

SURVEILLANCE REPORT

Annual Epidemiological Report for 2015

HIV and AIDS

Key facts

- HIV infection remains a major public health concern in EU/EEA countries, with approximately 30 000 new infections reported each year. In contrast, the overall number of AIDS cases has continued to steadily decline thanks to the growing use of effective antiretroviral treatment.
- In 2015, 29 747 people were diagnosed with HIV in the 31 countries of the EU/EEA, a rate of 5.8 cases per 100 000 population. This figure underestimates the true rate due to underreporting and the delay in reporting HIV diagnoses in a number of countries. Several countries were well above the average, including Estonia (20.6/100 000; 270 cases) and Latvia (19.8/100 000; 393 cases).
- The majority (77%) of people diagnosed with HIV in 2015 were men, and the highest proportion of all new diagnoses (42%) were attributed to sex between men. Heterosexual contact accounted for 32% of cases and injecting drug use for 4%.
- When adjusted for reporting delay, the overall rate of HIV diagnoses per 100 000 population has remained fairly stable between 2006 and 2015. However, there is an increase in the proportion of new diagnoses attributed to sex between men, while all other risk group transmission modes have decreased.

Methods

This report is based on data for 2015 retrieved from The European Surveillance System (TESSy) on 15 November 2016. TESSy is a system for the collection, analysis and dissemination of data on communicable diseases. EU Member States and EEA countries contribute to the system by uploading their infectious disease surveillance data at regular intervals [1].

An overview of the national surveillance systems is available online [2].

A subset of the data used for this report is available through the interactive *Surveillance atlas of infectious diseases* [3].

In 2015, all 31 countries of the EU/EEA reported case-based HIV data in accordance with a standard EU/EEA case definition, while 29 countries reported case-based AIDS data.

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To correct for reporting delay, a statistical approach using historical data from 2006 to 2015 was applied [4]. Countries were excluded from reporting delay adjustment when they: a) showed an inconsistent and non-stationary pattern in their reporting delay distribution during the period 2006–2015, or b) reported aggregated data during the period 2006–2015. Reporting delays were applied for the graphs showing trends for the EU/EEA and by transmission mode.

Epidemiology

HIV diagnoses

In 2015, 29 747 new HIV diagnoses were reported in 31 EU/EEA countries, with a rate of 5.8 cases per 100 000 population (Table 1). This rate rises to 6.3 per 100 000 when adjusted for reporting delay. The highest rates were reported by Estonia (20.6; 270 cases), Latvia (19.8; 393 cases), and Malta (14.2; 61 cases) (Figure 1). The lowest rates were reported by Slovakia (1.6; 86 cases), Slovenia (2.3; 48 cases), and the Czech Republic (2.5; 266 cases).

The overall rate for men in the EU/EEA was 9.1 per 100 000 population and for women, 2.6 per 100 000 population. The overall male-to-female ratio was 3.3:1. The ratio was highest in Croatia (18.5), the Czech Republic (13.8), and Cyprus (9.0).

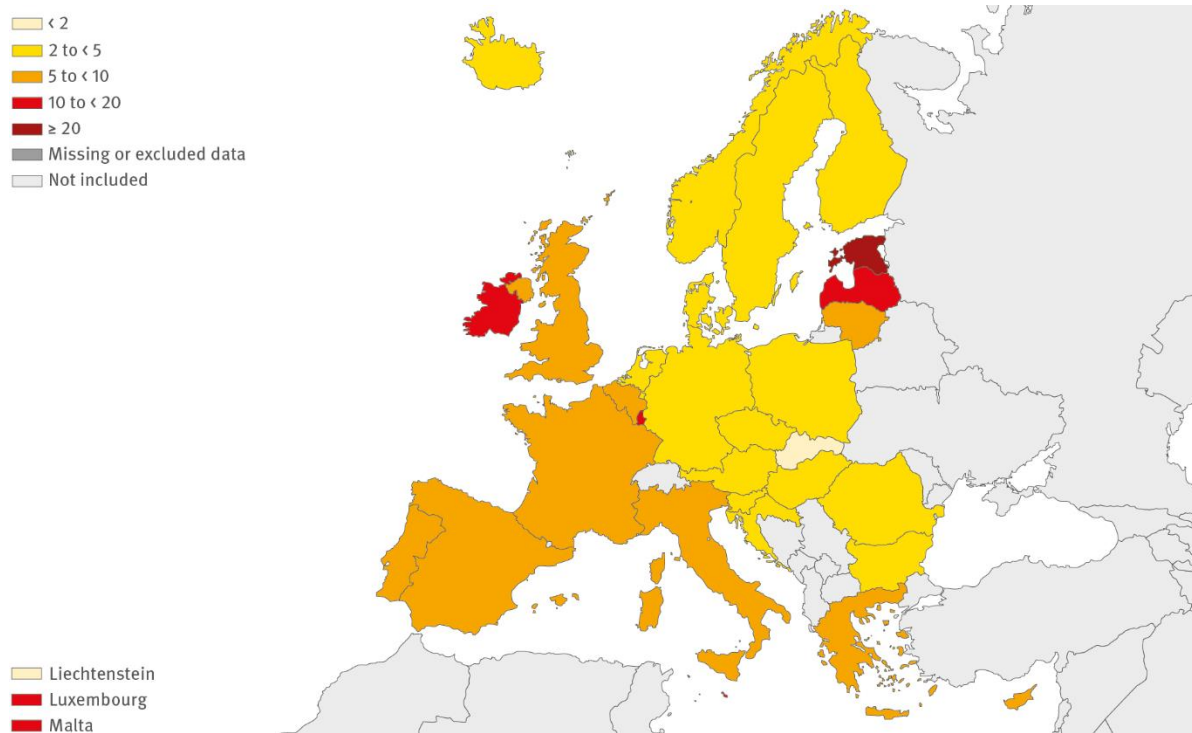
Men had higher age-specific rates than women in all age groups, except among persons under 15 years of age, where age-specific rates were similar (Figure 2). The highest rate of new HIV diagnoses per 100 000 population was in the age group 25–29 years (14.8), with the rate in men in this age group at 22.7 cases per 100 000 population and the rate in women peaking at 6.7 cases per 100 000 population.

Table 1. New HIV diagnoses by country, EU/EEA, 2011–2015

Country	2011		2012		2013		2014		2015	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Austria	338	4	338	4	280	3.3	257	3	264	3.1
Belgium	1185	10.8	1229	11.1	1126	10.1	1050	9.4	1001	8.9
Bulgaria	201	2.7	157	2.1	200	2.7	247	3.4	224	3.1
Croatia	74	1.7	73	1.7	85	2	92	2.2	117	2.8
Cyprus	54	6.4	58	6.7	54	6.2	56	6.5	80	9.4
Czech Republic	153	1.5	212	2	235	2.2	232	2.2	266	2.5
Denmark	266	4.8	201	3.6	233	4.2	256	4.5	277	4.9
Estonia	366	27.5	315	23.8	325	24.6	291	22.1	270	20.6
Finland	172	3.2	156	2.9	157	2.9	181	3.3	174	3.2
France	5417	8.3	5673	8.7	5561	8.5	5653	8.6	3943	5.9
Germany	2664	3.3	2957	3.7	3238	4	3500	4.3	3674	4.5
Greece	958	8.6	1147	10.3	871	7.9	761	7	691	6.4
Hungary	162	1.6	219	2.2	240	2.4	271	2.7	271	2.7
Iceland	23	7.2	19	5.9	11	3.4	11	3.4	12	3.6
Ireland	328	7.2	349	7.6	343	7.5	363	7.9	486	10.5
Italy	3924	6.6	4183	7	3845	6.4	3850	6.3	3444	5.7
Latvia	299	14.4	339	16.6	340	16.8	347	17.3	393	19.8
Liechtenstein	1	2.8	0	0	0	0	1	2.7	0	0
Lithuania	166	5.4	160	5.3	177	6	141	4.8	157	5.4
Luxembourg	58	11.3	63	12	65	12.1	74	13.5	57	10.1
Malta	21	5.1	30	7.2	36	8.5	40	9.4	61	14.2
Netherlands	1174	7	1088	6.5	1049	6.3	881	5.2	802	4.7
Norway	269	5.5	242	4.9	233	4.6	267	5.2	221	4.3
Poland	1117	2.9	1099	2.9	1108	2.9	1133	3	1029	2.7
Portugal	1684	15.9	1614	15.3	1530	14.6	1109	10.6	990	9.5
Romania	807	4	885	4.4	931	4.7	825	4.1	756	3.8
Slovakia	49	0.9	50	0.9	83	1.5	86	1.6	86	1.6
Slovenia	55	2.7	45	2.2	44	2.1	49	2.4	48	2.3
Spain	3532	10.8	3778	10	4098	8.8	4140	8.9	3428	7.4
Sweden	461	4.9	441	4.7	457	4.8	473	4.9	447	4.6
United Kingdom	6178	9.8	6216	9.8	6036	9.4	6157	9.6	6078	9.4
Total EU/EEA	32156	6.5	33336	6.7	32991	6.5	32794	6.4	29474	5.8

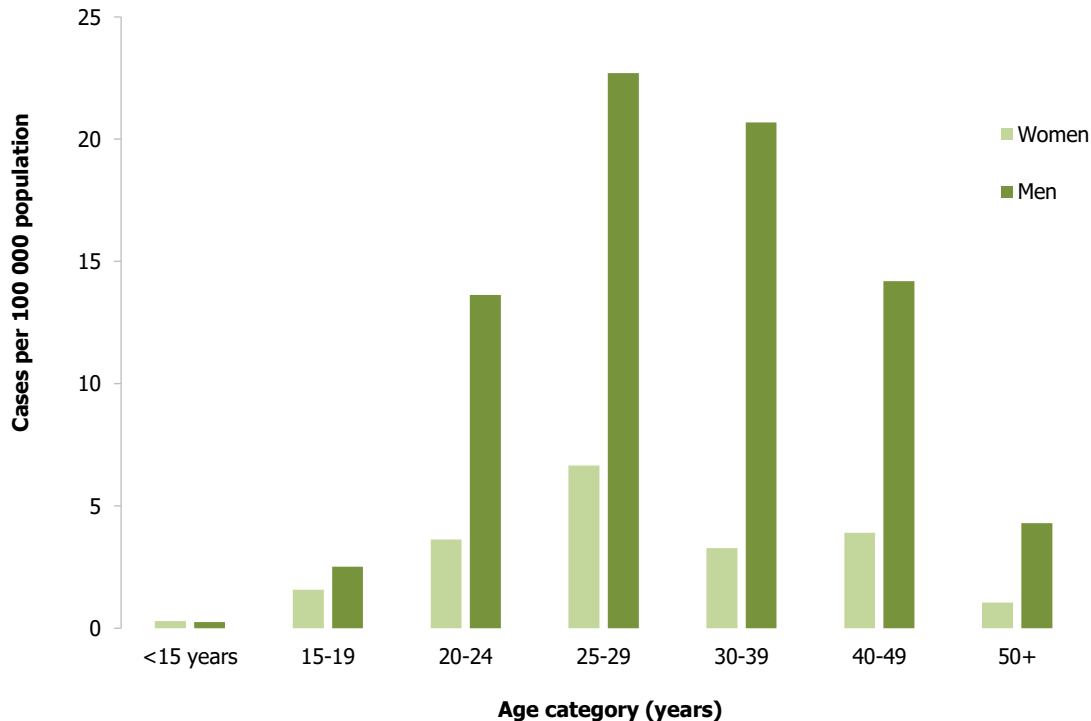
Source: Country reports from Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom.

Figure 1. New HIV diagnoses per 100 000 population by country, EU/EEA, 2015



Source: Country reports from Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom.

Figure 2. Age- and gender-specific rates of reported HIV diagnoses per 100 000 population, EU/EEA, 2015 (n=29 639)



Source: Country reports from: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom.

Data on transmission mode provide information on the groups that are most affected by HIV in the EU/EEA; this information was available for 23 746 HIV diagnoses (79.8%):

- Sex between men remains the predominant mode of HIV transmission reported in the EU/EEA, accounting for 42% of diagnoses overall, and 53% of HIV diagnoses in 2015 where the route of transmission was known.
- Sex between men and women is the second most commonly reported mode of transmission in the EU/EEA, accounting for 32% of diagnoses overall, and 41% of HIV diagnoses where the route of transmission was known.
- Four percent of HIV diagnoses overall, and 5% of HIV diagnoses with known route of HIV transmission were attributed to injecting drug use.
- Less than one percent of diagnoses were reported as mother-to-child transmission; 46% of those cases originated from countries with generalised HIV epidemics. Seventy-one cases (0.2%) were reported to be due to transfusion of blood and its products, and 11 cases (0.1%) were hospital-acquired infections. The majority of these cases were born outside of the EU/EEA and/or thought to have been acquired outside of the reporting country.

In 2015, 29 EU/EEA countries provided information on the country of birth, country of nationality, or region of origin for 25 785 (87%) HIV diagnoses. Overall, 9 347 diagnoses (37% of those with known information on region of origin) were made among people originating from outside of the reporting country, including 3 768 diagnoses (15% of those with known information on region of origin) among people originating from countries with generalised HIV epidemics and 5 579 (22%) in people originating outside of the reporting country, but not from a generalised epidemic country.

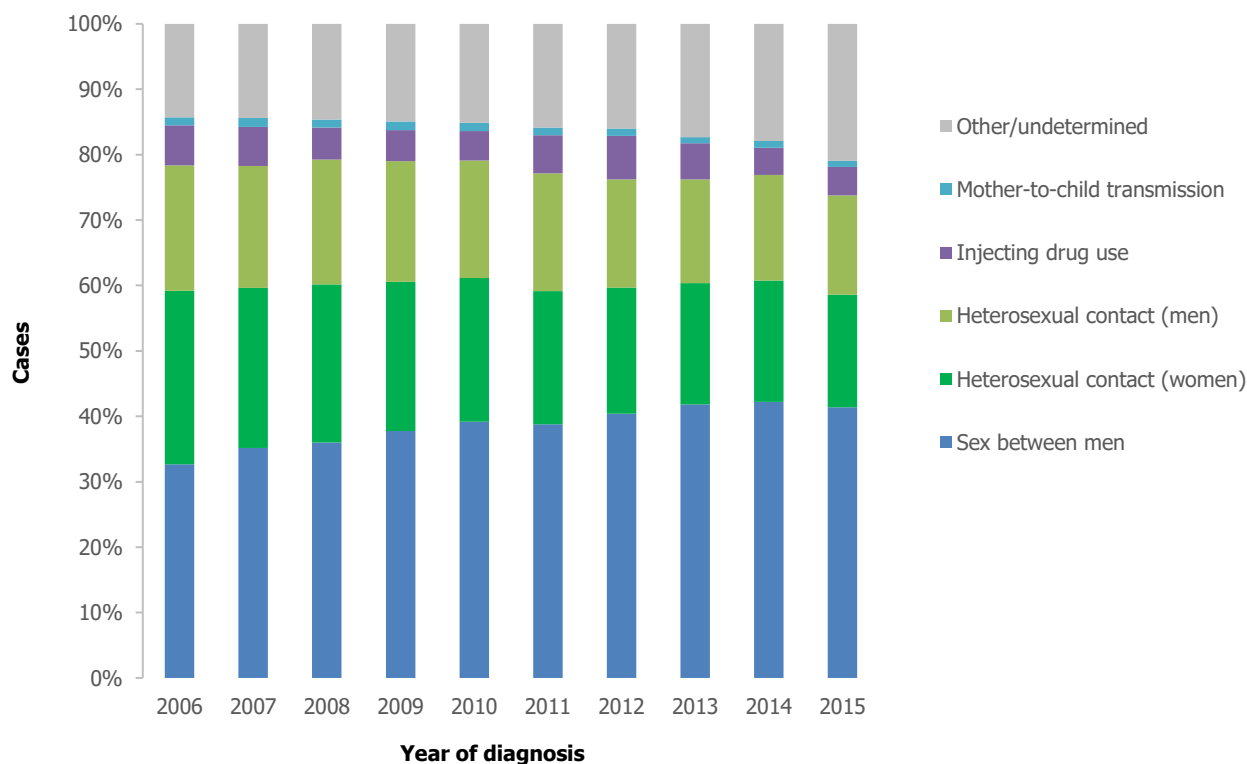
Information on CD4 cell count at the time of HIV diagnosis was provided by 24 countries for 18 103 (75%) adults and adolescents diagnosed in those countries. Nearly half (47%) of the cases with a CD4 cell count available were diagnosed with a count of less than 350 cells per mm³, including 28% of cases with advanced HIV infection (CD4 <200 cells/mm³).

Trends in HIV diagnoses

The notification rate of 5.8 cases per 100 000 population in 2015 was slightly below the relatively stable trend observed during the period 2006–2015 when rates fluctuated between 6.3 and 6.9. The notification rate in 2015, however is likely to be an underestimate due to reporting delay, and when adjusted for this delay, rises to 6.2 per 100 000.

Since 2006, 27 EU/EEA countries (data from Estonia, Italy, Poland and Spain excluded) have consistently reported data on transmission mode and have had comparable coverage of surveillance systems over time. Data from these countries indicate the following (Figure 3):

- The number of HIV diagnoses reported among MSM increased steadily between 2006 and 2015. The proportion of all HIV diagnoses attributed to sex between men increased from 33% of cases in 2006 to 42% of cases in 2015.
- The number of heterosexually acquired cases decreased in both men and women from 10 913 in 2006 to 6 948 in 2015, with a steadily decreasing trend. The proportion of all HIV diagnoses attributed to sex between men and women decreased from 46% of cases in 2006 to 32% in 2015. This is partially due to a decline in cases originating from countries with generalised HIV epidemics.
- The number of HIV diagnoses reported among people who inject drugs has been declining since 2006 when infections attributed to injecting drug use comprised 6.1% of new diagnoses. A temporary increase was observed in 2011 and 2012 due to localised outbreaks in Greece and Romania, and localised outbreaks were reported in 2015 in Ireland and Scotland, but overall EU/EEA cases in people who inject drugs in 2015 show a continued downward trend and comprised 4% of all new diagnoses.
- HIV transmitted from mother to child continues to be rare and decreased from 290 in 2006 to 197 in 2015. The majority of these cases originate from outside of the reporting country.
- The number of cases reported to have an unknown mode of transmission increased from 14% of new diagnoses in 2006 to 20% in 2015.
- Reporting delays differ significantly between transmission categories for some countries. When standardised adjustments for reporting delay are made, these increase the number of reported HIV cases in all transmission categories by between 8% and 19%.

Figure 3. New HIV diagnoses, by transmission mode and year of diagnosis, EU/EEA, 2006–2015

Source: Country reports from Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Portugal, Romania, Slovakia, Slovenia, Sweden, the United Kingdom.

AIDS diagnoses

Diagnoses of AIDS continued their steady decline. In 2015, 3 754 AIDS diagnoses were reported by 29 EU/EEA countries (all EU/EEA countries except Belgium and Sweden), resulting in a rate of 0.8 cases per 100 000 population. The highest rates were reported by Latvia (6.6; 132 cases) and Portugal (2.3, 238 cases). The rate of reported AIDS cases has halved from the 1.7 per 100 000 (8 465 cases) reported in 2006.

Discussion

Despite the stable trend of HIV in the EU/EEA, surveillance data indicate that the epidemiology of HIV has changed substantially during the past decade in key risk groups, and some countries remain more affected (Estonia, Latvia) while others (Malta and Cyprus) have more recent increases. There has been a sustained increase in HIV diagnoses among MSM in the majority of countries in the EU/EEA. MSM account for the largest number of new HIV diagnoses and are the only population in the EU/EEA where HIV cases continue to increase. While some of these increases could be due to decreased stigmatisation resulting in reduced underreporting of sex between men as a transmission mode over time, the data in many countries indicate a pressing need to scale up prevention programmes for this at-risk population [5].

There has been a substantial decrease in the number of HIV infections transmitted through sex between men and women during the past decade. However, heterosexual transmission still remains the second most common mode of HIV transmission in the EU/EEA and is the most common transmission mode in some countries. Part of the decline in heterosexual cases is the result of a decline in the number of heterosexually acquired cases in persons originating from countries with generalised HIV epidemics. Further investigation is required to understand whether these decreasing trends in HIV diagnoses are mainly driven by decreasing incidence of HIV in these populations, decreased testing, migration trends, or a combination of factors.

In 2015, migrants (or persons originating from outside of the reporting country) constituted a considerable proportion (37%) of new HIV diagnoses in the EU/EEA. There is evidence that a proportion of migrants, even those originating from HIV-endemic areas, acquire HIV after arrival in the EU/EEA [6-8].

Transmission among people who inject drugs is declining and remains at a low level in most countries in the EU/EEA. However, sudden increases were observed in recent years in Romania and Greece, countries with

previously very low levels of HIV among people who inject drugs [6-7] and more recent localised outbreaks in Ireland and Scotland [11,12].

Although few in number, cases infected through mother-to-child transmission continue to occur in some EU/EEA countries. Greater efforts are needed to address these entirely preventable cases through adequate antenatal screening and mother-to-child infection prevention.

Despite the clear evidence of the benefits of early introduction of antiretroviral treatment for the health of the HIV-positive individual [13,14], many persons continue to be diagnosed with HIV at an advanced stage of illness: estimates indicate that about 15% of the estimated 810 000 persons living with HIV in the EU/EEA remain undiagnosed [15]. This suggests problems with access to, and uptake of, HIV testing and counselling for those most at risk in many countries.

Public health implications

The changes in the epidemiology of HIV infections observed in the EU/EEA over the last decade indicate that some progress has been achieved, particularly with regard to reduced infections attributed to heterosexual transmission and injecting drug use. However, these epidemiological trends also indicate that it is crucial to sustain evidence-based HIV prevention interventions that are tailored to the local epidemiological context and targeted at those most at risk.

For most EU/EEA countries, this means a strong focus on reducing the vulnerability of MSM and to scaling up more effective multi-component prevention programmes for this at-risk population. Migrants, both those from high-endemic and from other countries, are also a key population that needs specific prevention and control efforts in the majority of EU/EEA countries. Given the increasing evidence of post-migration HIV acquisition, it is important that migrant-sensitive services for prevention and HIV testing, combined with policies which promote and ensure access and linkage to care are delivered in all EU/EEA countries.

Finally, harm reduction programmes among people who inject drugs and their sexual partners are crucial and should be maintained and scaled up where service coverage is low [12]. To decrease the number of people who are diagnosed late, new strategies are required for the delivery of expanded targeted HIV testing services [16,17]. These services should be tailored to the specific needs of these groups and support timely linkage to HIV prevention, treatment and care. This will ensure earlier diagnoses and treatment initiation and, in turn, improve treatment outcomes and reduce morbidity, mortality and HIV incidence.

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