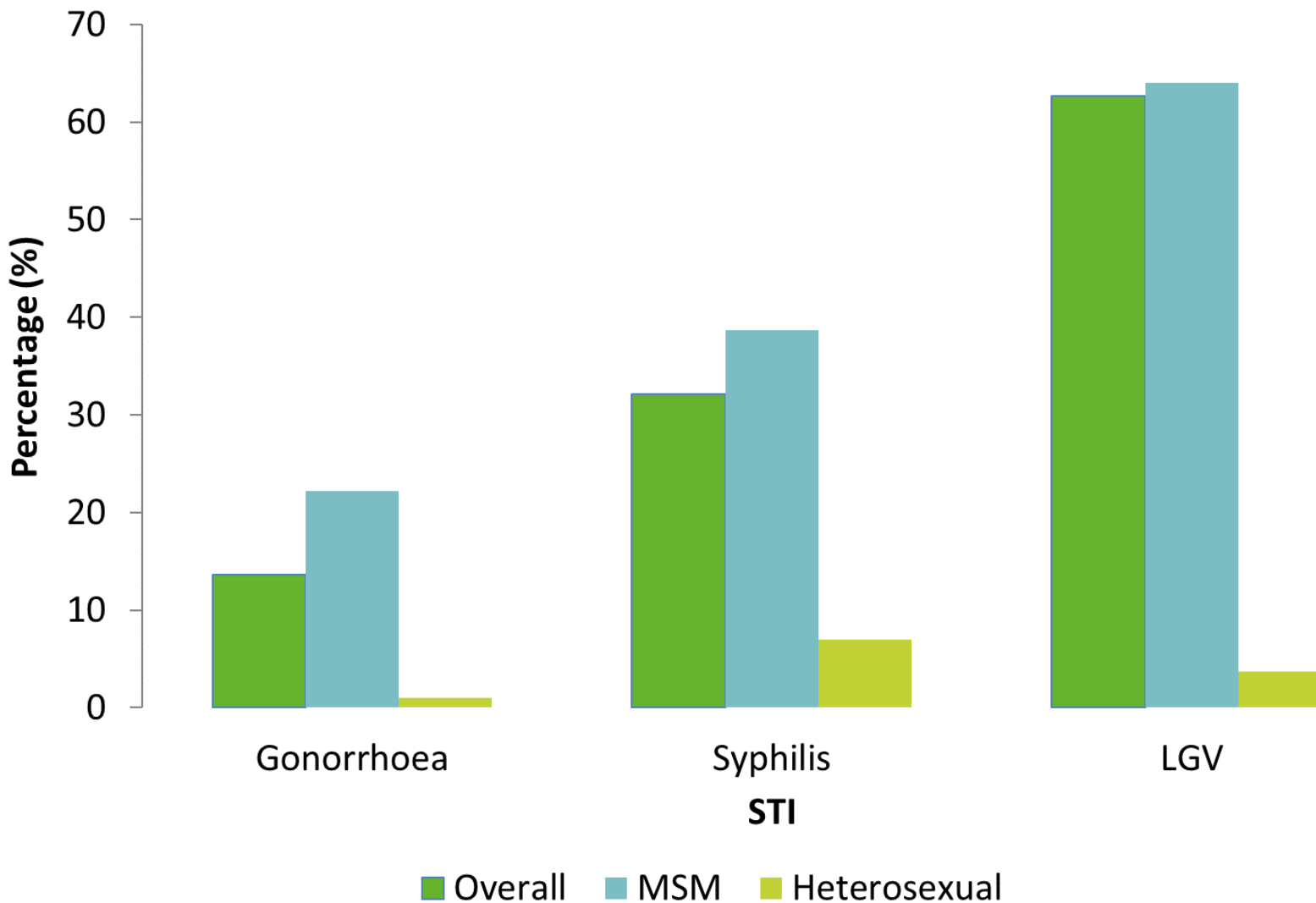


Confirmed LGV cases among the five EU/EEA Member States reporting the largest number of cases in 2017, 2004–2017

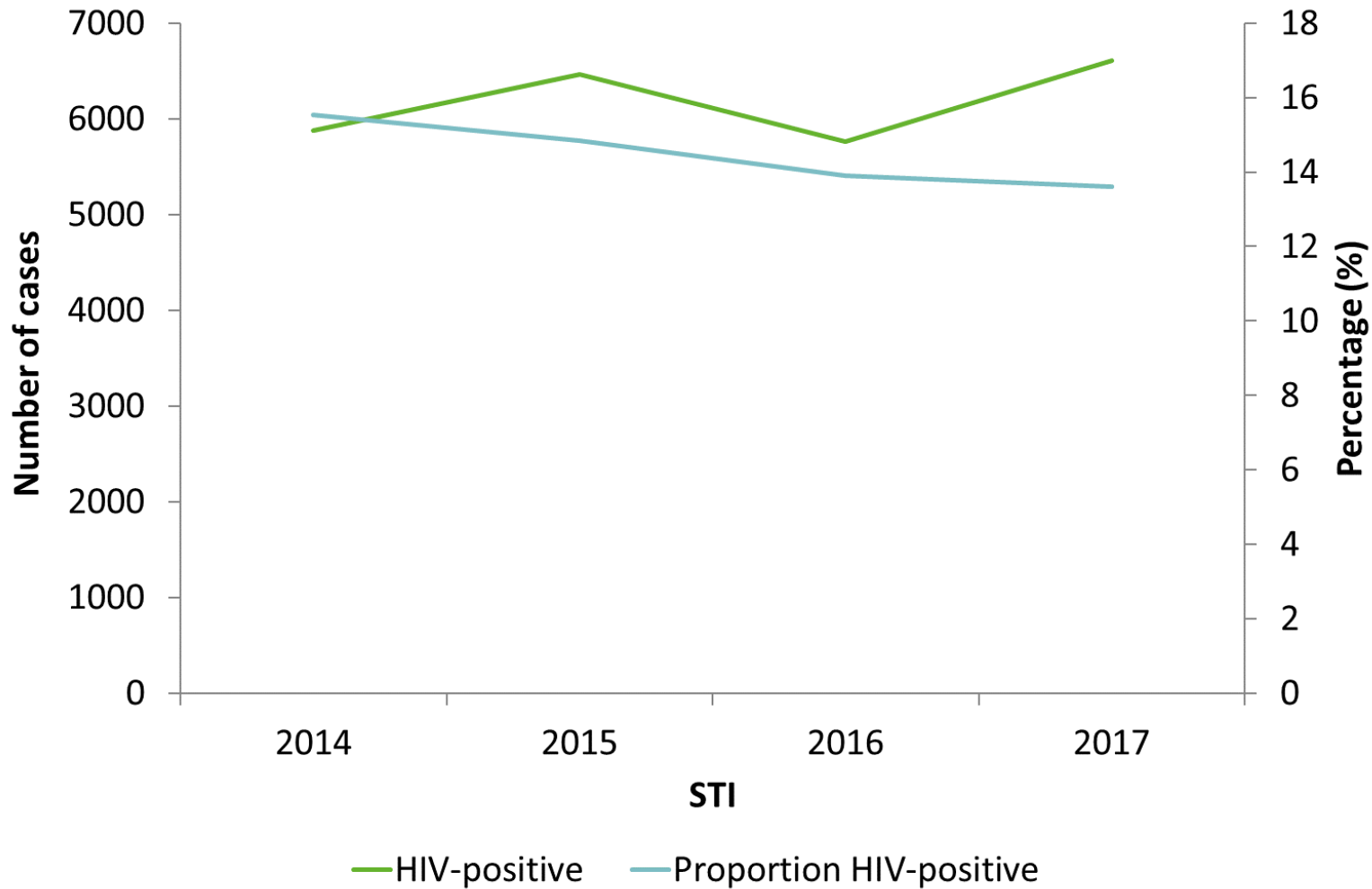


HIV co-infections

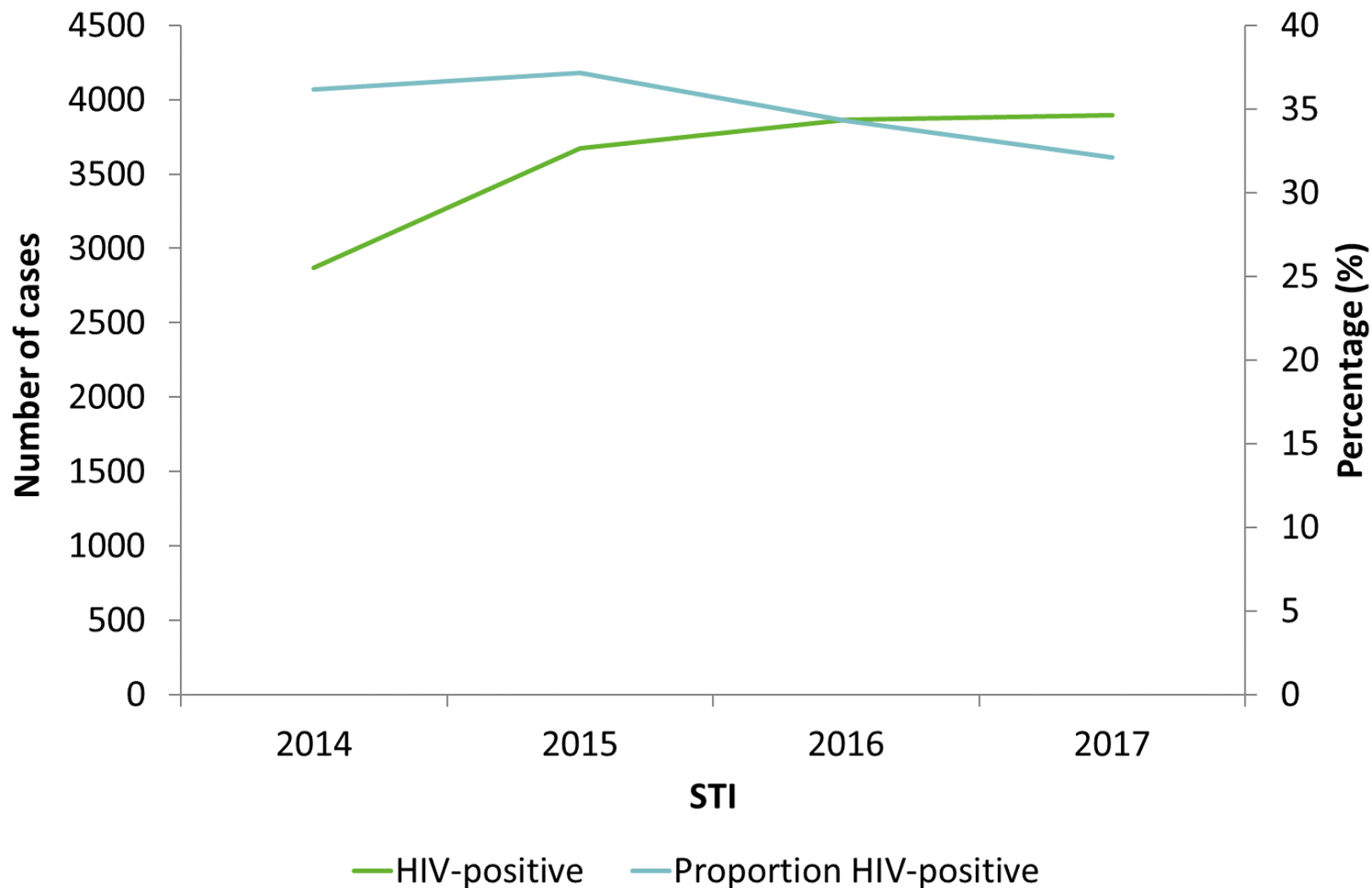
HIV co-infections, 2017



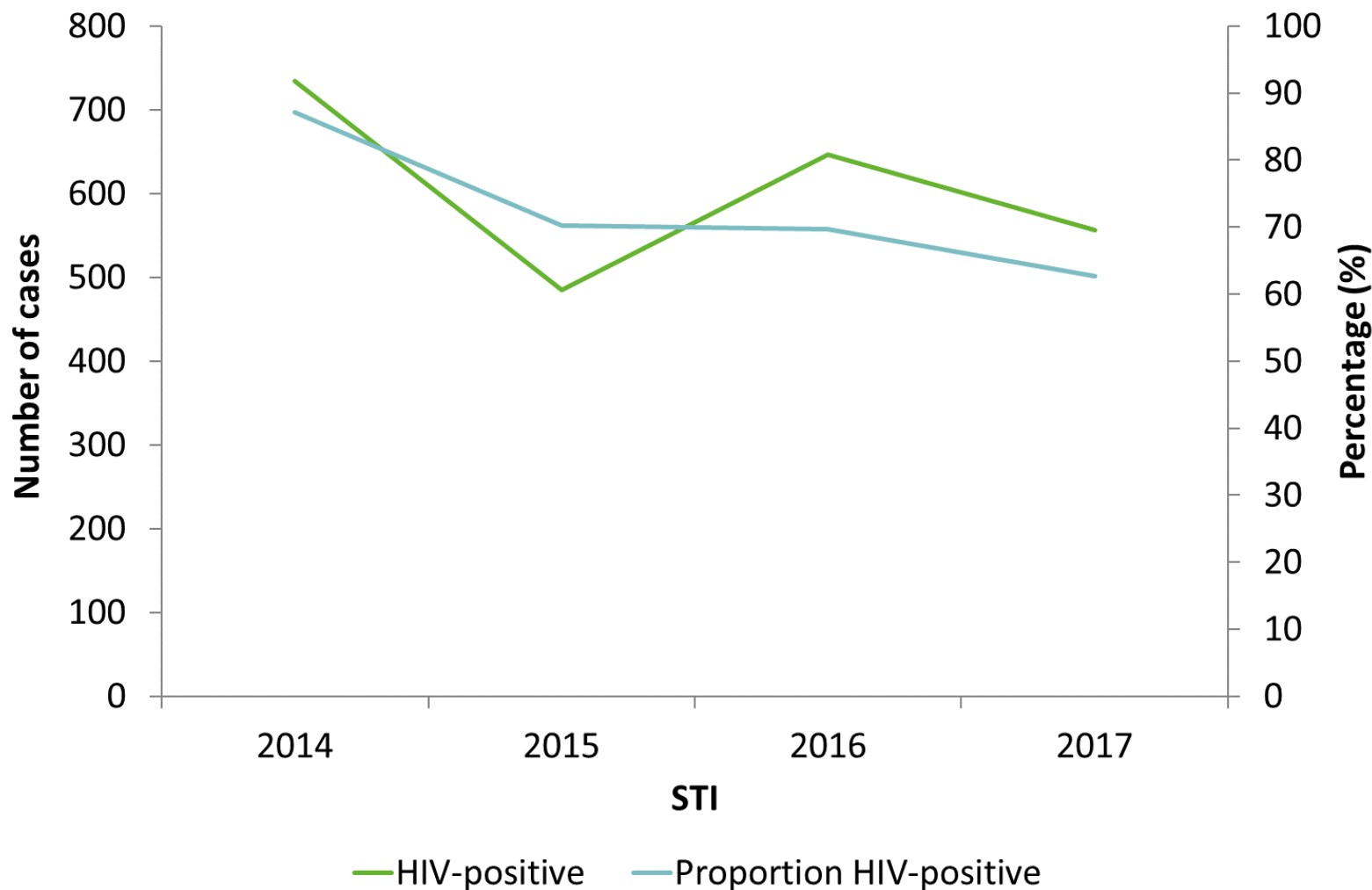
HIV co-infection trends: gonorrhoea



HIV co-infection trends: syphilis



HIV co-infection trends: LGV



HIV

New HIV diagnoses in the EU/EEA 2017



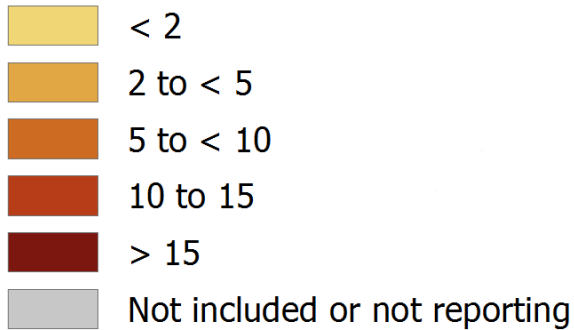
Reporting countries/number of countries*	30/31
Number of HIV diagnoses	25 353
Rate per 100 000 population (adjusted for reporting delay)	6.2
Male-to-female ratio	3.1
Percentage of new diagnoses CD4<350 cells/mm ³	49%
Transmission mode (%)	
Sex between men	38
Heterosexual transmission (men)	17
Heterosexual transmission (women)	16
Injecting drug use	4
Vertical transmission	<1
Unknown	24

* Due to technical issues no 2017 data were received from Germany

New HIV diagnoses, 2017, EU/EEA



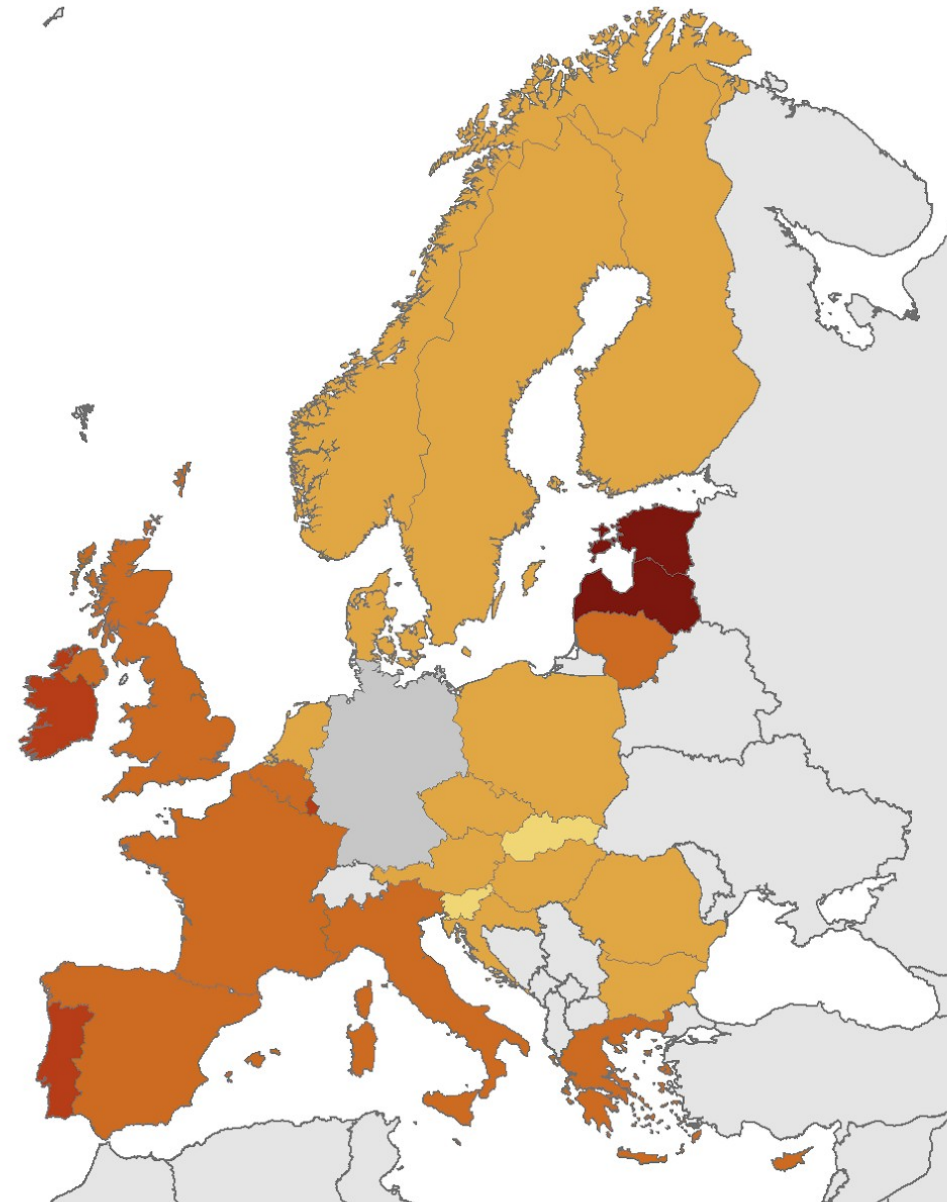
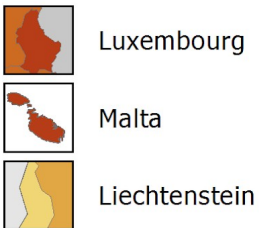
Rate per 100 000 population



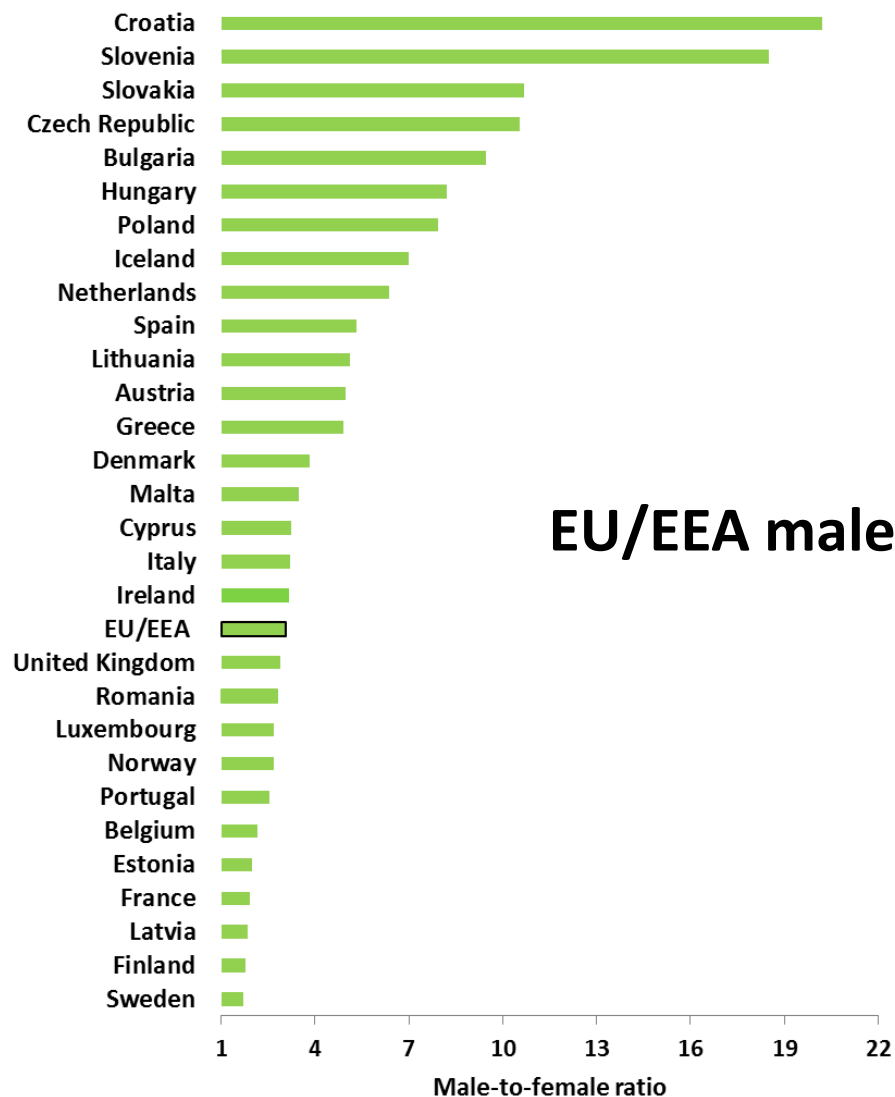
EU/EEA rate: 6.2 per 100 000

adjusted for reporting delay

Non-visible countries

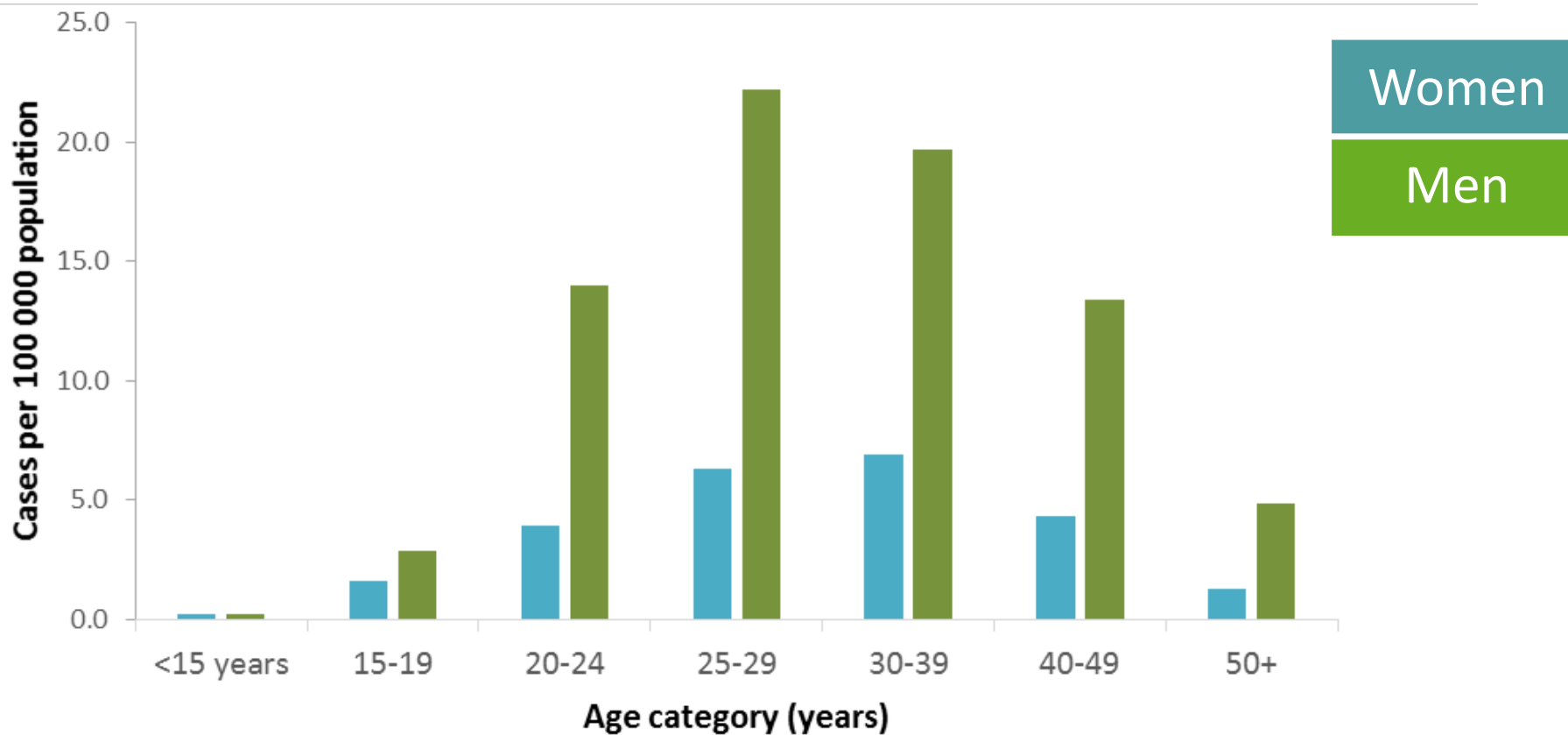


Male-to-female ratio in new HIV diagnoses, by country, EU/EEA, 2017

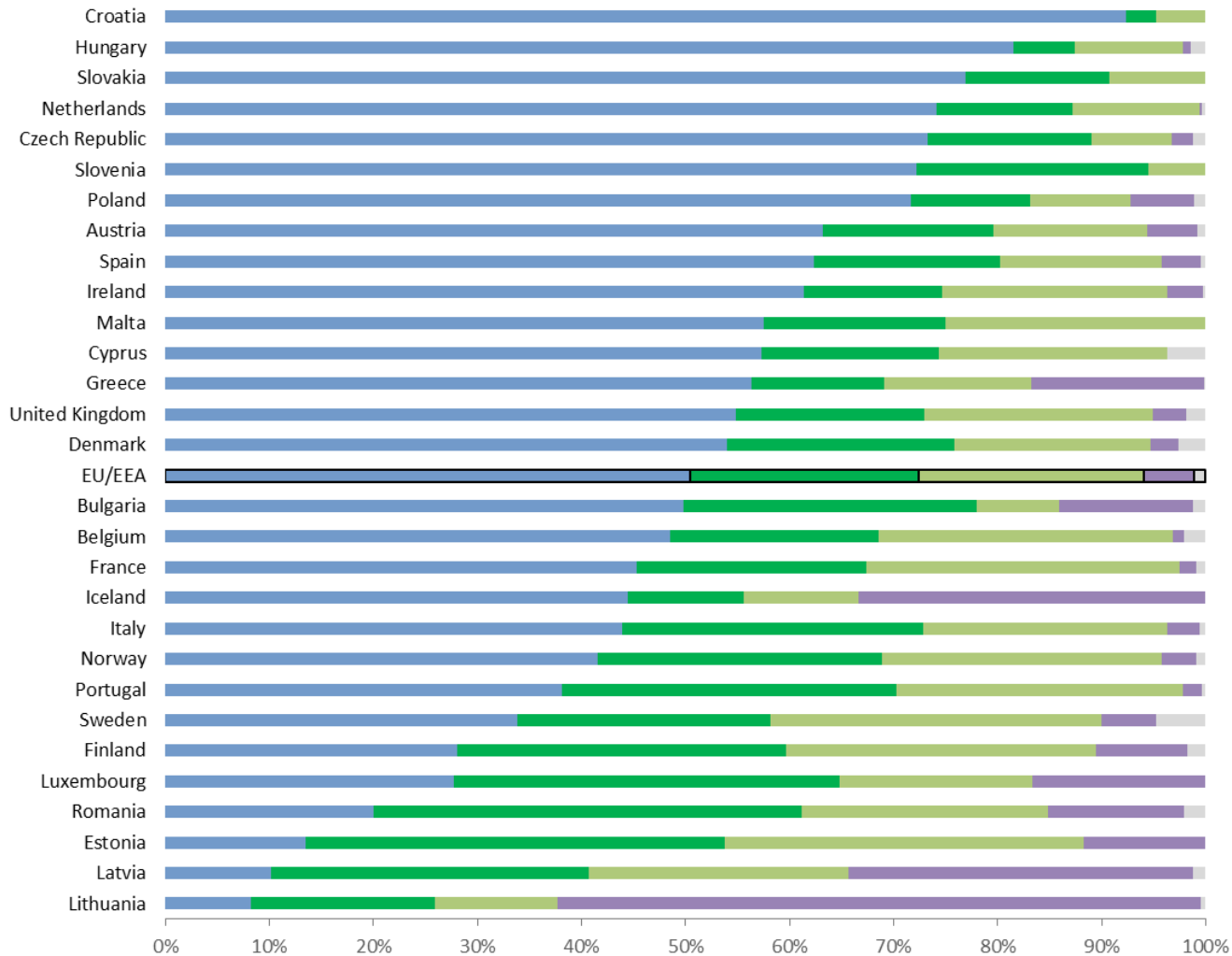


EU/EEA male-to-female ratio: 3.1

Age- and gender-specific rates of HIV diagnoses per 100 000 population, EU/EEA, 2017



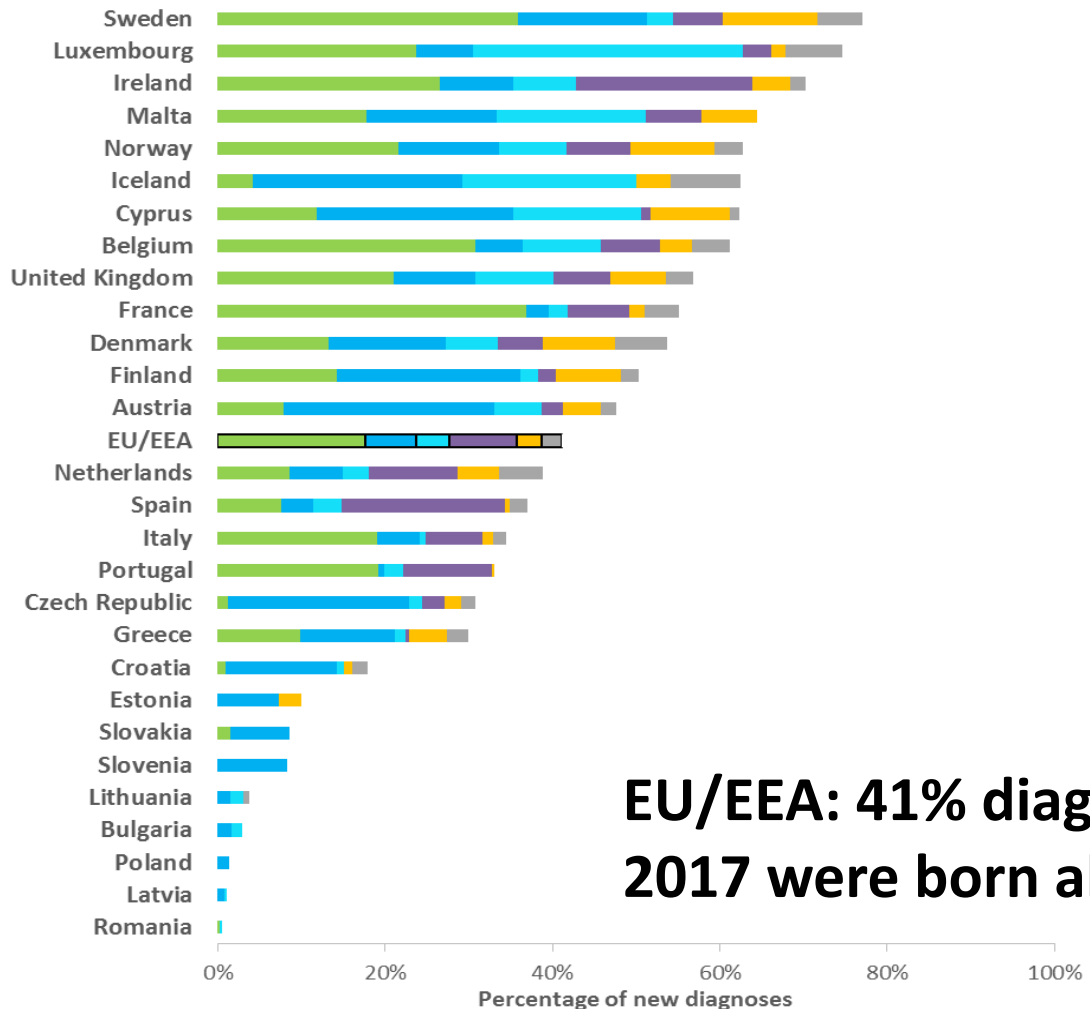
Proportion of new HIV diagnoses, by country and transmission, EU/EEA, 2017



- Sex between men
- Heterosexual contact (males)
- Heterosexual contact (females)
- Injecting drug use

Note: Germany did not report data for 2017, 0 cases were reported by Liechtenstein
 Source: ECDC/WHO (2018). HIV/AIDS Surveillance in Europe 2018– 2017 data

Proportion HIV diagnoses in migrants* by country of report and region of origin, EU/EEA 2017

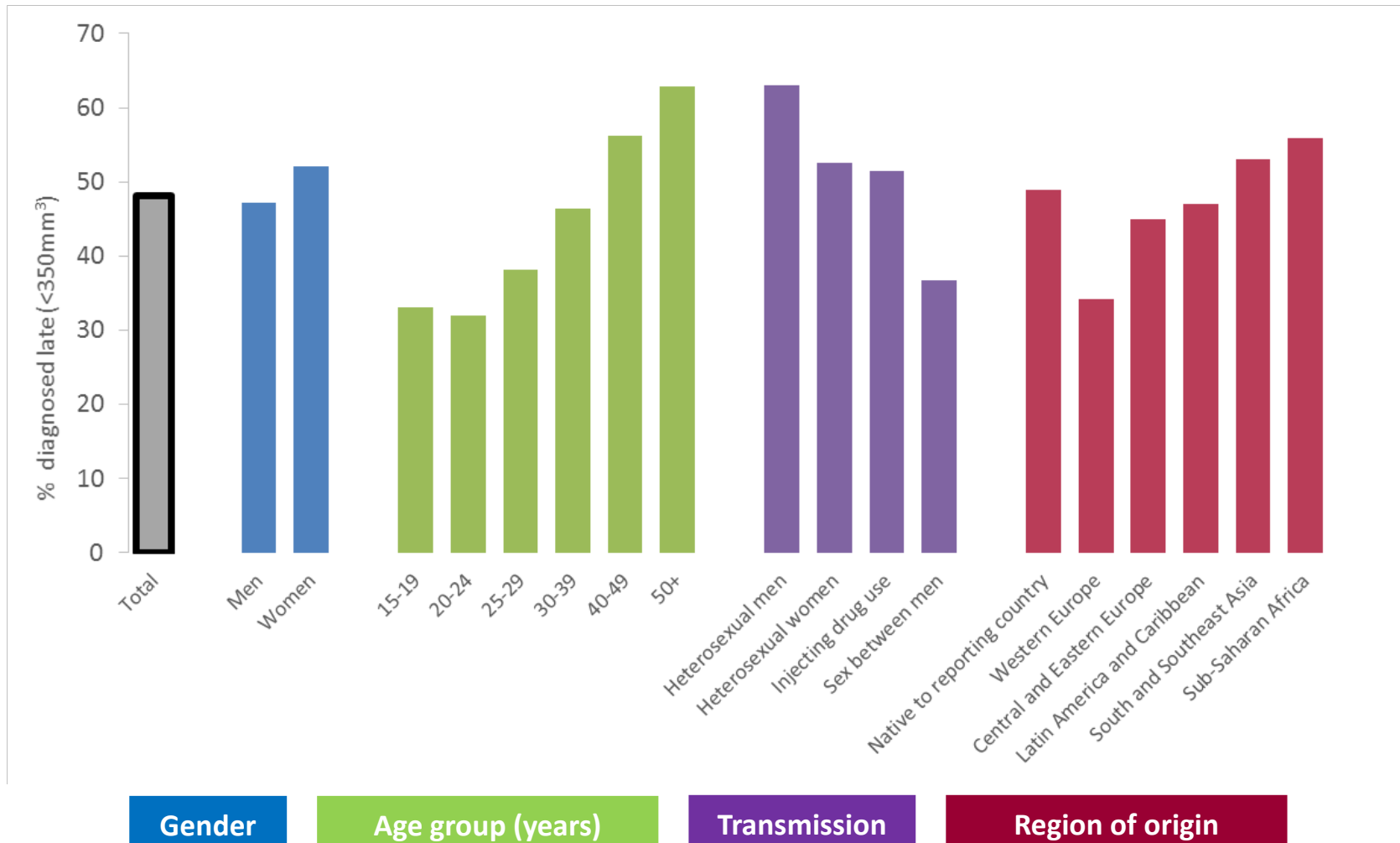


* Migrants include all persons born outside of the country in which the diagnosis was made.

EU/EEA: 41% diagnosed in 2017 were born abroad

Data include only cases with known region of origin; No data were reported by Germany in 2017 and zero cases were reported among migrants in Hungary or Liechtenstein

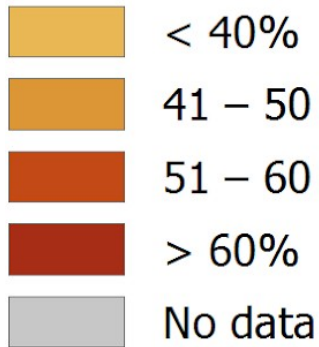
Proportion of persons diagnosed late* with HIV by demographic, EU/EEA, 2017



*Diagnosed late= $CD4 < 350 \text{ cells/mm}^3$ at diagnosis

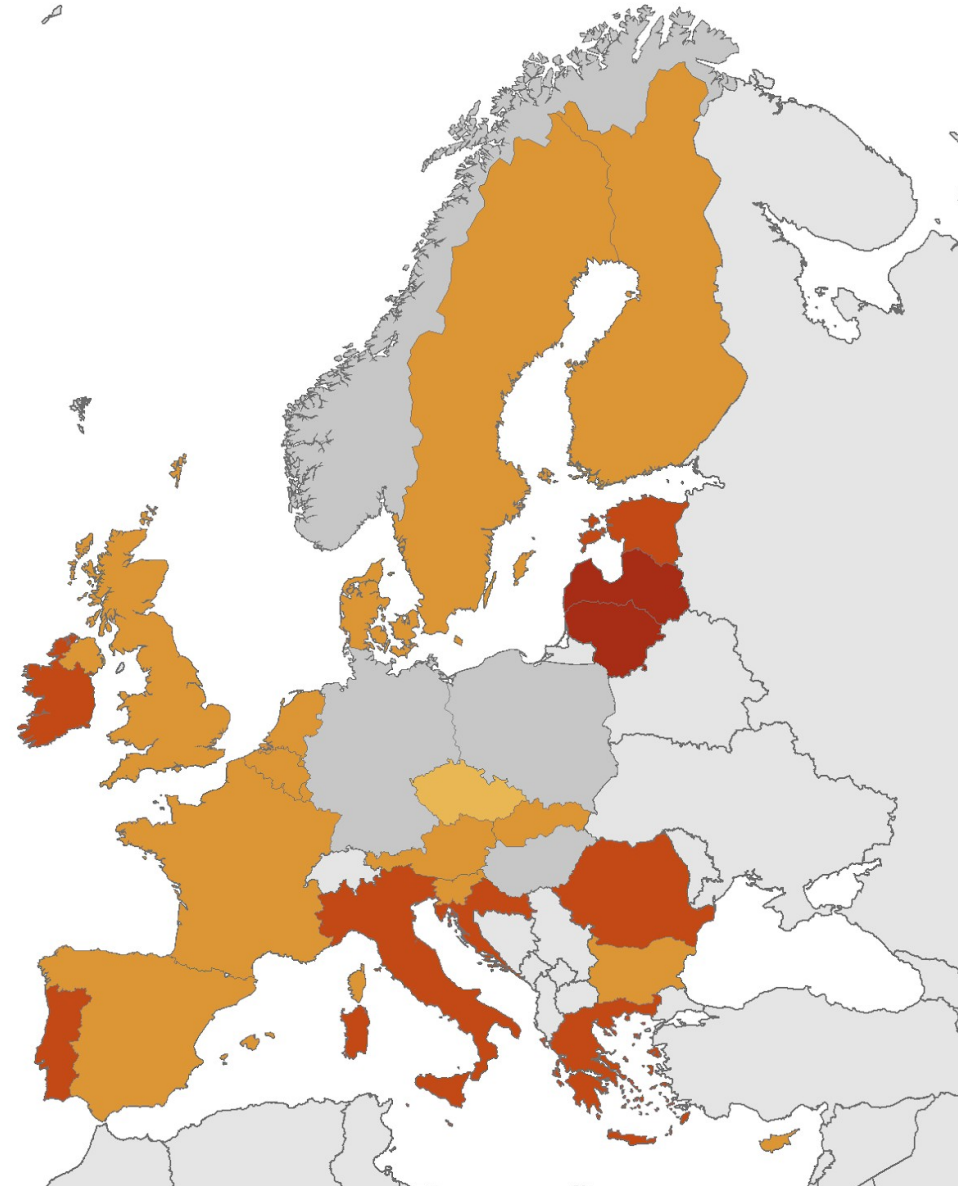
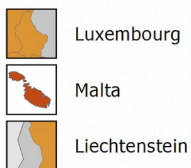
Proportion of HIV cases diagnosed late, 2017, EU/EEA

% persons with CD4
<350 cells/mm³ at HIV diagnosis

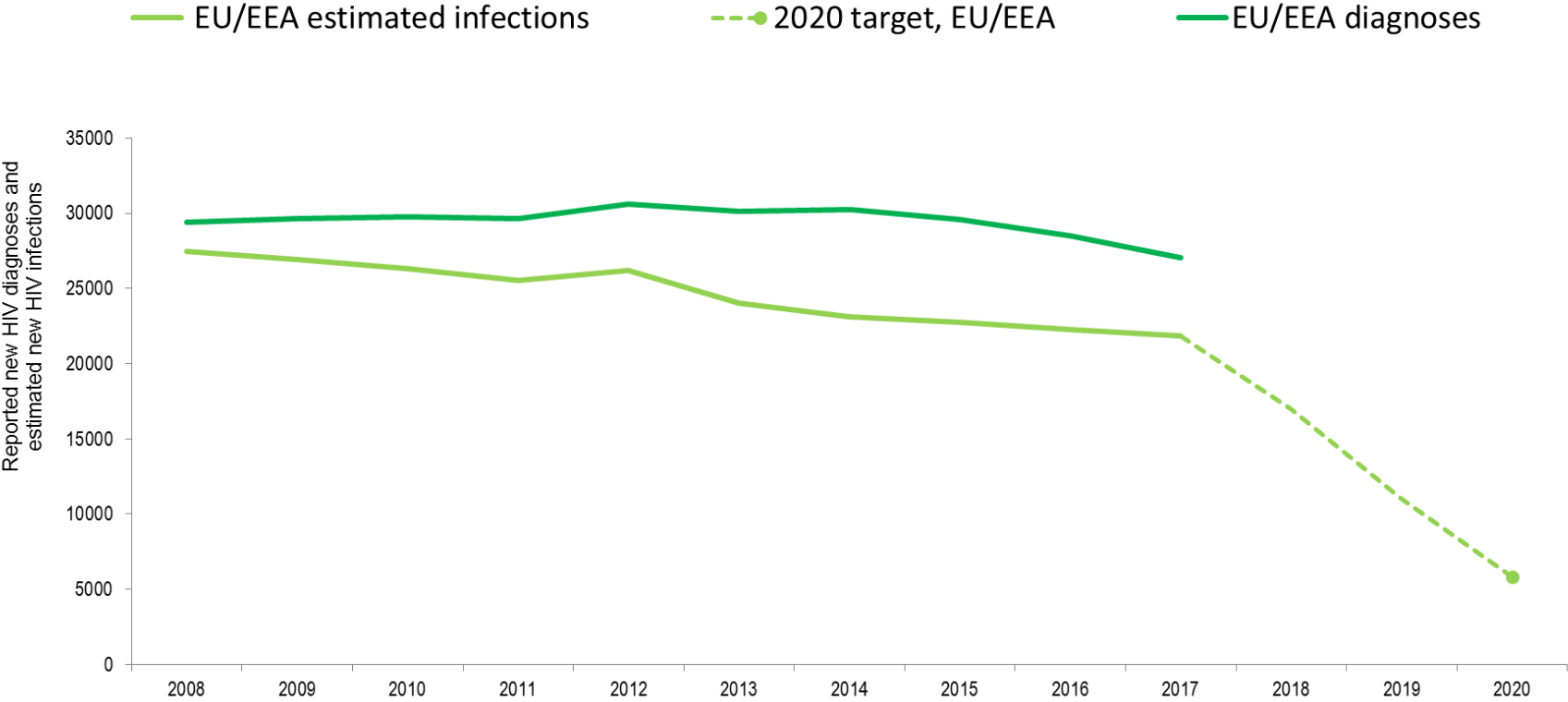


EU/EEA average: 49%

Non-visible countries

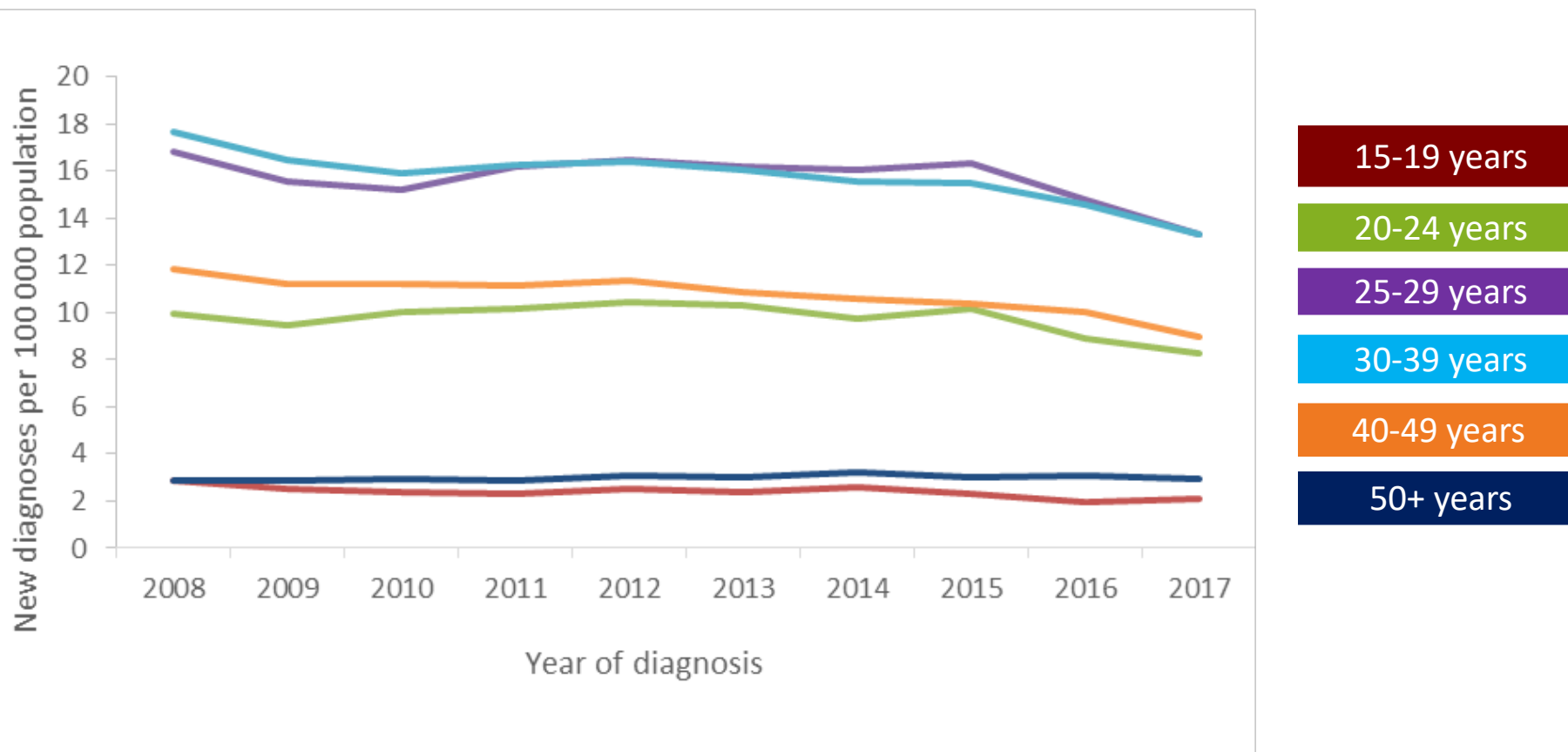


New reported HIV diagnosis and estimated infections, EU/EEA, 2008-2017



Source: Estimates from UNAIDS, 2018; ECDC/WHO (2018). HIV/AIDS Surveillance in Europe 2018– 2017 data

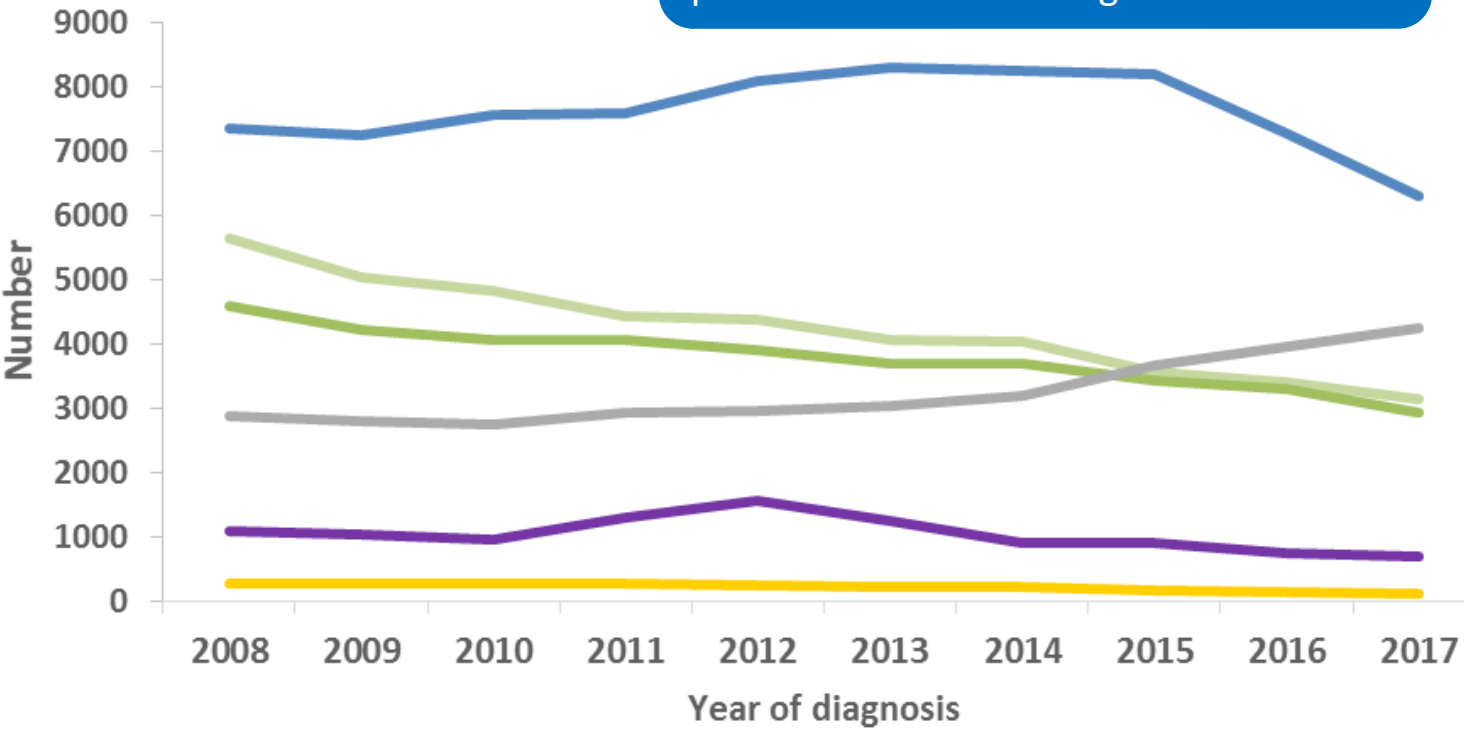
New HIV diagnoses, by age group, EU-EEA, 2008-2017



HIV diagnoses, by route of transmission, 2008-2017, EU/EEA



Declines in recent years reported from Belgium, France, Greece, the Netherlands, Spain and the United Kingdom







- Sex between men
- Other/
undetermined
- Heterosexual
(women)
- Heterosexual
(men)
- Injecting drug use
- Vertical
transmission

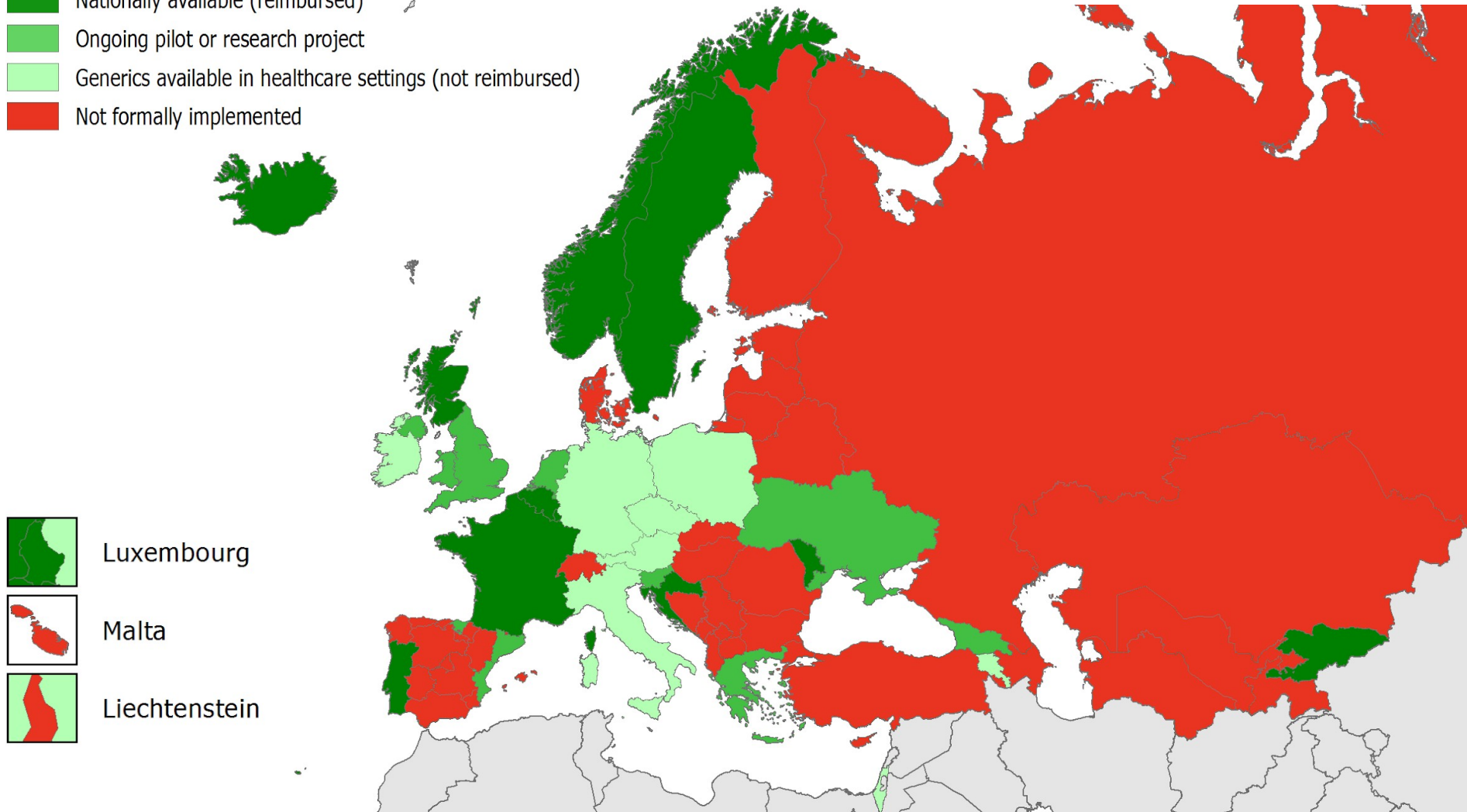
Data is adjusted for reporting delay. HIV diagnoses reported by Estonia and Poland excluded due to incomplete reporting on transmission mode during some years of the period; diagnoses reported by Germany, Italy and Spain excluded due to incomplete reporting during a portion of the period.

Status of formal PrEP implementation in Europe

December, 2018



-  Nationally available (reimbursed)
-  Ongoing pilot or research project
-  Generics available in healthcare settings (not reimbursed)
-  Not formally implemented



Conclusions



Chlamydia most frequently reported infection in Europe

- Women > men
- Young adults
- Stable trend
- Rates reflect different control policies/testing

Increasing trends of gonorrhoea and syphilis in many countries

- Men > women
- Older ages affected
- High and increasing proportion of MSM

Conclusions



Gonorrhoea AMR:

- Lack of ceftriaxone resistance is encouraging
- Level of resistance to azithromycin is of concern and threatens the effectiveness of antimicrobial regimen.

HIV-coinfection

- Increasing number of cases (gonorrhoea, syphilis)
- Lower proportion HIV-positive
- Impact of PrEP?

Conclusions

HIV: preventable through effective public health measures, significant transmission continues in the EU/EEA

- Sex between men accounted for the largest proportion of cases diagnosed (38%)
- 41% of new HIV diagnoses were among people originating from outside of the reporting country
- There is evidence of a decline in the rate of new HIV diagnoses in the EU/EEA as a whole
- Despite the overall decline, HIV rates continue to increase in one-third of EU/EEA countries
- Nearly half (49%) of people were diagnosed late, with a CD4 cell count of $<350/\text{mm}^3$ at diagnosis

Conclusions



Evidence-based HIV and STI prevention interventions tailored to the local epidemiological context and targeted at those most at risk should be sustained and scaled up.

Expansion of HIV testing and linkage to care will ensure early diagnosis and access to treatment; this will reduce the number of late presenters and improve treatment outcomes

Given the high proportion of HIV cases among migrants in many EU/EEA countries, and evidence of post-migration HIV acquisition, migrant-sensitive prevention services are crucial

Adequate harm reduction levels will continue to prevent HIV among people who inject drugs

Facilitating STI testing and ensuring adequate treatment essential to reduce transmission and prevent resistance

Programmes for men who have sex with men should be a cornerstone of HIV and STI prevention in all EU/EEA countries

Focus on young adults for chlamydia but remember gonorrhoea in this group

Primary prevention; condom use; partner notification

Acknowledgements



Otilia Mårdh

Andrew Amato

Anastasia Pharris

Teymur Noori

STI surveillance network

Euro-GASP network and contractors

HIV surveillance network

Thank you

Full report is
available at

www.ecdc.europa.eu

and

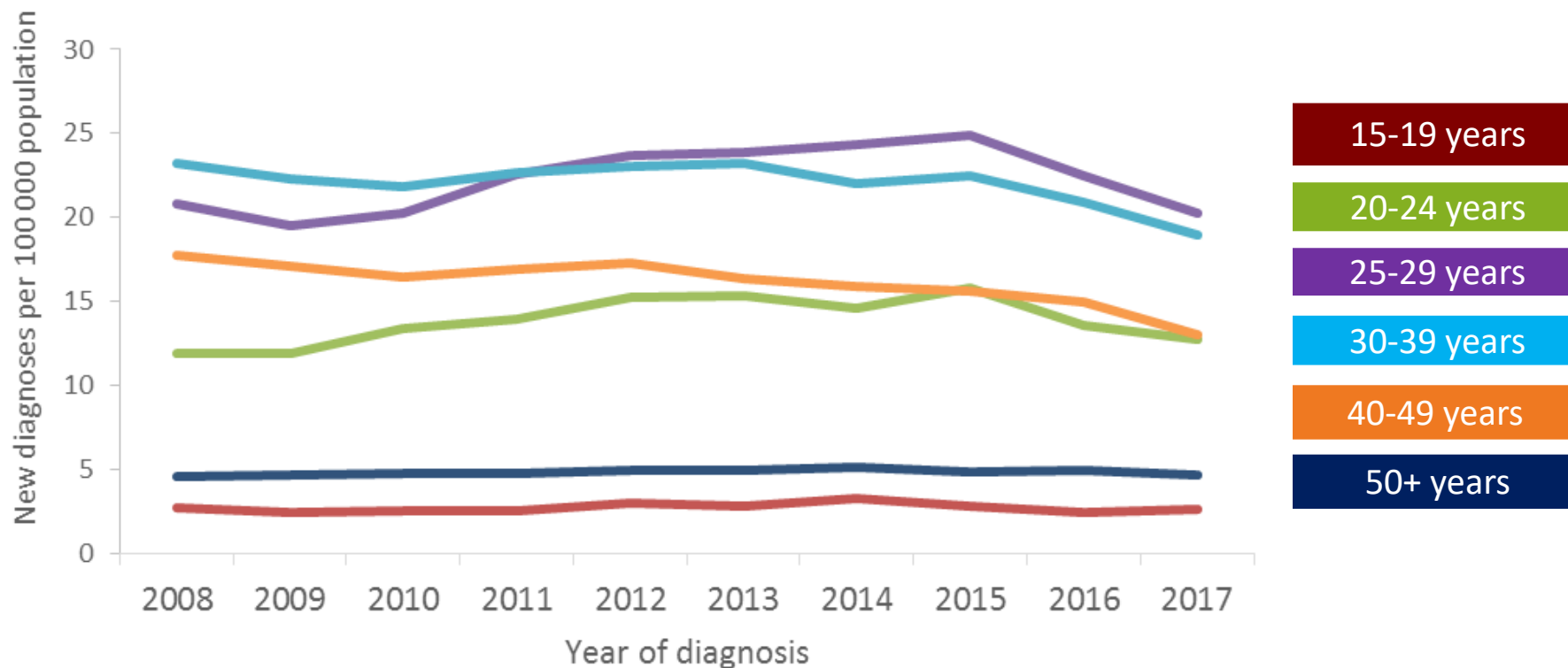
http://bit.ly/HIVsur_18

Questions

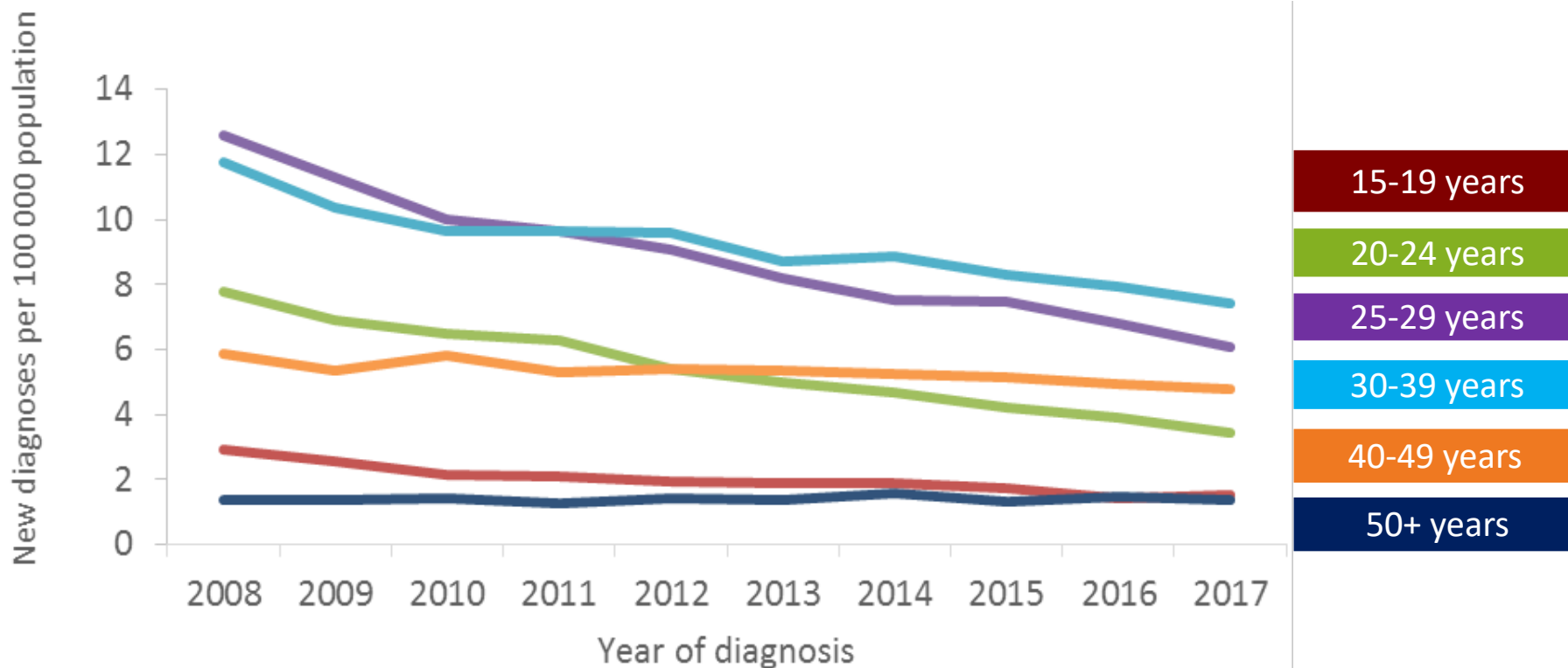
STIHIVHEP@ecdc.europa.eu



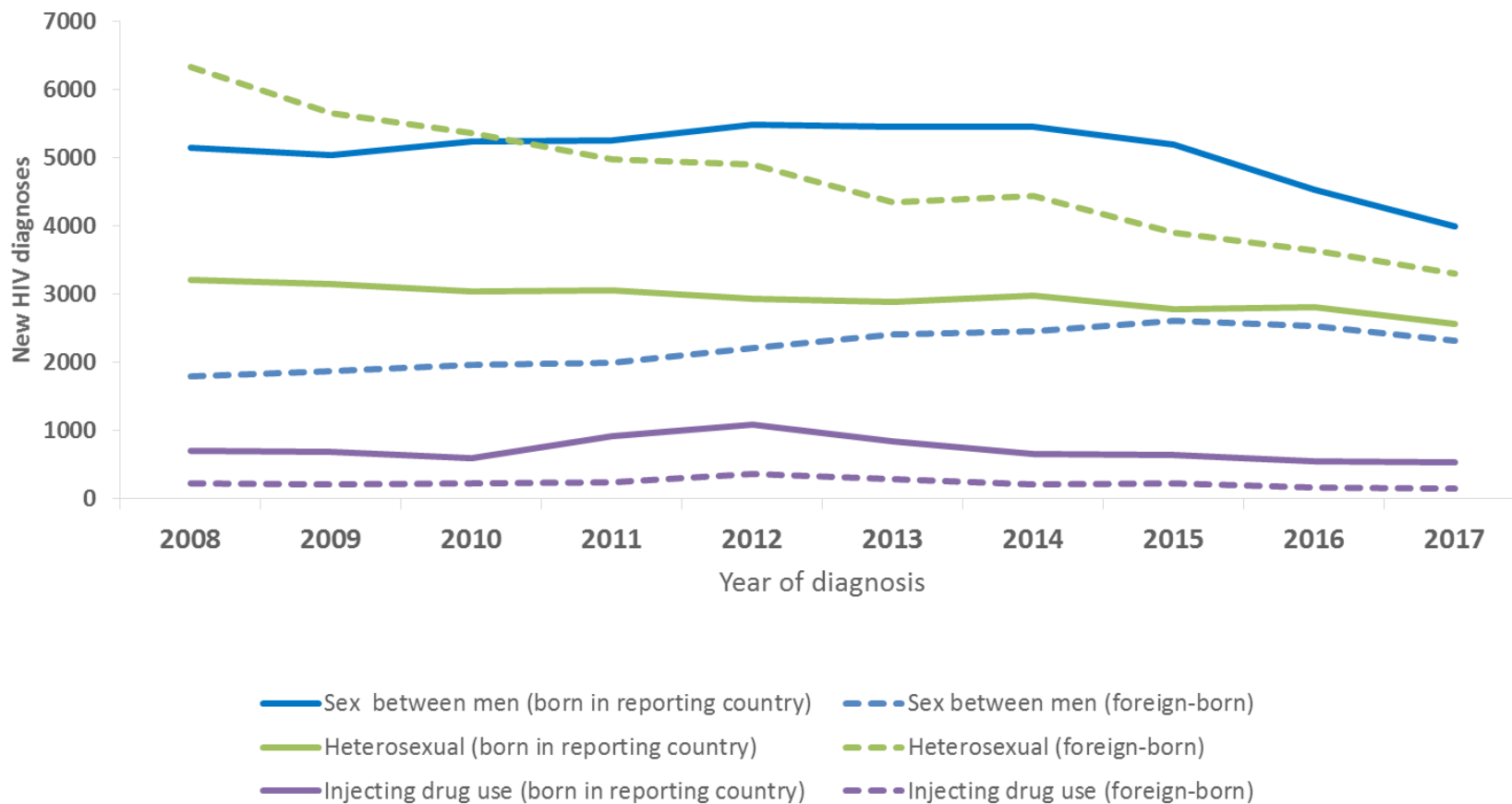
New HIV diagnoses in men, by age group, EU-EEA, 2008-2017



New HIV diagnoses in women, by age group, EU-EEA, 2008-2017



New HIV diagnoses, by year of diagnosis, transmission route and migration status, EU/EEA, 2008-2017



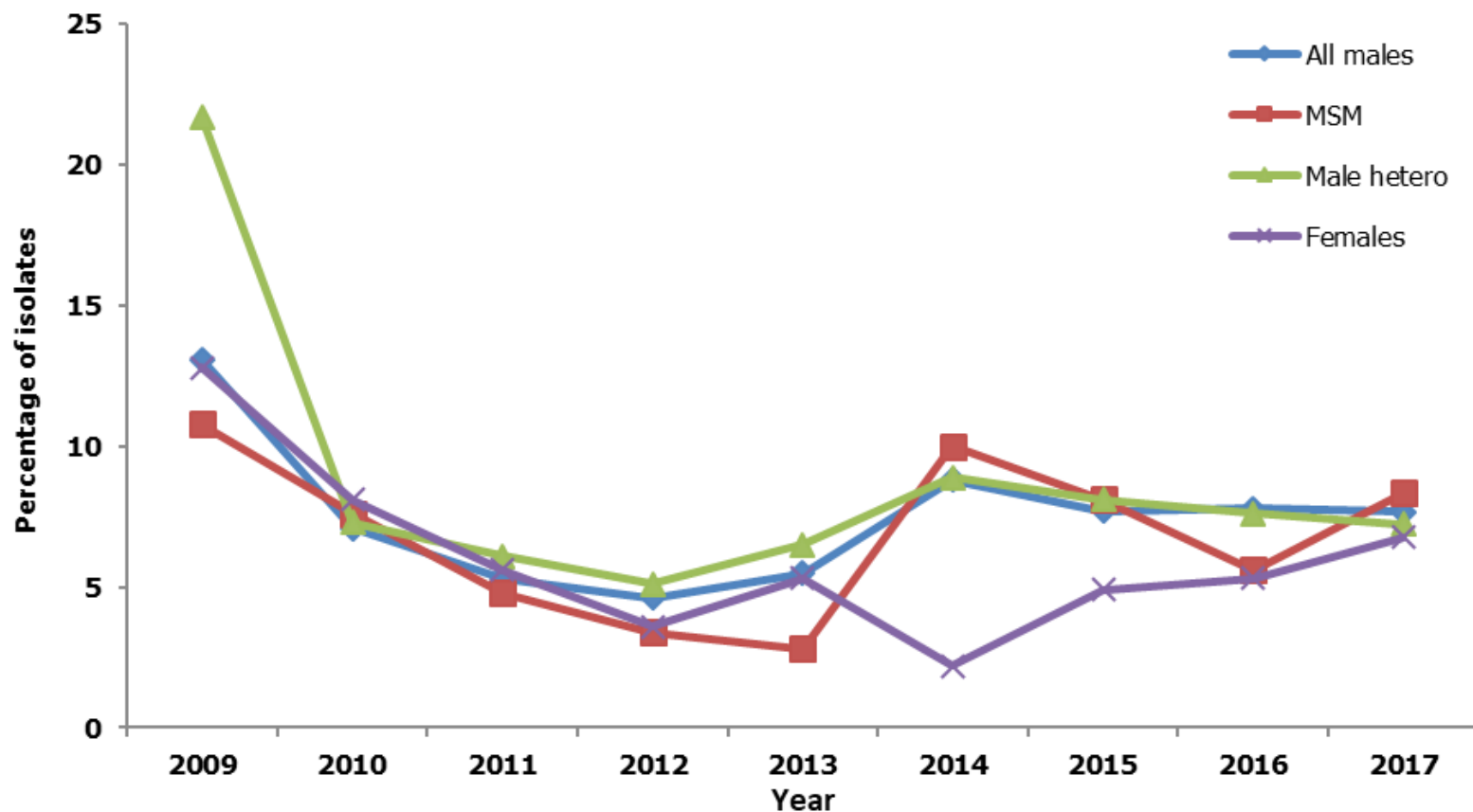
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Source: ECDC/WHO (2018). HIV/AIDS Surveillance in Europe 2018– 2017 data

Percentage of isolates with cefixime resistance by gender and male sexual orientation, Euro-GASP, 2009–2017

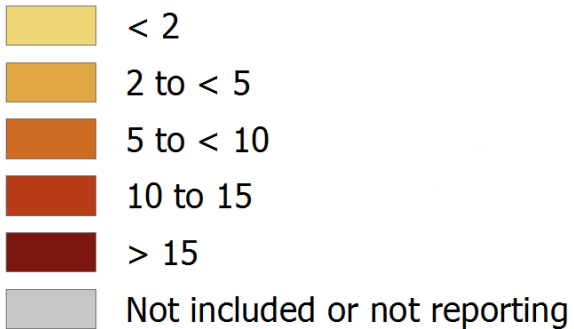


Percentage of isolates with azithromycin resistance by gender and male sexual orientation, Euro-GASP, 2009–2017



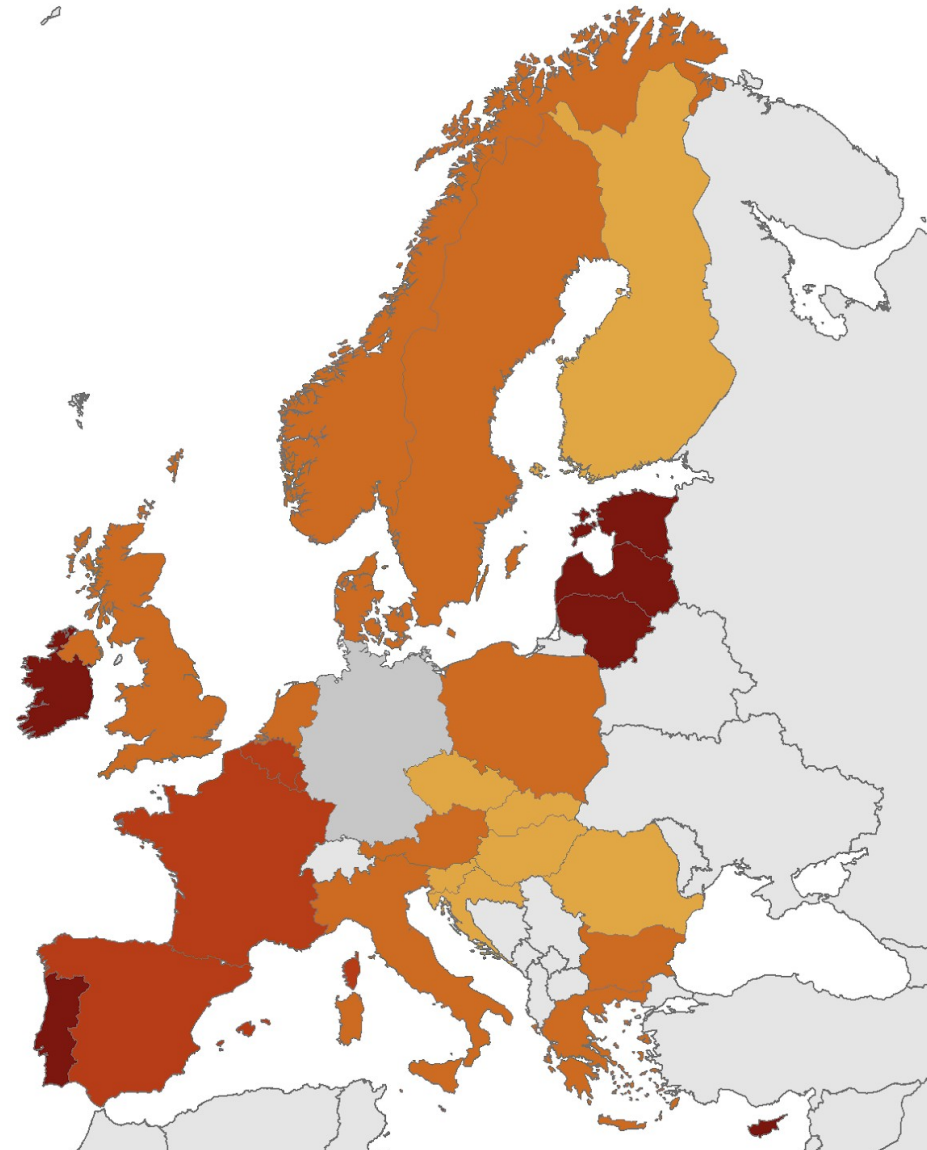
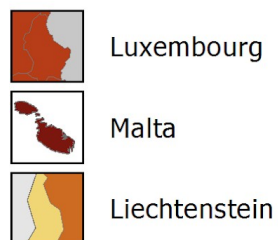
New HIV diagnoses in men, 2017, EU/EEA

Rate per 100 000 male population



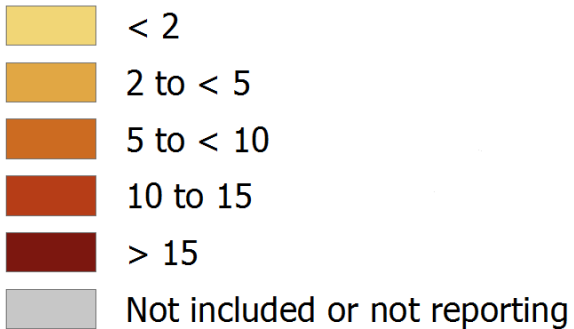
EU/EEA rate: 9.0 per 100 000

Non-visible countries



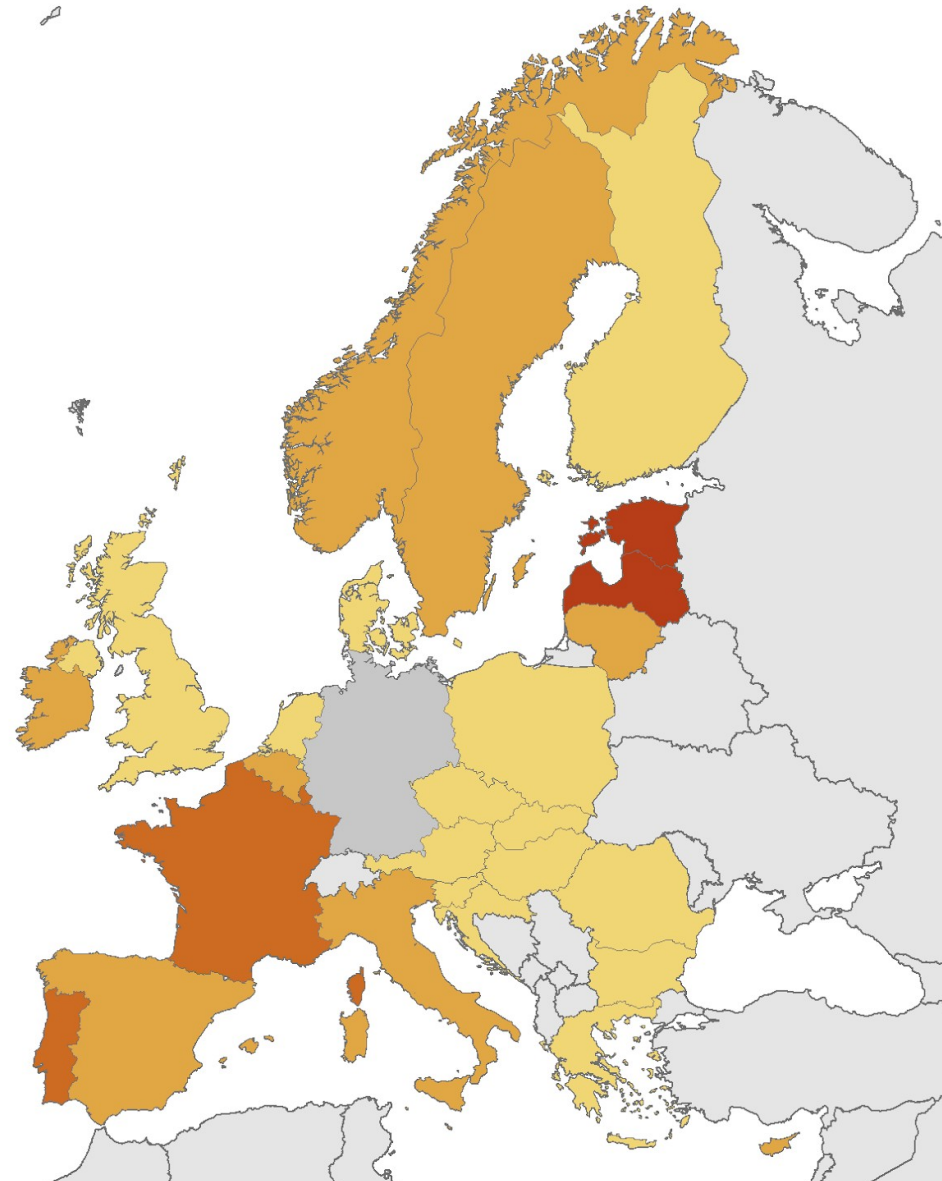
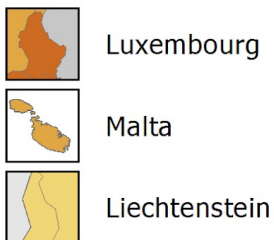
New HIV diagnoses in women, 2017, EU/EEA

Rate per 100 000 female population



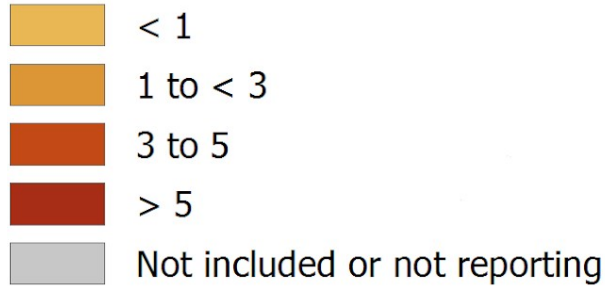
EU/EEA rate: 2.8 per

Non-visible countries

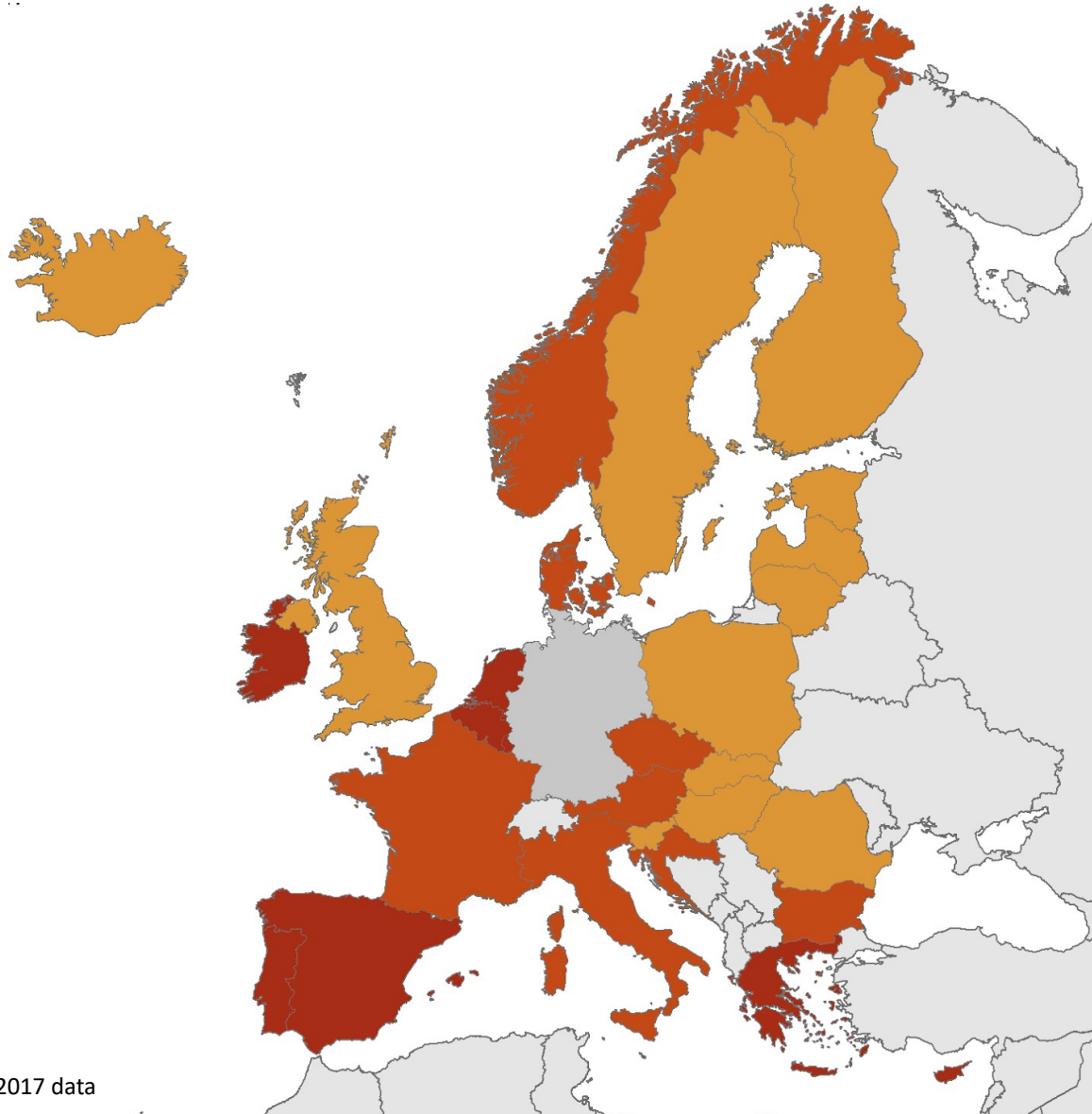
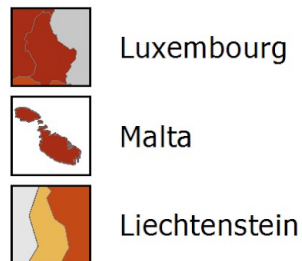


New HIV diagnoses attributed to sex between men, 2017, EU/EEA

Rate per 100 000 male population

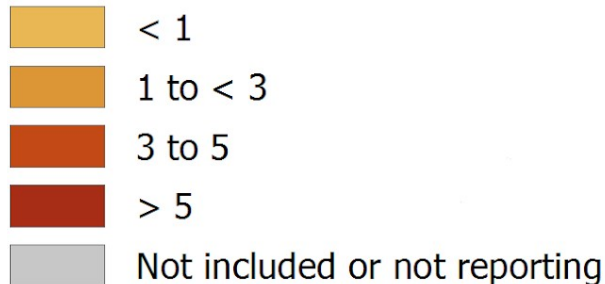


Non-visible countries

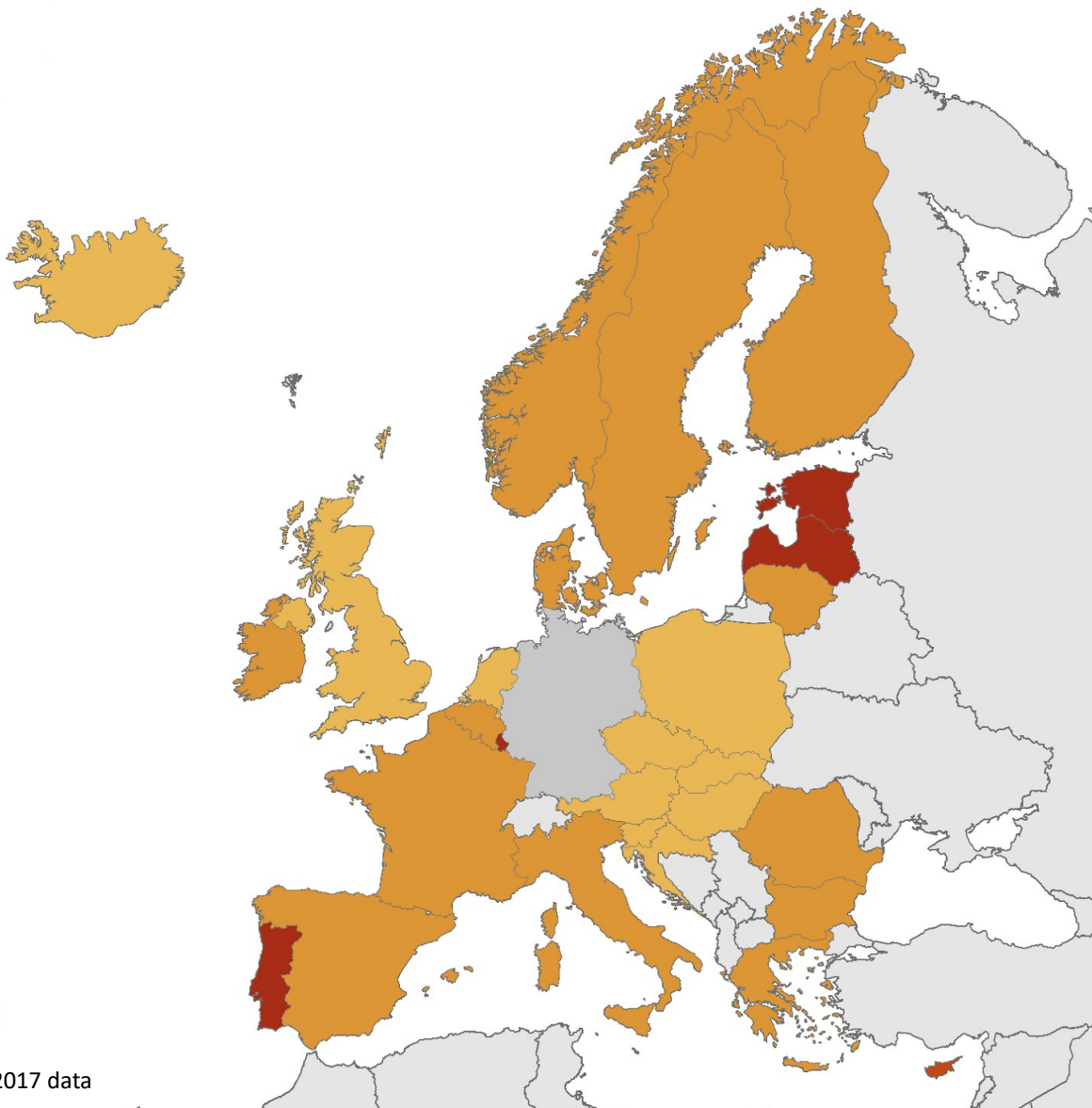
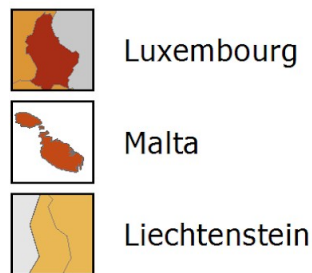


New HIV diagnoses attributed to heterosexual transmission, 2017, EU/EEA

Rate per 100 000 population

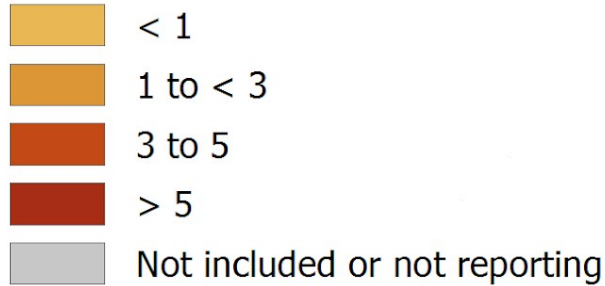


Non-visible countries

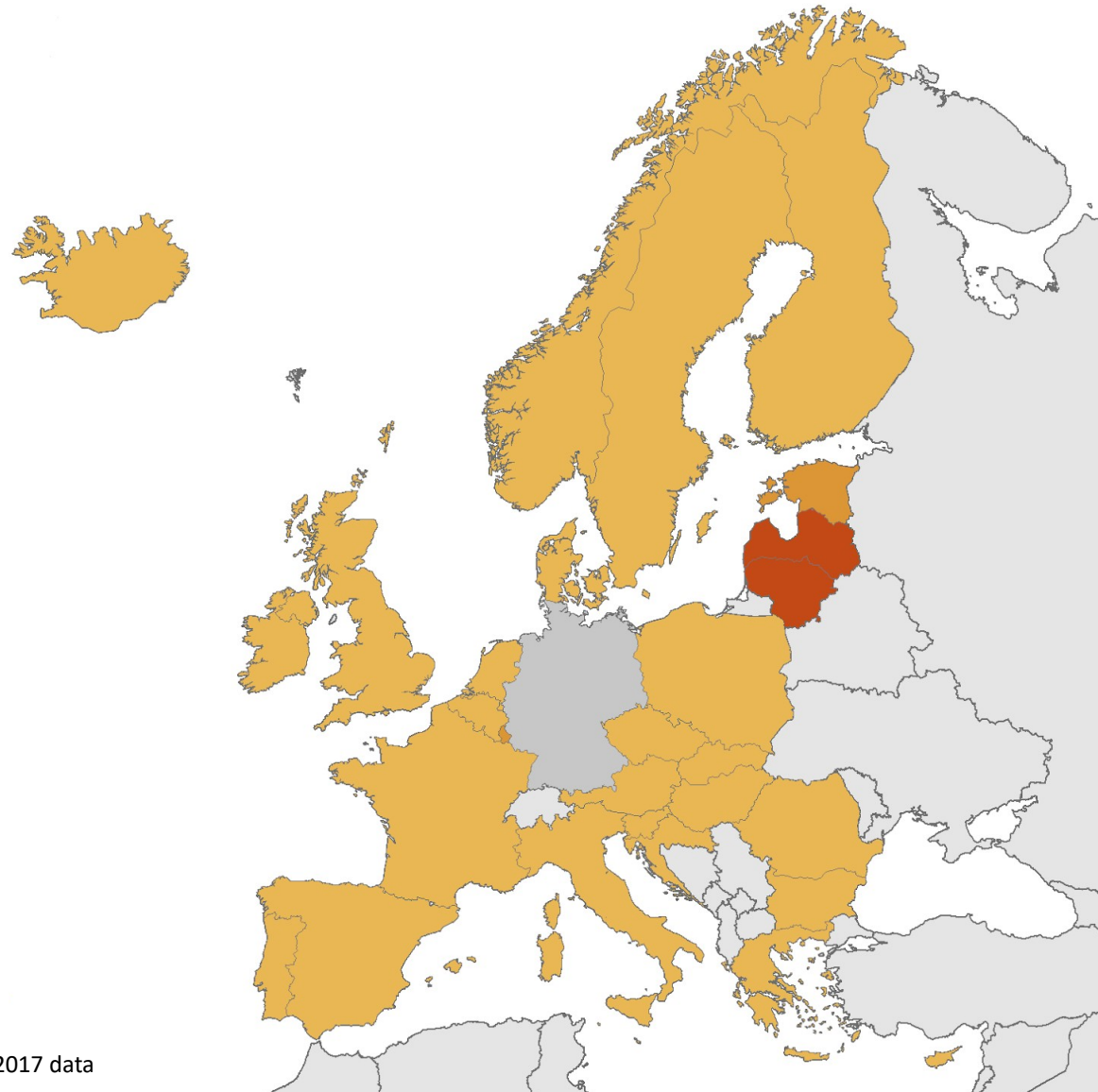
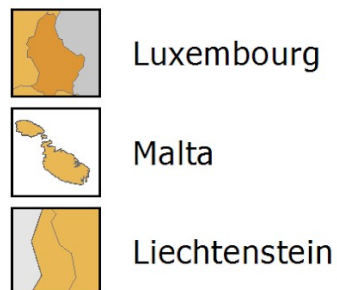


New HIV diagnoses attributed to injecting drug use, 2017, EU/EEA

Rate per 100 000 population

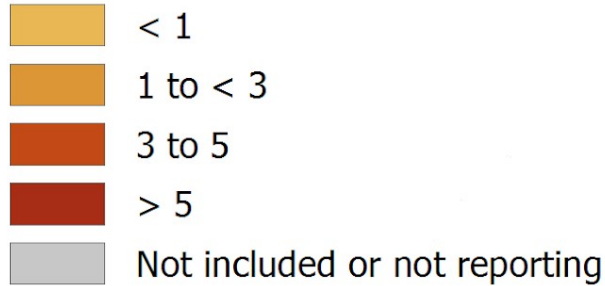


Non-visible countries



AIDS diagnoses, 2017, EU/EEA

Rate per 100 000 population



EU/EEA rate: 0.7 per 100 000

Non-visible countries

