

## HIV/AIDS SURVEILLANCE IN EUROPE: UPDATE 2007

M J van de Laar (marita.van.de.laar@ecdc.europa.eu)<sup>1</sup>, G Likatavicius<sup>1</sup>, A R Stengaard<sup>2</sup>, M C Donoghoe<sup>2</sup>

1. European Centre for Disease Prevention and Control (ECDC), Stockholm, Sweden

2. World Health Organization Regional Office for Europe, Copenhagen, Denmark

Human immunodeficiency virus (HIV) infection remains of major public health importance in Europe, with evidence of increasing transmission of HIV in several countries. This article provides an overview of HIV and acquired immunodeficiency syndrome (AIDS) surveillance data, and indicates that since 2000 the rate of newly reported cases of HIV per million population has almost doubled in Europe. In 2007, a total of 48,892 cases of HIV infection were reported from 49 of 53 countries in the Region, with the highest rates in Estonia, Ukraine, Portugal and the Republic of Moldova. In the European Union (EU) and European Free Trade Association (EFTA) countries, the predominant mode of transmission for HIV infection is sex between men followed by heterosexual contact. Injecting drug use is still the main mode of transmission in the eastern part of the WHO European region, while in the central part heterosexual contact is the predominant mode of transmission. In 2007, the reported number of AIDS cases diagnosed decreased in the Region overall, except in the eastern part. HIV/AIDS surveillance data are vital to monitor the trends of the HIV epidemic and evaluate public health responses.

### Introduction

Since January 2008, the European Centre for Disease Prevention and Control (ECDC) and the World Health Organization Regional Office for Europe have been jointly carrying out the HIV/AIDS surveillance in Europe [1]. This article presents the main findings for the whole WHO European Region, the three geographical regions of the WHO European Region (West, Centre and East)\* and the European Union (EU) and European Free Trade Association (EFTA) countries.

### HIV case reports in WHO European Region

In 2007, 48,892 newly diagnosed HIV cases (76 per million population) were reported from 49 of the 53 countries in the WHO European Region (no data from Austria, Italy, Monaco and the Russian Federation). In the three parts of the WHO European Region, the rate of newly reported cases of HIV per million population was highest in the East (Table 1); whereas among individual countries, the highest rates were reported in: Estonia (472 per million), Ukraine (285 per million), Portugal (217 per million) and the Republic of Moldova (204 per million). Between

TABLE 2

Characteristics of newly diagnosed cases of HIV infection reported in the EU/EFTA countries\*, 2007

	EU/EFTA countries*
Number of HIV cases	26 279
Rate per million population	64.1
Percentage of cases:	
Age 15–29 years	28%
Female	31%
Transmission mode**	
Heterosexual***	29%
Men who have sex with men	39%
Injecting drug users	9%

\* Missing data: Italy, Austria.

\*\* Transmission group unknown is excluded in the percentages.

\*\*\* Excludes persons originating from countries with generalised epidemics (4 422 in total).

TABLE 1

Characteristics of newly diagnosed cases of HIV infection reported in the WHO European Region and by geographical area, 2007

	WHO European Region*	West*	Centre	East*
Number of HIV cases	48 892	24 202	1 897	22 793
Rate per million population	76.4	77.0	10.1	164.8
Percentage of cases:				
Age 15–29 years	33%	26%	41%	40%
Female	33%	31%	24%	36%
Transmission mode**				
Heterosexual***	36%	29%	53%	42%
Men who have sex with men	20%	40%	30%	0.4%
Injecting drug users	32%	8%	13%	57%

\* Missing data: Austria, Italy, Monaco, Russian Federation.

\*\* Transmission group unknown is excluded from the percentages.

\*\*\* Excludes persons originating from countries with generalised epidemics (4 555 in total; 4 540 in West).

2000 and 2007, the annual rate of newly reported cases of HIV per million population has increased from 39 to 75 per million (90% increase) among the 44 countries that have consistently reported.

### HIV case reports in the EU/EFTA

In 28 of the 30 EU/EFTA countries, 26,279 cases of HIV infection (64 per million) were reported in 2007 (Table 2), with the highest rates reported in Estonia (472 per million), Portugal (217 per million) and Latvia (149 per million). The predominant mode of transmission is sexual contact between men (39%), followed by heterosexual contact (29%), when persons originating from countries with generalised epidemics are excluded. Injecting drug use accounted for 9% of newly reported infections. Among the countries that have consistently reported, the rate has increased from 44 per million in 2000 to 58 per million in 2007. Rates of reported HIV infection have doubled in Bulgaria, Czech Republic, Hungary, the Netherlands, Slovakia, Slovenia, Sweden and the United Kingdom.

The number of HIV reports among men who have sex with men (MSM) has increased by 39% between 2003 and 2007 (Figure 1). The number of heterosexually acquired cases has remained fairly stable at around 6,000 cases (although higher numbers were reported in 2004-2006). Further, the number of cases originating from countries with generalised epidemics amongst heterosexually acquired cases varied between 5,000 in 2005 and 4,400 in 2007. The number of HIV reports among injecting drug users (IDUs) has declined by 30% between 2003 and 2007.

### HIV case reports by geographical area

The HIV epidemics across the three geographical areas show remarkable differences (Figure 2).

The data suggest that the HIV epidemic in the western part of the WHO European Region is characterised by a continuing

increase in sexual transmission of HIV infection. The distribution of transmission modes largely mirrors that described for the EU/EFTA countries. In 2007, 24,202 new cases of HIV infection (77/million) were reported from 20 countries (Table 1).

The HIV epidemic in the central part of the WHO European Region remains at low and stable levels (1,897 cases; 10 per million), although there is evidence of increasing sexual (both heterosexual and homosexual) transmission in many countries (Table 1). Heterosexual transmission accounted for 53% of all reported cases, followed by 30% cases reported among MSM and 13% cases among IDUs, data on transmission mode were missing for 33% of cases.

In the eastern part of the WHO European Region, in 2007, 14 countries reported 22,793 new HIV cases (165 per million), of which 58% were from Ukraine. The predominant mode of transmission in this region is through IDUs, accounting for 57% of the reported cases. Between 2000 and 2007, the rate of newly reported HIV infections has increased from 54 per million to 160 per million. However, the numbers in this region are greatly underestimated as no data were reported from the Russian Federation.

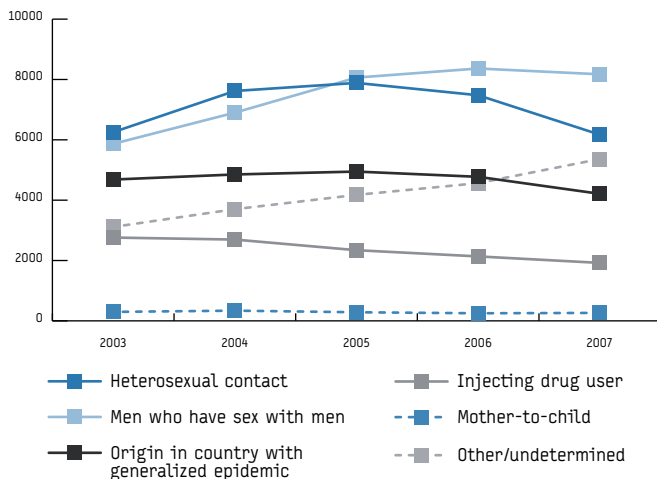
### AIDS diagnoses

In 2007, 5,244 AIDS cases were reported as being diagnosed in 48 of the 53 countries (9 per million) in the WHO European Region (no data from Italy, Kazakhstan, Monaco, Russian Federation and Ukraine). Due to incomplete reporting and no adjustment for reporting delays the total number of AIDS cases is underestimated.

Trends in AIDS diagnoses per million population (Figure 3) have continued to decrease in the WHO European Region overall, from 16 per million in 2000 to 9 per million in 2007, mainly due to decrease in western and central regions probably due to a combination of reporting delay and the effect of highly active

FIGURE 1

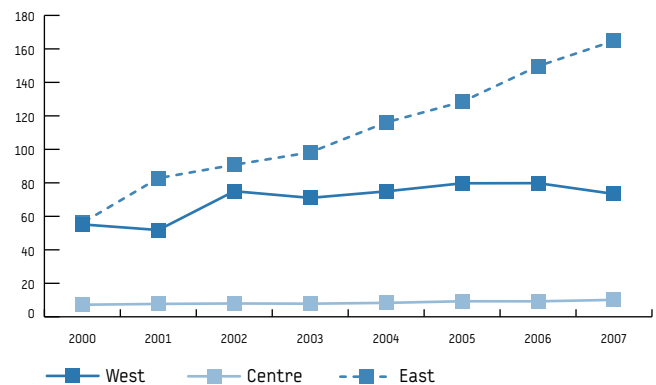
Number of reported HIV infections by transmission mode, origin and year of notification, EU/EFTA, 2003-2007



Data were not available for: Austria, Estonia (except for IDU), Italy, and Malta.

FIGURE 2

HIV cases per million population in geographic areas of the WHO European Region (West, Centre, East) by year of notification, 2000-2007



Data not included from: West: Andorra, Austria, France, Italy, Malta, Monaco, Spain; Centre: Serbia; East: Russian Federation.

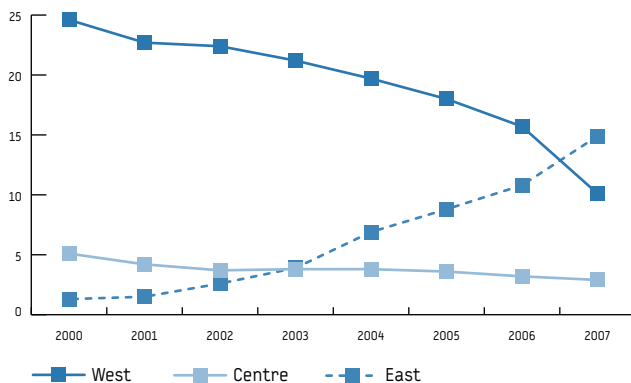
antiretroviral therapy (HAART) [2]. However, during the same period, the rate increased in 21 (mainly eastern) countries, with the largest increases in Belarus and the Republic of Moldova.

### Discussion and conclusion

HIV infection remains of major public health importance in Europe with a continued increase in the number of HIV cases reported [1,3]. In contrast, the number of AIDS cases diagnosed (not adjusted for reporting delays) has continued to decline, except in the eastern part of the WHO European Region. The data suggest evidence of increased transmission of HIV in many countries. However, the predominant transmission group varies by country and geographical area and the data illustrate the wide diversity in the epidemiology of HIV in Europe.

In 2007, in the EU/EFTA countries, also reflecting the western part of the WHO European Region, the highest proportion of HIV cases was reported among MSM. National prevention programmes aimed at reducing HIV transmission within Europe should have a strong focus on MSM [4]. Migrant populations should also be targeted in national prevention programmes and access to treatment and care services should be ensured. Although there seems to be a decline in the number of new diagnoses among IDUs, this is still the predominant transmission group in the Baltic States. In the central part of the WHO European Region, levels of HIV remain low and stable, although there is evidence of increasing sexual transmission in many countries. In the eastern part, the number of HIV cases has increased substantially, mainly driven by an increase in cases acquired through IDU but also by an increase in heterosexually-acquired cases. Interventions to control HIV among IDUs should be the cornerstone of HIV prevention strategies in the eastern part but measures should also be strengthened to prevent heterosexual transmission, especially targeted at those with high-risk partners.

**FIGURE 3**  
Number of diagnosed AIDS cases per million population in the geographic areas of WHO European Region (West, Centre, East) by year of diagnosis, 2000-2007



Data not included from: West: Andorra, Italy, Monaco; East: Kazakhstan, Russian Federation, Ukraine

In interpreting the presented data, it should be taken into account that data are incomplete due to non-reporting from a few large countries. Therefore the findings and conclusions are limited to the surveillance data reported by these 49 countries. Had all data from all countries been available, the total number of reported HIV infections could have doubled to almost 100,000 cases in 2007.

Surveillance of HIV/AIDS is essential to monitor the epidemic and evaluate the public health response to control the transmission of infections. Countries in Europe need to ensure that surveillance data is of high quality by implementing case-based reporting systems for HIV and AIDS cases and ensuring its completeness, especially regarding the probable mode of transmission. Achieving full coverage of reporting from all countries in Europe is of utmost importance.

\*The WHO European Region comprises:

The West, 23 countries: Andorra, Austria (EU), Belgium (EU), Denmark (EU), Finland (EU), France (EU), Germany (EU), Greece (EU), Iceland (EFTA), Ireland (EU), Israel, Italy (EU), Luxembourg (EU), Malta (EU), Monaco, the Netherlands (EU), Norway (EFTA), Portugal (EU), San Marino, Spain (EU), Sweden (EU), Switzerland (EFTA), United Kingdom (EU).

The Centre, 15 countries: Albania, Bosnia and Herzegovina, Bulgaria (EU), Croatia, Cyprus (EU), Czech Republic (EU), Hungary (EU), the Former Yugoslav Republic of Macedonia, Montenegro, Poland (EU), Romania (EU), Serbia, Slovakia (EU), Slovenia (EU), Turkey.

The East, 15 countries: Armenia, Azerbaijan, Belarus, Estonia (EU), Georgia, Kazakhstan, Kyrgyzstan, Latvia (EU), Lithuania (EU), Republic of Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan.

### Acknowledgements

We would like to thank all participating countries and national institutions of the European network for HIV/AIDS surveillance for their important contributions.

### References

1. European Centre for Disease Prevention and Control / WHO Regional Office for Europe: HIV/AIDS Surveillance in Europe 2007. Stockholm: European Centre for Disease Prevention and Control; 2008. Available from: [http://ecdc.europa.eu/en/files/pdf/Publications/20081201\\_Annual\\_HIV\\_Report.pdf](http://ecdc.europa.eu/en/files/pdf/Publications/20081201_Annual_HIV_Report.pdf)
2. Sterne JAC, Hernán MA, Ledergerber B, Tilling K, Weber R, Sendi P, et al. Long-term effectiveness of potent antiretroviral therapy in preventing AIDS and death: a prospective cohort study. *Lancet* 2005;366(9483):378-84.
3. EuroHIV. HIV/AIDS Surveillance in Europe. End-Year report 2006. Saint-Maurice: Institut de veille sanitaire, 2007. No. 75.
4. Likatavicius G, Klavs I, Devaux I, Alix J, Nardone A. An increase in newly diagnosed HIV cases reported among men who have sex with men in Europe, 2000-6: implications for a European public health strategy. *Sex Transm Infect.* 2008;84(6):499-505.

This article was published on 11 December 2008.

Citation style for this article: van de Laar MJ, Likatavicius G, Stengaard AR, Donoghoe MC. HIV/AIDS surveillance in Europe: update 2007. *Euro Surveill.* 2008;13(50):pii=19066. Available online: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19066>