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Mid-year report 2005
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- Reporting of cases of HIV infection
- HIV and men who have sex with men
- HIV and pregnant women
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HIV / AIDS
Surveillance in Europe

EuroHIV

European Centre for the Epidemiological Monitoring of HIV/AIDS
WHO and UNAIDS Collaborating Centre on HIV/AIDS

Institut de Veille Sanitaire

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HIV/AIDS Surveillance in Europe

HIV/AIDS Surveillance in Europe is a half-yearly report prepared by EuroHIV (European Centre for the Epidemiological Monitoring of HIV/AIDS) and presents information provided by the national coordinators for the surveillance of HIV/AIDS in the WHO European Region.

Single copies and regular mailing can be requested from the address below; the report is also accessible on the EuroHIV web site: www.eurohiv.org.

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Foreword

This issue of *HIV/AIDS Surveillance in Europe* represents a subtle departure from the format and tone of previous EuroHIV reports and we provide herewith a note of explanation to help orientate you, the reader.

Until now, the biannual report *HIV/AIDS Surveillance in Europe* has presented data on both HIV/AIDS case reporting and (usually) HIV prevalence in one or more selected sub-populations. In 2005, it was decided that the mid-year report would focus principally on more comprehensive reviews of HIV in specific populations, with complete data on HIV/AIDS case reporting presented in end-year reports only.

We have taken this opportunity to make some changes in the style of presentation. This issue is thus the first with the new format, the aim of which is to provide the reader with an update of the HIV/AIDS epidemic in each of the specific sub-populations identified, drawing upon all data collated by EuroHIV, in particular the European HIV Prevalence database and the European HIV/AIDS case reporting databases.

This mid-year report is presented in four sections:
1. Reporting of cases of HIV infection;
2. HIV and men who have sex with men (MSM);
3. HIV and pregnant women;
4. HIV and blood donations.

For each section, we have expanded the commentary to include a digest of the main results, including summary tables and figures, as well as providing a discussion of the main findings and recommendations that arise from them. The commentary for the specific populations includes not only the HIV prevalence data usually presented but also, where pertinent, further analysis of HIV and AIDS case reporting data. Furthermore, for the section on MSM, we have also presented data on behavioural studies. Each section is then followed by annexes of the relevant data tables for those readers who may wish to delve deeper into the matter. In this way, we believe that we have achieved the aim of producing a report updating the status of the HIV/AIDS epidemic in Europe for each of the specific populations.

As is usual for EuroHIV reports, we have presented data by the three geographic sub-regions (West, Centre and East) of the WHO European Region (see Technical Note, for list of countries in each region) as this best reflects the epidemiology of the HIV/AIDS epidemic in Europe. Of the 25 countries in the European Union, 16 are in the West, six in the Centre and three in the East.

Your comments and feedback regarding this report are welcome and should be sent to the email address at the front of the report.

Anthony Nardone
on behalf of the EuroHIV team

Summary

HIV infection remains of major public health importance in Europe, with evidence of increasing sexual transmission of HIV in many western and eastern European countries. HIV data are presented in this report for three populations:

Men who have sex with men (MSM): HIV prevalence studies suggest levels among specific populations of MSM in the range of 10-20% in western Europe, but very much lower in eastern Europe (<5%). An important proportion of MSM have recently engaged in high risk sexual behaviour and similar levels were observed throughout Europe. Continued health promotion is needed among MSM, both in the West, where there is increasing transmission, and the East, where there is evidence of a hidden epidemic.

Pregnant women: in most countries in Europe the prevalence of HIV among pregnant women remains low. However, increasing numbers of cases of HIV infection reported amongst women of child-bearing age are reflected in an increasing HIV prevalence amongst pregnant women, most notably in Estonia (0.48% in 2002) and Ukraine (0.34% in 2004). Important pockets of higher HIV prevalence among pregnant women have been reported in major urban areas.

Blood donations: in most countries in central and western Europe, the prevalence of HIV in blood donations remains low (<5/100,000 donations), but rapid increases have been reported in many countries in eastern Europe, and especially Ukraine (128/100,000 in 2004). Strategies to guarantee the safety of the blood supply (e.g. nucleic acid testing, pool of regular donors) need to be assured in these countries.

Résumé

En Europe, l'infection à VIH reste un problème de santé publique majeur, avec une augmentation importante de la transmission par voie sexuelle dans la plusieurs des pays de l'Europe de l'Ouest et de l'Est. Les données présentées dans ce rapport concernent trois populations :

Hommes ayant des relations sexuelles avec les hommes (HSH) : les études de prévalence VIH indiquent des niveaux de contamination compris entre 10 et 20 % en Europe de l'Ouest dans certaines populations de HSH, ces niveaux étant bien plus faibles en Europe de l'Est (<5%). Une proportion importante de HSH pratiquent des comportements sexuels à haut risque, des niveaux similaires étant observés dans toute l'Europe. Il est nécessaire de maintenir et renforcer les campagnes de prévention parmi les HSH, d'une part à l'ouest où le risque de transmission est croissant, et à l'est, où il existe des arguments en faveur d'une épidémie cachée.

Femmes enceintes : dans la plupart des pays d'Europe, la prévalence du VIH parmi les femmes enceintes reste à un niveau très bas. Cependant, une augmentation des cas d'infection à VIH rapportée chez les femmes en âge de procréer se reflète par une augmentation de la prévalence du VIH chez les femmes enceintes, en particulier en Estonie (0.48 % en 2002) et en Ukraine (0.34 % en 2004). Une prévalence supérieure du VIH chez les femmes enceintes a été signalée dans les grandes zones urbaines.

Dons de sang : dans la plupart des pays d'Europe de l'Ouest et centrale, la prévalence du VIH parmi les donneurs de sang reste basse (<5 pour 100 000 dons). Des augmentations brutales ont cependant été constatées dans plusieurs pays d'Europe de l'est, particulièrement en Ukraine (128 pour 100 000 en 2004). Des dispositifs pour garantir la sécurité transfusionnelle (e.g. dépistage génomique viral, recours à des donneurs réguliers sélectionnés) doivent être renforcés dans ces pays.

Резюме

ВИЧ инфекция остается одной из важнеиших проблем здравоохранения в Европе, о чем свидетельствует увеличение передачи ВИЧ инфекций сексуальным путем во многих Западно и Восточноевропейских странах. В этом издании данные на ВИЧ, представленные по трем групам :

Мужчины, имеющие секс с мужчинами (МСМ): даные по иследованиям о ВИЧ инфекции среди некоторых груп МСМ показывают распостранение ВИЧ в диапазоне от 10-20% в Западной Европе и более низкое распостранение в Восточной Европе (<5 %). Высокий уровень рискового поведения отмечен у важной пропорций МСМ во всей Европе. Продолжение программ поощрения здоровя среди МСМ необходимо как на Западе, где наблюдается прирост новых случаев инфекций, так и на Востоке где наблюдаются признаки скрытой инфекций.

Беременные женщины: в большинстве Европейских стран распостранение ВИЧ среди беременных женщин остается низкой. Однако, увеличение числа случаев ВИЧ инфекции среди женщин фертилного возраста, отражены в увеличений распостранения ВИЧ среди беременых женщин, наиболее силно выраженном в Эстонии (0.48 % в 2002) и на Украине (0.34 % в 2004). Также высокие уровни распостранения ВИЧ наблюдаются в болших городах.

Донорская кровь: в большинстве стран Центральной и Западной Европы, распостранение ВИЧ инфекции в донорской крови остается низкой (<5/100 000 донации), но резкое увеличение распространенности ВИЧ отмечается во многих странах на Восточной Европе, и особенно на Украине (128/100 000 в 2004). Стратегии, гарантирующие безопасность кровоснабжения (например : внедрение тестирования нуклеиновой кислоты, группы постояных доноров) должны быть внедрены в этих странах.

Section 1
Reporting of cases of HIV infection

1.1. Introduction

The reporting of HIV diagnoses remains a major tool in the surveillance and monitoring of the HIV/AIDS epidemic. However, a number of important caveats need to be highlighted:

- national data are unavailable for two countries in western Europe (Italy and Spain), sites of major epidemics. More recently, data for 2004 remain unavailable for Bulgaria and Norway as well as Monaco and San Marino;
- in making international comparisons, an assumption is made that the quality and coverage of national surveillance are comparable. Where appropriate, footnotes in the annex tables highlight changes and developments that may have an impact on this assumption;
- cases of HIV infection are presented by year of report and not diagnosis. In some countries, significant delays exist between diagnosis and reporting of HIV cases;
- data regarding newly diagnosed cases of HIV infection are presented. They do not necessarily represent incidence as infection may have occurred up to several years previously.

1.2. Update of HIV case reports (end June 2005)

The data presented here include HIV cases reported in the first half of 2005 as well as an update of data for previous years presented in report No. 71 [1].

HIV reports January - June 2005

The number of newly diagnosed cases of HIV infection up to mid-2005 is presented for 29 of the 52 countries in the WHO European Region (Annex 1.1). The total number of HIV cases reported from January-June 2005 (10,426) is proportionally much less than the total for 2004 (74,760), but this is due to important reporting delays and non-responses.

In those countries that have reported data for January to June 2005, the number of newly diagnosed HIV cases reported is approximately half that reported for the whole of 2004. However, in four countries reporting more than 50 cases of HIV in 2004, the total of newly diagnosed cases of HIV reported in the first half of 2005 is 60% or more of the total reported in 2004:

- Azerbaijan (84 in January-June 2005 compared with 121 in 2004);
- Georgia (102 *versus* 163);
- Hungary (67 *versus* 71);
- United Kingdom (4,659 *versus* 7,510).

HIV and AIDS case reports for the full year of 2005 will be presented in *HIV/AIDS Surveillance in Europe,* No. 73.

HIV reports 2004 (updated end June 2005)

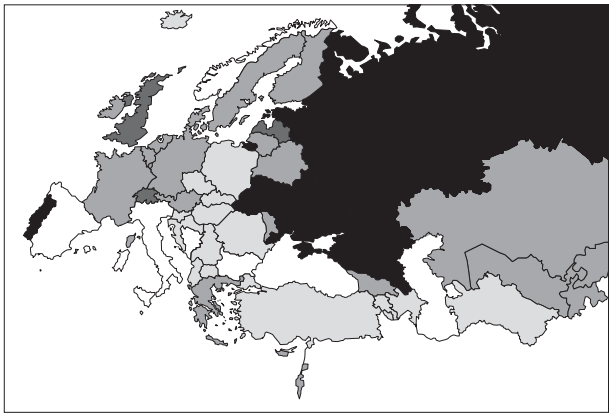
Data for 2004 are available for 46 of the 52 countries, of which 29 countries, most notably France, have updated previously reported data.

A total of 74,760 newly diagnosed cases of HIV were reported in 2004 (Annex 1.1). Rates of newly diagnosed cases of HIV infection per million population reported in 2004 are presented for individual countries in Figure 1.1 and Annex 1.1. Four countries reported rates of more than 200 newly diagnosed cases of HIV infection per million population: Estonia (568); Portugal (278); Russian Federation (239); and Ukraine (212).

In the European Union (EU), 24,184 newly diagnosed cases of HIV infection were reported in 2004 in 23 countries (excluding Italy and Spain), representing a rate of 68 HIV infections per million population. Over a third of cases (36%) were reported among females and 13% were among young people 15-24 years of age.

The highest rates were reported in Estonia and Portugal, but rates of between 100 and 200 new diagnoses of HIV infection per million population were reported by three EU countries: Latvia (141); Luxembourg (131); United Kingdom (126).

Figure 1.1: Rates of newly diagnosed cases of HIV infection per million population reported in 2004, WHO European Region



1.2.1 Eastern Europe

Of the three sub-regions of Europe, by far the largest number of new cases of HIV infection was reported in the East (49,929) representing a rate of 174.2 per million population (Table 1.1).

In the East, the HIV epidemic has been concentrated amongst injecting drug users, although in 2004 the number of new

diagnoses amongst drug users had declined to 18,456 from the peak of 55,324 (excluding Estonia) reported in 2001 (Table 1.1, Annex 1.3). The decline among injecting drug users is most notable in the Russian Federation (from 48,231 in 2001 to 10,200 in 2004), Kazakhstan (from 1,037 to 433) and Latvia (from 665 to 145). However, for the same period, large increases in the number of HIV diagnoses among injecting drug users have been reported in the Ukraine (from 3,964 to 5,778), Uzbekistan (from 447 to 831) and Tajikistan (from 31 to 105).

In contrast, the number of infections in the East that were reported as heterosexually acquired has nearly doubled, from 5,180 reported cases in 2001 to 9,666 in 2004 (Annex 1.4). Over a third (36%) of newly diagnosed HIV infections in 2004 were reported in young people (15 to 24 years old) and 40% were female (Table 1.1).

Table 1.1: Characteristics of newly diagnosed cases of HIV infection reported in eastern Europe in 2004

	East
Number of HIV cases	49,929
Rate per million population	174.2
Percentage of cases:	
Aged 15-24 years old	36%
Female	40%
Predominant transmission mode	Drug injection

1.2.2 Central Europe

In the Centre, the epidemic remains at low levels, with only 1,585 new cases of HIV infection being reported in 2004, representing a rate of 8.5 per million population (Table 1.2). Thirty per cent of newly diagnosed cases were female and 21% in young people (aged 15-24 years old).

The epidemic is characterised in the Centre by its heterogeneity, with different transmission modes predominating in different countries, for example homosexual contact in Hungary, injecting drug use in Poland and heterosexual contact in Romania (Annexes 1.2-1.4).

Table 1.2: Characteristics of newly diagnosed cases of HIV infection reported in central Europe in 2004

	Centre*
Number of HIV cases	1,585
Rate per million population	8.5
Percentage of cases:	
Aged 15-24 years old	21%
Female	30%
Predominant transmission mode	Various

* Missing data: Bulgaria.

1.2.3 Western Europe

In the West, 23,246 new cases of HIV infection were reported in 2004, a rate of 77.9 per million population (Table 1.3). The predominant transmission mode is heterosexual contact. The number of cases in this transmission group has nearly doubled from 2001 (5,968 cases) to 2004 (11,126) (Annex 1.4).

Table 1.3: Characteristics of newly diagnosed cases of HIV infection reported in western Europe in 2004

	West*
Number of HIV cases	23,246
Rate per million population	77.9
Percentage of cases:	
Aged 15-24 years old	10%
Female	36%
Predominant transmission mode	Heterosexual

* Missing data: Italy, Monaco, Norway, San Marino, Spain.

Of the 14 countries with complete data, increases of more than 50% in the period 2001 to 2004 were reported in four countries reporting more than 50 cases in 2000: United Kingdom (from 2,342 to 4,369), Sweden (from 143 to 259), Switzerland (from 276 to 433) and Portugal (from 921 to 1,411). The proportion of heterosexually acquired cases of infection in persons known to originate from countries with generalised HIV epidemics varied from 22% in Portugal to 71% in Belgium and Sweden [1].

At the same time, the number of HIV reports among men who have sex with men (MSM) from 14 countries has increased by 56%, from 3,148 in 2001 to 4,914 in 2004 (Annex 1.2). Over a third (36%) of new cases of HIV infection in 2004 were female (36%), but the proportion amongst young people (15-24 years old) was very low (10%).

1.3. Conclusion

HIV infection remains a disease of major public health impact in the WHO European Region. Although the total number of HIV cases reported in 2004 is lower than observed at the peak of 2001, there is strong evidence of increasing sexual transmission of HIV in many countries in both western and eastern Europe.

In eastern Europe, injecting drug use predominates as the main transmission mode, although numbers have declined since 2001, mostly due to a decrease in the number of new diagnoses reported from the Russian Federation. Appropriate public health interventions among injecting drug users need to be maintained in those countries with mature epidemics and developed in those with more recent increases in HIV cases. The increasing numbers of HIV cases reported as having acquired their infection heterosexually emphasises

the need for increasing initiatives to control transmission in the heterosexually active population.

In central Europe, the HIV epidemic remains at a low level and the main transmission mode varies by country. Interventions must therefore be adapted to suit these different circumstances.

In western Europe, the number of cases reported as being infected heterosexually continues to increase. In many countries the majority of these cases were in persons born in countries with generalised epidemics, reinforcing the need to ensure that prevention and care services are adapted to reach migrant populations. Furthermore, renewed health promotion campaigns are needed among MSM (see also section 2).

The surveillance of HIV is essential to provide the necessary information with which to not only monitor the epidemic, but also evaluate the public health response to control the transmission of new infections. In order to achieve this aim, countries in Europe need to ensure that surveillance data is of the highest quality, in particular, to provide complete HIV and AIDS case reporting.

References

1. European Centre for the Epidemiological Monitoring of AIDS. *HIV/AIDS Surveillance in Europe.* End-year report 2004. 2005; No. 71. (http://www.eurohiv.org/reports/report_71/pdf/report_eurohiv_71.pdf)

Annexes 1.1-1.6.
HIV infections newly diagnosed and reported by June 2005

Annex.1.1. HIV infections newly diagnosed and rates per million population by country and year of report (1998-2005), and cumulative totals, WHO European Region, data reported by 30 June 2005

Geographic area		Year reporting started	Year of report							
			1998		1999		2000		2001	
	Country		N	Rate	N	Rate	N	Rate	N	Rate
West										
	Andorra †	2004	–	–	–	–	–	–	–	–
EU	Austria	1998	313	38.6	339	41.9	428	52.8	402	49.6
EU	Belgium	1986	753	73.8	801	78.3	950	92.7	963	93.7
EU	Denmark	1990	213	40.3	287	54.1	260	48.9	319	59.8
EU	Finland	1986	80	15.5	142	27.5	146	28.2	128	24.7
EU	France §	2003	–	–	–	–	–	–	–	–
EU	Germany	1993	2,209	26.9	1,790	21.8	1,688	20.5	1,296	15.7
EU	Greece ‖	1999	667	62.1	1,271	117.3	504	46.2	423	38.6
	Iceland	1985	8	28.9	12	42.9	10	35.4	11	38.6
EU	Ireland ¶	1985	116	31.1	186	49.3	290	75.9	299	77.4
	Israel	1983	379	65.6	277	46.9	289	47.8	359	58.2
EU	Italy **	1985	–	–	1,233	73.5	1,174	70.0	1,145	68.2
EU	Luxembourg ‡‡	1999	29	68.5	30	69.9	44	101.1	41	92.9
EU	Malta §§	2004	–	–	–	–	–	–	–	–
	Monaco ‖ ‖	–	–	–	–	–	–	–	–	–
EU	Netherlands ¶¶	2002	–	–	1,478	93.5	363	22.8	570	35.7
	Norway	1986	101	22.8	136	30.6	169	37.8	163	36.3
EU	Portugal ***	1983	–	–	–	–	4,100	409.4	2,422	241.4
	San Marino	1983	1	38.3	2	75.7	3	112.1	3	110.9
EU	Spain †††	1999	–	–	–	–	–	–	–	–
EU	Sweden	1985	249	28.1	211	23.8	242	27.3	269	30.4
	Switzerland	1985	617	86.1	626	87.3	587	81.8	628	87.6
EU	United Kingdom	1984	3,008	51.6	3,150	53.9	3,310	56.4	4,103	69.7
Total West			**8,743**		**11,971**		**14,557**		**13,544**	
Centre										
	Albania	1992	5	1.6	4	1.3	10	3.2	20	6.4
	Bosnia & Herzegovina	1989	26	7.1	12	3.1	2	0.5	8	2.0
	Bulgaria	1987	26	3.2	27	3.3	49	6.1	40	5.0
	Croatia	1986	36	8.1	48	10.8	33	7.4	31	7.0
EU	Cyprus ‡‡‡	1986	19	24.7	23	29.6	29	37.0	22	27.9
EU	Czech Republic	1985	31	3.0	50	4.9	57	5.6	51	5.0
EU	Hungary	1985	74	7.3	62	6.2	47	4.7	82	8.2
	Macedonia, F.Y.R.	1987	9	4.5	5	2.5	7	3.5	5	2.5
EU	Poland	1985	637	16.5	527	13.6	630	16.3	564	14.6
	Romania	1992	648	28.8	364	16.2	290	12.9	440	19.6
	Serbia & Montenegro	1985	106	10.0	87	8.2	78	7.4	92	8.7
EU	Slovakia	1985	11	2.0	2	0.4	19	3.5	8	1.5
EU	Slovenia	1986	14	7.0	15	7.5	13	6.5	16	8.0
	Turkey	1985	110	1.7	120	1.8	158	2.3	184	2.7
Total Centre			**1,752**		**1,346**		**1,422**		**1,563**	
East										
	Armenia	1988	9	2.8	35	11.1	29	9.3	29	9.4
	Azerbaijan	1987	66	8.2	81	10.0	64	7.8	128	15.6
	Belarus	1987	554	54.7	411	40.8	527	52.5	578	57.9
EU	Estonia	1988	10	7.2	12	8.7	390	285.3	1,474	1,089.7
	Georgia	1989	25	4.7	35	6.6	79	15.0	93	17.8
	Kazakhstan	1987	299	18.7	185	11.7	347	22.2	1,175	75.6
	Kyrgyzstan	1987	6	1.3	10	2.1	16	3.3	149	29.8
EU	Latvia	1987	162	67.1	242	101.1	466	196.4	807	343.3
EU	Lithuania	1988	52	14.8	66	18.8	65	18.6	72	20.7
	Moldova, Republic of	1987	408	94.8	155	36.1	176	41.1	234	54.7
	Russian Federation §§§	1987	3,968	27.0	19,728	134.9	58,786	403.7	87,144	601.5
	Tajikistan	1987	1	0.2	0	0.0	7	1.1	37	6.0
	Turkmenistan	1989	0	0.0	1	0.2	0	0.0	0	0.0
	Ukraine §§§	1987	8,197	162.3	5,300	105.8	5,485	110.4	6,086	123.5
	Uzbekistan	1987	3	0.1	28	1.1	154	6.2	549	21.7
Total East			**13,760**		**26,289**		**66,591**		**98,555**	
Total European Union (EU)			**8,647**		**11,917**		**15,215**		**15,476**	
Total WHO European Region			**24,255**		**39,606**		**82,570**		**113,662**	

EU Countries which constitute the European Union as of 1 May 2004.
* Cumulative totals since the start of reporting; may include cases with year of report not available.
† New HIV reporting system started in 2004; data include many cases diagnosed in previous years.
‡ December 2004 data.
§ New HIV reporting system started gradually in 2003; 2003 data from March to December; 2004 data for the full year.
‖ Retrospective reporting before 1999; data for 1999 include many cases diagnosed in previous years.
¶ Excluding mother-to-child cases before 2000.
** HIV reporting exists in 7 out of 20 regions/provinces (Bolzano, Friuli Venezia-Giulia, Lazio, Modena, Piemonte,Trento, Veneto); rates based on the population of the 7 regions: 16.78 million; data (presented by year of diagnosis) available for all 7 regions for 1999-2003 only; other years not shown.
†† December 2003 data.

Annex1.1. HIV infections newly diagnosed and rates per million population by country and year of report (1998-2005), and cumulative totals, WHO European Region, data reported by 30 June 2005
(Cont.)

Year of report							Cumulative total reported *	Geographic area	
2002		2003		2004		June 2005			
N	Rate	N	Rate	N	Rate	N	N		Country
									West
–	–	–	–	35	–	–	35 ‡		Andorra †
442	54.5	423	52.1	470	57.9	–	2,817 ‡	EU	Austria
990	96.2	1,048	101.6	984	95.2	–	16,781 ‡	EU	Belgium
292	54.6	270	50.3	319	59.3	132	4,414	EU	Denmark
130	25.0	134	25.7	128	24.5	–	1,753 ‡	EU	Finland
–	–	3,081	–	5,246	84.3	–	8,327 ‡	EU	France §
1,789	21.7	1,765	21.4	2,090	25.3	1,213	24,712	EU	Germany
400	36.5	431	39.3	436	39.7	248	7,371	EU	Greece ‖
7	24.4	10	34.5	5	17.1	–	176 ‡		Iceland
364	93.1	399	100.9	356	89.0	147	3,911	EU	Ireland ¶
333	52.8	297	46.2	315	48.0	170	4,483		Israel
1,240	73.9	1,104	65.8	–	–	–	5,896 ††	EU	Italy **
33	73.8	47	103.7	60	130.7	34	686	EU	Luxembourg ‡‡
–	–	–	–	17	42.9	6	23	EU	Malta §§
–	–	–	–	–	–	–	–		Monaco ‖ ‖
3,403	211.8	1,571	97.3	1,265	78.0	481	10,843	EU	Netherlands ¶¶
203	45.0	225	49.6	–	–	–	2,755 ††		Norway
2,500	248.8	2,260	224.6	2,803	278.3	1,174	27,013	EU	Portugal ***
1	36.6	4	144.9	–	–	–	43 ††		San Marino
–	–	–	–	–	–	–	–	EU	Spain †††
278	31.4	364	41.0	431	48.5	190	6,897	EU	Sweden
751	104.7	774	108.0	776	108.3	356	28,243		Switzerland
5,958	100.9	7,042	118.9	7,510	126.4	4,659	72,938	EU	United Kingdom
19,114		**21,249**		**23,246**		**8,810**	**230,117**	**Total West**	
									Centre
26	8.3	21	6.6	29	9.1	–	148 ‡		Albania
8	1.9	13	3.1	16	3.8	4	105		Bosnia & Herzegovina
43	5.4	63	8.0	–	–	–	465 ††		Bulgaria
44	9.9	45	10.2	56	12.7	33	504		Croatia
16	20.1	24	29.9	25	31.0	–	441 ‡	EU	Cyprus ‡‡‡
50	4.9	61	6.0	76	7.4	39	776	EU	Czech Republic
80	8.1	63	6.4	71	7.2	67	1,242	EU	Hungary
4	2.0	1	0.5	6	2.9	6	76		Macedonia, F.Y.R.
574	14.9	610	15.8	656	17.0	–	9,151 ‡	EU	Poland
335	15.0	244	10.9	293	13.2	110	6,323		Romania
105	10.0	113	10.7	107	10.2	57	2,035		Serbia & Montenegro
11	2.0	13	2.4	15	2.8	11	228	EU	Slovakia
22	11.1	14	7.1	25	12.6	16	261	EU	Slovenia
192	2.7	197	2.8	210	2.9	–	1,922 ‡		Turkey
1,510		**1,482**		**1,585**		**343**	**23,677**	**Total Centre**	
									East
41	13.3	29	9.5	49	16.1	37	325		Armenia
105	12.7	116	13.9	121	14.3	84	802		Azerbaijan
915	92.1	713	72.1	778	79.0	–	6,263 ‡		Belarus
899	671.9	840	634.9	743	567.8	344	4,786	EU	Estonia
95	18.3	100	19.5	163	32.1	102	740		Georgia
694	44.9	747	48.4	699	45.4	396	5,092		Kazakhstan
162	32.0	130	25.3	157	30.1	80	731		Kyrgyzstan
542	232.7	403	174.7	323	141.3	154	3,187	EU	Latvia
397	114.6	110	31.9	135	39.5	76	1,056	EU	Lithuania
209	48.9	258	60.5	360	84.4	–	2,305 ‡		Moldova, Republic of
47,715	331.2	36,379	254.0	33,969	238.6	–	294,601 ‡		Russian Federation §§§
29	4.7	42	6.7	198	31.4	–	317 ‡		Tajikistan
0	0.0	0	0.0	0	0.0	–	2 ‡		Turkmenistan
7,385	151.0	8,179	168.6	10,218	212.2	–	66,529 ‡		Ukraine §§§
981	38.2	1,836	70.4	2,016	76.1	–	5,612 ‡		Uzbekistan
60,169		**49,882**		**49,929**		**1,273**	**392,348**	**Total East**	
20,410		**22,077**		**24,184**		**8,991**	**215,510**	**Total European Union (EU)**	
80,793		**72,613**		**74,760**		**10,426**	**646,142**	**Total WHO European Region**	

‡‡ Retrospective reporting before 1999.
§§ New HIV reporting system started in 2004; 39% of cases were non residents.
‖ ‖ Data not available.
¶¶ New HIV reporting system started in 2002; 2002 data include many cases diagnosed in previous years. Data prior to 2002 are from a national cohort of HIV positive adults receiving antiretroviral therapy; 1999 data include many cases diagnosed in previous years.
*** HIV reporting system modified in 2000: data for 2000 include many cases diagnosed in previous years; data prior to 2000 not available by year.
††† HIV reporting exists in some regions only; data not available.
‡‡‡ 41% cases were non residents.
§§§ Excluding mother-to-child cases.

Annex 1.2. HIV infections newly diagnosed in men who have sex with men by country and year of report (2001-2005), and cumulative totals, WHO European Region, data reported by 30 June 2005

Geographic area		Year of report					Cumulative total reported*	
	Country	2001	2002	2003	2004	Jan-June 2005		
West								
	Andorra †	–	–	–	1	–	1	§
EU	Austria ‡	–	–	–	–	–	–	
EU	Belgium	143	153	182	189	–	3,091	§
EU	Denmark	110	92	114	159	54	1,701	
EU	Finland	27	38	30	44	–	533	§
EU	France ‖	–	–	619	1,074	–	1,693	§
EU	Germany	474	711	746	997	589	9,198	
EU	Greece	160	152	157	130	75	3,296	
	Iceland	2	3	3	2	–	90	§
EU	Ireland	73	46	75	64	24	620	
	Israel	30	27	31	63	28	660	
EU	Italy ¶	198	268	238	–	–	1,113	**
EU	Luxembourg	11	15	6	20	9	251	
EU	Malta ††	–	–	–	2	2	4	
	Monaco ‡‡	–	–	–	–	–	–	
EU	Netherlands §§	326	1,477	687	564	228	5,580	
	Norway	37	33	52	–	–	880	**
EU	Portugal	176	224	213	308	139	1,437	
	San Marino	1	0	3	–	–	11	**
EU	Spain ‖ ‖	–	–	–	–	–	–	
EU	Sweden	68	68	78	81	42	2,522	
	Switzerland	116	134	143	178	105	3,208	
EU	United Kingdom	1,432	1,949	2,154	2,115	1,236	34,297	
Total West		**3,384**	**5,390**	**5,531**	**5,991**	**2,531**	**70,186**	
Centre								
	Albania	0	1	2	1	–	14	§
	Bosnia & Herzegovina	1	2	4	1	0	19	
	Bulgaria	0	1	1	–	–	31	**
	Croatia	12	17	24	26	17	137	
EU	Cyprus	8	4	7	8	–	142	§
EU	Czech Republic	31	28	37	31	21	415	
EU	Hungary	34	35	32	43	30	617	
	Macedonia, F.Y.R.	1	0	0	0	0	7	
EU	Poland	24	28	17	21	–	590	§
	Romania	2	5	4	6	5	101	
	Serbia & Montenegro ¶¶	–	27	29	31	25	122	
EU	Slovakia	4	6	10	12	6	95	
EU	Slovenia	8	11	8	16	13	139	
	Turkey	9	19	15	10	–	151	§
Total Centre		**134**	**184**	**190**	**206**	**117**	**2,580**	
East								
	Armenia	1	0	0	0	1	3	
	Azerbaijan	0	1	0	4	0	8	
	Belarus	3	3	0	0	–	26	§
EU	Estonia ***	26	13	–	–	–	93	
	Georgia	3	2	3	6	5	24	
	Kazakhstan	0	4	0	2	2	18	
	Kyrgyzstan	0	0	0	0	0	0	
EU	Latvia	7	8	14	7	5	128	
EU	Lithuania	4	5	3	4	1	68	
	Moldova, Republic of	0	3	1	0	–	9	§
	Russian Federation	82	56	84	116	–	1,050	§
	Tajikistan	0	0	0	0	–	0	§
	Turkmenistan	0	0	0	0	–	0	§
	Ukraine	3	2	3	9	–	55	§
	Uzbekistan	6	2	0	9	–	18	§
Total East		**135**	**99**	**108**	**157**	**14**	**1,500**	
Total European Union (EU)		**3,344**	**5,331**	**5,427**	**5,889**	**2,474**	**67,623**	
Total WHO European Region		**3,653**	**5,673**	**5,829**	**6,354**	**2,662**	**74,266**	

EU Countries which constitute the European Union as of 1 May 2004.
* Cumulative totals available since the beginning of reporting (see Annex 1.1).
† New HIV reporting system started in 2004; transmission group unknown for 86% of cases.
‡ Data not available by transmission group.
§ December 2004 data.
‖ New HIV reporting system started gradually in 2003; 2003 data from March to December; 2004 data for the full year.
¶ HIV reporting exists in 7 out of 20 regions/provinces (Bolzano, Friuli Venezia-Giulia, Lazio, Modena, Piemonte,Trento, Veneto); population: 16.78 million; data (presented by year of diagnosis) available for all 7 regions for 1999-2003 only.
** December 2003 data.
†† New HIV reporting system started in 2004.
‡‡ Data not available.
§§ New HIV reporting system started in 2002; 2002 data include many cases diagnosed in previous years. Data prior to 2002 are from a national cohort of HIV positive adults receiving antiretroviral therapy.
‖ ‖ HIV reporting exists in some regions only; data not available.
¶¶ Data not available by transmission group before 2002.
*** Data not available by transmission group for adult cases after 2002.

Annex 1.3. HIV infections newly diagnosed in injecting drug users by country and year of report (2001-2005), and cumulative totals, WHO European Region, data reported by 30 June 2005

Geographic area		Year of report					Cumulative total reported *	
	Country	2001	2002	2003	2004	Jan-June 2005		
West								
	Andorra †	–	–	–	1	–	1	§
EU	Austria ‡	–	–	–	–	–	–	
EU	Belgium	18	22	30	22	–	668	§
EU	Denmark	31	31	24	14	12	416	
EU	Finland	49	27	23	10	–	298	§
EU	France ‖	–	–	119	181	–	300	§
EU	Germany	97	126	117	120	64	2,357	
EU	Greece	15	15	10	9	8	267	
	Iceland	2	1	1	1	–	20	§
EU	Ireland	38	50	49	71	37	542	
	Israel	59	65	41	56	29	603	
EU	Italy ¶	169	197	153	–	–	970	**
EU	Luxembourg	7	5	3	3	3	95	
EU	Malta ††	–	–	–	2	0	2	
	Monaco ‡‡	–	–	–	–	–	–	
EU	Netherlands §§	24	175	80	47	10	578	
	Norway	8	13	15	–	–	484	**
EU	Portugal	1,257	1,140	870	992	360	7,003	
	San Marino	0	0	0	–	–	12	**
EU	Spain ‖ ‖	–	–	–	–	–	–	
EU	Sweden	39	31	31	27	9	945	
	Switzerland	78	67	109	83	37	3,425	
EU	United Kingdom	121	144	120	147	70	4,284	
Total West		**2,012**	**2,109**	**1,795**	**1,786**	**639**	**23,270**	
Centre								
	Albania	0	1	0	0	–	1	§
	Bosnia & Herzegovina	2	1	0	3	1	12	
	Bulgaria	0	2	0	–	–	12	**
	Croatia	4	1	2	4	1	31	
EU	Cyprus	0	0	0	0	–	5	§
EU	Czech Republic	3	1	5	7	2	37	
EU	Hungary	3	1	1	2	0	14	
	Macedonia, F.Y.R.	0	0	0	0	1	7	
EU	Poland	270	180	217	184	–	5,162	§
	Romania	2	3	4	0	1	12	
	Serbia & Montenegro ¶¶	–	15	17	15	4	54	
EU	Slovakia	0	0	0	0	0	2	
EU	Slovenia	1	0	0	0	0	12	
	Turkey	1	5	5	6	–	110	§
Total Centre		**286**	**210**	**251**	**221**	**10**	**5,471**	
East								
	Armenia	19	27	14	33	21	175	
	Azerbaijan	72	41	39	60	36	346	
	Belarus	414	583	448	359	–	4,412	§
EU	Estonia ***	1,340	702	–	–	–	2,396	
	Georgia	74	64	65	105	47	480	
	Kazakhstan	1,037	500	502	433	251	3,875	
	Kyrgyzstan	143	131	108	124	46	580	
EU	Latvia	665	397	233	145	59	2,205	
EU	Lithuania	55	379	85	101	56	837	
	Moldova, Republic of	172	140	138	182	–	1,635	§
	Russian Federation	48,231	18,503	12,174	10,200	–	144,600	§
	Tajikistan	31	16	31	105	–	191	§
	Turkmenistan	0	0	0	0	–	0	§
	Ukraine	3,964	4,587	4,815	5,778	–	46,222	§
	Uzbekistan	447	631	918	831	–	2,977	§
Total East		**56,664**	**26,701**	**19,570**	**18,456**	**516**	**210,931**	
Total European Union (EU)		**4,202**	**3,623**	**2,170**	**2,084**	**690**	**29,395**	
Total WHO European Region		**58,962**	**29,020**	**21,616**	**20,463**	**1,165**	**239,672**	

EU Countries which constitute the European Union as of 1 May 2004.
* Cumulative totals available since the beginning of reporting (see Annex1.1).
† New HIV reporting system started in 2004; transmission group unknown for 86% of cases.
‡ Data not available by transmission group.
§ December 2004 data.
‖ New HIV reporting system started gradually in 2003; 2003 data from March to December; 2004 data for the full year.
¶ HIV reporting exists in 7 out of 20 regions/provinces (Bolzano, Friuli Venezia-Giulia, Lazio, Modena, Piemonte,Trento, Veneto); population: 16.78 million; data (presented by year of diagnosis) available for all 7 regions for 1999-2003 only.
** December 2003 data.
†† New HIV reporting system started in 2004.
‡‡ Data not available.
§§ New HIV reporting system started in 2002; 2002 data include many cases diagnosed in previous years. Data prior to 2002 are from a national cohort of HIV positive adults receiving antiretroviral therapy.
‖ ‖ HIV reporting exists in some regions only; data not available.
¶¶ Data not available by transmission group before 2002.
*** Data not available by transmission group for adult cases after 2002.

Annex 1.4. HIV infections newly diagnosed in persons infected through heterosexual contact by country and year of report (2001-2005), and cumulative totals, WHO European Region, data reported by 30 June 2005

Geographic area		Year of report					Cumulative total reported *	
	Country	2001	2002	2003	2004	Jan-June 2005		
West								
	Andorra †	–	–	–	2	–	2	§
EU	Austria ‡	–	–	–	–	–	–	
EU	Belgium	387	438	467	403	–	6,279	§
EU	Denmark	148	151	119	129	56	1,927	
EU	Finland	24	41	54	55	–	612	§
EU	France ‖	–	–	1,566	2,509	–	4,075	§
EU	Germany	450	606	548	604	354	6,677	
EU	Greece	110	97	118	101	77	1,533	
	Iceland	7	2	6	2	–	58	§
EU	Ireland	171	231	223	178	72	1,228	
	Israel	208	169	171	149	92	2,398	
EU	Italy ¶	464	516	528	–	–	2,438	**
EU	Luxembourg	20	13	35	35	21	247	
EU	Malta ††	–	–	–	8	3	11	
	Monaco ‡‡	–	–	–	–	–	–	
EU	Netherlands §§	183	1,362	589	479	166	3,515	
	Norway	112	149	149	–	–	1,255	**
EU	Portugal	921	1,074	1,101	1,411	639	6,338	
	San Marino	2	0	1	–	–	14	**
EU	Spain ‖ ‖	–	–	–	–	–	–	
EU	Sweden	143	152	206	259	94	2,828	
	Switzerland	276	321	404	433	176	4,849	
EU	United Kingdom	2,342	3,468	4,265	4,369	2,389	27,902	
Total West		**5,968**	**8,790**	**10,550**	**11,126**	**4,139**	**74,186**	
Centre								
	Albania	12	22	16	25	–	111	§
	Bosnia & Herzegovina	5	4	9	10	3	57	
	Bulgaria	40	37	62	–	–	392	**
	Croatia	11	22	13	17	10	140	
EU	Cyprus	10	10	17	17	–	266	§
EU	Czech Republic	13	21	17	33	12	247	
EU	Hungary	20	25	18	13	12	219	
	Macedonia, F.Y.R.	4	3	0	6	5	50	
EU	Poland	27	20	28	34	–	407	§
	Romania	60	150	113	178	64	978	
	Serbia & Montenegro ¶¶	–	41	46	28	14	148	
EU	Slovakia	4	3	3	2	5	38	
EU	Slovenia	5	6	2	5	1	53	
	Turkey	114	91	101	126	–	993	§
Total Centre		**325**	**455**	**445**	**494**	**126**	**4,099**	
East								
	Armenia	5	14	13	15	13	122	
	Azerbaijan	45	22	22	33	42	218	
	Belarus	157	317	253	387	–	1,723	§
EU	Estonia ***	105	182	–	–	–	360	
	Georgia	16	29	30	49	44	216	
	Kazakhstan	65	154	161	203	99	786	
	Kyrgyzstan	6	29	19	32	33	141	
EU	Latvia	63	67	66	66	46	410	
EU	Lithuania	7	6	13	24	11	105	
	Moldova, Republic of	47	57	110	169	–	555	§
	Russian Federation	2,744	3,294	3,686	4,431	–	17,708	§
	Tajikistan	5	2	1	14	–	25	§
	Turkmenistan	0	0	0	0	–	0	§
	Ukraine	1,885	2,499	3,043	4,041	–	17,674	§
	Uzbekistan	30	110	270	202	–	628	§
Total East		**5,180**	**6,782**	**7,687**	**9,666**	**288**	**40,671**	
Total European Union (EU)		**5,617**	**8,489**	**9,983**	**10,734**	**3,958**	**67,715**	
Total WHO European Region		**11,473**	**16,027**	**18,682**	**21,286**	**4,553**	**118,956**	

EU Countries which constitute the European Union as of 1 May 2004.
* Cumulative totals available since the beginning of reporting (see Annex1.1).
† New HIV reporting system started in 2004; transmission group unknown for 86% of cases.
‡ Data not available by transmission group.
§ December 2004 data.
‖ New HIV reporting system started gradually in 2003; 2003 data from March to December; 2004 data for the full year.
¶ HIV reporting exists in 7 out of 20 regions/provinces (Bolzano, Friuli Venezia-Giulia, Lazio, Modena, Piemonte,Trento, Veneto); population: 16.78 million; data (presented by year of diagnosis) available for all 7 regions for 1999-2003 only.
** December 2003 data.
†† New HIV reporting system started in 2004.
‡‡ Data not available.
§§ New HIV reporting system started in 2002; 2002 data include many cases diagnosed in previous years. Data prior to 2002 are from a national cohort of HIV positive adults receiving antiretroviral therapy.
‖ ‖ HIV reporting exists in some regions only; data not available.
¶¶ Data not available by transmission group before 2002.
*** Data not available by transmission group for adult cases after 2002.

Annex 1.5. HIV infections newly diagnosed in persons infected through mother-to-child transmission by country and year of report (2001-2005), and cumulative totals, WHO European Region, data reported by 30 June 2005

Geographic area		Year of report					Cumulative total reported *	
	Country	2001	2002	2003	2004	Jan-June 2005		
West								
	Andorra †	–	–	–	–	–	0	§
EU	Austria ‡	–	–	–	–	–	–	
EU	Belgium	23	12	12	7	–	342	§
EU	Denmark	9	7	3	6	2	71	
EU	Finland	0	3	1	1	–	12	§
EU	France ‖	–	–	42	51	–	93	§
EU	Germany	14	22	11	17	4	148	
EU	Greece	2	2	2	3	1	49	
	Iceland	0	0	0	0	–	1	§
EU	Ireland	6	8	12	3	1	34	
	Israel	12	8	8	8	9	127	
EU	Italy ¶	38	23	7	–	–	127	**
EU	Luxembourg	0	0	0	0	0	2	
EU	Malta ††	–	–	–	0	0	0	
	Monaco ‡‡	–	–	–	–	–	–	
EU	Netherlands §§	0	49	22	9	10	90	
	Norway	3	2	2	–	–	31	**
EU	Portugal	6	19	16	20	6	89	
	San Marino	0	0	0	–	–	1	**
EU	Spain ‖ ‖	–	–	–	–	–	–	
EU	Sweden	0	5	4	14	7	96	
	Switzerland	6	17	9	4	2	156	
EU	United Kingdom	101	118	140	124	24	1,301	
Total West		**220**	**295**	**291**	**267**	**66**	**2,770**	
Centre								
	Albania	0	1	3	0	–	5	§
	Bosnia & Herzegovina	0	0	0	0	0	0	
	Bulgaria	0	1	0	–	–	5	**
	Croatia	1	0	1	0	0	6	
EU	Cyprus	4	0	0	0	–	5	§
EU	Czech Republic	0	0	1	0	0	4	
EU	Hungary	0	0	0	0	2	5	
	Macedonia, F.Y.R.	0	0	0	0	0	3	
EU	Poland	6	29	11	10	–	81	§
	Romania	12	10	12	7	0	197	
	Serbia & Montenegro ¶¶	–	3	2	3	0	10	
EU	Slovakia	0	0	0	0	0	0	
EU	Slovenia	0	1	0	1	0	4	
	Turkey	4	4	4	8	–	35	§
Total Centre		**27**	**49**	**34**	**29**	**2**	**360**	
East								
	Armenia	2	0	0	1	2	5	
	Azerbaijan	0	3	0	1	1	9	
	Belarus	4	0	0	20	–	43	§
EU	Estonia	3	2	3	7	1	16	
	Georgia	0	0	0	2	2	6	
	Kazakhstan	1	1	3	6	4	17	
	Kyrgyzstan	0	0	0	0	0	0	
EU	Latvia	0	2	2	4	1	11	
EU	Lithuania	0	0	0	0	0	0	
	Moldova, Republic of	0	2	7	6	–	19	§
	Russian Federation ***	–	–	–	–	–	–	
	Tajikistan	0	0	0	0	–	0	§
	Turkmenistan	0	0	0	0	–	0	§
	Ukraine ***	–	–	–	–	–	–	§
	Uzbekistan	2	5	0	4	–	11	§
Total East		**12**	**15**	**15**	**51**	**11**	**137**	
Total European Union (EU)		**212**	**302**	**289**	**277**	**59**	**2,580**	
Total WHO European Region		**259**	**359**	**340**	**347**	**79**	**3,267**	

EU Countries which constitute the European Union as of 1 May 2004.
* Cumulative totals available since the beginning of reporting (see Annex 1.1).
† New HIV reporting system started in 2004; transmission group unknown for 86% of cases.
‡ Data not available by transmission group.
§ December 2004 data.
‖ New HIV reporting system started gradually in 2003; 2003 data from March to December; 2004 data for the full year.
¶ HIV reporting exists in 7 out of 20 regions/provinces (Bolzano, Friuli Venezia-Giulia, Lazio, Modena, Piemonte,Trento, Veneto); population: 16.78 million; data (presented by year of diagnosis) available for all 7 regions for 1999-2003 only.
** December 2003 data.
†† New HIV reporting system started in 2004.
‡‡ Data not available.
§§ New HIV reporting system started in 2002; 2002 data include many cases diagnosed in previous years. Data prior to 2002 are from a national cohort of HIV positive adults receiving antiretroviral therapy.
‖ ‖ HIV reporting exists in some regions only; data not available.
¶¶ Data not available by transmission group before 2002.
*** Data on mother-to-child cases not available.

Annex 1.6. HIV infections newly diagnosed in women aged 15-49 years by country and year of report (2001-2004), rates per million in 2004 and cumulative totals, WHO European Region, data reported by 30 June 2005

Geographic area		Year of report				Rate per million in 2004	Cumulative total reported *	
	Country	2001	2002	2003	2004			
West								
	Andorra †	–	–	–	9	–	9	§
EU	Austria ‡	–	–	–	–	–	–	
EU	Belgium	353	386	387	356	145.8	5,481	§
EU	Denmark	77	90	65	64	51.6	957	
EU	Finland	30	33	40	21	17.7	402	§
EU	France ‖	–	–	1,178	1,970	134.2	3,148	§
EU	Germany	283	392	339	376	19.1	4,737	
EU	Greece	73	77	80	71	25.9	1,125	
	Iceland	2	2	4	1	13.6	33	§
EU	Ireland	127	194	189	156	143.6	937	
	Israel	119	117	104	79	49.2	1,227	
EU	Italy ¶	298	329	299	–	–	1,574	**
EU	Luxembourg	11	6	16	17	147.4	148	
EU	Malta †	–	–	–	2	20.8	4	
	Monaco ††	–	–	–	–	–	–	
EU	Netherlands ‡‡	110	891	370	293	75.3	2,227	
	Norway	54	74	79	–	–	778	**
EU	Portugal	545	630	574	695	267.9	3,595	
	San Marino	1	0	1	–	–	10	**
EU	Spain §§	–	–	–	–	–	–	
EU	Sweden	98	95	126	150	74.5	1,773	
	Switzerland	198	268	284	253	143.2	7,229	
EU	United Kingdom	1,445	2,270	2,812	2,977	207.1	18,632	
Total West		**3,824**	**5,854**	**6,947**	**7,490**		**54,026**	
Centre								
	Albania	3	10	8	10	12.2	40	§
	Bosnia & Herzegovina	0	1	1	3	3.0	15	
	Bulgaria	11	16	15	–	–	133	**
	Croatia	4	5	9	4	3.6	51	
EU	Cyprus	10	5	13	13	59.6	135	§
EU	Czech Republic	9	11	9	19	7.5	152	
EU	Hungary	22	13	10	11	4.4	151	
	Macedonia, F.Y.R.	2	2	0	3	5.7	21	
EU	Poland	132	113	148	136	13.4	1,931	§
	Romania	143	124	83	118	20.8	943	
	Serbia & Montenegro	0	26	25	14	5.5	79	
EU	Slovakia	2	3	3	2	1.4	27	
EU	Slovenia	1	6	3	2	4.0	38	
	Turkey	60	55	30	40	2.0	440	§
Total Centre		**399**	**390**	**357**	**375**		**4,156**	
East								
	Armenia	2	8	6	12	13.6	68	
	Azerbaijan	12	15	20	20	8.1	138	
	Belarus	153	280	252	292	109.2	1,884	§
EU	Estonia	344	260	226	233	684.4	1,261	
	Georgia	7	18	24	36	29.7	141	
	Kazakhstan	0	175	169	218	51.6	668	
	Kyrgyzstan	14	11	18	35	24.8	107	
EU	Latvia	176	161	126	107	180.9	842	
EU	Lithuania	21	7	15	20	22.4	113	
	Moldova, Republic of	62	63	93	152	126.9	679	§
	Russian Federation	20,421	14,889	13,299	14,057	353.1	81,299	§
	Tajikistan	16	4	5	0	0.0	26	§
	Turkmenistan	0	0	0	0	0.0	0	§
	Ukraine	2,218	2,804	3,406	4,058	326.9	22,796	§
	Uzbekistan	38	170	338	329	46.1	907	§
Total East		**23,484**	**18,865**	**17,997**	**19,569**		**110,929**	
Total European Union (EU)		**4,167**	**5,972**	**7,028**	**7,691**		**49,390**	
Total WHO European Region		**27,707**	**25,109**	**25,301**	**27,434**		**169,111**	

EU Countries which constitute the European Union as of 1 May 2004.
* Cumulative totals available since the beginning of reporting (see Annex 1.1).
† New HIV reporting system started in 2004, rate is not available.
‡ Data not available by sex.
§ Data reported in December 2004.
‖ New HIV reporting system started gradually in 2003; 2003 data from March to December; 2004 data for the full year.
¶ HIV reporting exists in 7 out of 20 regions/provinces (Bolzano, Friuli Venezia-Giulia, Lazio, Modena, Piemonte, Trento, Veneto); population: 16.78 million; data (presented by year of diagnosis) available for all 7 regions for 1999-2003 only.
** December 2003 data.
†† Data not available.
‡‡ New HIV reporting system started in 2002; 2002 data include many cases diagnosed in previous years. Data prior to 2002 are from a national cohort of HIV positive adults receiving antiretroviral therapy.
§§ HIV reporting exists in some regions only; data not available.

Section 2
HIV among men who have sex with men

Key points:

- the number of new HIV diagnoses among MSM has continued to increase since 2000;
- HIV prevalence studies suggest levels among specific populations of MSM are in the range of 10-20% in western Europe, but very much lower in eastern Europe (<5%);
- similar and sometimes high proportions of MSM who had recently engaged in high risk sexual behaviour were reported throughout Europe;
- evidence of a hidden epidemic among MSM in central and eastern Europe.

Recommendations for surveillance:

- to encourage the implementation, following appropriate evaluation, of serological techniques to detect recent infections among newly diagnosed cases;
- to promote regular surveys among MSM in both community and clinical settings in which both behavioural and prevalence data are collected;
- to establish standardised indicators of high risk sexual behaviour among MSM.

Recommendations for public health:

- to strengthen health promotion among MSM with appropriate and innovative interventions;
- to encourage widespread HIV testing among MSM;
- to develop a pan-European strategy for health promotion.

2.1. Introduction

Men who have sex with men (MSM) continue to represent a population at high risk for HIV infection. In this section, we review recent data from HIV and AIDS case reporting as well as HIV prevalence and behavioural studies in this population.

Prevalence studies that have been performed among MSM for at least one year in the period 2000 to 2004 have been reported from 23 of the 52 countries of the WHO European Region. These data are presented here to update and supplement those previously presented in report No. 67 for the period 1996 to 2001 [1]. They are complemented by data on risk behaviour reported from studies with both behavioural and prevalence components carried out among MSM in nine countries.

These studies, by their nature, sample a sub-population of MSM who may be more sexually active (e.g. those attending STI clinics) and therefore the results do not necessarily represent the prevalence of HIV or of high risk sexual behaviour in the wider population of MSM. Nonetheless, these data are pertinent as these populations represent an important target for health promotion.

2.2. HIV and AIDS cases reported among MSM

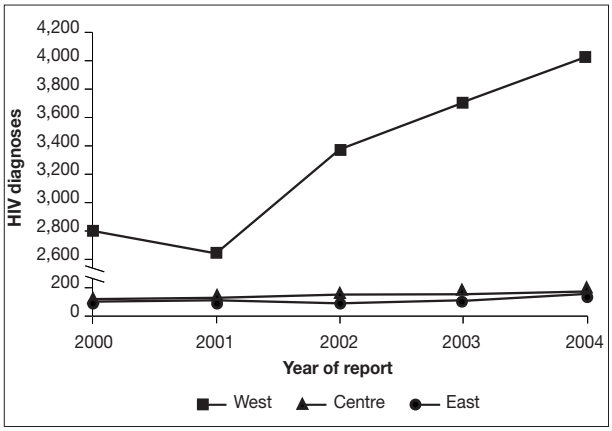
In 2004 in the WHO European Region, 6,354 newly diagnosed cases of HIV were reported among MSM, accounting for less than 10% of all HIV case reports received (8.5%; 6,354/74,760) (Annexes 1.1 and 1.2). The vast majority (94%, 5,991) of these cases were reported from 17 western European countries. In the three different regions of Europe, the proportion of all HIV cases reported among MSM varied considerably:

- western Europe: the 5,991 cases of HIV reported among MSM represented 26% of all HIV cases reported in 2004 (23,246);
- central Europe: the 206 cases of HIV among MSM represented 13% of all HIV cases reported in 2004 (1,585);
- eastern Europe: the 157 cases of HIV among MSM represented 0.3% of all cases of HIV reported in 2004 (49,929).

It should be noted that HIV reporting remains incomplete in Europe. National HIV data are unavailable for Spain, Monaco, Italy and in 2004 for Bulgaria, Norway and San Marino. Furthermore, transmission group has not been reported from Austria and since 2003 from Estonia. Trends in the number of HIV cases (Figures 2.1 and 2.2.) are limited to the 38 countries that have reported for the whole period of 2000 to 2004 (Annex 1.2).

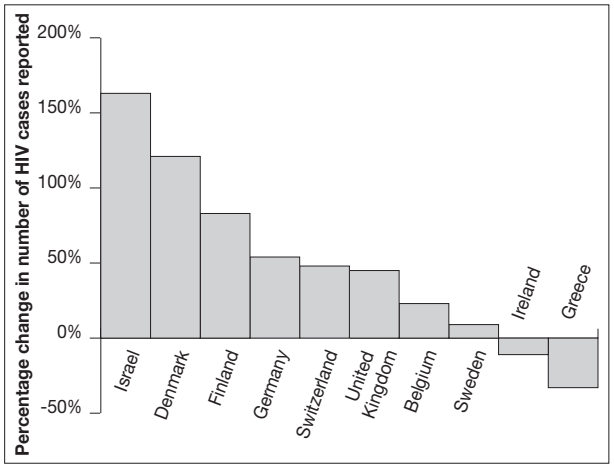
In these 38 countries, there has been a 45% increase in the number of newly diagnosed cases of HIV reported amongst MSM between 2000 (3,010) and 2004 (4,374). This increase is almost entirely due to the increase in HIV case reports observed in western Europe, where the number has increased from 2,788 in 2000 to 4,042 in 2004 (Figure 2.1). Large percentage increases were reported in the numbers of HIV cases among MSM in central and eastern Europe, but the numbers of reported HIV cases in 2000 were very small (124 and 98 respectively; Figure 2.1).

Figure 2.1: New diagnoses of HIV among MSM in Europe by geographic area, 2000-2004



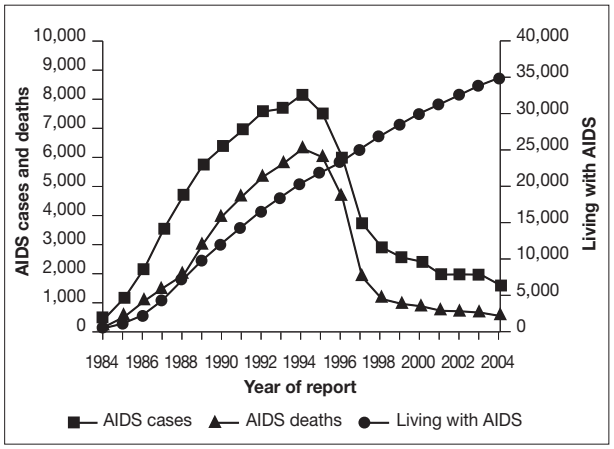
The number of HIV cases reported among MSM has increased in most western countries. The largest increase was reported in Israel (163% increase from 24 in 2000 to 63 in 2004). Percentage increases of more than 50% were reported in Denmark (121%), Finland (83%) and Germany (54%), while decreases were observed in Greece (33% from 195 in 2000 to 130 in 2004) and Ireland (11%) (Figure 2.2).

Figure 2.2: Percentage change in the reported number of new HIV diagnoses among MSM in selected countries of western Europe, 2000-2004



In Europe, an estimated 1,599 AIDS cases were diagnosed among MSM in 2004, the majority from western European countries (95%, 1,517), with much smaller numbers in central (60) and eastern (22) European countries [2]. The number of AIDS cases and deaths among MSM diagnosed with AIDS fell sharply in 1996-1998, following the introduction of effective antiretroviral treatment. Since 2000, the total number of AIDS cases among MSM has continued to decline (from 2,416 in 2000 to 1,599 in 2004), most evident in western European countries (from 2,328 to 1,517). At the end of 2004, it has been estimated that in the WHO European Region there were 35,000 MSM diagnosed and living with AIDS (Figure 2.3).

Figure 2.3: AIDS cases, deaths among MSM with AIDS and MSM living with AIDS, 1984-2004, WHO European Region



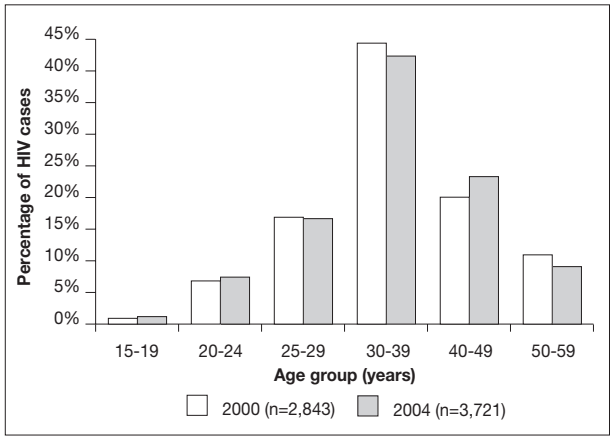
Age at HIV diagnosis among MSM

In 2004, in all of Europe, the largest proportion of newly diagnosed HIV infections among MSM was reported in the 30-39 year age group (41%). Among the other age groups, a quarter of reported cases were in their twenties (8% among 20-24 and 16% among 25-29 year olds), 22% in their forties, 10% in their fifties and 1% less than 20 years old.

In western, central and eastern Europe, the largest proportion of newly diagnosed cases of HIV infection was reported among MSM in their thirties. However, in western Europe, MSM with a newly diagnosed HIV infection were older, with over a third of new cases (34%) among those aged 40 or older, compared to 23% in central and eastern Europe (Figures 2.4 and 2.5). In contrast, the proportion of newly diagnosed cases among young (15-24 years old) MSM in central and eastern Europe was more than twice that in western Europe (19% *versus* 8%, Figures 2.4 and 2.5).

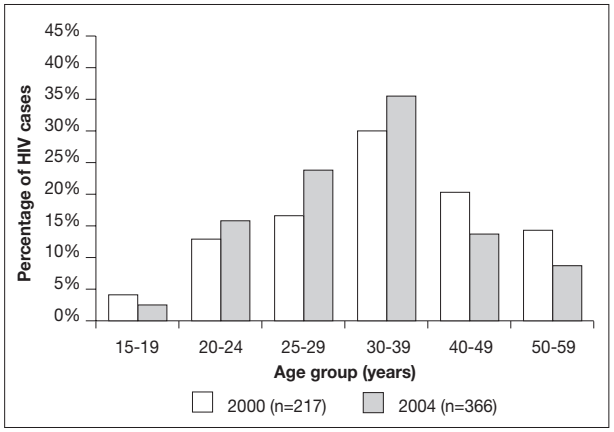
In comparison to the cases reported in 2000, there has been no overall change in the distribution by age group of newly diagnosed HIV cases among MSM reported in 2004. However, when analysed by region, there has been a small increase in age in western Europe, with the proportion of cases aged 40-49 years old increasing from 20% to 23% between 2000 and 2004, and a corresponding decline among those in their thirties (Figure 2.4).

Figure 2.4: The distribution by age group of newly diagnosed HIV cases among MSM in western Europe reported in 2000 and 2004



Although the numbers are much smaller in central and eastern Europe, a decline in age at report has been observed. The proportion of cases aged forty years or more fell from 35% (82/233) of cases reported in 2000 to 21% (82/363) in 2004 (Figure 2.5). The proportion of those in their twenties increased from 29% in 2000 to 39% in 2004, the largest increase being reported in those between 25 and 29 years of age (Figure 2.5).

Figure 2.5: The distribution by age group of newly diagnosed HIV cases among MSM in central and eastern Europe reported in 2000 and 2004



Late HIV diagnosis

Diagnosing HIV as early as possible is important, both for the individual, so giving an opportunity for early medical intervention, and for the community, to allow for counselling to prevent the spread of infection. Monitoring the proportion of late HIV diagnoses provides an important indicator for public health decision makers to evaluate AIDS care and prevention programmes.

We have analysed data on individual HIV cases among MSM reported from 35 countries of the WHO European Region (Table 2.1). A late HIV diagnosis was defined as an HIV diagnosis in a person subsequently diagnosed with AIDS at the same time or within 12 months. Analysis was limited to HIV cases diagnosed between 2000 and 2003 and reported by the end of 2004. The proportion of late diagnoses was compared by geographic region. There exists a number of important caveats in the interpretation of these results:

- the proportion of late diagnoses among all newly diagnosed HIV cases in a given period is dependent not only on HIV testing practices but also on the dynamics of the underlying HIV epidemic. Thus, for example, a high proportion of late diagnoses may reflect either a late-stage, declining epidemic, with relatively few recent infections in the population, or low detection rates of HIV infection prior to the onset of clinical symptoms – or a combination of both. Additional data are necessary to assess the relative importance of these factors; the latter is a more likely explanation when no previous peak in HIV cases has been observed;
- progression from HIV diagnosis to AIDS is dependent not only on access to treatment and care but also on the biological status and personal environment of the individual. Limited clinical data at the time of HIV and AIDS diagnosis are collected by the EuroHIV databases;
- differences exist in the functioning of HIV case reporting and the ability to link HIV and AIDS case reporting in various European countries. The proportion of late diagnosis will be underestimated if follow up is incomplete.
- the number of HIV cases reported in this period as being infected by homosexual contact is much higher in the West (13,561) than in either the Centre (535) or East (67). The small number of HIV cases reported among MSM from eastern European countries qualifies the conclusions that can be drawn from these data.

The proportion of late HIV diagnoses among MSM diagnosed between 2000 and 2003 varied between the regions in Europe (Table 2.1). In eastern Europe, 31% of HIV diagnoses were late, although the numbers (67) were very small. In contrast, in western Europe, only 11% of HIV diagnoses were defined as late, while in central Europe the proportion rose to 24%.

Table 2.1: Proportion of HIV cases among MSM defined as late diagnoses (diagnosed with AIDS at the same time or within 12 months of an HIV diagnosis) by region, 2000-2003

	No. countries (total)		% late HIV diagnoses (total HIV reports)	
West	15	(23)	10.9%	(13,561)
Centre	12	(14)	24.3%	(535)
East	8	(15)	31.3%	(67)

The possible reasons for the high proportion of late HIV diagnoses among MSM in eastern Europe include individual (e.g. denial of risk or fear of positive HIV test result), cultural (discrimination against MSM), medical (access to voluntary counselling and testing (VCT) and treatment) and epidemiological (e.g. a decreasing epidemic).

The high proportion of late diagnoses among MSM in eastern Europe, taken together with the small number of previous diagnoses (lack of evidence of a peak in HIV infection), suggests a possible hidden epidemic in this population, with a high proportion of MSM unaware of their HIV status.

2.3. HIV prevalence among MSM

For the period 2000-2004, HIV prevalence data from 40 studies among MSM in 23 countries are included in the European HIV prevalence database (Annex 2) [3-24]. The data reported are from two main categories of studies:

- seroprevalence studies: based either on testing of serum or saliva samples (SP) or on self-reported (SR) HIV status (usually as part of behavioural studies). The validity of a self-reported HIV status is less than that obtained by the testing of a biological sample, especially as it has been demonstrated that an important proportion of MSM are

unaware of their true HIV status [10]. Nonetheless, self-reported status is more easily employed in the field as it avoids the difficulties of collecting biological samples in a community setting;

- diagnostic testing (DT): refers here to the systematic reporting of results of all diagnostic testing, carried out with the primary objective of providing individuals with their serostatus. HIV testing may have been offered as by the clinician as either part of routine testing or in the context of clinical care as well as self-initiated by the individual themselves. These data are subject to a participation bias depending on HIV testing practices, selective uptake of testing and exclusion of known HIV-infected men, all of which may change over time.

The methodology of these studies varied widely. However we have grouped them into three main categories according to the type and setting of the study:

- seroprevalence studies performed in gay community settings;
- seroprevalence studies performed among MSM attending STI clinics, subdivided into those with a diagnosed STI and STI clinic attendees;
- results of DT performed in various clinical and health care settings.

Summary results are presented in Tables 2.2-2.6 and full details in Annex 2.

2.3.1 HIV prevalence studies among MSM in gay community settings

Results on HIV prevalence in gay community settings are available for 15 studies set in 13 countries (seven countries in the West, two in the Centre and four in the East). The methodologies varied widely, but have been grouped into three broad categories:

- unlinked anonymous testing (UAT) studies (three studies in Slovenia, Spain, United Kingdom). Biological samples (in all cases saliva) were collected from MSM recruited in gay venues (e.g. bars, clubs);
- self-reported (SR) studies (7 studies), in which HIV status was self-reported. Questionnaires were distributed to MSM, either exclusively through the gay press or internet (France, Germany, Switzerland, United Kingdom), in gay venues and events (Ireland, Russian Federation) or a combination of both (Denmark);
- referral studies (5 studies) in which gay men were recruited in gay venues and referred to another service where blood was taken to ascertain HIV status, which could thus be linked to the individual.

In western Europe, the HIV prevalence found in these studies ranged from a high of 18% in Barcelona in 2002 to 5% in Ireland in 2004 (Table 2.2). In the remaining five countries, HIV prevalence varied from 10% (Denmark in 2001) to 15% (London in 2003).

Table 2.2: HIV prevalence studies among MSM in gay community settings in western Europe, 2000-2004

Country	Source of HIV status	Last year of data	Reported HIV prevalence (N)	
Spain (Barcelona)[11]	UAT	2002	18%	(328)
UK (London)[14,15]	UAT	2001	12%	(1,314)
UK[16]	SR	2002	12%	(2,233)
Denmark	SR	2001	10%	(1,160)
France[3]	SR	2004	13%	(3,951)
Germany[5,6]	SR	2003	12%	(3,221)
Ireland[7]	SR	2004	5%	(303)
Switzerland[12]	SR	2000	11%	(734)

In one study, in France, national data was analysed by region of residence; the self-reported prevalence of HIV was significantly higher among MSM living in Paris (17%) than in the rest of France (12%)(Annex 2.1).

In central and eastern Europe, all studies reported a prevalence of <5% in the population sampled (Table 2.3). All five referral studies reported were performed in this region, and although such studies are open to a number of difficulties and biases, the prevalence levels reported were similar to those observed using other methodologies undertaken in different cities or neighbouring countries. It should also be noted that sample sizes were very much smaller (in the hundreds) than most similar studies in the West. In some years, numbers were too small to be included.

Table 2.3: HIV prevalence studies among MSM in gay community settings in central and eastern Europe, 2000-2004

Country	Source of HIV status	Last year of data	Reported HIV prevalence (N)	
Centre:				
Czech Republic (Prague)[17]	Referral	2004	0.5%	(379)
Slovenia (Ljubljana)[19]	UAT	2004	3%	(79)
East:				
Kazakhstan (Karaganda)[21]	Referral	2003	0%	(100)
Lithuania	Referral	2004	0%	(79)
Republic of Moldova (Kishinev)[22]	Referral	2003	2%	(118)
Russian Federation (2 cities)[22]	Referral	2003	3%	(238)
Russian Federation (St Petersburg)[24]	SR	2000	1%	(296)

2.3.2 HIV prevalence among MSM attending STI clinics

Estimates of HIV prevalence among MSM attending an STI clinic, and especially those with a diagnosed acute STI, represent a population at highest risk. The presence of a diagnosed acute STI is indicative of recent high risk and unprotected sexual behaviour, and this population should be especially targeted for health promotion.

MSM with a diagnosed STI

All five studies included (Table 2.4) were performed in western Europe. MSM were recruited from STI clinics, although in Germany MSM attending voluntary counselling and testing (VCT) services and consulting private practitioners were also included. In Ireland and Paris, France, only those MSM with a syphilis diagnosis were included, whilst the remaining three studies included men diagnosed with one of a number of acute STIs. HIV status was reported by the patient or physician in three studies (France, Germany, Ireland), identified by UAT of serum in one study (United Kingdom) and confirmed by serological testing in the remaining study in Italy.

In 2002, the prevalence of HIV among MSM diagnosed with an STI in the five studies varied from a minimum of 11% in the United Kingdom to 55% among MSM diagnosed with syphilis in Paris (Table 2.4).

Table 2.4: HIV prevalence among MSM with a diagnosed STI in western Europe, 2002

Country	Source of HIV status	Reported HIV prevalence (N)	
France (Paris)	Self reported	55%	(215)
Germany	Self reported	49%	(420)
Ireland[8]	Self reported	20%	(132)
Italy	Serum	27%	(296)
UK[13]	Serum (UAT)	11%	(2,812)

MSM attending STI clinics

Five studies were included that estimated HIV prevalence among MSM attending STI clinics, but not necessarily seeking testing for HIV (Table 2.5). They include men attending for various reasons, some of whom may have STI diagnosed or a suspicion of such and the observed estimate of HIV prevalence will clearly be a function of the respective sizes of these two groups. Two studies were conducted in eastern Europe (Belarus, Georgia), although in Belarus the hospital setting remains undefined. All but one of the five studies determined HIV status by UAT of serum; in Georgia the sera were tested in a linked manner.

In western Europe, the HIV prevalence levels reported in the two studies conducted at a national level were similar (13% in Spain and 12% in the United Kingdom). In eastern Europe, the prevalence among MSM attending STI clinics was very much lower (5% in Georgia and 0% in Belarus).

Analysis of data by region or city demonstrated important variations. One in five MSM attending STI clinics in Amsterdam were HIV positive (Table 2.5). In the UK study, the prevalence of HIV among MSM attending STI clinics in London (19%) was very much higher than that in the rest of the country (12%)(Annex 2).

Table 2.5: HIV prevalence among MSM attending STI clinics in Europe, 2002-2004

Country	Source of HIV status	Last year of data	Reported HIV prevalence (N)	
West:				
Netherlands (Amsterdam)	Serum (UAT)	2003	20%	(398)
Spain (6 cities)	Serum(UAT)	2002	13%	(168)
UK[13]	Serum(UAT)	2004	12%	(9,595)
East:				
Belarus	Serum(UAT)	2004	0%	(170)
Georgia	Serum	2004	5%	(113)

2.3.3 Results of diagnostic testing (DT)

Results of diagnostic testing among MSM have been collated from various medical settings including anonymous testing services, STI clinics and hospitals. The prevalence of HIV reported from these data would be expected to be lower than in other studies (e.g. surveys in community settings or UAT among STI clinic attendees) as many men with a known HIV-positive status will be excluded and the results for men seeking repeat testing will be included. For example, in 2003 in Amsterdam, Netherlands, the prevalence of HIV in diagnostic testing data was 4.3% compared to 20% in a UAT study among STI clinic attendees.

In western Europe, HIV prevalence obtained from diagnostic testing data reported from four countries (Belgium, France, the Netherlands, Switzerland) was less than 5%, while in Lisbon, Portugal a level of 6.4% was reported in 2002 (Table 2.6, Annex 2). In Spain, HIV prevalence reported from national diagnostic testing data was 5.5%, similar to that reported in Catalonia (4.9%). In the Netherlands, the prevalence of HIV nationally in 2004 was 4.2%; it was much higher among MSM attending sites in Amsterdam (5.7%) than in the rest of the country (3.0%) (Annex 2).

Trends in reported prevalence from diagnostic testing appeared to remain stable in Belgium (2.1% in 2000, 1.9% in 2002), United Kingdom (Scotland) (3.9% in 2000, 4.2% in 2004) and in combined data from cities of Spain, although a small increase was observed in Catalonia (2.8% in 2000, 4.9% in 2003) (Annex 2).

Table 2.6: HIV prevalence among MSM reported from diagnostic testing data

Country	Last year of data	Reported HIV prevalence (N)	
West:			
Belgium	2002	1.9%	(376)
France	2004	2.0%	(443)
Netherlands	2004	4.2%	(3,483)
Portugal (Lisbon)	2002	6.4%	(468)
Spain (19 cities)	2003	5.5%	(4,165)
Spain (Catalonia)	2003	4.9%	(266)
Switzerland	2004	1.6%	(1,091)
United Kingdom (Scotland)	2004	4.2%	(2,576)
Centre:			
Poland	2003	5.4%	(424)
Serbia & Montenegro (Serbia)	2004	8.7%	(277)
East:			
Armenia	2000	0.9%	(108)
Kyrgyzstan	2004	0%	(101)
Russian Federation	2004	0.5%	(5,889)

In contrast, in two central European countries (Poland, Serbia & Montenegro), the prevalence of HIV reported from diagnostic testing data was much higher. In Poland, a maximum of 8.2% was reported in 2000 and in Serbia & Montenegro levels increased from 4.4% in 2002 to 8.7% in 2004 (Table 2.6, Annex 2).

Low prevalences (<2%) were reported from diagnostic testing data in eastern Europe (Table 2.6, Annex 2). In the Russian Federation, the prevalence of HIV remained low (0.5% in 2004), but has nevertheless increased from 0.2% in 2000 (Table 2.6, Annex 2).

2.4. Behavioural studies among MSM

Behavioural studies play an increasingly important role in the surveillance of HIV in at-risk groups such as MSM, providing more detailed information on high risk sexual behaviour with which to evaluate and monitor public health interventions, such as health promotion campaigns, to control HIV transmission.

In the 42 studies conducted among MSM and included in the HIV prevalence database, behavioural data were available for 11 studies in nine countries (six in the West and three in the East) (Table 2.7). Of the four studies that did not survey MSM in gay venues, three used press media and/or internet (Germany, Switzerland, United Kingdom) [5,6,12,16] to distribute questionnaires and one (Dublin, Ireland) recruited men in health clinics [8].

In these studies a wide range of indicators of high risk sexual behaviour has been used (Table 2.7). One of two possible measures of high risk sexual behaviour has commonly been reported, although variations exist in the precise indicator reported and the time periods concerned:

- unprotected anal intercourse (UAI): this is the most commonly employed measure of high risk behaviour among MSM (used in 6 of 11 studies), especially in western European countries. However, the indicator reported includes any UAI (1 study), UAI with sero-discordant (sd) partners (4 studies) and UAI with casual partners (1 study). All but one study monitored UAI in the last 12 months (3 months in St Petersburg);
- condom use (CU): indicators based on condom use are favoured in studies performed in eastern and central European countries (three of the four studies). However, the precise indicator has varied. Three studies have reported condom use at last contact (CU last) and two studies condom use with casual partners (CU casual).

The use of not only different behavioural indicators, but also different recruitment methods, makes comparisons difficult. However, all studies report important levels of high risk sexual behaviour, varying from 23% of men engaging in sero-discordant UAI in 2001 in London, United Kingdom, to 60% of men not using a condom at last contact in two cities (Tomsk and Ekaterinburg) in the Russian Federation in 2003.

Table 2.7: Surveys of high risk sexual behaviour among MSM in Europe, 2000-2004

Country	Indicator of risk behaviour	Last year of study	% engaging in high risk behaviour
West:			
France[3]	UAI (casual)	2004	36%
Germany[5,6]	sdUAI	2003	30%
Ireland (Dublin)[8]	CU (last)	2000	51%
Spain (Barcelona)[11]	sdUAI	2002	28%
Switzerland[12]	CU (casual)	2004	50%
UK[16]	sdUAI	2002	31%
UK (London)[15]	sdUAI	2001	23%
East:			
Moldova (Kishinev)[22]	CU (last)	2003	41%
Kazakhstan (Karaganda)[21]	CU (casual)	2004	49%
Russian Federation (St Petersburg)[24]	UAI	2000	38%
Russian Federation (2 cities)[22]	CU (last)	2003	60%

CU = condom use.
UAI = Unprotected anal intercourse.
Sd = sero-discordant partner.

Furthermore, four surveys (in France, London (United Kingdom), Barcelona (Spain) and Switzerland) have been repeated regularly and all have demonstrated increases in the proportion of MSM reporting having recently engaged in high risk sexual behaviour, although it has recently been reported in the United Kingdom that levels have stabilised [25].

2.5. Discussion

There is evidence of increasing transmission of HIV among MSM, with a 45% increase in the number of HIV cases reported since 2000. This increase has occurred mostly in western Europe, where the largest numbers of HIV reports among MSM have been received, representing the highest rate per million population [2].

HIV prevalence studies performed in gay community settings or among men attending STI clinics suggest levels in the range of 10-20% among MSM in western Europe. These studies sample one aspect of the population of MSM, be it by setting (e.g. those attending gay bars) or by geographic area, and do not reflect the HIV prevalence in the wider population of MSM, which is generally lower. For example, a modelling study in the United Kingdom estimated the prevalence of both diagnosed and undiagnosed HIV infection to be 9% among all MSM living in London and 3% outside London [28], both lower than that found in HIV prevalence studies undertaken in the United Kingdom and reported here [14, 16].

The prevalence of HIV reported in eastern Europe in community settings or among men attending STI clinics is <5% and much lower than that observed in similar settings in western Europe. Even though the prevalence of HIV among MSM in central and eastern European countries remains low, rapid increases in the number of reports have been observed in some countries (e.g. Serbia & Montenegro). Furthermore, data suggesting high levels of late HIV diagnosis among MSM in eastern and central Europe indicate that the prevalence of HIV may be higher than reported in this population, with many individuals unaware of their HIV status.

Behavioural surveys among MSM have reported an important proportion of men who have recently engaged in high risk sexual behaviour. In western Europe studies have reported increases over time [11,14], although levels may have stabilised recently [25]. In central and eastern Europe, despite levels of high risk sexual behaviour among MSM comparable to those in western Europe, the epidemiological advantage is currently maintained. Nonetheless, with increased mobility, the possibility of a hidden epidemic among MSM and the background of an HIV epidemic among injecting drug users and increasing sexual transmission of HIV, the potential for an increasing epidemic among MSM in eastern and central Europe remains.

Health promotion messages among MSM have advocated different sexual health strategies to control the transmission of HIV infection, including negotiated safety and sexual sorting, although such strategies are not always reliably implemented by individuals [14, 26]. The high levels of sero-discordant UAI, the increasing numbers of MSM living with HIV since the introduction of HAART and high levels of HIV sero-positivity reported among MSM with a diagnosed acute STI indicate the need for ensuring widespread HIV testing in MSM as well as interventions that target MSM known to be HIV-positive.

HIV reports have provided the bulk of the data with which to assess the epidemiology of infection among MSM, but these provide little information on whether infection was recently acquired. Thus, for example, the slight increases in age reported among newly diagnosed cases of HIV in western Europe may reflect a change in the epidemiology of the infection [personal communication from D. Deangelis] or increased testing among older MSM possibly infected many years ago. This illustrates the need, after appropriate evaluation, to encourage widespread implementation of serological techniques to detect recent infections. This important improvement in HIV surveillance will enable public health decision makers to evaluate and better monitor the epidemic among MSM.

Regular surveys of HIV prevalence have proved valuable in many countries to better understand the epidemiology of HIV among MSM and thus to develop necessary and appropriate interventions. The use of saliva samples has facilitated the estimation of HIV prevalence in the community and, in combination with behavioural surveys, has provided valuable information with which to evaluate the appropriateness of safe sex strategies such as negotiated safety and sexual sorting.

However, a lack of consistency in either the methodologies or the indicators of high risk sexual behaviour employed militates against the ability to compare the situation in different countries. Establishing more standardised measures of high risk sexual behaviour would allow comparisons across Europe and would assist in the development of a pan-European strategy in a population that exhibits increasing social mobility of individuals and their attendant diseases [28].

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Annex 2
HIV prevalence studies among men who have sex with men

Annex 2. HIV prevalence studies among men who have sex with men, 2000-2004

Geographic area Country	Coverage	Data[1]	Population[2]	Site[3]
West				
EU Belgium				
	National	DT	MSM seeking HIV testing	ATS[5]
EU Denmark				
	National	SR	MSM	Internet, gay venues, gay pride events
EU France				
	National	SR	MSM	Gay press
	- Paris			
	- outside Paris			
	- < 25 years			
	Paris	SR/DT[6]	MSM with syphilis	STI
	National[7]	SR	MSM	Gay venues
	- Paris			
	- outside Paris			
	- <25 years			
	National	DT	MSM	VCT
	- Paris			
EU Germany				
	National	SR	MSM	Gay press, internet[8]
	- western Germany	*SR*		
	- eastern Germany	*SR*		
	- <30 years	*SR*		
	National	SR	MSM with STI	VCT, STI, PP
EU Ireland				
	National (+ N. Ireland)	SR	MSM	Gay pride events, gay venues
	National	SR/DT[6]	MSM with syphilis	STI
EU Italy				
	National	SP	MSM with STI	STI
EU Netherlands				
	National[9]	DT	MSM attending STI clinics	STI
	- Amsterdam			
	- outside Amsterdam			
	Amsterdam	SP(UAT)	MSM attending STI clinics	STI
EU Portugal				
	Lisbon area	DT	MSM seeking HIV testing	STI
EU Spain				
	National (19 cities)[10]	DT	MSM seeking HIV testing	VCT, STI
	Barcelona	SP(UAT,S)	MSM	Gay venues
	6 cities[11]	SP(UAT)	MSM attending STI clinics[12]	STI
	Catalonia	DT	MSM seeking HIV testing	ATS
Switzerland				
	National	DT	MSM seeking HIV testing	ATS
	National	SR	MSM	Gay press & organisations
EU United Kingdom				
	National	SP(UAT)	MSM attending STI clinics[13]	STI
	- London			
	- previously undiagnosed HIV (London)			
	- E,W & NI[14] outside London			
	- Scotland			
	- MSM with acute STI			
	- <25 years			
	Scotland	DT	MSM seeking HIV testing	Hospitals/clinics, VCT, STI
	- <25 years			
	London	SP(UAT,S)	MSM	Gay venues
	National	SR	MSM	Internet
Centre				
EU Czech Republic				
	Prague	SP	MSM	Gay venues, VCT
EU Poland				
	National	DT	MSM seeking HIV testing	Hospitals/clinics, VCT, STI
Serbia & Montenegro				
	Serbia	DT	MSM seeking HIV testing	VCT
EU Slovenia				
	Ljubljana	P(UAT,S)[15]	MSM	Gay venues
East				
Armenia				
	Yerevan	DT	MSM seeking HIV testing	VCT
Belarus				
	National	SP(UAT)	MSM	Hospitals
Georgia				
	National	SP	MSM	STI, VCT
Kazakhstan				
	Karaganda	SP	MSM	Gay venues,VCT
Kyrgyzstan				
	Bishkek	DT	MSM seeking HIV testing	-
EU Lithuania				
	National	SP	MSM	Gay venues, VCT
Moldova, Republic of				
	Kishinev	SP	MSM	VCT
Russian Federation				
	National	DT	MSM seeking HIV testing	VCT
	2 cities	SP	MSM[16]	Gay venues
	- Tomsk			
	- Ekaterinburg			
	St Petersburg	SR	MSM[17]	Gay venues

EU Countries which constitute the European Union as of 1 May 2004.
(1) DT-diagnostic testing, SP-seroprevalence study, SR- self reported HIV serostatus, UAT-unlinked anonymous testing, S-saliva testing.
(2) MSM - men who have sex with men, STI - sexually transmitted infection(s).
(3) ATS- anonymous testing sites, VCT-voluntary counselling and testing sites, STI-sexually transmitted infection clinics, PP-private practitioners.
(4) References - see text.
(5) The main ATS in Belgium, located in Brussels.
(6) HIV status on syphilis report form.
(7) National data are available only in 2002.
(8) In 2003 the recruitment sites were extended from gay press only to gay press and internet.
(9) New sentinel STI surveillance system replaced previous systems in 2003.

Annex 2. HIV prevalence studies among men who have sex with men, 2000-2004

(Cont.)

2000		2001		2002		2003		2004			Geographic area	
N	%/HIV+	N	%/HIV+	N	%/HIV+	N	%/HIV+	N	%/HIV+	Ref.[4]	Country	Coverage
											West	
											Belgium	
384	2.1	351	0.9	376	1.9	-	-	-	-			National
											Denmark	
1,324	14.5	1,160	9.9	-	-	-	-	-	-			National
											France	
4,035	14.7	-	-	-	-	-	-	3,951	12.9	3		National
1,231	*19.2*	-	-	-	-	-	-	*948*	*16.6*			*- Paris*
2,589	*12.9*	-	-	-	-	-	-	*2,639*	*11.6*			*- outside Paris*
410	*2.4*	-	-	-	-	-	-	*353*	*1.7*			*- <25 years*
-	-	*112*	66.1	215	54.9	-	-	-	-			Paris
-	-	-	-	7,511	12.1	-	-	-	-	4		National[7]
1,107	*18.7*	-	-	*1,899*	*17.4*	-	-	-	-			*- Paris*
-	-	-	-	*5,388*	*10.2*	-	-	-	-			*- outside Paris*
198	*1.5*	-	-	*1,054*	*3.4*	-	-	-	-			*- <25 years*
-	-	-	-	-	-	-	-	443	2.0			National
-	-	-	-	-	-	-	-	*153*	*3.3*			*- Paris*
											Germany	
-	-	-	-	-	-	3,221	12.0	-	-	5,6		National
-	-	-	-	-	-	*2,637*	*12.3*	-	-			*- western Germany*
-	-	-	-	-	-	*534*	*10.3*	-	-			*- eastern Germany*
-	-	-	-	-	-	*1,029*	*3.3*	-	-			*- <30 years*
-	-	-	-	420	48.8	-	-	-	-			National
											Ireland	
750	5.1	-	-	-	-	357	5.3	303	5.3	7		National (+ N. Ireland)
35	25.7	199	26.1	132	19.7	64	26.6	54	18.5	8		National
											Italy	
143	36.4	215	30.7	296	26.7	-	-	-	-			National
											Netherlands	
-	-	-	-	-	-	2,880	3.3	3,483	4.2	9,10		National
546	*5.7*	*965*	*4.7*	*1,481*	*3.8*	*1,402*	*4.6*	*1,572*	*5.7*			*- Amsterdam*
531	*3.8*	*845*	*3.2*	*1,322*	*5.4*	*1,478*	*2.1*	*1,911*	*3.0*			*- Outside Amsterdam*
337	16.9	355	14.6	429	20.3	398	20.1	-	-			Amsterdam
											Portugal	
282	7.8	392	4.3	468	6.4	-	-	-	-			Lisbon area
											Spain	
3,085	5.3	3,495	4.9	3,791	5.0	4,165	5.5	-	-			National (19 cities)[10]
308	17.9	-	-	328	18.3	-	-	-	-	11		Barcelona
208	10.6	132	10.6	168	13.1	-	-	-	-			6 cities[11]
144	2.8	227	3.1	260	3.8	266	4.9	-	-			Catalonia
											Switzerland	
874	1.8	889	1.1	981	1.6	1,060	1.1	1,091	1.6			National
734	11.0	-	-	-	-	-	-	-	-	12		National
											United Kingdom	
6,919	7.6	*8,472*	11.0	10,033	18.6	10,179	13.6	9,595	12.1	13		National
4,246	*10.7*	*5,495*	*15.5*	*6,711*	*26.1*	*6,144*	*20.2*	*5,025*	*19.1*			*- London*
3,984	*4.8*	*4,898*	*5.2*	*5,242*	*5.4*	*5,172*	*5.2*	*4,262*	*4.7*			*- previously undiagnosed HIV (London)*
1,811	*2.4*	*1,990*	*2.6*	*2,220*	*3.7*	*2,711*	*3.7*	*3,037*	*4.3*			*- E,W& NI[14] outside London*
862	*2.9*	*987*	*2.5*	*1 102*	*2.5*	*1 324*	*3.4*	*1 533*	*4.2*			*- Scotland*
2,390	*7.6*	*2,889*	*10.2*	*2,767*	*11.3*	*2,931*	*11.2*	*2,869*	*11.2*			*- MSM with acute STI*
1,221	*2.5*	*1,437*	*3.6*	*1,633*	*4.7*	*1,955*	*3.6*	*2,091*	*3.0*			*- <25 years*
1,358	*3.9*	*1,547*	*3.6*	*1,781*	*3.6*	*2,112*	*3.7*	*2,576*	*4.2*			Scotland
360	*1.7*	*426*	*1.9*	*504*	*0.8*	*646*	*1.9*	*746*	*1.5*			*- <25 years*
1,206	10.9	1,314	11.5	-	-	-	-	-	-	14,15		London
-	-	-	-	2,233	12.4	-	-	-	-	16		National
											Centre	
											Czech Republic	
123	0.8	147	0.7	159	3.1	252	2.0	379	0.5	17		Prague
											Poland	
378	8.2	499	4.8	595	4.7	424	5.4	-	-	18		National
											Serbia & Montenegro	
-	-	-	0.1	383	4.4	156	3.2	277	8.7			Serbia
											Slovenia	
132	3.0	101	3.0	113	0.0	101	1.0	79	2.5	19		Ljubljana
											East	
											Armenia	
108	0.9	-	-	-	-	-	-	-	-	20		Yerevan
											Belarus	
-	-	-	-	123	0.0	-	-	170	0.0			National
											Georgia	
-	-	-	-	-	-	-	-	113	5.3			National
											Kazakhstan	
-	-	-	-	-	-	100	0.0	-	-	21		Karaganda city
											Kyrgyzstan	
-	-	-	-	-	-	-	-	101	0.0			Bishkek
											Lithuania	
-	-	-	-	149	0.7	242	0.8	79	0.0			National
											Moldova, Republic of	
-	-	-	-	-	-	118	1.7	-	-	22		Kishinev
											Russian Federation	
12,378	0.2	9,275	0.4	9,489	0.4	8,056	0.3	5,889	0.5	23		National
-	-	-	-	-	-	238	2.5	-	-	22		2 cities
-	-	-	-	-	-	*114*	*0.0*	-	-			*- Tomsk*
-	-	-	-	-	-	*124*	*4,8*	-	-			*- Ekaterinburg*
296	1.4	-	-	-	-	-	-	-	-	24		St.Petersburg

(10) Project EPI-VIH.
(11) Alicante, Bilbao, Gijon, Madrid, Oviedo, Pamplona.
(12) Persons attending specifically for HIV testing excluded.
(13) Specimens collected for syphilis serology.
(14) E,W&NI - England, Wales & Northern Ireland.
(15) Consecutive testing among men willing to provide saliva specimen.
(16) Years with small numbers (<75) were excluded.
(17) 2 HIV+ cases in Ekaterinburg were reported to be injecting drug users.
(18) Only a small proportion reported recent HIV test.

Section 3
HIV prevalence among pregnant women

Key points:

- in Europe the prevalence of HIV among pregnant women remains low (<0.5%);
- increasing numbers of cases of HIV infection reported in women of child-bearing age are reflected in an increasing HIV prevalence among pregnant women, most notably in Estonia (0.48% in 2002) and Ukraine (0.34% in 2004);
- important pockets of higher HIV prevalence among pregnant women have been reported in major urban areas.

Recommendations for surveillance:

- to monitor HIV prevalence among pregnant women where necessary, using an appropriate methodology;
- to analyse surveillance data at the sub-national level;
- to ensure that all cases of HIV and AIDS infected by mother-to-child transmission (MCT) are reported.

Recommendations for public health measures:

- to ensure access to testing and to provide treatment and care for all HIV-infected pregnant women, including those from vulnerable populations.

3.1. Introduction

The detection of HIV infection before or during pregnancy allows for the provision of appropriate care and treatment for the mother and preventive interventions to dramatically reduce the risk of mother to child HIV transmission [1,2]. Accurate monitoring of HIV prevalence among women giving birth provides a valuable tool to evaluate the effectiveness of national antenatal HIV testing programmes as well as to assess the spread of the HIV epidemic in the heterosexually active population.

Since the late 1980s, a variety of methods have been used to address one or both of these objectives in Europe, but the two most common methods were either seroprevalence studies (SP) based on unlinked anonymous testing (UAT) or systematic collection of the results of all diagnostic testing (DT) carried out among pregnant women.

Prevalence data for at least one year in the period 2000 to 2004 have been reported from 28 of the 52 countries of the WHO European Region. These data are presented here to update and supplement those previously presented in report No. 64 for the period 1995 to 2000 [3]. To help in interpreting the data presented, the methods used to obtain them are briefly presented and compared with those used in an earlier 5-year period (1990-1994), prior to the introduction of effective antiretroviral therapy.

3.2. Reporting of newly diagnosed HIV infections among women and cases of HIV infection and AIDS acquired through mother-to-child transmission

An increasing proportion of HIV infections in Europe are being diagnosed among women. Among a total of 74,760 newly diagnosed HIV infections reported in 2004, 37% (27,434 cases) were in women between the ages of 15 and 49 (Annex 1.6), compared with 24% (27,707/113,662) in 2001.

In 2004, the rate of new HIV diagnoses per million women aged 15-49 was highest in eastern Europe (250/million in 15 countries), over twice that reported in western Europe (108/million, 16 countries) and over 30 times that in central Europe (8/million, 13 countries) (Table 3.1). Rates over 200 per million women aged 15-49 were reported in Estonia (684), the Russian Federation (353), Ukraine (327), Portugal (268) and the United Kingdom (207).

Table 3.1: Rates of newly diagnosed cases of HIV infection per million women aged 15-49 years reported by region (45 countries) in 2004

Region	No. HIV cases	Population $*10^6$	Rate/million
West	7,490	69.6	108
Centre	375	48.5	8
East	19,569	78.3	250

In 2004, 347 newly diagnosed HIV infections were reported in persons thought to be infected through mother-to-child transmission, a total similar to that reported in the previous two years (Annex 1.5). Seventy-two AIDS cases were diagnosed in this transmission category in 2004, a 34% decline from the number reported in 2000 (109) [4]. However, it should be noted that:

- since 2000, between a third and half of all cases of HIV and AIDS infected by mother-to-child transmission have been reported by one country (United Kingdom);
- reporting of HIV infection is incomplete in the West (e.g. no national data for Spain and Italy), and AIDS cases are no longer reported from the Russian Federation;
- mother-to-child HIV cases are not reported by the Russian Federation, where the number of infants born to HIV-infected mothers increased from 212 in 1999 to 3,091 in 2003, or Ukraine (2,273 infants born to HIV-infected mothers in 2004).

3.3. Methods used to monitor HIV prevalence among pregnant women

For the period 2000 to 2004, we report the results of 37 studies estimating HIV prevalence among pregnant women or women giving birth undertaken in 28 countries (9 in the West, 9 in the Centre, 10 in the East) (Annex 3)[5-19].

National data are available for 25 countries. The three countries for which regional data only are available are

Kyrgyzstan, Romania and Poland. Eight countries (Armenia, Belarus, Germany, Netherlands, Russian Federation, Spain, Ukraine and United Kingdom) have undertaken regional studies in addition to the national studies, often in regions and/or populations considered to be at a higher risk of HIV.

The three methods used to monitor HIV prevalence amongst pregnant women are:

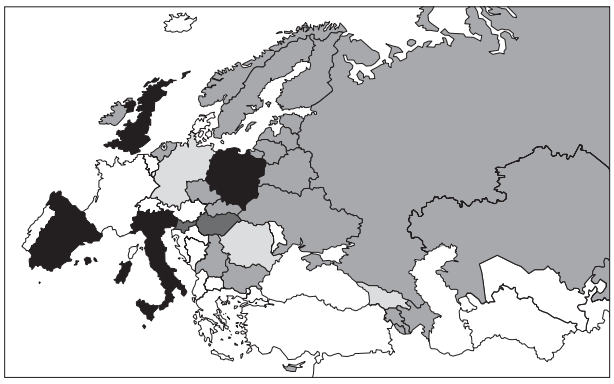
- seroprevalence studies based on unlinked anonymous testing (SP-UAT) of either newborns or pregnant women;
- other seroprevalence studies (SP) including those estimating HIV prevalence using multiple data sources;
- diagnostic testing (DT) is the systematic collection and reporting of the results of all diagnostic testing carried out among pregnant women. Testing may be offered by the health care provider either routinely or initiated because of illness or clinical signs or symptoms.

Unlinked anonymous testing (UAT)

UAT studies among pregnant women are often conducted using residual sera (e.g. from blood taken for syphilis serology) and among newborns using dried blood spots collected for routine metabolic testing. Studies among newborns estimate the sero-prevalence amongst those women who give birth, which tends to be lower than in similar studies performed in pregnant women where, due to miscarriage or termination, the pregnancy may not reach term.

UAT studies have a reduced sampling bias compared to diagnostic testing results, particularly important prior to the advent of effective treatment and prophylactic measures. However, the ethics of UAT studies are controversial and in some countries they are not allowed by ethical committees [20].

Figure 3.1: Principal methods used to monitor HIV prevalence among pregnant women in European countries in the period 2000-2004



- Unlinked anonymous testing in newborns
- Unlinked anonymous testing in pregnant women
- Reporting results of diagnostic testing
- Other seroprevalence studies
- No data available or surveillance not carried out

In 2000-2004, UAT studies were the principal tool used to monitor HIV prevalence among pregnant women at national or regional level in six countries (Figure 3.1) and a total of 12 UAT studies were reported from nine countries (Figure 3.1, Annex 3).

In five countries, UAT studies were undertaken in newborns:

- three countries have ongoing studies with a representative national coverage (Italy, Spain and United Kingdom). In Spain, two studies were reported, one with a nationally representative coverage of eight regions and one performed in Catalonia;
- two countries undertook regional or city UAT studies: Lower Saxony, Germany for 2000 only; Marzovia (includes Warsaw), Poland between July 2001 and May 2002.

In five countries, UAT studies were undertaken among pregnant women:

- one country (Slovenia) has an ongoing study with representative national coverage;
- two countries terminated national programmes in 2000: Ireland, where UAT was replaced in 2002 by a national diagnostic testing reporting system, and Hungary;
- two countries have undertaken regional UAT studies: Belarus in three cities and the UK in London.

In the UK, three coordinated UAT studies are undertaken. The national UAT newborn survey is complemented by more limited UAT studies among pregnant women in antenatal care and women undergoing termination of pregnancy in London. These complementary systems allow comparisons between prevalence levels in women giving birth, in all pregnant women (including those who will not deliver due to spontaneous or voluntary abortion) and in women terminating pregnancy.

Other seroprevalence studies

Other types of seroprevalence study were undertaken in five countries:

- two countries used multiple data sources to estimate the prevalence of HIV among women who gave birth: in Germany since 2000 and in the Russian Federation in St. Petersburg between 1998 and 2002;
- three countries undertook studies to estimate HIV prevalence among pregnant women: in Armenia in the city of Yerevan in 2002; in Romania in Constanta county in 2001 and nationally in Georgia in 2004.

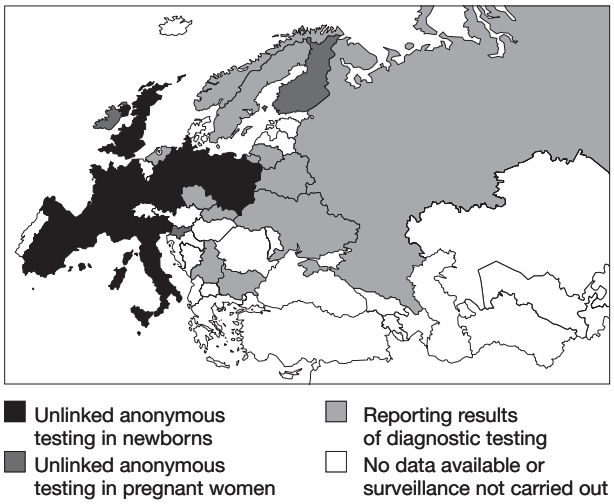
Diagnostic testing (DT)

While HIV testing of women in antenatal care, either offered routinely or in the context of clinical care, is widely proposed and performed throughout Europe, the numbers of women

tested and of those found positive are not systematically reported in all countries. These data are more subject to participation bias depending on HIV testing practices, selective uptake of testing and exclusion of known HIV-infected women, all of which may change over time. This makes international comparisons difficult as well as affecting the interpretation of trends, even within a given country.

Diagnostic testing data among pregnant women were reported for 19 countries, of which 18 have national coverage. Of the 13 studies reported from countries in eastern Europe, nine were DT, which was thus the preferred means to monitor HIV prevalence (Figure 3.1, Annex 3). It should be noted that in several countries of the East, including Latvia, Russian Federation and Ukraine, it is recommended that HIV testing be offered at least twice during pregnancy. This may lead to under-estimation of prevalence if –as seems possible– women who test positive on the first occasion are less likely to be re-tested than those who test negative.

Figure 3.2: Principal methods used to monitor HIV prevalence among pregnant women in European countries in the period 1990-1994



Evolution of studies performed

Between 1990-94 and 2000-04, there has been an evolution in the number and types of studies undertaken to monitor HIV prevalence in pregnant women or women giving birth. The overall number of reported studies has increased from 20 in the period 1990-1994 to 28 in 2000-2004.

Ten countries reported HIV prevalence data for the first time in the period 2000-2004, four central and six eastern European countries. Two countries that reported data in 1990-1994 did not do so for the period 2000-2004: France (last available data 1996) and Republic of Moldova (1995).

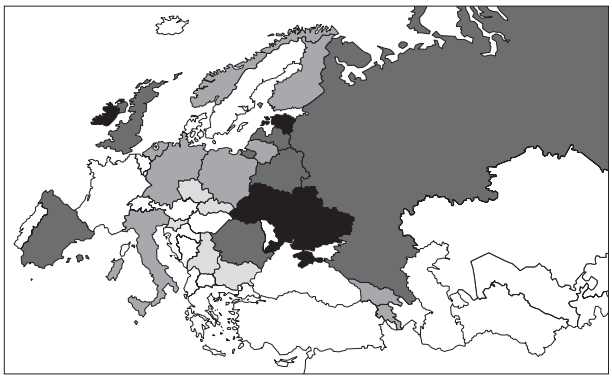
There has been a shift from UAT to DT studies. In 1990-1994, results from UAT studies were reported from eight countries (seven in western and one in central Europe), of which five were conducted among newborns (Finland, Germany, Italy, Spain, United Kingdom) and three (France, Ireland, Slovenia) among pregnant women (Figure 3.2). In 2000-2004, only four countries (Italy, Spain, Slovenia, United Kingdom) continued reporting UAT studies with representative national coverage (Figure 3.1). In Finland and Ireland, UAT studies have been replaced by reporting of DT results (since 1998 and 2002 respectively). In Germany and France, UAT studies have been discontinued and, in Germany, replaced by an estimation of national prevalence (see above).

The number of countries reporting national DT results increased from 12 in 1990-94 to 18 in 2000-04. Results of DT continued to be reported from all but one (Republic of Moldova) of the countries reporting before 1995 and became available from a further eight countries, though as yet limited to 2 cities in Kyrgyzstan (19 countries in total) (Figure 3.1).

3.4. HIV prevalence results

In the period 2002-2004, the highest national prevalence of HIV in 23 countries was 0.48% in Estonia (2002), 0.34% in Ukraine (2004) and 0.31% in Ireland (2003). In all three countries increases in the prevalence of HIV have been reported in recent years. In the remaining 20 countries, reported HIV prevalence was consistently less than 0.3% and was under 0.03% in seven countries (Bulgaria, Czech Republic, Finland, Lithuania, Serbia & Montenegro, Slovakia, Slovenia) (Figure 3.3, Annex 3).

Figure 3.3: Highest reported HIV prevalence at national or regional level among pregnant women or women giving birth in European countries, 2002-2004



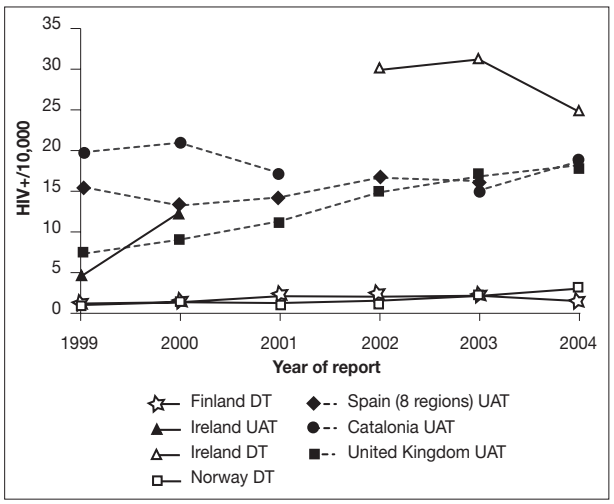
However, when regional data were reported, important variations existed within countries, with a higher prevalence being observed in urban areas. Trends in HIV prevalence in selected countries and cities are shown in Figures 3.4-3.8.

3.4.1 Western Europe

HIV prevalence ranged from a high of 0.3% in Ireland (DT in pregnant women in 2002 and 2003) to <0.03% among pregnant women (DT) in Finland. Intermediate levels (0.03-0.3%) of HIV prevalence were reported among women giving birth in Germany, Italy, Spain and the United Kingdom and among pregnant women (DT) in the Netherlands and Norway.

The largest trend of increasing prevalence among pregnant women was observed in Ireland, where prevalence increased from 0.04% in 1997-1999 to 0.12% in 2000 (UAT) and has been consistently over 0.2% since 2002, when a new system based on DT reporting was introduced. Elsewhere, the only discernible trends since 2000 are a continuing increase among women giving birth in the United Kingdom, from 0.09% in 2000 to 0.17% in 2003 and 0.18% in 2004, to reach levels similar to those found in eight regions of Spain. HIV prevalence among pregnant women has remained low and stable in Finland (<0.03%), but has increased in Norway (from 0.01% in 2000 to 0.03% in 2004) (Figure 3.4).

Figure 3.4: HIV prevalence among pregnant women (continuous lines) and women giving birth (dotted lines) at national or regional level in five countries of western Europe, 1999-2004

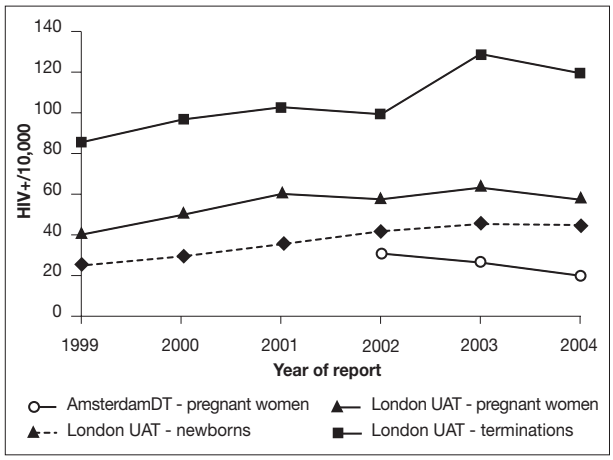


Data from the United Kingdom show that prevalence is much higher in London than in the rest of the country. In the UAT survey among newborns, prevalence in 2004 was almost four times greater in London (0.45%) than in the rest of the country (0.11%). The higher prevalence in London is due, at least in part, to the larger migrant population: among women born in sub-Saharan Africa, HIV sero-positivity was 2.2% (415/18,883) in 2004 compared to 0.07% among UK-born women, although prevalence among the latter increased significantly between 2003 (0.03%) and 2004 (0.07%) [8].

Data from two other UAT studies carried out in London illustrate the generally higher prevalence among pregnant women as a whole (0.57% in 2004) than among those who deliver (0.45%), although the trends in these two populations are similar (Figure 3.5, Annex 3). The highest levels are found among women undergoing termination of pregnancy (in 2004, 1.19% vs 0.62% among women in antenatal care in inner London [8].

In Amsterdam, exceptionally high levels (rising to 1.36% in 2002) were found in a sentinel survey of DT carried out in two hospitals and a midwife practice. However, much lower levels were found when the system was extended to include all sites attended by pregnant women in Amsterdam (0.2-0.3% in 2002-2004). The reporting system was further enlarged to cover the whole country in 2004; preliminary results for 2004 suggest a prevalence of 0.06%, considerably lower than in Amsterdam.

Figure 3.5: HIV prevalence among pregnant women, women giving birth (UAT of newborns) and women terminating pregnancy in 2 cities of western Europe, 1999-2004



3.4.2 Central Europe

In central Europe, national HIV prevalence data was reported from six countries and regional data from two countries (Poland, Romania). With the exception of one study among newborns in Poland, all data reported in the Centre relate to pregnant women and come either from seroprevalence studies (Hungary, Romania, Slovenia) or from DT reporting (Bulgaria, Cyprus, Czech Republic, Serbia & Montenegro, Slovakia).

Prevalence levels were generally very low (<0.01%) except in the two regional studies in Poland and Romania. In Poland, a UAT study conducted between July 2001 and July 2002 found a prevalence of 0.06% (14/25,453) among women giving birth in the province of Mazovia, which includes Warsaw [12].

In Romania, HIV seroprevalence among pregnant women in Constanta County between June 2000 and May 2002 was estimated as part of a pilot programme for the prevention of mother-to-child transmission [13]. Constanta county was the epicentre of the well documented paediatric nosocomial HIV outbreak in the late 1980s and early 1990s and is the region of Romania with the highest rates of newly diagnosed HIV infection. Over the 2-year period of the study, over 80% of pregnant women in the county were tested, either during pregnancy or at delivery; among these women, HIV prevalence was 0.18% (20/11,423).

3.4.3 Eastern Europe

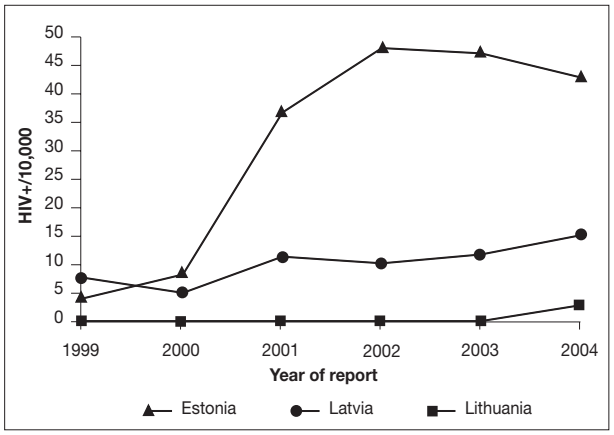
In eastern Europe, national HIV prevalence data were reported from nine countries, of which three (Armenia, Belarus, Russian Federation) also reported sub-national data. In Kyrgyzstan, data was reported for two cities only.

Trends of increasing HIV prevalence were observed in four countries (Estonia, Latvia, Russian Federation and Ukraine), and were most marked in Estonia and Ukraine (Figures 3.6, 3.7).

The highest HIV prevalence at national level was reported in Estonia (0.48%) in 2002 and Ukraine (0.34%) in 2004. Levels in the range 0.10-0.15% have been regularly reported from Belarus, Latvia and the Russian Federation. In the remaining four countries (Armenia, Azerbaijan, Georgia and Lithuania), HIV prevalence remained below 0.1%.

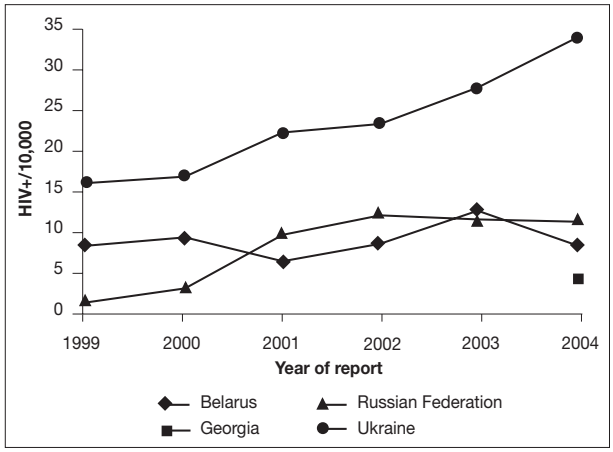
In the Baltic States, the HIV prevalence amongst pregnant women in Estonia increased 10-fold between 1999 (0.04%) and 2002 (0.48%) and remained high in the following years (0.43% in 2004) (Figure 3.6). In Latvia, the prevalence of HIV among pregnant women has nearly doubled since 1999, from 0.08% to 0.15% in 2004. In Lithuania, no HIV cases were detected among pregnant women until 2004 (1 case, 0.03%).

Figure 3.6: HIV prevalence reported from diagnostic testing of pregnant women in the Baltic States, 1999-2004



Among the remaining states of the former Soviet Union, the reported prevalence in Ukraine has increased steadily since 1995 (0.002%) to reach 0.34% in 2004 (Figure 3.7). Since 1998, reported prevalence has also increased, though more slowly, in the Russian Federation, where it appears to have stabilised in recent years at approximately 0.1%. No clear trend is apparent in Belarus where a high of 0.13% was observed in 2003, similar to that reported as early as 1998 [3].

Figure 3.7: HIV prevalence among pregnant women in four countries of eastern Europe, 1999-2004



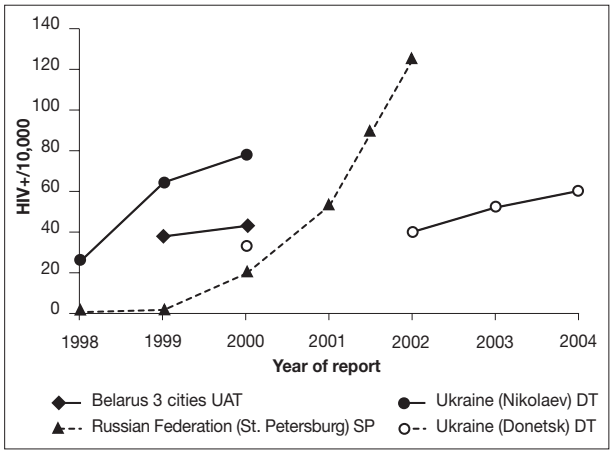
Sub-national data in eastern European countries demonstrate important regional differences, with HIV prevalence in some regions or cities very much higher than the national average, as illustrated by data from the following three countries:

- Ukraine: in 2000, DT data revealed the highest seroprevalence in the Black Sea port of Nikolaiev (0.79% vs 0.17% nationally), followed by Odessa (0.35%) and Donetsk (0.34%). More recent data are available only for Donetsk, where prevalence increased to 0.61% in 2004, remaining almost twice that in the country as a whole (0.34%);
- Belarus: in a UAT study conducted in 1999 and 2000 among pregnant women attending antenatal clinics in three cities (Svetlogorsk, Oktaybrsk, Zhlobin), prevalence levels of around 0.4% were reported, almost five times greater than those in national DT data in the same years (0.08-0.09%);
- Russian Federation: HIV prevalence among DT data reported in 2003 ranged from <0.01% in 8 of 51 regions (oblasts) to a high of 0.44% in Samara oblast and was 0.32% in St Petersburg.

  A study to estimate prevalence among women giving birth in St Petersburg found much higher levels, with a 60-fold increase over the three years from 1999 (0.02%) to 2002 (1.25%) [19]. In the same period, prevalence in national DT data increased 10-fold, from 0.01% to 0.12%. In the St Petersburg study, women were tested for HIV either during

pregnancy or at delivery (an estimated 99% of all live births in St Petersburg) and prevalence was estimated from the reported number of children born to HIV-infected women and the total number of live births in the city. Prevalence may however be over-estimated due to referral of high-risk or known HIV-positive pregnant women from outside St Petersburg. In the same study, data for 2002 showed that HIV prevalence was considerably higher among women without ante-natal care (7.8%, 114/1,466).

Figure 3.8: HIV prevalence among pregnant women (continuous lines) and women giving birth (dotted line) in cities of eastern Europe, 1998-2004



3.5. Discussion

During the period 2000 to 2004, no country has reported a national HIV prevalence among pregnant women of greater than 0.5% and in this population HIV prevalence appears to have remained low and stable, especially in central European and Scandinavian countries. Nonetheless, in the context of the increasing number of HIV cases reported among women of child-bearing age, many challenges remain including assuring access to treatment and care services and the prevention of mother-to-child transmission, especially in the most at risk and hard-to-reach populations.

The increase in numbers of cases of HIV infection reported amongst women of child bearing age is reflected in an increasing HIV prevalence amongst pregnant women. Rapid increases of HIV prevalence among pregnant women have been reported in a number of countries, most notably Estonia (a five-fold increase since 2000 reaching a maximum of 0.48% in 2002), Ukraine (doubling since 2000 to reach a maximum of 0.34% in 2004) and Ireland (doubling since 2000 to a maximum of 0.31% in 2003) as well as increases in more recent years in Latvia and in the United Kingdom.

The surveillance of HIV among pregnant women contributes to understanding the spread of infection in the heterosexually active population as well as providing a measure of the burden of disease in the general population. For example, the systematic reporting of the results of HIV diagnostic testing, widely offered to women in antenatal care throughout Europe, could provide a vital surveillance tool to monitor HIV prevalence in this sentinel population. Furthermore, the use of multiple data sources can give added value in the analysis of the epidemiology of HIV and evaluation of public health interventions to control the infection. Examples have been presented from both eastern (Russian Federation) [19] and western Europe (United Kingdom) [9].

The prevalence of HIV is not uniform within a country and areas of higher HIV prevalence amongst pregnant women have been reported in urban areas, especially larger cities and capitals. Surveillance data need to be analysed at a sub-national level to identify these pockets and ancillary information collected in order to assist in the targeting and monitoring of public health interventions for the care and treatment of those affected.

City data from St Petersburg and London have demonstrated that the challenge for many countries is to ensure access for their specific vulnerable populations. In St Petersburg, HIV prevalence was higher in women giving birth with no history of antenatal care. As in many other eastern European countries, ensuring access to health care, in a time of economic transition, for these hard-to-reach women remains a priority. In London, HIV prevalence was much higher among migrant women and, as in many other western European countries, the majority of new cases of heterosexually acquired HIV are diagnosed in this population. The challenge therefore is to ensure access to treatment and care for migrant populations.

The WHO has set a target for the virtual elimination of HIV in infants, defined as <1 HIV-infected infant per 100,000 live births by 2010 in the European Region [21]. The number of cases of HIV/AIDS reported as being infected by mother-to-child transmission will be an essential element in the monitoring of international disease control targets and in the evaluation of public health interventions to control the transmission of infection.

Although cases of mother-to-child transmission are few and numbers have remained stable in Europe in the last five years, an important proportion of such cases have been reported from one country only (United Kingdom). Furthermore, two countries (Russian Federation, Ukraine), which have reported large numbers of children being born to HIV-positive mothers, are unable to report cases of HIV infection among these children and one (Russian Federation) has discontinued reporting AIDS cases - both vital tools to evaluate interventions to control mother-to-child transmission of HIV.

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Annex 3
HIV prevalence among pregnant women

Annex 3. HIV prevalence surveys and results of diagnostic testing among pregnant women, 1999-2004

Geographic area	Country	Coverage	Data[1]	Population tested[2]	Site[3]	1999 N	1999 HIV+ /10,000	2000 N	2000 HIV+ /10,000
West									
EU	Finland								
		National	DT	PW	ANC	58,382	1.4	58,881	1.4
EU	Germany								
		National	SP[5]	N	Neonatal units	-	-	-	-
		Lower Saxony	SP[6] (UAT)	N	Neonatal units	74,367	2.3	73,961	1.9
EU	Ireland								
		National	SP (UAT)	PW	ANC	54,089	4.4	56,468	12.4
		National	DT	PW	ANC	-	-	-	-
EU	Italy								
		National	SP[6] (UAT)	N	Neonatal units	70,070	7.6	-	-
EU	Netherlands								
		National	DT	PW	ANC, hospitals, GP, midwife practices	-	-	-	-
		- Amsterdam				-	-	-	-
		Amsterdam[8]	DT	PW	Hospitals, midwife practices	1,836	81.7	1,733	80.8
	Norway								
		National	DT	PW[9]	ANC, GP	69,073	1.0	66,211	1.4
EU	Spain								
		8 regions[10]	SP[6] (UAT)	N	Neonatal units	88,536	15.6	94,432	13.2
		Catalonia	SP[6] (UAT)	N	Neonatal units	29,356	19.8	32,921	21.0
EU	Sweden								
		National	DT	PW	ANC, abortion clinics	110,000	1.1	110,000	1.0
EU	United Kingdom								
		National	SP[6] (UAT)	N	Home visits by nurses	462,283	7.3	452,914	9.1
		- London				*101,988*	*24.9*	*102,965*	*29.3*
		- EW & NI[11] outside London				*304,921*	*2.3*	*296,602*	*2.8*
		- Scotland				*55,374*	*2.3*	*53,347*	*4.7*
		London	SP (UAT)	PW	ANC	51,515	40.2	49,670	49.7
		Inner London	SP (UAT)	PW[12]	Abortion clinics	7,358	85.6	5,670	96.6
Centre									
	Bulgaria								
		National	DT	PW	ANC	-	-	-	-
EU	Cyprus								
		National	DT	PW	ANC	-	-	-	-
EU	Czech Republic								
		National	DT	PW	ANC	117,727	0.4	121,201	0.4
EU	Hungary								
		National	SP (UAT)	PW	ANC	-	-	5,268	0.0
EU	Poland								
		Mazovia[13]	SP[6] (UAT)	N	Neonatal units	-	-	-	-
	Romania								
		Constanta county[15]	SP[16]	PW	ANC, maternity units	-	-	-	-
	Serbia & Montenegro								
		Serbia	DT	PW[18]	Obstetrics clinics	1,112	0.0	389	0.0
EU	Slovakia								
		National	DT	PW	ANC	9,273	1.1	13,265	0.8
EU	Slovenia								
		National	SP[19] (UAT)	PW	ANC	6,900	1.4	-	-
East									
	Armenia								
		National	DT	PW[20]	ANC	-	-	-	-
		Yerevan	SP	PW	ANC	-	-	-	-
	Azerbaijan								
		National	DT	PW	ANC, VCT, maternity units	52,270	2.9	64,857	0.3
	Belarus								
		National	DT	PW	ANC	21,980	8.2	24,965	9.2
		3 Cities[21]	SP[19] (UAT)	PW	ANC	4,412	38.5	4,120	43.7
EU	Estonia								
		National	DT	PW	ANC	7,501	4.0	7,331	8.2
	Georgia								
		National	SP	PW	ANC, VCT, maternity units	-	-	-	-
	Kyrgyzstan								
		2 Cities[22]	DT	PW	ANC	-	-	-	-
EU	Latvia								
		National	DT[23]	PW	ANC	5,258	7.6	18,183	4.9
EU	Lithuania								
		National	DT	PW	ANC	474	0.0	354	0.0
	Russian Federation								
		National	DT[23]	PW	ANC	2,491,545	1.2	2,569,253	2.9
		- Moscow				-	-	-	-
		- St Petersburg				-	-	-	-
		- Samara oblast				-	-	-	-
		St.Petersburg[24]	SP	PW[25]	ANC, maternity units	29,348	2.4	34,339	20.4
		- women without prenatal care				-	-	-	-
	Ukraine								
		National	DT[26]	PW	ANC	393,774	15.9	519,520	16.7
		- Donetsk				-	-	*55,238*	*33.9*
		- Kiev				*15,120*	*29.8*	*32,967*	*20.0*
		- Nikolaiev				*4,916*	*65.1*	*10,282*	*78.8*
		- Odessa				*49,321*	*29.8*	*47,754*	*34.6*

EU Countries which constitute the European Union as of 1 May 2004.
(1) DT - diagnostic testing, SP - seroprevalence studies , UAT - unlinked and anonymous testing.
(2) N - newborns, PW - pregnant women.
(3) ANC - ante-natal care, VCT - HIV voluntary counselling and testing sites, GP - general practitioners.
(4) References - see text.
(5) Lower bound (estimated 50%) of true HIV prevalence among women giving birth: N = total number of live births, HIV+ = reported ELISA-positive HIV test results in newborns.
(6) Neonatal dried blood spots taken for metabolic screening.
(7) Results for 6 months only.
(8) Limited sentinel study including two hospitals and one midwife practice.
(9) Previously known HIV+ women excluded.
(10) 7 regions in 1999- 2002 (Baleares, Canarias, Castilla-La Mancha, Castilla y Leon, Galicia, Melilla, Murcia), 8 regions in 2003.
(11) EW & NI - England, Wales & Northern Ireland.
(12) Women undergoing termination of pregnancy.
(13) Mazovia province, including Warsaw.

Annex 3. HIV prevalence surveys and results of diagnostic testing among pregnant women, 1999-2004

(Cont.)

2001		2002		2003		2004			Geographic area		
									Country		
N	HIV+ /10,000	N	HIV+ /10,000	N	HIV+ /10,000	N	HIV+ /10,000	Ref.[4]			Coverage
									West		
										Finland	
57,141	2.1	58,864	2.0	60,226	2.2	60,003	1.5				National
										Germany	
735,755	2.7[5]	719,250	2.4[5]	-	-	-	-				National
-	-	-	-	-	-	-	-				Lower Saxony
										Ireland	
-	-	-	-	-	-	-	-				National
-	-	52,101	29.9	46,860	31.2	41,588	24.8				National
										Italy	
82,695	8.5	92,810	6.7	-	-	-	-				National
										Netherlands	
-	-	-	-	-	-	95,000[7]	6.3	5,6			National
-	-	*9,772*	30.7	13,329	26.3	*13,111*	*19.8*				*- Amsterdam*
1,727	92.6	1,912	136.0	1,952	123.0	1,752	108.4				Amsterdam[8]
										Norway	
63,408	1.3	64,458	1.6	65,709	2.1	62,700	3.0				National
										Spain	
91,900	14.3	92,578	15.7	131,718	16.2	130,328	15.3	7			8 regions[10]
34,214	17.2	-	-	37,775	15.1	36,954	18.7				Catalonia
										Sweden	
-	-	-	-	-	-	-	-				National
										United Kingdom	
453,581	11.3	451,407	14.9	479,778	16.8	453,049	18.7	8,9			National
103,391	*35.3*	105,855	*39.7*	*113,016*	*45.2*	*114,590*	*44.7*				*- London*
297,483	*4.4*	*294,264*	*7.5*	*313,799*	*8.9*	*284,631*	*10.7*				*- EW & NI[11] outside London*
52,707	*3.0*	51,288	*5.8*	*52,963*	*3.2*	*53,828*	*5.2*				*- Scotland*
51,495	60.0	56,655	57.4	57,231	63.1	56,511	57.2	8			London
6,333	102.6	5,848	99.2	4,348	128.8	3,435	119.4	8			Inner London
									Centre		
										Bulgaria	
26,640	0.8	28,715	0	26,121	1.1	18,553	0.0				National
										Cyprus	
2,422	4.1	-	-	-	-	-	-				National
										Czech Republic	
127,824	0.3	136,269	0.1	134,579	0.0	138,030	0.4	10,11			National
										Hungary	
-	-	-	-	-		-	-				National
										Poland	
-	-	25,453[14]	5.5	-	-	-	-	12			Mazovia[13]
										Romania	
11,423[17]	17.5	-	-	-	-	-	-	13			Constanta county[15]
										Serbia & Montenegro	
649	0.0	749	0.0	991	0.0	1,384	0.0				Serbia
										Slovakia	
16,487	1.2	14,622	0.7	21,040	1.0	17,033	1.2				National
										Slovenia	
8,146	0.0	-	-	7,553	0.0	-	-	14			National
									East		
										Armenia	
812	0.0	2,875	7.0	2,166	4,6	3,219	0.0	15			National
-	-	500	0.0	-	-	-	-				Yerevan
										Azerbaijan	
-	-	-	-	-	-	-	-				National
										Belarus	
46,260	6.3	52,276	8.4	60,867	12.5	96,366	8.3	16			National
-	-	-	-	-	-	-	-				3 Cities[21]
										Estonia	
9,559	36.6	11,475	47.9	13,618	47.0	16,600	42.8	17			National
										Georgia	
-	-	-	-	-	-	10,318	3.9				National
										Kyrgyzstan	
-	-	-	-	-	-	1,233	0.0				2 Cities[22]
										Latvia	
22,108	11.3	22,692	10.1	22,219	11.7	23,889	15.1				National
										Lithuania	
584	0.0	2,398	0.0	4,040	0.0	3,587	2.8				National
										Russian Federation	
2,555,799	9.5	2,922,008	11.9	3,080,896	11.4	3,518,393	11.1	18			National
-	-	-	-	*183,897*	*11.0*	-	-				*- Moscow*
-	-	-	-	*95,453*	*31.5*	-	-				*- St Petersburg*
-	-	-	-	*71,781*	*43.9*	-	-				*- Samara oblast*
36,171	53.6	39,141	125.2	-	-	-	-	19			St Petersburg[24]
-	-	*1,466*	*777.6*	-	-	-	-				*- women without prenatal care*
										Ukraine	
599,112	22.1	808,632	23.2	924,099	27.6	965,405	33.7				National
-	-	*75,475*	*40.7*	*78,598*	*52.7*	*79,925*	*60.8*				*- Donetsk*
-	-	-	-	-	-	-	-				*- Kiev*
-	-	-	-	-	-	-	-				*- Nikolaiev*
-	-	-	-	-	-	-	-				*- Odessa*

(14) Data for July 2001 - July 2002.
(15) Epicentre of paediatric nosocomial HIV outbreak in late 1980s and early 1990s.
(16) Pilot PMTCT programme; >80% pregnant women included during pregnancy or at delivery.
(17) Data for June 2000 -May 2002.
(18) Women at delivery or termination of pregnancy.
(19) Residual sera from syphilis serology testing.
(20) First-time attenders at antenatal clinics.
(21) Svetlogorsk, Oktaybrsk, Zhlobin.
(22) Bishkek, Osh.
(23) HIV testing proposed twice during pregnancy (Latvia: since 2000).
(24) Includes some women at increased risk of HIV referred from outside St.Petersburg district.
(25) Women who gave birth, tested before or at delivery; estimated 99% of all live births in St Petersburg.
(26) For 90% of pregnant women, HIV testing performed twice during pregnancy.

Section 4
HIV prevalence
in blood donations

Key points:

- in most countries of central and western Europe, the prevalence of HIV in blood donations remains low (<5 per 100,000 donations);
- rapid increases have been reported in many countries in eastern Europe, and especially Ukraine (128 per 100,000 donations in 2004).

Recommendations for surveillance:

- ensure regular reporting of data from blood screening;
- provide separate data on HIV prevalence in first and repeat blood donations.

Recommendations for public health:

- ensure that basic screening measures are available for all blood donations in all European countries;
- strategies to guarantee the safety of the blood supply need to be strengthened in countries with high HIV prevalence among blood donations. These include improving donor selection, promoting voluntary unpaid blood donations, maintaining a pool of regular donors, implementing nucleic acid testing.

4.1. Introduction

Monitoring HIV prevalence among donations provides an indication of the relative safety of the blood supply across countries and over time. In addition, it provides some indication of HIV trends in the population, although trends in prevalence among blood donations are also clearly affected by changes in the effectiveness of donor selection.

In all European countries, blood donations are systematically screened for HIV antibodies and those testing positive are eliminated from the blood supply. Nevertheless, a small residual risk remains through the transfusion of blood with undetected antibody, either from donations being made in the window period of sero-conversion (when individuals will be HIV antibody sero-negative but have HIV viraemia) or from assay failure. The residual risk will be larger with a higher prevalence/incidence of HIV in the population donating blood. Various methods are available to reduce this residual risk of HIV transmission by blood transfusion. A sound and effective approach to donor selection which will minimise HIV prevalence in blood donations is essential. New assay technologies, including that of nucleic acid testing (NAT) can detect donations which are RNA positive, but not yet HIV antibody positive [1].

The data presented in this section cover the period 1998 to 2004 and update those presented in report No. 69, published in 2003, and covering the period 1996 to 2002 [2].

4.2. Reporting of cases of HIV infection and AIDS acquired through transfusion

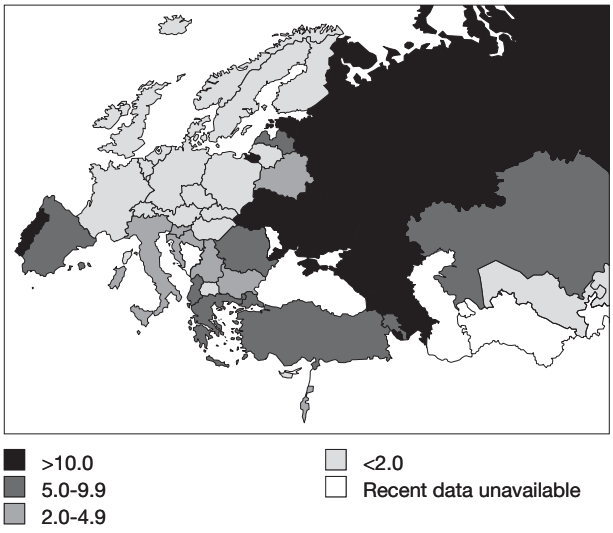
In 2004, a total of 76 AIDS cases were reported in the transmission categories of haemophiliac/patient with coagulation disorder (23) and transfusion recipient (53). In the same year, 144 newly diagnosed HIV cases were reported in the same transmission groups: 12 amongst haemophiliacs and 132 amongst blood transfusion recipients.

It should be noted that the Russian Federation, where a high prevalence of HIV has been detected in blood donations, no longer reports AIDS cases, while in two other countries transmission group is not included in HIV case reports (Estonia, Austria).

4.3. HIV prevalence in blood donations

In 2004, the overall HIV prevalence among blood donations in the WHO European Region was 10 per 100,000 donations (data from 34 of the 52 countries) (Annex 4.1)[3-14]. However, wide variations were observed, with very much higher levels in eastern European countries (Figure 4.1). In 2004, the prevalence of HIV ranged from 0 (i.e. no HIV positive blood donors detected) in eight countries to 37.9 per 100,000 donations in the Republic of Moldova and 128.4 per 100,000 donations in Ukraine (Figure 4.1, Annex 4.1).

Figure 4.1: HIV prevalence in blood donations (per 100,000), WHO European Region, 2002-2004 or latest available*

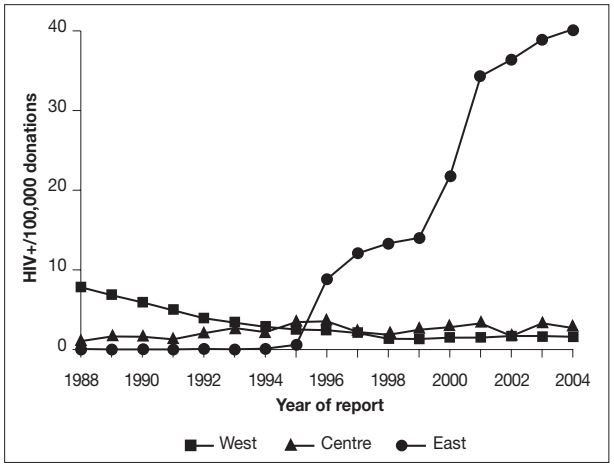


* Latest available data: Albania 2000, Romania 2001, Uzbekistan 2000.

In western European countries, the prevalence of HIV among blood donations has declined from 7.8 (17 countries reporting) in 1988 to 1.6 HIV+ per 100,000 donations in 2004 (15 countries) (Figure 4.2). In central European countries, during the same period, the prevalence of HIV amongst

blood donations rose from 1.1 (7 countries reporting) in 1988 to 2.7 HIV+ per 100,000 donations in 2004 (10 countries) (Figure 4.2). In contrast, in eastern Europe, the prevalence of HIV+ blood donations has increased dramatically from <1 in 1995 (11 countries reporting) to 40.2 HIV+ per 100,000 blood donations in 2004 (8 countries reporting) (Figure 4.2).

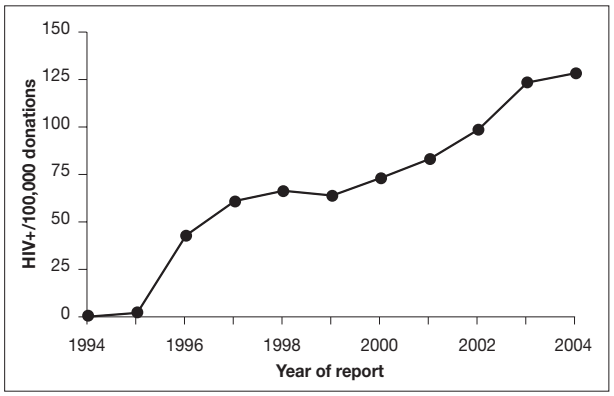
Figure 4.2: HIV prevalence in blood donations (per 100,000), WHO European Region, 1988-2004



4.3.1 Eastern Europe

The earliest and most dramatic rise in the number of HIV positive donations was in Ukraine, where the rate of HIV positive donations has increased year-on-year from 2.1 per 100,000 donations in 1995 to 128.4 in 2004 (Figure 4.3, Annex 4.1).

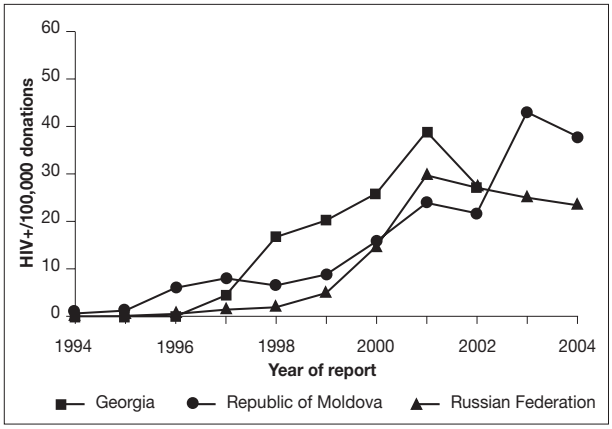
Figure 4.3: HIV prevalence in blood donations (per 100,000), Ukraine, 1994-2004



Increases have also been observed in most other eastern European countries (Figures 4.4, 4.5, Annex 4.1). All occurred after the increase in the Ukraine and none are of the same magnitude. In 2004, the second highest prevalence was observed in the Republic of Moldova (37.9 per 100,000 donations) following a steady increase since 1995 (Figure 4.4).

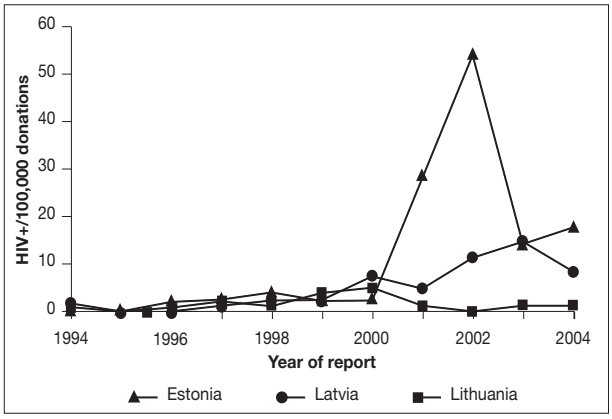
Rapid increases in prevalence were also reported in Georgia and the Russian Federation. In the Russian Federation, between 1999 and 2001, HIV prevalence doubled each year, reaching 29.6 per 100,000 in 2001, since when it has remained stable (Figure 4.4).

Figure 4.4: HIV prevalence in blood donations (per 100,000) in three eastern European countries, 1994-2004



The HIV prevalence detected in blood donations reported in 2004 corresponds to more than 1200 HIV-infected donations in Ukraine and nearly 1000 in the Russian Federation. Of note, data on HIV prevalence in blood donations have not been available for Tajikistan and Turkmenistan since 1998 and Uzbekistan since 2001.

Figure 4.5: HIV prevalence in blood donations (per 100,000) in the Baltic States, 1994-2004

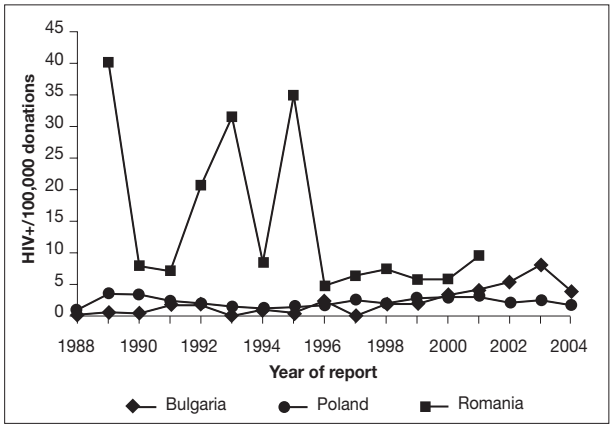


Rapid increases in HIV prevalence among blood donations were also reported in Estonia, from 4.0/100,000 in 1998 to a maximum of 54/100,000 in 2002, from where it declined to 17.7/100,000 donations in 2004 (Figure 4.5). However, in Latvia, a smaller increase has also been reported, from 2.3/100,000 in 1998 to 14.7/100,000 in 2003, and in Lithuania, HIV prevalence has remained low (<2/100,000) (Figure 4.5).

4.3.2 Central Europe

In the central European countries, the prevalence of HIV-positive blood donations has remained stable at below 5 per 100,000 donations since 1988 (Figure 4.6). No clear trends could be elicited in these countries, although there are geographic variations. In some countries, including the Czech Republic, the Former Yugoslav Republic of Macedonia and Slovakia rates have been systematically lower than 0.5 HIV+ per 100,000 donations (Annex 4.1).

Figure 4.6: HIV prevalence in blood donations (per 100,000) in three central European countries, 1988-2004

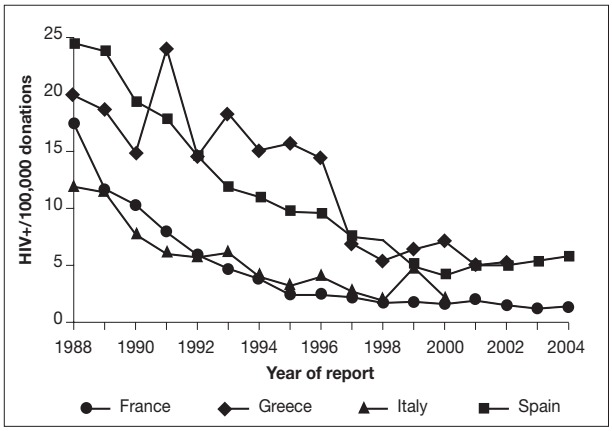


HIV prevalence of >5 HIV+ per 100,000 donations have been reported for at least one year in Albania (7.1 in 2001, although only one case of HIV was detected), Bulgaria (8.1 in 2003), Romania (9.5 in 2001), Serbia & Montenegro (9.5 in 2004) and Turkey (5.5 in 2004) (Annex 4.1). In Romania, although it has not matched the peak levels reported in 1989 (40/100,000) and 1995 (35/100,000), prevalence increased steadily to reach 9.5/100,000 in 2001 (latest data available) (Figure 4.6). In Bulgaria, prevalence has been increasing steadily since 1999 and reached 8.1 per 100,000 in 2003, than declined in 2004 to 3.9/100,000 (Figure 4.6).

4.3.3 Western Europe

In the West, HIV prevalence among blood donations has declined steadily since the mid 1980s (Figures 4.2 and 4.7, Annex 4.1) [2]. Since 2001, prevalence has been lower than 2 per 100,000 donations in all countries except Greece (5.3 in 2002), Spain (5.8 in 2004), Italy (3.2 in 2002), and Israel (2.2 in 2002) and in three major cities in Portugal (10.4 in 2004).

Figure 4.7: HIV prevalence in blood donations (per 100,000) in four western European countries, 1988-2004



4.4. HIV prevalence among first time and repeat donors, 2000-2004

Information on HIV prevalence among first time/candidate donors and donations from repeat donors for at least one year in the period 2000-2004 was available for a total of 19 countries; 14 from western, 5 from central and none from eastern Europe (Annexes 4.2 and 4.3). First time donors represented 11% of all donations in western and 16% in central European countries in 2004, although this percentage varied by country over time with a maximum of 19% in Greece in 2001-2002.

Data for these 19 countries indicate that HIV prevalence is consistently up to 10 times higher in donations from first time than from repeat donors. Prevalence of HIV in repeat donors is more reflective of incidence and was <1/100,000 in all the countries except Greece (2.5/100,000 in 2000), Switzerland (1.4/100,000 in 2004), Romania (3.8/100,000 in 2000).

4.5. Discussion

In the East, HIV has been a growing problem since 1995, mainly among injecting drug users [15], and this has been accompanied by an increase of HIV positive blood donations in several countries (Russian Federation, Ukraine, Estonia, Latvia). The situation in the Ukraine remains particularly alarming. In Poland, changes of HIV prevalence in blood donations in 1990 and again in 1998-2000 followed two peaks of reported HIV cases, showing how prevalence among blood donations may reflect that in the general population [2,16].

In contrast to the decreasing trend in western Europe, increasing levels of HIV prevalence in blood donations in several countries in eastern Europe reflect the intensified transmission of HIV in the donors' source population. However, the very high levels of HIV prevalence reported among blood donations in some countries of eastern Europe should be interpreted with care. Due to lack of voluntary counselling and testing facilities in some of these countries, blood donation centres may have served as HIV testing sites [13,17]. Other countries had difficulties to ensure screening of all blood donations for HIV [11,18,19].

One important component of blood safety is the maintenance of a pool of regular donors, since HIV positive donations are much lower among them. This requires more resources than existing health care systems in transition can provide and family replacement or paid donation practices, which are at increased risk of HIV infection, are used in many countries in eastern Europe [18]. The overall proportion of repeat donors in western Europe is 89%. Although recent information on first time/repeat donors is not available, this proportion is believed to be much lower in the eastern countries.

The control of transfusion-transmitted infectious diseases is a key public health issue, especially in eastern European countries. The regular reporting of HIV prevalence data from among blood donations should be assured by all countries. Furthermore, improving donor selection, including constituting a pool of regular donors, ensuring testing of all donated blood and implementing more sensitive laboratory screening methods, are urgently needed in several countries in the East.

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Annexes 4.1-4.3
HIV prevalence
in blood donations

Annex 4.1. Systematic HIV antibody screening in blood banks: HIV prevalence in blood donations (first time or candidate donors included) by country, 1999-2004, WHO European Region

Geographic area		1999			2000			2001		
	Country	N	HIV+	HIV+ /100,000	N	HIV+	HIV+ /100,000	N	HIV+	HIV+ /100,000
West										
	Andorra	–	–	–	–	–	–	–	–	–
EU	Austria	546,044	5	0.9	521,919	13	2.5	525,602	7	1.3
EU	Belgium	729,152 †	4	0.5	689,085	2	0.3	705,023	0	0.0
EU	Denmark	372,577	1	0.3	378,976	0	0.0	376,755	1	0.3
EU	Finland	335,751	0	0.0	330,635	0	0.0	322,357	0	0.0
EU	France	2,515,038	45	1.8	2,475,000	40	1.6	2,429,484	45	1.9
EU	Germany	5,432,041	44	0.8	5,583,510	52	0.9	5,713,060	53	0.9
EU	Greece	579,505	37	6.4	503,998	36	7.1	537,858	27	5.0
	Iceland	16,682	0	0.0	13,489 **	0	0.0	14,717	0	0.0
EU	Ireland	152,236	1	0.7	150,626	1	0.7	147,068	1	0.7
	Israel	255,890	3	1.2	257,948	3	1.2	270,093	5	1.9
EU	Italy	799,743 ‖	38	4.8	1,615,877	35	2.2	1,910,430	41	2.1
EU	Luxembourg	26,053	0	0.0	21,113	0	0.0	21,195	1	4.7
EU	Malta	16,666	0	0.0	16,335	0	0.0	16,854	0	0.0
	Monaco	1,525	0	0.0	1,380††	0	0.0	1,478††	0	0.0
EU	Netherlands	963,000	4	0.4	875,000	3	0.3	872,000	3	0.3
	Norway	200,214	0	0.0	195,424	1	0.5	199,730	0	0.0
EU	Portugal ¶	98,225	10	10.2	110,201	20	18.1	–	–	–
	San Marino	785	0	0.0	1,065	0	0.0	1,062	0	0.0
EU	Spain	1,454,121	71	4.9	1,569,638	64	4.1	1,505,415	76	5.0
EU	Sweden	710,600	2	0.3	680,600	0	0.0	710,400	1	0.1
	Switzerland	444,980	5	1.1	434,209	4	0.9	415,151	7	1.7
EU	United Kingdom	2,922,045	20	0.7	2,905,280	14	0.5	2,831,951	16	0.6
Total West		**18,572,873**	**290**	**1.6**	**19,331,308**	**288**	**1.5**	**19,527,683**	**284**	**1.5**
Centre										
	Albania	18,127	1	5.5	15,200	0	0.0	14,000	1	7.1
	Bosnia & Herzegovina	–	–	–	49,320	0	0.0	48,174	0	0.0
	Bulgaria	161,997	3	1.9	150,477	5	3.3	144,071	6	4.2
	Croatia	163,315	2	1.2	167,396	2	1.2	156,513	2	1.3
EU	Cyprus	40,543	0	0.0	44,822	1	2.2	42,093	0	0.0
EU	Czech Republic	467,778	0	0.0	455,124	0	0.0	466,774	1	0.2
EU	Hungary	507,186	1	0.2	501,289	1	0.2	491,820	2	0.4
	Macedonia, F.Y.R.	52,909	0	0.0	52,170	0	0.0	50,052	0	0.0
EU	Poland	928,710	26	2.8	934,845	28	3.0	932,182	28	3.0
	Romania	383,557	21	5.5	343,174	20	5.8	369,076	35	9.5
	Serbia & Montenegro ‡‡	222,185	16	7.2	279,073	5	1.8	229,020	21	9.2
EU	Slovakia	109,753	1	0.9	128,318	1	0.8	139,167	0	0.0
EU	Slovenia	97,939	1	1.0	92,526	0	0.0	91,221	0	0.0
	Turkey	856,278	27	3.2	937,295	47	5.0	1,067,337	42	3.9
Total Centre		**4,010,277**	**99**	**2.5**	**4,151,029**	**110**	**2.6**	**4,241,500**	**138**	**3.3**
East										
	Armenia §§	12,480	0	0.0	12,367	1	8.1	10,449	2	19.1
	Azerbaijan §§	13,573	1	7.4	13,660	7	51.2	–	–	–
	Belarus	365,358	3	0.8	356,119	4	1.1	347,142	3	0.9
EU	Estonia	44,524	1	2.2	43,979	1	2.3	42,655	12	28.1
	Georgia §§	19,840	4	20.2	19,305	5	25.9	20,573	8	38.9
	Kazakhstan	316,131	4	1.3	326,706	8	2.4	335,407	11	3.3
	Kyrgyzstan	47,336	1	2.1	41,917	0	0.0	35,687	0	0.0
EU	Latvia	82,071	2	2.4	81,595	6	7.4	83,183	4	4.8
EU	Lithuania	127,664	5	3.9	79,603	4	5.0	84,440	1	1.2
	Moldova, Republic of	56,591	5	8.8	50,490	8	15.8	50,147	12	23.9
	Russian Federation	3,830,728	187	4.9	4,041,951	593	14.7	4,008,116	1,187	29.6
	Tajikistan	–	–	–	–	–	–	–	–	–
	Turkmenistan	–	–	–	–	–	–	–	–	–
	Ukraine	1,021,820	653	63.9	989,544	724	73.2	980,770	816	83.2
	Uzbekistan	297,908	0	0.0	224,345	6	2.7	–	–	–
Total East		**6,236,024**	**866**	**13.9**	**6,281,581**	**1,367**	**21.8**	**5,998,569**	**2,056**	**34.3**
Total European Union (EU)		**20,058,965**	**319**	**1.6**	**20,789,894**	**322**	**1.5**	**20,998,987**	**320**	**1.5**
Total WHO European Region		**28,819,174**	**1,255**	**4.4**	**29,763,918**	**1,765**	**5.9**	**29,767,752**	**2,478**	**8.3**

EU Countries which constitute the European Union as of 1 May 2004.
* References – see text.
† Incomplete data (95% of donations).
‖ Incomplete data (60% of donations).
¶ Data from regional blood centres in the three main cities (Coimbra, Lisbon and Oporto); do not represent the country as a whole.

Annex 4.1. Systematic HIV antibody screening in blood banks: HIV prevalence in blood donations (first time or candidate donors included) by country, 1999-2004, WHO European Region
(Cont.)

2002			2003			2004				Geographic area	
N	HIV+	HIV+ /100,000	N	HIV+	HIV+ /100,000	N	HIV+	HIV+ /100,000	Ref.*		Country
											West
–	–	–	–	–	–	–	–	–			Andorra
520,485	3	0.6	521,248	3	0.6	514,326	7	1.4		EU	Austria
704,676 †	0	0.0	–	–	–	–	–	–		EU	Belgium
403,399	2	0.5	393,840	0	0.0	391,910	3	0.8	3	EU	Denmark
312,455	2	0.6	300,748	2	0.7	285,794	0	0.0		EU	Finland
2,459,663	36	1.5	2,468,038	30	1.2	2,498,298	35	1.4	4,5	EU	France
6,632,434	86	1.3	7,089,129	100	1.4	6,370,671	77	1.2	6-8	EU	Germany
543,485	29	5.3	–	–	–	–	–	–	9	EU	Greece
15,598	0	0.0	–	–	–	–	–	–			Iceland
162,502	0	0.0	151,812	2	1.3	157,346	1	0.6		EU	Ireland
276,118	6	2.2	–	–	–	–	–	–			Israel
1,918,846	62	3.2	–	–	–	–	–	–		EU	Italy
21,282	0	0.0	21,773	0	0.0	21,017	0	0.0		EU	Luxembourg
16,173	0	0.0	16,688	0	0.0	15,292	0	0.0		EU	Malta
2,767	0	0.0	–	–	–	–	–	–			Monaco
927,800	8	0.9	–	–	–	–	–	–		EU	Netherlands
201,607	0	0.0	200,000	0	0.0	200,000	0	0.0			Norway
–	–	–	105,869	12	11.3	115,862	12	10.4		EU	Portugal ¶
784	0	0.0	883	0	0.0	1,078	0	0.0			San Marino
1,506,376	76	5.0	1,621,339	88	5.4	1,610,824	93	5.8		EU	Spain
708,300	2	0.3	676,900	4	0.6	624,900	2	0.3		EU	Sweden
415,722	2	0.5	394,495	5	1.3	377,288	5	1.3			Switzerland
2,844,465	33	1.2	2,822,807	42	1.5	2,779,863	18	0.6		EU	United Kingdom
20,594,937	**347**	**1.7**	**16,785,569**	**288**	**1.7**	**15,964,469**	**253**	**1.6**			**Total West**
											Centre
–	–	–	–	–	–	–	–	–			Albania
48,834	0	0.0	–	–	–	42,483	0	0.0			Bosnia & Herzegovina
147,405	8	5.4	148,041	12	8.1	152,813	6	3.9			Bulgaria
166,784	0	0.0	161,161	6	3.7	147,802	4	2.7			Croatia
41,788	0	0.0	44,214	0	0.0	46,145	0	0.0		EU	Cyprus
510,389	1	0.2	508,127	1	0.2	514,523	1	0.2	10	EU	Czech Republic
494,600	2	0.4	–		–	505,344	3	0.6		EU	Hungary
52,145	0	0.0	53,716	0	0.0	54,758	0	0.0			Macedonia, F.Y.R.
967,090	20	2.1	1,036,010	26	2.5	1,006,639	17	1.7		EU	Poland
–	–	–	–	–	–	–	–	–			Romania
210,729	5	2.4	229,539	8	3.5	230,812	22	9.5			Serbia & Montenegro ‡‡
118,722	1	0.8	–		–	–	–	–		EU	Slovakia
89,934	3	3.3	86,697	0	0.0	84,684	2	2.4		EU	Slovenia
1,053,724	28	2.7	1,245,996	64	5.1	1,227,085	68	5.5			Turkey
3,902,144	**68**	**1.7**	**3,513,501**	**117**	**3.3**	**4,013,088**	**123**	**3.1**			**Total Centre**
											East
10,686	1	9.4	11,304	1	8.8	11,957	1	8.4	11		Armenia §§
26,501 ‖ ‖	8	30.2	–	–	–	–	–	–			Azerbaijan §§
311,672	11	3.5	328,716	14	4.3	320,530	15	4.7	12		Belarus
48,116	26	54.0	61,964	15	24.2	62,040	11	17.7	13	EU	Estonia
21,720	6	27.6	–	–	–	–	–	–			Georgia §§
338,435	23	6.8	342,836	30	8.8	–	–	–			Kazakhstan
–	–	–	–	–	–	–	–	–			Kyrgyzstan
79,909	9	11.3	81,449	12	14.7	71,264	6	8.4		EU	Latvia
82,876	0	0.0	81,784	1	1.2	85,615	1	1.2		EU	Lithuania
50,715	11	21.7	62,800	27	43.0	71,161	27	37.9			Moldova, Republic of
3,855,814	1,074	27.9	3,811,675	954	25.0	3,803,488	889	23.4	14		Russian Federation
–	–	–	–	–	–	–	–	–			Tajikistan
–	–	–	–	–	–	–	–	–			Turkmenistan
939,108	927	98.7	958,205	1,182	123.4	941,524	1,209	128.4			Ukraine
–	–	–	–	–	–	–	–	–			Uzbekistan
5,765,552	**2,096**	**36.4**	**5,740,733**	**2,236**	**38.9**	**5,367,579**	**2,159**	**40.2**			**Total East**
22,115,765	**401**	**1.8**	**18,090,436**	**338**	**1.9**	**17,762,357**	**289**	**1.2**			**Total European Union (EU)**
30,262,633	**2,511**	**8.3**	**25,810,264**	**2,633**	**10.2**	**25,114,324**	**2,513**	**10.0**			**Total WHO European Region**

** Incomplete data (~90% of donations).
†† Blood donors (not donations).
‡‡ No data for Kosovo.
§§ Due to shortage of test reagents, in some years not all blood donations were tested.
‖ ‖ Data for 2001 and 2002 combined.

Annex 4.2. Systematic HIV antibody screening in blood banks: HIV prevalence in blood donations from new or candidate donors by country, 2000-2004, WHO European Region

Geographic area		2000		2001		2002		2003		2004	
	Country	N	HIV+ /100,000	N	HIV+ /100,000	N	HIV+ /100,000	N	HIV+ /100,000	N	HIV+ /100,000
West											
EU	Belgium	44,472	0.0	45,849	0.0	–	–	–	–	–	–
EU	Denmark *	35,675	0.0	36,737	0.0	40,019	0.0	33,496	0.0	35,762	2.8
EU	Finland	22,744	0.0	22,447	0.0	19,990	0.0	18,944	5.3	16,858	0.0
EU	France	416,000	4.8	403,094	6.5	363,075	5.5	381,606	5.2	377,175	4.0
EU	Germany	478,263	3.6	535,324	4.7	576,979	7.5	572,012	8.2	519,403	4.8
EU	Greece †	85,806	12.8	102,900	17.5	105,000	18.1	–	–	–	–
EU	Ireland	20,508	4.9	25,314	0.0	25,280	0.0	20,767	9.6	18,343	5.5
EU	Luxembourg	948	0.0	1,803	0.0	758	0.0	699	0.0	801	0.0
EU	Malta	–	–	–	–	3,091	0.0	–	–	–	–
	Monaco	256	0.0	219	0.0	–	–	–	–	–	–
EU	Netherlands	59,000 ‡	3.4	56,000	0.0	–	–	–	–	–	–
EU	Sweden *	37,600 ‡	0.0	45,400	2.2	46,300 ‡	4.3	43,900 ‡	4.6	38,900 ‡	0.0
	Switzerland	29,291	10.2	31,577	3.2	41,772	2.4	19,172	15.6	20,436	0.0
EU	United Kingdom	306,894	2.0	275,544	3.6	293,208	4.8	280,409	7.8	305,309	2.3
Total West		**1,537,457**	**3.9**	**1,582,208**	**5.1**	**1,515,472**	**6.6**	**1,371,005**	**7.1**	**1,332,987**	**3.7**
Centre											
-	Croatia §	14,241	0.0	11,312	0.0	10,347	0.0	18,261	11.0	–	–
EU	Poland	148,731	14.1	141,674	15.5	150,763	9.3	173,250	8.1	164,341	9.1
-	Romania	50,783	17.7	70,625	36.8	–	–	–	–	–	–
-	Serbia & Montenegro ‖	5,051	0.0	5,149	0.0	5,544	18.0	–	–	–	–
EU	Slovenia	9,969	0.0	10,719	0.0	–	–	–	–	–	–
Total Centre		**228,775**	**13.1**	**239,479**	**20.0**	**166,654**	**9.0**	**191,511**	**8.4**	**164,341**	**9.1**
Total European Union (EU)		**1,666,610**	**4.7**	**1,702,805**	**5.9**	**1,624,463**	**6.9**	**1,525,083**	**7.1**	**1,476,892**	**4.3**
Total WHO European Region		**1,766,232**	**5.1**	**1,821,687**	**7.1**	**1,682,126**	**6.8**	**1,562,516**	**7.2**	**1,497,328**	**4.3**

EU Countries which constitute the European Union as of 1 May 2004.
* Candidate donors: persons who apply for donating blood and have an initial HIV test before they can be registered as blood donors.
† Partial data only.
‡ Estimated.
§ Data for Zagreb city and Zagreb county (25% of the population).
‖ Montenegro only.

Annex 4.3. Systematic HIV antibody screening in blood banks: HIV prevalence in blood donations from repeat donors by country, 2000-2004, WHO European Region

Geographic area		2000		2001		2002		2003		2004	
	Country	N	HIV+ /100,000	N	HIV+ /100,000	N	HIV+ /100,000	N	HIV+ /100,000	N	HIV+ /100,000
West											
EU	Belgium	644,613	0.3	659,174	0.0	–	–	–	–	–	–
EU	Denmark	343,301	0.0	340,018	0.3	363,380	0.6	360,344	0.0	356,148	0.6
EU	Finland	307,891	0.0	299,910	0.0	292,465	0.3	281,804	0.4	268,936	0.0
EU	France	2,059,000	1.0	2,026,390	0.9	2,096,588	0.8	2,086,432	0.5	2,121,123	0.9
EU	Germany	5,105,247	0.7	5,177,736	0.5	6,055,455	0.7	6,517,117	0.8	5,851,268	0.9
EU	Greece *	200,215	2.5	205,130 †	1.0	195,500 †	1.0	–	–	–	–
EU	Ireland	130,119	0.0	121,754	0.8	137,222	0.0	131,045	0.0	139,003	0.0
EU	Luxembourg	–	–	–	–	20,524	0.0	–	–	–	–
EU	Malta	–	–	–	–	13,082	0.0	–	–	–	–
	Monaco	1,124 †	0.0	1,259 †	0.0	–	–	–	–	–	–
EU	Netherlands	816,000 ‡	0.1	816,000 ‡	0.4	–	–	–	–	–	–
EU	Sweden	643,000	0.0	665,000 ‡	0.0	662,000 ‡	0.0	633,000 ‡	0.3	586,000 ‡	0.3
	Switzerland	404,918	0.2	383,574	1.6	373,950	0.3	375,323	0.5	356,852	1.4
EU	United Kingdom	2,598,386	0.3	2,556,407	0.2	2,551,257	0.7	2,542,398	0.8	2,474,554	0.4
Total West		**13,253,814**	**0.5**	**13,252,352**	**0.5**	**12,761,423**	**0.7**	**12,927,463**	**0.7**	**12,153,884**	**0.8**
Centre											
	Croatia §	53,195	0.0	56,075	0.0	57,621	0.0	142,900	2.8	–	–
EU	Poland	786,114	0.9	790,508	0.8	816,327	0.7	862,760	1.4	842,298	0.2
	Romania	286,688	3.8	294,107	3.1	–	–	–	–	–	–
	Serbia & Montenegro ‖	8,412	0.0	8,340	0.0	8,788	11.4	–	–	–	–
EU	Slovenia	82,557	0.0	80,502	0.0	–	–	–	–	–	–
Total Centre		**1,216,966**	**1.5**	**1,229,532**	**1.2**	**882,736**	**0.8**	**1,005,660**	**4.2**	**842,298**	**0.2**
Total European Union (EU)		**13,716,443**	**0.6**	**13,738,529**	**0.5**	**13,203,800**	**0.7**	**13,414,900**	**0.7**	**12,639,330**	**0.7**
Total WHO European Region		**14,470,780**	**0.6**	**14,481,884**	**0.6**	**13,644,159**	**0.7**	**13,933,123**	**0.7**	**12,996,182**	**0.7**

EU Countries which constitute the European Union as of 1 May 2004.
* Partial data only.
† Blood donors (not donations).
‡ Estimated.
§ Data for Zagreb city and Zagreb county (25% of the population).
‖ Montenegro only.

Technical note

Technical note

All 52 countries of the WHO European Region participate in the HIV/AIDS surveillance activities coordinated by EuroHIV (European Centre for the Epidemiological Monitoring of HIV/AIDS). A single institution in each country (see back cover) reports national data to EuroHIV and is responsible for the quality of the data provided.

Reporting of HIV infection

Data collection and management

Reporting of cases of newly diagnosed HIV infection started at different times in European countries and is now implemented in most of them (Annex 1.1). Data are reported to EuroHIV in a standard format.

Anonymous, individual data on all reported cases of HIV infection are sent to EuroHIV every 6 months, according to a standard data file specification, by countries able to provide individual data. Since individual data are reported without personal identifiers, elimination of duplicate reports between countries is not possible. A new complete database is provided at each update to allow validation and inclusion of follow-up data on previously reported cases. After validation, these data are merged into the European HIV Infection Data Set (EHIDS).

From other countries, aggregate data (by sex, age and transmission group) on new cases reported are provided every 6 months, with no updating of previously reported data.

Case definition

A case of HIV infection is defined as an individual with HIV infection confirmed by laboratory according to country definitions and requirements, diagnosed at any clinical stage including AIDS, and not previously reported in that country. For children aged under 18 months at diagnosis, at least one direct detection HIV test (non-antibody based) is also required.

Reported HIV cases represent mostly new diagnoses; only a minority of reported cases have been diagnosed (but not reported) previously and, when this is the case, the previous diagnosis was frequently made anonymously or in another country.

Transmission groups

For surveillance purposes, cases attributable to more than one mode of transmission are counted once only in a hierarchy which is intended to correspond to the most probable route of transmission. This hierarchy varies slightly within the WHO European Region. Likewise, relative risks of infection among different transmission groups vary between countries. Furthermore, the definition for heterosexual transmission varies slightly between countries.

The category "heterosexual contact" proposed by EuroHIV includes persons in whom major risk factors for HIV infection other than heterosexual contact have not been recognised and who either:

a) originate from a country with a generalised HIV epidemic (HIV prevalence consistently over 1% in pregnant women) [1] or
b) had sex with either a bisexual male, an injecting drug user, a person with haemophilia (or other coagulation disorder), a transfusion recipient, a person originating from or living in a country with a generalised HIV epidemic, or an HIV-infected person not known to belong to one of the above categories or
c) are strongly believed to have been infected through heterosexual transmission, although information on the partner(s) is not available.

"Nosocomial infection" refers to patients infected in healthcare settings. The category "other/undetermined" includes cases of occupational exposure in healthcare workers, cases with unusual modes of transmission not classifiable in other categories and cases with no or insufficient information to allow classification; those with undetermined transmission modes may subsequently be reclassified into other transmission groups.

Cases of HIV infection reported in the category "homo/bisexual male and injecting drug user" have been reclassified at country level as either "homo/bisexual male" or "injecting drug user" according to the most probable mode of transmission.

Patterns of HIV diagnosis and reporting

The proportion of newly diagnosed HIV cases infected in previous years and the overall proportion of all prevalent HIV infections that have been diagnosed are unknown, and are believed to differ widely between countries and between sub-populations within countries. They are heavily dependent on HIV testing patterns among high risk populations, access to voluntary counselling and testing, and access to care, all of which vary by country.

Case reporting is subject to delay and some cases may never be reported. Reporting delays and under-reporting also vary by country. However, adjustment of HIV data for reporting delays (as is done for AIDS cases) is not feasible at present as many countries continue to provide only aggregate data. For this reason HIV data are presented by year of report and not by year of diagnosis.

HIV prevalence assessment in specific populations

Data on HIV prevalence from the participating countries are updated regularly and compiled in the European HIV Prevalence Database. This database contains aggregate data on HIV prevalence in various populations (e.g. injecting drug users, pregnant women) in the countries of the WHO European Region. Data included must comply with specific quality criteria and availability of information on the study methods (e.g. representativity of the study population, minimum sample size, availability of data by periods of 1 year or less).

In addition to classical epidemiological surveys where testing may be unlinked and anonymous, prevalence may be assessed through data obtained from HIV testing programmes which, in turn, may be voluntary or mandatory (e.g. testing of blood donations), or through self-reported HIV serostatus (e.g. among participants in behaviour surveys). Studies are conducted nationally, locally or both; some are continuous (notably those based on testing programmes) while others are periodical or occasional.

For each study, the following information is recorded: characteristics of the population tested (target population, geographic coverage, recruitment site); sampling and testing methods; and numbers of subjects tested (or, for self-reported data, ever-tested) and found (or reported) to be HIV positive. For studies which have been published, bibliographical references are also included in the database.

Data presentation

In most tables, data are presented by geographic area (see below); sub-totals are also shown for the 25 countries which constitute the European Union as of 1 May 2004 (population 456 million).

HIV case reporting data are presented by year of report (see above) and are provisional because previously reported data are subject to regular update (e.g. detection and deletion of duplicate cases, inclusion of new information about already reported cases). Annual rates are calculated per million population. Country population denominators used to calculate rates are based on data from the United Nations Population Division [2]

Geographic areas

Based on geopolitical and epidemiological considerations, the 52 countries have been grouped into three geographic areas:

- West: 23 countries with a total population of 401 million: Andorra, Austria*, Belgium*, Denmark*, Finland*, France*, Germany*, Greece*, Iceland, Ireland*, Israel, Italy*, Luxembourg*, Malta*, Monaco, Netherlands*, Norway, Portugal*, San Marino, Spain*, Sweden*, Switzerland, United Kingdom*;
- East: the 15 countries of the former Soviet Union with a total population of 287 million: Armenia, Azerbaijan, Belarus, Estonia*, Georgia, Kazakhstan, Kyrgyzstan, Latvia*, Lithuania*, Republic of Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan;
- Centre: the 14 remaining countries of the WHO European Region with a total population of 193 million: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus*, Czech Republic*, Hungary*, Former Yugoslav Republic of Macedonia, Poland*, Romania, Serbia and Montenegro, Slovakia*, Slovenia*, Turkey.

References

1. UNAIDS/WHO Working Group on Global HIV/AIDS and STI Surveillance. Guidelines for second generation HIV surveillance. Geneva: UNAIDS/WHO, 2000.
2. United Nations Population Division. Annual Populations 1950-2050 (The 2002 Revision), United Nations, New York 2002.

** Countries which constitute the European Union as of 1 May 2004*

Notes

Notes

Notes

HIV/AIDS surveillance in Europe: participating countries and national institutions

Albania	Institute of Public Health, Tirana
Andorra	Ministry of Health and Welfare, Andorra la Vella
Armenia	National Centre for AIDS Prevention, Yerevan
Austria	Federal Ministry for Health and Women, Vienna
Azerbaijan	Azerbaijan Centre for AIDS Prevention, Baku
Belarus	National Centre for AIDS Prevention, Minsk
Belgium	Scientific Institute of Public Health, Brussels
Bosnia & Herzegovina	Federal Ministry of Health, Sarajevo
	National Public Health Institute of Republic Srpska, Banja Luka
Bulgaria	Ministry of Health, Sofia
Croatia	Croatian National Institute of Public Health, Zagreb
Cyprus	Ministry of Health, Nicosia
Czech Republic	National Institute of Public Health, Prague
Denmark	Statens Serum Institute, Copenhagen
Estonia	Health Protection Inspectorate, Tallin
Finland	National Public Health Institute, Helsinki
France	Institut de Veille Sanitaire, Saint-Maurice
Georgia	Georgian AIDS and Clinical Immunology Research Centre, Tbilisi
Germany	Robert Koch-Institut, Berlin
Greece	Hellenic Centre for Disease Prevention & Control, Athens
Hungary	National Centre for Epidemiology, Budapest
Iceland	General Directorate of Public Health, Reykjavik
Ireland	Health Protection Surveillance Centre, Dublin
Israel	Ministry of Health, Jerusalem
Italy	Istituto Superiore di Sanità, Rome
Kazakhstan	Centre for AIDS Prevention and Control, Almaty
Kyrgyzstan	National Centre for AIDS Prevention and Control, Bishkek
Latvia	AIDS Prevention Centre, Riga
Lithuania	Lithuanian AIDS Centre, Vilnius
Luxembourg	Direction de la Santé, Luxembourg
Macedonia, former Yugoslav Republic of	Republic Institute for Health Protection, Skopje
Malta	Department of Public Health, Msida
Moldova, Republic of	National Centre for AIDS Prevention and Control, Chisinau
Monaco	Direction de l'Action Sanitaire et Sociale, Monaco
Netherlands	National Institute for Public Health & the Environment, Bilthoven
Norway	Norwegian Institute of Public Health, Oslo
Poland	National Institute of Hygiene, Warsaw
Portugal	National Institute of Health Dr Ricardo Jorge, Lisbon
Romania	Matei Bals Institute of Infectious Diseases, Bucharest
Russian Federation	Russian Federal AIDS Centre, Moscow
San Marino	San Marino State Hospital, San Marino
Serbia & Montenegro	Institute of Public Health of Serbia, Belgrade
	Institute of Public Health of Montenegro, Podgorica
Slovak Republic	State Public Health Institute, Bratislava
Slovenia	Institute of Public Health, Ljubljana
Spain	Instituto de Salud "Carlos III", Madrid
Sweden	Swedish Institute for Infectious Disease Control, Solna
Switzerland	Swiss Federal Office of Public Health, Bern
Tajikistan	National AIDS Centre, Dushanbe
Turkey	Ministry of Health, Ankara
Turkmenistan	National AIDS Prevention Centre, Ashgabat
Ukraine	Ukrainian AIDS Centre, Kiev
United Kingdom	Health Protection Agency, London
	Health Protection Scotland, Glasgow
Uzbekistan	Republican Centre for AIDS Prevention and Control, Tashkent

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