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2007, No. 74

- Reporting of cases of HIV infection and AIDS
- HIV prevalence among STI patients
- HIV prevalence among commercial sex workers
- HIV and TB co-morbidity in Europe

HIV / AIDS
Surveillance in Europe

EuroHIV

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

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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 and 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 EuroHIV web site: www.eurohiv.org.

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Summary

HIV infection remains of major public health importance in Europe. Its epidemiology and public health priorities vary across Europe. In the East, increasing incidence of AIDS and the number of HIV diagnoses underline the need to ensure access to treatment and care as well as to strengthen HIV prevention in groups at risk such as injecting drug users (IDU) and their partners. In the West, HIV prevention needs to be reinforced among men who have sex with men (MSM), and access to treatment and care should be ensured for migrant communities. In this report, HIV data are presented for three populations:

- patients with sexually transmitted infections (STI): the high HIV prevalence (up to 66%) reported among MSM diagnosed with an acute STI in western Europe suggests the need to strengthen the promotion of safer sex in this population;
- commercial sex workers (CSW): the high prevalence of HIV among IDU-CSW in the East (>40% in some cities of the Russian Federation) requires that interventions for the control and prevention of HIV among CSW, and especially IDU, need to be prioritised. At the same time, there is a need to develop HIV prevention programmes for male and transgender CSW, especially, but not only, in the West;
- HIV and tuberculosis co-infection: the increases in HIV/TB co-morbidity reported by many eastern European countries underline the need to strengthen TB and HIV control and treatment. In the West, access to both case management and disease control services must be ensured for migrants from Sub-Saharan Africa who are at an increased risk for HIV/TB co-morbidity.

Résumé

L'infection à VIH demeure d'importance de santé publique majeure. L'épidémiologie et les priorités de santé publique varient en Europe. À l'est, une augmentation de l'incidence du sida ainsi que du nombre de diagnostics du VIH soulignent la nécessité d'assurer l'accès aux traitements et aux soins, ainsi que de renforcer la prévention du VIH dans les groupes à risque, comme les usagers de drogues par injection (UDI) et leurs partenaires. À l'ouest, la prévention du VIH doit être renforcée parmi les hommes ayant des relations sexuelles avec des hommes (HSH), et l'accès au traitement et aux soins parmi les communautés de migrants doit être assuré. Dans ce rapport, les données du VIH sont présentées pour trois populations :

- patients avec une infection sexuellement transmissible (IST) : la prévalence élevée du VIH (jusqu'à 66 %) déclarée parmi les HSH diagnostiqués avec une IST en l'Europe de l'Ouest indique la nécessité de renforcer la promotion du "safer sex" dans cette population ;
- travailleurs du sexe (TS) : la prévalence élevée du VIH parmi les UDI-TS à l'Est (> 40 % dans quelques villes de la Fédération de Russie) demande que des interventions pour le contrôle et la prévention du VIH parmi les TS, particulièrement les UDI, aient la priorité. En même temps, il est nécessaire de développer des programmes de prévention du VIH pour des TS masculins et transsexuels, particulièrement à l'Ouest ;
- coïnfection VIH et tuberculose : l'augmentation de la coïnfection VIH-TB, déclarée par plusieurs pays en Europe de l'Est, souligne le besoin de renforcer le contrôle et les traitements des deux infections. À l'Ouest, la prise en charge des cas et l'accès aux services de soin doivent être assurés, pour les migrants de l'Afrique sub-saharienne, au plus haut risque de coïnfection VIH-TB.

Резюме

ВИЧ инфекция остается однои из важнеиших проблем здравоохранения в Европе. ВИЧ эпидемиология и последовательно приоритеты здравоохранения в Европе неоднородны. На Востоке, увеличение случаев СПИДа и увеличение числа ВИЧ случаев, подчеркивает важность гарантировать доступ к лечению и уходу, а также укреплению превентивных мер по предотвращению ВИЧ передачи в групах риска, таких как потребители инекционных наркотиков и их партнеры. На Западе, меры по предотвращению ВИЧ должны быть укреплены среди мужчин, которые имеют секс с мужчинами (МСМ). Также должен быть обеспечен доступ к лечению и уходу среди мигрантов. В этом издании ВИЧ данные, представленные по следующим трем групам, демонстрируют:

- **Пациенты с инфекциями передоваемыми половым путеъм (ИППП):** В Западной Европе, высокая распространенность ВИЧ (до 66 %) наблюдается среди МСМ, у которых диагностированно острое заболевание ИППП, что указывает на потребность усилить меры по профилактике более безопасного секса в этой группе;
- **Коммерческие сексуальные работники (КСР):** высокая распространенность ВИЧ среди ПИН-КСР на Востоке (> 40 % в некоторых городах Российской Федерации), указывает на потребность установления приоритетов интервенции для контроля и предотвращения ВИЧ среди КСР, и особенно ПИН. Так же, есть потребность развивать программы предотвращения ВИЧ среди мужчин КСР и трансексуалов КСР;
- **Ко-инфекция ВИЧ и туберкулеза:** увеличение заболеваемости ВИЧ и ТБ, о которой сообщают многие восточноевропейские странны подчеркивает надобность усилить контроль и лечение ТВ и ВИЧ. На Западе, доступ, к услугам и контролю болезни должен быть обеспечен для мигрантов из Суб-Сахарнои Африки, так как они являются групои повышенного риска для заболевания ВИЧ и ТБ.

Section 1
Reporting of cases of HIV infection and AIDS

The reporting of HIV diagnoses remains a major tool in the surveillance and monitoring of the HIV/AIDS epidemic. It has progressively replaced AIDS surveillance which, since 1996 with the introduction and widespread use highly active antiretroviral treatment (HAART), has become less reflective of the underlying trends in HIV infection.

However, some important caveats need to be highlighted:

- national HIV data are unavailable for two countries in western Europe (Italy and Spain), sites of major epidemics, as well as Monaco. National AIDS data remain unavailable for Cyprus;
- 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. In contrast, AIDS cases are adjusted for reporting delays, except for those reported from the Russian Federation (see Technical note);
- data regarding newly diagnosed cases of HIV infection do not necessarily represent incidence as infection may have occurred up to several years previously.

Data are presented (Annexes 1.1-1.6) and discussed within three geographic areas: the West, the Centre and the East (see Technical note) as well as for the 27 countries of the European Union (EU), including the new Member States of Bulgaria and Romania.

1.1 Update of HIV and AIDS case reports (2005)

The data presented here are an update of HIV and AIDS data available in report No. 73 [1], for the WHO European Region, and include:

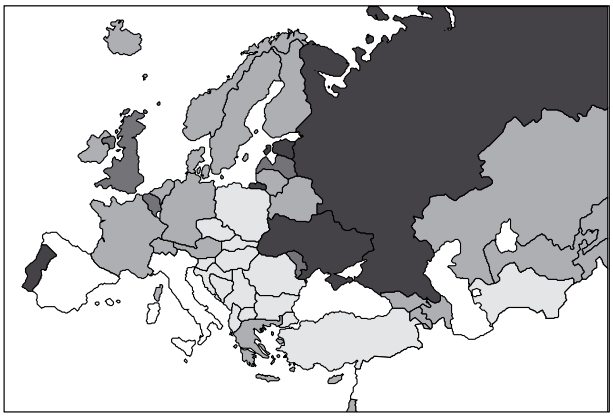
- HIV case reports: complete data from France for 2005 and Norway (2004 and 2005);
- AIDS case reports: complete data from France and Ukraine for 2005.

Update HIV reports 2005

Data for 2005 are available for 50 of the 53 countries in the WHO European Region.

A total of 80,758 newly diagnosed cases of HIV were reported in 2005 (Annex 1.1). Rates of newly diagnosed cases of HIV infection per million population reported in 2005 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 (467); Portugal (251); Russian Federation (247); and Ukraine (243).

Figure 1.1: Rates of newly diagnosed cases of HIV infection per million population reported in 2005



HIV per million population

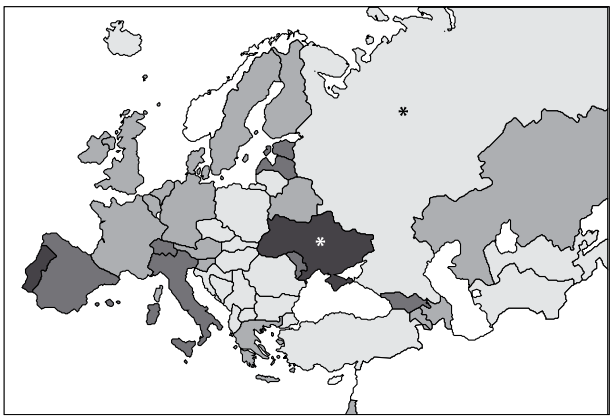
200 +
100-199
20-99
<20
Data unavailable

Update AIDS reports 2005

Data for 2005 are available for 49 of the 53 countries in the WHO European Region.

A total of 12,797 AIDS cases were diagnosed in 2005 (Annex 1.6). Incidence of AIDS cases per million population diagnosed in 2005 are presented for individual countries in Figure 1.2 and Annex 1.6. In two countries, >50 AIDS cases per million population were diagnosed in 2005: Ukraine (84) and Portugal (80).

Figure 1.2: Incidence of AIDS cases per million population diagnosed in 2005



AIDS per million population

50 +
20-49
5-19
<5
Data unavailable

* Reported AIDS cases per million population

1.2 Update of HIV case reports (2005) by region

European Union

In the EU, 26,894 newly diagnosed cases of HIV infection were reported in 2005 in 25 countries (excluding Italy and Spain), representing a rate of 69.4 cases per million population (Table 1.1).

The highest rates were reported in Estonia (467) and Portugal (251), but rates of between 100 and 200 new diagnoses of HIV infection per million population were reported by three EU countries: United Kingdom (148); Latvia (130); and Luxembourg (136).

Over a third of cases (35%) were reported among females and 12% were among young people 15-24 years of age.

The predominant mode of transmission among the 20,808 cases with a reported route of transmission (data missing for 6,086 cases, 23%) was heterosexual (11,557; 55%). Newly diagnosed cases of HIV infection among men who have sex with men (MSM) represented a third of new cases (7,067; 34%).

Table 1.1: Characteristics of newly diagnosed cases of HIV infection reported in 25 countries of the European Union in 2005

	European Union*
Number of HIV cases	26,894
Rate per million population	69.4
Percentage of cases:	
Aged 15-24 years	12%
Female	35%
Predominant transmission mode	Heterosexual

* Data not available: Italy and Spain.

Eastern Europe

The largest number of new cases of HIV infection was reported in eastern Europe (53,024) representing a rate of 186.3 per million population in 2005 (Table 1.2).

In the East, the HIV epidemic has been concentrated among injecting drug users, although in 2005 the number of new diagnoses among drug users had declined to 19,561 from the peak of 55,323 (excluding Estonia) reported in 2001 (Annex 1.3). The decline among injecting drug users is most marked in the Russian Federation (from 48,231 in 2001 to 10,283 in 2005), Kazakhstan (from 1,037 to 636) and Latvia (from 665 to 111). However, large increases in the number of HIV diagnoses among injecting drug users have been reported in Ukraine (from 3,964 to 6,270), Uzbekistan (from 447 to 1,140) and Tajikistan (from 31 to 142).

In contrast, the number of infections in the East that were reported as heterosexually acquired has doubled, from 5,076 reported cases in 2001 to 11,202 in 2005 (excluding Estonia) (Annex 1.4).

Just under a third (31%) of newly diagnosed HIV infections in 2005 were reported in young people (15-24 years old) and 41% were female (Table 1.2).

Table 1.2: Characteristics of newly diagnosed cases of HIV infection reported in eastern Europe in 2005

	East
Number of HIV cases	53,024
Rate per million population	186.3
Percentage of cases:	
Aged 15-24 years	31%
Female	41%
Predominant transmission mode	Drug injection

Central Europe

In the Centre, the epidemic remains at low levels, with only 1,806 new cases of HIV infection being reported in 2005, representing a rate of 9.4 per million population (Table 1.3). Twenty per cent of newly diagnosed cases were young people (aged 15-24 years) and 28% female.

Overall, the predominant transmission group is heterosexual. However, 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 [1].

Table 1.3: Characteristics of newly diagnosed cases of HIV infection reported in central Europe in 2005

	Centre
Number of HIV cases	1,806
Rate per million population	9.4
Percentage of cases:	
Aged 15-24 years	20%
Female	28%
Predominant transmission mode	Heterosexual

Western Europe

In the West, 25,928 new cases of HIV infection were reported in 2005, a rate of 85.0 per million population (Table 1.4). Ten percent of newly diagnosed cases were young people (aged 15-24 years old) and 36% female.

Table 1.4: Characteristics of newly diagnosed cases of HIV infection reported in western Europe in 2005

	West*
Number of HIV cases	25,928
Rate per million population	85.0
Percentage of cases:	
Aged 15-24 years	10%
Female	36%
Predominant transmission mode	Heterosexual

* Data not available: Italy, Monaco, Spain.

The predominant transmission mode in western Europe is heterosexual contact. Of the 20,842 cases of newly diagnosed HIV cases of HIV infection with a reported route of transmission (5,086 missing data, 20%), the majority (11,715, 56%) were acquired by heterosexual contact. The number of cases in this transmission group has nearly doubled between 2001 (6,017 cases) and 2005 (11,715). 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].

Over a third of newly diagnosed cases of HIV were among MSM (7,183, 34%) and has more than doubled since 2001 (3,384). Less than 10% (1,647, 8%) of cases have been reported among injecting drug users (IDU), but it should be noted that data from Spain and Italy, sites of previous epidemics among IDU, are not included. Nonetheless, data from Italy (seven regions) and from Portugal (which has also reported epidemics among IDU), demonstrate a continuing decline in HIV cases reported among IDU.

1.3 Recent trends in HIV and AIDS reporting

HIV reporting

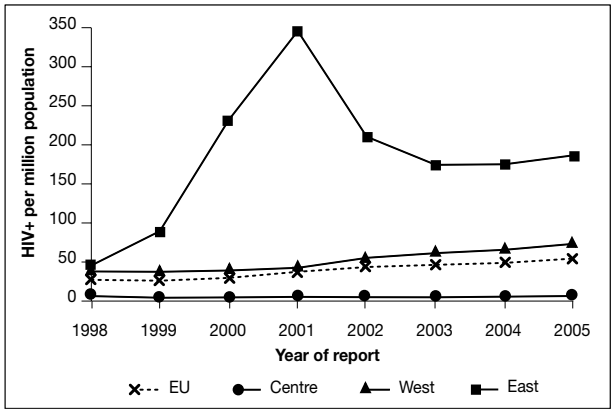
Trends since 1998 in the rates of newly diagnosed cases of HIV infection per million population by year of report are presented in Figure 1.3 and limited to the 44 countries with complete reporting for each year (see Annex 1.1).

In the East, a peak in the reporting of newly diagnosed cases of HIV infection was observed in 2001 (343/million), which was mostly due to the HIV epidemic among IDU in the Russian Federation. The rate of newly diagnosed cases of HIV infections then declined to a low in 2003 (174/million), since when the rate has increased to 186 cases of HIV per million population reported in 2005.

In the Centre, the rate of newly diagnosed cases of HIV infection has remained low and stable at <10/million.

In the West, the rate of newly diagnosed cases of HIV infection has steadily increased since 1998, from 40 to 75/million in 2005. The increase is due to increases among cases of heterosexually acquired infection among migrants and among MSM.

Figure 1.3: Rate of newly diagnosed cases of HIV per million population in 44 countries of the WHO European Region (West, Centre, East and EU), 1998-2005



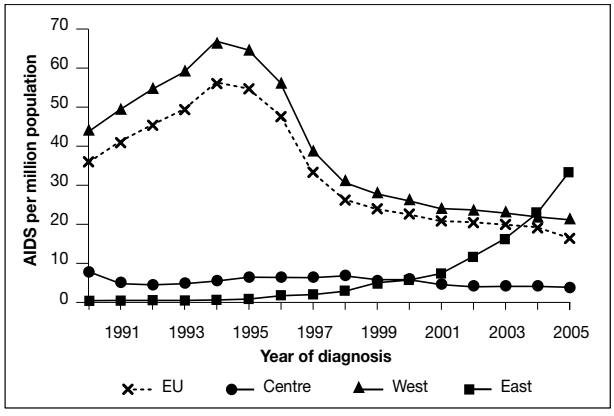
AIDS reporting

Trends since 1990 in the incidence of AIDS cases diagnosed per million population are presented in Figure 1.4 and limited to 47 countries in the WHO European Region with complete data for each year (Annex 1.6).

Incidence of AIDS has declined by more than two-thirds in both the West and the EU since the peak reported in 1994. A similar decline has been observed in AIDS incidence in central Europe in the same period.

In contrast, in the East, a rapid increase in the incidence of AIDS has been observed since the late 1990s. In 2005, the incidence of AIDS in the East was 34/million, a third more than that reported in the West and over ten times the rate reported in 1999. Although the majority of AIDS cases (>85%) have been reported from the Ukraine, large increases in recent years (i.e. since 1998) have been reported by nearly all of the 15 countries in the region (Annex 1.6).

Figure 1.4: Incidence of AIDS per million population in 47 countries of the WHO European Region (West, Centre, East and EU), 1990-2005



1.4 Conclusion

HIV infection remains a disease of major public health impact in the WHO European Region. However, the epidemiology of transmission varies across Europe, with important differences observed in the three sub-regions, requiring different priorities and interventions.

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. At the same time, there has been a rapid growth in the incidence of AIDS diagnosis in the East, where many countries have poor access to HAART for HIV-infected individuals [2].

In the East, 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 number of HIV cases reported as having acquired their infection heterosexually highlights the need for initiatives to control transmission in the heterosexually active population. Furthermore, measures to improve access to treatments are urgently required in many countries in this region.

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. Among MSM, the recent increases in the number of HIV diagnoses combined with evidence of increasing levels of sexual risk behaviour [3] reinforces the need for renewed health promotion campaigns in this population.

The surveillance of HIV and AIDS is essential to provide the necessary information with which both to monitor the epidemic and to evaluate the public health response to control the transmission of new infections. In order to achieve this aim, national public health authorities in Europe need to ensure that surveillance data is of the highest quality, in particular by the provision of complete national HIV and AIDS individual case reporting.

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Annexes 1.1-1.6
HIV infections newly diagnosed and AIDS cases reported by end December 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 31 December 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	38.7	339	41.9	428	52.9	402	49.6
EU	Belgium	1986	754	73.6	800	77.9	950	92.2	963	93.2
EU	Denmark	1990	200	37.8	292	54.9	256	47.9	321	59.9
EU	Finland	1986	80	15.5	142	27.5	145	28.0	127	24.5
EU	France ‡	2003	–	–	–	–	–	–	–	–
EU	Germany	1993	2,211	26.9	1,786	21.7	1,684	20.5	1,309	15.9
EU	Greece §	1999	665	61.2	1,266	115.8	501	45.6	420	38.1
	Iceland	1985	8	29.0	12	43.1	10	35.6	11	38.7
EU	Ireland	1985	120	32.4	190	50.7	290	76.3	299	77.4
	Israel	1983	379	65.1	277	46.5	289	47.5	359	57.8
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	22.7	136	30.4	169	37.5	163	36.0
EU	Portugal ‖ ‖	1983	–	–	–	–	4,069	397.9	2,405	234.0
	San Marino	1983	1	37.8	2	74.9	3	111.3	3	110.4
EU	Spain ¶¶	1999	–	–	–	–	–	–	–	–
EU	Sweden	1985	249	28.1	211	23.8	242	27.3	269	30.2
	Switzerland	1985	617	86.8	626	87.7	586	81.8	628	87.3
EU	United Kingdom	1984	3,000	51.4	3,142	53.6	3,268	55.6	4,161	70.5
Total West			**8,727**		**11,962**		**14,471**		**13,596**	
Centre										
	Albania	1992	5	1.6	4	1.3	10	3.3	20	6.5
	Bosnia & Herzegovina	1989	26	7.2	12	3.2	3	0.8	9	2.3
EU	Bulgaria	1987	26	3.2	27	3.4	49	6.1	40	5.0
	Croatia	1986	36	7.9	48	10.6	33	7.3	31	6.9
EU	Cyprus ***	1986	19	24.9	23	29.7	29	36.9	22	27.6
EU	Czech Republic	1985	31	3.0	50	4.9	57	5.6	51	5.0
EU	Hungary	1985	74	7.2	62	6.0	47	4.6	82	8.0
	Macedonia, F.Y.R.	1987	9	4.5	5	2.5	7	3.5	5	2.5
EU	Poland	1985	636	16.4	527	13.6	630	16.3	564	14.6
EU	Romania	1992	648	29.0	364	16.4	290	13.1	440	20.0
	Serbia & Montenegro †††	1985	106	10.0	87	10.4	77	9.2	93	11.2
EU	Slovakia	1985	11	2.0	2	0.4	19	3.5	8	1.5
EU	Slovenia	1986	14	7.1	15	7.6	13	6.6	16	8.1
	Turkey	1985	110	1.7	120	1.8	158	2.3	184	2.7
Total Centre			**1,751**		**1,346**		**1,422**		**1,565**	
East										
	Armenia	1988	9	2.9	35	11.3	29	9.4	29	9.5
	Azerbaijan	1987	66	8.2	81	10.0	64	7.9	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	1,086.4
	Georgia	1989	25	5.2	35	7.3	79	16.7	93	19.9
	Kazakhstan	1987	299	19.5	185	12.2	347	23.1	1,175	78.6
	Kyrgyzstan	1987	6	1.3	10	2.1	16	3.2	149	29.7
EU	Latvia	1987	162	67.2	242	101.2	466	196.4	807	342.4
EU	Lithuania	1988	52	14.7	66	18.7	65	18.6	72	20.7
	Moldova. Republic of	1987	408	94.8	155	36.1	176	41.2	234	54.9
	Russian Federation ‡‡‡	1987	3,968	26.9	19,728	134.2	58,786	401.1	87,144	596.9
	Tajikistan	1987	1	0.2	0	0.0	7	1.1	37	5.9
	Turkmenistan	1989	0	0.0	1	0.2	0	0.0	0	0.0
	Ukraine ‡‡‡	1987	8,197	163.2	5,300	106.7	5,485	111.7	6,086	125.3
	Uzbekistan	1987	3	0.1	28	1.1	154	6.2	549	21.9
Total East			**13,760**		**26,289**		**66,591**		**98,555**	
Total European Union (EU)			**9,304**		**12,299**		**15,469**		**16,008**	
Total WHO European Region			**24,238**		**39,597**		**82,484**		**113,716**	

EU Countries which constitute the European Union as of 1 January 2007.
* Cumulative totals since the start of reporting; may include cases with year of report not available.
† New HIV reporting system started in 2004; 2004 data include many cases diagnosed in previous years.
‡ New HIV reporting system started in 2003 (data March-December).
§ Retrospective reporting before 1999; data for 1999 include many cases diagnosed in previous years.
‖ HIV reporting exists in 8 of the 20 regions/provinces (Bolzano, Friuli Venezia-Giulia, Lazio, Liguria, Modena, Piemonte, Trento, Veneto); data presented for 1999-2004 for 7 regions (Liguria excluded: data only available for 2004); rates based on the population of the 7 regions: 16.78 million.
¶ Retrospective reporting before 1999.

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 31 December 2005
(Cont.)

Year of report								Cumulative total reported *	Geographic area	
2002		2003		2004		2005				
N	Rate	N	Rate	N	Rate	N	Rate	N		Country
										West
–	–	–	–	31	–	10	148.9	41		Andorra †
442	54.4	423	51.9	470	57.5	453	55.3	3,270	EU	Austria
990	95.6	1,049	101.1	1,000	96.2	1,066	102.3	17,869	EU	Belgium
295	54.8	259	48.0	308	56.9	285	52.5	4,521	EU	Denmark
130	25.0	133	25.5	128	24.4	137	26.1	1,887	EU	Finland
–	–	3,293	–	5,493	88.5	6,151	98.7	14,937	EU	France ‡
1,872	22.7	1,904	23.1	2,244	27.2	2,451	29.6	26,333	EU	Germany
400	36.2	444	40.1	452	40.7	560	50.4	7,718	EU	Greece §
7	24.4	10	34.6	5	17.1	8	27.2	184		Iceland
364	92.6	399	99.6	356	87.3	318	76.7	4,082	EU	Ireland
333	52.5	297	45.9	315	47.7	350	52.0	4,662		Israel
1,240	73.9	1,104	65.8	1,083	64.5	–	–	6,979	EU	Italy ‖
33	73.8	47	103.7	60	130.7	63	135.5	715	EU	Luxembourg ¶
–	–	–	–	17	42.5	19	47.3	36	EU	Malta **
–	–	–	–	–	–	–	–	–		Monaco ††
3,405	211.9	1,575	97.5	1,291	79.6	1,216	74.6	11,610	EU	Netherlands ‡‡
203	44.6	225	49.2	251	54.6	219	47.4	3,225		Norway §§
2,486	240.6	2,252	216.8	2,797	267.9	2,635	251.1	28,370	EU	Portugal ‖ ‖
1	36.5	4	144.6	5	179.3	5	177.8	53		San Marino
–	–	–	–	–	–	–	–	–	EU	Spain ¶¶
278	31.1	364	40.6	430	47.7	392	43.4	7,099	EU	Sweden
750	104.0	773	107.0	776	107.2	722	99.6	28,606		Switzerland
5,944	100.4	6,989	117.6	7,413	124.3	8,868	148.3	76,850	EU	United Kingdom
19,173		**21,544**		**24,925**		**25,928**		**249,047**		**Total West**
										Centre
26	8.4	21	6.8	29	9.3	31	9.9	179		Albania
8	2.0	13	3.3	16	4.1	13	3.3	116		Bosnia & Herzegovina
43	5.5	63	8.0	50	6.4	83	10.7	598	EU	Bulgaria
44	9.8	45	10.0	56	12.3	66	14.5	538		Croatia
16	19.8	24	29.4	25	30.3	43	51.5	484	EU	Cyprus ***
50	4.9	61	6.0	76	7.4	90	8.8	827	EU	Czech Republic
80	7.9	63	6.2	71	7.0	110	10.9	1,285	EU	Hungary
4	2.0	1	0.5	6	3.0	12	5.9	82		Macedonia, F.Y.R.
573	14.8	610	15.8	656	17.0	652	16.9	9,801	EU	Poland
335	15.3	244	11.2	293	13.4	205	9.4	6,433	EU	Romania
101	12.4	108	13.2	105	12.9	112	13.8	2,079		Serbia & Montenegro †††
11	2.0	13	2.4	15	2.8	21	3.9	158	EU	Slovakia
22	11.2	14	7.1	25	12.7	36	18.3	281	EU	Slovenia
192	2.7	197	2.8	210	2.9	332	4.5	2,254		Turkey
1,505		**1,477**		**1,633**		**1,806**		**25,115**		**Total Centre**
										East
41	13.4	29	9.5	49	16.2	75	24.9	363		Armenia
105	12.7	115	13.9	122	14.6	210	25.0	928		Azerbaijan
915	92.2	713	72.3	778	79.3	751	77.0	7,014		Belarus
899	666.8	840	626.3	743	556.5	621	467.0	5,063	EU	Estonia
95	20.6	100	21.9	163	36.1	242	54.1	880		Georgia
694	46.6	747	50.3	699	47.1	964	65.0	5,657		Kazakhstan
162	31.9	130	25.3	157	30.2	171	32.5	822		Kyrgyzstan
542	231.4	403	172.9	323	139.3	299	129.6	3,332	EU	Latvia
397	114.5	110	31.8	135	39.2	120	35.0	1,100	EU	Lithuania
209	49.2	258	61.0	360	85.4	533	126.7	2,838		Moldova, Republic of
47,715	328.3	36,379	251.6	33,969	236.1	35,379	247.1	329,980		Russian Federation ‡‡‡
29	4.6	42	6.6	198	30.8	189	29.0	506		Tajikistan
0	0.0	0	0.0	0	0.0	0	0.0	2		Turkmenistan
7,385	153.7	8,179	172.2	10,218	217.5	11,272	242.5	77,801		Ukraine ‡‡‡
981	38.5	1,836	71.1	2,016	76.9	2,198	82.7	7,810		Uzbekistan
60,169		**49,881**		**49,930**		**53,024**		**444,096**		**Total East**
20,847		**22,680**		**25,954**		**26,894**		**241,638**		**Total European Union (EU)**
80,847		**72,902**		**76,488**		**80,758**		**718,258**		**Total WHO European Region**

** 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; 1999 data include many cases diagnosed in previous years.
§§ Data by year of diagnosis rather than year of report.
‖ ‖ 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.
*** 40% cases were non residents.
††† Two independent states from June 2006; separate data not available for this update; data not available from Kosovo from 1999.
‡‡‡ 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 31 December 2005

Geographic area		Year of report					Cumulative
	Country	2001	2002	2003	2004	2005	total reported *
West							
	Andorra †	–	–	–	5	5	10
EU	Austria ‡	–	–	–	–	–	–
EU	Belgium	146	152	181	197	231	3,344
EU	Denmark	106	94	101	150	127	1,746
EU	Finland	27	38	30	44	31	564
EU	France §	–	–	669	1,143	1,317	3,137
EU	Germany	475	760	823	1,094	1,220	10,050
EU	Greece	159	154	157	140	175	3,406
	Iceland	2	3	3	2	3	93
EU	Ireland	73	46	75	64	57	885
	Israel	30	27	31	63	87	719
EU	Italy ‖	198	268	238	225	–	1,338
EU	Luxembourg	11	14	7	21	13	257
EU	Malta †	–	–	–	2	5	7
	Monaco ¶	–	–	–	–	–	–
EU	Netherlands **	326	1 478	690	576	571	5,939
	Norway ††	37	33	52	70	56	1,006
EU	Portugal	175	223	211	308	294	1,587
	San Marino	1	0	3	3	0	14
EU	Spain ‡‡	–	–	–	–	–	–
EU	Sweden	68	68	78	83	97	2,580
	Switzerland	116	134	143	177	198	3,303
EU	United Kingdom	1,434	1,965	2,160	2,176	2,696	35,767
Total West		**3,384**	**5,457**	**5,652**	**6,543**	**7,183**	**75,752**
Centre							
	Albania	0	1	2	1	1	15
	Bosnia & Herzegovina	1	2	4	1	2	18
EU	Bulgaria	0	1	1	0	4	35
	Croatia	12	17	24	26	37	157
EU	Cyprus	8	4	7	8	17	159
EU	Czech Republic	31	28	37	31	50	444
EU	Hungary	34	35	32	43	58	645
	Macedonia, F.Y.R.	1	0	0	0	1	8
EU	Poland	24	28	19	22	39	633
EU	Romania	2	5	4	6	10	106
	Serbia & Montenegro §§	–	27	29	31	44	141
EU	Slovakia	4	6	10	12	9	98
EU	Slovenia	8	11	8	16	28	154
	Turkey	9	19	15	10	31	182
Total Centre		**134**	**184**	**192**	**207**	**331**	**2,795**
East							
	Armenia	1	0	0	0	2	4
	Azerbaijan	0	1	0	4	0	8
	Belarus	3	3	0	0	2	28
EU	Estonia ‖ ‖	26	13	–	–	–	93
	Georgia	3	2	3	6	8	29
	Kazakhstan	0	4	0	2	3	19
	Kyrgyzstan	0	0	0	0	0	0
EU	Latvia	7	8	14	7	15	138
EU	Lithuania	4	5	3	4	3	70
	Moldova, Republic of	0	3	1	0	5	14
	Russian Federation	82	56	84	116	75	1,125
	Tajikistan	0	0	0	0	0	0
	Turkmenistan	0	0	0	0	0	0
	Ukraine	3	2	3	9	20	75
	Uzbekistan	6	2	0	9	10	28
Total East		**135**	**99**	**108**	**157**	**143**	**1,631**
Total European Union (EU)		**3,346**	**5,404**	**5,555**	**6,372**	**7,067**	**73,182**
Total WHO European Region		**3,653**	**5,740**	**5,952**	**6,907**	**7,657**	**80,178**

EU Countries which constitute the European Union as of 1 January 2007.
* Cumulative totals available since the beginning of reporting (see Annex 1.1).
† New HIV reporting system started in 2004.
‡ Data not available by transmission group.
§ New HIV reporting system started in 2003 (data March-December).
‖ HIV reporting exists in 8 of the 20 regions/provinces (Bolzano, Friuli Venezia-Giulia, Lazio, Liguria, Modena, Piemonte, Trento, Veneto); data presented for 2001-2004 for 7 regions (Liguria excluded: data only available for 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.
†† Data reported by year of diagnosis rather than year of report.
‡‡ HIV reporting exists in some regions only; data not available.
§§ Two independent states from June 2006; separate data not available for this update; data not available from Kosovo from 1999; 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 31 December 2005

Geographic area		Year of report					Cumulative
	Country	2001	2002	2003	2004	2005	total reported *
West							
	Andorra †	–	–	–	8	1	9
EU	Austria ‡	–	–	–	–	–	–
EU	Belgium	18	22	30	25	12	686
EU	Denmark	30	32	23	14	19	421
EU	Finland	49	27	23	10	15	313
EU	France §	–	–	126	198	163	487
EU	Germany	99	131	136	134	136	2,470
EU	Greece	15	15	10	9	19	277
	Iceland	2	1	1	1	0	20
EU	Ireland	38	50	49	71	66	1,270
	Israel	59	65	41	56	51	625
EU	Italy ‖	169	197	153	145	–	1,115
EU	Luxembourg	7	5	4	3	7	100
EU	Malta †	–	–	–	2	0	2
	Monaco ¶	–	–	–	–	–	–
EU	Netherlands **	24	174	80	49	29	598
	Norway ††	8	13	15	15	20	519
EU	Portugal	1,247	1,132	865	987	857	7,449
	San Marino	0	0	0	0	0	12
EU	Spain ‡‡	–	–	–	–	–	–
EU	Sweden	39	31	32	31	25	966
	Switzerland	78	67	109	83	59	3,447
EU	United Kingdom	122	144	125	165	168	4,392
Total West		**2,004**	**2,106**	**1,822**	**2,006**	**1,647**	**25,178**
Centre							
	Albania	0	1	0	0	0	1
	Bosnia & Herzegovina	2	1	0	3	2	16
EU	Bulgaria	0	2	0	7	13	32
	Croatia	4	1	2	4	1	31
EU	Cyprus	0	0	0	0	0	5
EU	Czech Republic	3	1	4	7	4	38
EU	Hungary	3	1	1	2	2	17
	Macedonia, F.Y.R.	0	0	0	0	2	8
EU	Poland	274	182	220	187	151	5,337
EU	Romania	2	3	4	0	2	13
	Serbia & Montenegro §§	–	15	17	15	11	61
EU	Slovakia	0	0	0	0	0	2
EU	Slovenia	1	0	0	0	0	12
	Turkey	1	5	5	6	8	118
Total Centre		**290**	**212**	**253**	**231**	**196**	**5,691**
East							
	Armenia	19	27	14	33	46	200
	Azerbaijan	72	41	43	66	110	430
	Belarus	414	583	448	359	276	4,688
EU	Estonia ‖ ‖	1 340	702	–	–	–	2,396
	Georgia	73	64	64	105	128	560
	Kazakhstan	1,037	500	502	433	636	4,260
	Kyrgyzstan	143	131	108	124	106	640
EU	Latvia	665	397	233	145	111	2,257
EU	Lithuania	55	379	85	101	85	866
	Moldova, Republic of	172	140	138	182	228	1,863
	Russian Federation	48,231	18,503	12,174	10,200	10,283	154,883
	Tajikistan	31	16	31	105	142	333
	Turkmenistan	0	0	0	0	0	0
	Ukraine	3,964	4,587	4,815	5,778	6,270	52,492
	Uzbekistan	447	631	918	831	1,140	4,117
Total East		**56,663**	**26,701**	**19,573**	**18,462**	**19,561**	**229,985**
Total European Union (EU)		**4,200**	**3,627**	**2,203**	**2,292**	**1,884**	**31,521**
Total WHO European Region		**58,957**	**29,019**	**21,648**	**20,699**	**21,404**	**260,854**

EU Countries which constitute the European Union as of 1 January 2007.
* Cumulative totals available since the beginning of reporting (see Annex 1.1).
† New HIV reporting system started in 2004.
‡ Data not available by transmission group.
§ New HIV reporting system started in 2003 (data March-December).
‖ HIV reporting exists in 8 of the 20 regions/provinces (Bolzano, Friuli Venezia-Giulia, Lazio, Liguria, Modena, Piemonte, Trento, Veneto); data presented for 2001-2004 for 7 regions (Liguria excluded: data only available for 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.
†† Data reported by year of diagnosis rather than year of report.
‡‡ HIV reporting exists in some regions only; data not available.
§§ Two independent states from June 2006; separate data not available for this update; data not available from Kosovo from 1999; 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 31 December 2005

Geographic area		Year of report					Cumulative
	Country	2001	2002	2003	2004	2005	total reported *
West							
	Andorra †	–	–	–	7	3	10
EU	Austria ‡	–	–	–	–	–	–
EU	Belgium	391	443	472	445	404	6,756
EU	Denmark	159	146	122	129	118	1,978
EU	Finland	24	41	54	56	63	676
EU	France §	–	–	1,705	2,731	2,652	7,088
EU	Germany	453	620	573	613	681	7,053
EU	Greece	107	99	125	102	148	1,611
	Iceland	7	2	6	2	5	63
EU	Ireland	173	231	223	178	159	1,487
	Israel	208	169	171	149	175	2,481
EU	Italy ‖	464	516	528	495	–	2,933
EU	Luxembourg	20	14	33	35	39	263
EU	Malta †	–	–	–	8	11	19
	Monaco ¶	–	–	–	–	–	–
EU	Netherlands **	183	1 300	546	453	448	3,666
	Norway ††	112	149	149	163	134	1,552
EU	Portugal	916	1,070	1,101	1,411	1,409	7,093
	San Marino	2	0	1	0	0	14
EU	Spain ‡‡	–	–	–	–	–	–
EU	Sweden	143	152	207	261	194	2,931
	Switzerland	276	321	403	435	322	4,996
EU	United Kingdom	2,379	3,484	4,287	4,485	4,750	30,388
Total West		**6,017**	**8,757**	**10,706**	**12,158**	**11,715**	**83,058**
Centre							
	Albania	12	22	16	25	26	137
	Bosnia & Herzegovina	6	4	9	10	9	65
EU	Bulgaria	40	37	62	43	65	500
	Croatia	11	22	13	17	22	152
EU	Cyprus	10	10	17	17	25	291
EU	Czech Republic	13	21	18	34	28	265
EU	Hungary	20	25	18	13	19	226
	Macedonia, F.Y.R.	4	3	0	6	8	53
EU	Poland	29	20	30	36	70	488
EU	Romania	60	150	113	178	146	1,060
	Serbia & Montenegro §§	–	37	41	27	28	152
EU	Slovakia	4	3	3	2	12	45
EU	Slovenia	5	6	2	5	2	54
	Turkey	114	91	101	126	187	1,180
Total Centre		**328**	**451**	**443**	**539**	**647**	**4,668**
East							
	Armenia	5	14	13	15	25	134
	Azerbaijan	45	18	26	32	84	259
	Belarus	157	317	253	387	428	2,151
EU	Estonia ‖ ‖	105	182	–	–	–	360
	Georgia	17	29	30	49	85	256
	Kazakhstan	65	154	161	203	236	923
	Kyrgyzstan	6	29	19	32	59	167
EU	Latvia	63	67	66	66	94	458
EU	Lithuania	7	6	13	24	20	114
	Moldova, Republic of	47	57	110	169	291	846
	Russian Federation	2,744	3,294	3,686	4,431	4,883	22,591
	Tajikistan	5	2	1	14	28	53
	Turkmenistan	0	0	0	0	0	0
	Ukraine	1,885	2,499	3,043	4,041	4,586	22,260
	Uzbekistan	30	110	270	202	383	1,011
Total East		**5,181**	**6,778**	**7,691**	**9,665**	**11,202**	**51,583**
Total European Union (EU)		**5,768**	**8,643**	**10,318**	**11,820**	**11,557**	**77,803**
Total WHO European Region		**11,526**	**15,986**	**18,840**	**22,362**	**23,564**	**139,309**

EU Countries which constitute the European Union as of 1 January 2007.
* Cumulative totals available since the beginning of reporting (see Annex 1.1).
† New HIV reporting system started in 2004.
‡ Data not available by transmission group.
§ New HIV reporting system started in 2003 (data March-December).
‖ HIV reporting exists in 8 of the 20 regions/provinces (Bolzano, Friuli Venezia-Giulia, Lazio, Liguria, Modena, Piemonte, Trento, Veneto); data presented for 2001-2004 for 7 regions (Liguria excluded: data only available for 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.
†† Data reported by year of diagnosis rather than year of report.
‡‡ HIV reporting exists in some regions only; data not available.
§§ Two independent states from June 2006; separate data not available for this update; data not available from Kosovo from 1999; 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 31 December 2005

Geographic area		Year of report					Cumulative
	Country	2001	2002	2003	2004	2005	total reported *
West							
	Andorra †	–	–	–	1	0	1
EU	Austria ‡	–	–	–	–	–	–
EU	Belgium	23	12	12	9	7	351
EU	Denmark	7	10	3	4	4	71
EU	Finland	0	3	1	1	0	12
EU	France §	–	–	44	52	48	144
EU	Germany	14	22	11	18	17	162
EU	Greece	2	2	2	3	1	49
	Iceland	0	0	0	0	0	1
EU	Ireland ‖	6	8	12	3	3	36
	Israel	12	8	8	8	13	131
EU	Italy ¶	38	23	7	9	–	136
EU	Luxembourg	0	0	0	0	0	2
EU	Malta †	–	–	–	0	0	0
	Monaco **	–	–	–	–	–	–
EU	Netherlands ††	0	58	27	16	10	111
	Norway ‡‡	3	2	2	1	5	37
EU	Portugal	6	19	16	20	6	89
	San Marino	0	0	0	0	0	1
EU	Spain §§	–	–	–	–	–	–
EU	Sweden	0	5	4	14	12	101
	Switzerland	6	17	9	4	5	159
EU	United Kingdom	103	117	141	140	69	1,353
Total West		**220**	**306**	**299**	**303**	**200**	**2,947**
Centre							
	Albania	0	1	3	0	0	5
	Bosnia & Herzegovina	0	0	0	0	0	0
EU	Bulgaria	0	1	0	0	1	6
	Croatia	1	0	1	0	0	6
EU	Cyprus	4	0	0	0	1	6
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	1	4
EU	Poland	6	29	11	10	8	88
EU	Romania	12	10	12	7	4	201
	Serbia & Montenegro ‖ ‖	–	3	2	3	1	11
EU	Slovakia	0	0	0	0	0	0
EU	Slovenia	0	1	0	1	0	4
	Turkey	4	4	4	8	8	43
Total Centre		**27**	**49**	**34**	**29**	**26**	**383**
East							
	Armenia	2	0	0	1	2	5
	Azerbaijan	0	3	0	1	3	11
	Belarus	4	0	0	20	34	77
EU	Estonia	3	2	3	7	4	19
	Georgia	0	0	1	2	7	12
	Kazakhstan	1	1	3	6	9	22
	Kyrgyzstan	0	0	0	0	2	2
EU	Latvia	0	2	2	4	2	12
EU	Lithuania	0	0	0	0	0	0
	Moldova, Republic of	0	2	7	6	9	28
	Russian Federation ¶¶	–	–	–	–	–	–
	Tajikistan	0	0	0	0	0	0
	Turkmenistan	0	0	0	0	0	0
	Ukraine ¶¶	–	–	–	–	–	–
	Uzbekistan	2	5	0	4	11	22
Total East		**12**	**15**	**16**	**51**	**83**	**210**
Total European Union (EU)		**224**	**324**	**309**	**318**	**199**	**2,962**
Total WHO European Region		**259**	**370**	**349**	**383**	**309**	**3,540**

EU Countries which constitute the European Union as of 1 January 2007.
* Cumulative totals available since the beginning of reporting (see Table 1).
† New HIV reporting system started in 2004.
‡ Data not available by transmission group.
§ New HIV reporting system started in 2003 (data March-December).
‖ Cumulative total since 2000 (data on mother-to-child cases not available prior to 2000).
¶ HIV reporting exists in 8 of the 20 regions/provinces (Bolzano, Friuli Venezia-Giulia, Lazio, Liguria, Modena, Piemonte, Trento, Veneto); data presented for 2001-2004 for 7 regions (Liguria excluded: data only available for 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.
‡‡ Data reported by year of diagnosis rather than year of report.
§§ HIV reporting exists in some regions only; data not available.
‖ ‖ Two independent states from June 2006; separate data not available for this update; data not available from Kosovo from 1999; data not available by transmission group before 2002.
¶¶ Data on mother-to-child cases not available.

Annex 1.6. AIDS cases and incidence rates per million population by country and year of diagnosis (1998-2005) adjusted for reporting delays*, and cumulative totals, WHO European Region, data reported by 31 December 2005

Geographic area		Year of diagnosis							
		1998		1999		2000		2001	
	Country	N	Rate	N	Rate	N	Rate	N	Rate
West									
	Andorra ‡	–	–	–	–	–	–	–	–
EU	Austria	99	12.2	101	12.5	85	10.5	91	11.2
EU	Belgium	121	11.8	118	11.5	140	13.6	137	13.3
EU	Denmark	74	14.0	75	14.1	58	10.9	71	13.2
EU	Finland	15	2.9	10	1.9	17	3.3	18	3.5
EU	France	1,948	32.2	1,833	30.2	1,730	28.4	1,670	27.3
EU	Germany	938	11.4	831	10.1	788	9.6	746	9.1
EU	Greece	125	11.5	130	11.9	130	11.8	93	8.4
	Iceland	2	7.3	0	0.0	1	3.6	1	3.5
EU	Ireland	18	4.9	25	6.7	13	3.4	26	6.7
	Israel	71	12.2	50	8.4	68	11.2	63	10.1
EU	Italy	2,440	42.4	2,130	37.0	1,949	33.8	1,804	31.2
EU	Luxembourg	9	21.3	5	11.6	10	23.0	4	9.1
EU	Malta	4	10.3	1	2.6	3	7.7	0	0.0
	Monaco	0	0.0	0	0.0	0	0.0	0	0.0
EU	Netherlands	238	15.1	178	11.3	248	15.6	255	16.0
	Norway	39	8.8	29	6.5	38	8.4	28	6.2
EU	Portugal	1,023	101.0	1,095	107.6	994	97.2	976	95.0
	San Marino	3	113.3	0	0.0	0	0.0	1	36.8
EU	Spain	3, 679	91.4	3,115	77.0	2,823	69.3	2,441	59.4
EU	Sweden	60	6.8	69	7.8	60	6.8	48	5.4
	Switzerland	272	38.3	280	39.2	206	28.7	216	30.1
EU	United Kingdom	793	13.6	756	12.9	830	14.1	731	12.4
Total West		**11,971**		**10,831**		**10,191**		**9,420**	
Centre									
	Albania	1	0.3	1	0.3	3	1.0	12	3.9
	Bosnia & Herzegovina	3	0.8	11	2.9	3	0.8	10	2.6
EU	Bulgaria	3	0.4	11	1.4	16	2.0	14	1.8
	Croatia	13	2.8	16	3.5	19	4.2	7	1.6
EU	Cyprus ‖	–	–	–	–	–	–	–	–
EU	Czech Republic	8	0.8	17	1.7	14	1.4	7	0.7
EU	Hungary	36	3.5	37	3.6	27	2.6	20	2.0
	Macedonia, F.Y.R.	3	1.5	5	2.5	4	2.0	3	1.5
EU	Poland	129	3.3	137	3.5	124	3.2	132	3.4
EU	Romania	835	37.4	659	29.7	655	29.6	433	19.7
	Serbia & Montenegro ¶	95	9.0	56	6.7	71	8.5	66	7.9
EU	Slovakia	3	0.6	2	0.4	5	0.9	5	0.9
EU	Slovenia	13	6.6	9	4.6	7	3.6	5	2.5
	Turkey	40	0.6	26	0.4	48	0.7	43	0.6
Total Centre		**1,182**		**987**		**996**		**757**	
East									
	Armenia	2	0.6	8	2.6	3	1.0	4	1.3
	Azerbaijan	2	0.2	9	1.1	18	2.2	17	2.1
	Belarus	4	0.4	5	0.5	0	0.0	6	0.6
EU	Estonia	4	2.9	2	1.5	3	2.2	2	1.5
	Georgia	2	0.4	6	1.3	14	3.0	8	1.7
	Kazakhstan	9	0.6	5	0.3	10	0.7	18	1.2
	Kyrgyzstan	0	0.0	1	0.2	0	0.0	1	0.2
EU	Latvia	12	5.0	18	7.5	23	9.7	40	17.0
EU	Lithuania	9	2.5	6	1.7	7	2.0	10	2.9
	Moldova, Republic of	6	1.4	3	0.7	4	0.9	11	2.6
	Russian Federation	66	0.4	40	0.3	22	0.1	–	–
	Tajikistan	0	0.0	0	0.0	0	0.0	1	0.2
	Turkmenistan	0	0.0	0	0.0	0	0.0	0	0.0
	Ukraine	293	5.8	586	11.8	650	13.2	842	17.3
	Uzbekistan	3	0.1	0	0.0	4	0.2	9	0.4
Total East		**412**		**689**		**758**		**969**	
Total European Union (EU)		**12,636**		**11,370**		**10,759**		**9,779**	
Total WHO European Region		**13,565**		**12,507**		**11,945**		**11,146**	

EU Countries which constitute the European Union as of 1 January 2007.
* See Technical note; due to differences in estimation methods, data adjusted may differ slightly from those presented in national reports.
† Cumulative totals since the beginning of the epidemic; unadjusted.
‡ HIV/AIDS surveillance system started in 2004.
§ December 2003 data.
‖ Data not available.

Annex 1.6. AIDS cases and incidence rates per million population by country and year of diagnosis (1998-2005) adjusted for reporting delays*, and cumulative totals, WHO European Region, data reported by 31 December 2005
(Cont.)

Year of diagnosis								Cumulative total reported †	Geographic area	
2002		2003		2004		2005				
N	Rate	N	Rate	N	Rate	N	Rate	N		Country
										West
–	–	–	–	1	14.9	0	0.0	1		Andorra ‡
93	11.4	56	6.8	88	10.7	103	12.5	2,468	EU	Austria
129	12.5	122	11.8	124	11.9	162	15.5	3,511	EU	Belgium
44	8.2	38	7.1	58	10.8	49	8.9	2,573	EU	Denmark
20	3.8	25	4.8	19	3.6	28	5.4	422	EU	Finland
1,634	26.6	1,454	23.5	1,341	21.6	1,173	18.8	60,833	EU	France
713	8.6	758	9.2	851	10.3	673	8.1	24,335	EU	Germany
98	8.9	94	8.4	89	8.0	101	9.1	2,669	EU	Greece
0	0.0	1	3.5	3	10.3	1	3.4	57		Iceland
34	8.6	38	9.6	56	13.7	47	11.2	876	EU	Ireland
79	12.4	78	12.0	38	5.7	90	13.5	1,035		Israel
1,744	30.1	1,706	29.4	1,620	27.9	1,475	25.4	56,076	EU	Italy
1	2.2	8	17.7	12	26.1	8	17.4	185	EU	Luxembourg
4	10.1	2	5.0	1	2.5	3	7.5	61	EU	Malta
0	0.0	0	0.0	0	0.0	0	0.0	40		Monaco
294	18.3	271	16.8	260	16.0	198	12.1	6,845	EU	Netherlands
33	7.2	39	8.5	–	–	–	–	813 §		Norway
982	95.1	894	86.0	802	76.8	834	79.5	12,702	EU	Portugal
1	36.5	1	36.2	0	0.0	1	35.6	19		San Marino
2,270	54.5	2,217	52.6	2,049	48.0	1,549	36.0	72,099	EU	Spain
60	6.7	51	5.7	64	7.1	46	5.1	2,033	EU	Sweden
213	29.5	232	32.1	257	35.4	269	37.1	8,251		Switzerland
879	14.8	931	15.7	884	14.8	795	13.3	21,898	EU	United Kingdom
9,324		**9,015**		**8,617**		**7,605**		**279,802**		**Total West**
										Centre
10	3.2	5	1.6	6	1.9	9	2.9	57		Albania
3	0.8	5	1.3	5	1.3	6	1.5	83		Bosnia & Herzegovina
13	1.6	13	1.7	22	2.8	19	2.5	164	EU	Bulgaria
19	4.2	10	2.2	12	2.7	12	2.7	234		Croatia
–	–	–	–	–	–	–	–	–	EU	Cyprus ‖
8	0.8	8	0.8	13	1.3	11	1.1	196	EU	Czech Republic
26	2.6	26	2.6	23	2.3	33	3.3	505	EU	Hungary
5	2.5	0	0.0	3	1.5	12	5.9	63		Macedonia, F.Y.R.
122	3.2	147	3.8	180	4.7	165	4.3	1,725	EU	Poland
323	14.7	350	16.0	290	13.3	270	12.4	9,825	EU	Romania
73	9.0	62	7.6	58	7.2	56	6.9	1,334		Serbia & Montenegro ¶
2	0.4	2	0.4	2	0.4	3	0.6	40	EU	Slovakia
3	1.5	6	3.0	10	5.1	10	5.1	125	EU	Slovenia
44	0.6	44	0.6	54	0.7	30	0.4	588		Turkey
651		**678**		**679**		**637**		**14,939**		**Total Centre**
										East
4	1.3	10	3.3	23	7.6	39	12.9	105		Armenia
15	1.8	21	2.5	24	2.8	60	7.2	166		Azerbaijan
21	2.1	33	3.3	89	9.1	129	13.2	303		Belarus
6	4.5	10	7.5	29	21.7	27	20.3	100	EU	Estonia
52	11.3	50	11.0	121	26.7	119	26.7	383		Georgia
34	2.3	68	4.6	74	5.0	99	6.7	332		Kazakhstan
10	2.0	6	1.2	–	–	–	–	18 §		Kyrgyzstan
56	23.9	75	32.2	79	34.3	85	37.0	394	EU	Latvia
9	2.6	9	2.6	21	6.1	10	3.0	96	EU	Lithuania
19	4.5	46	10.9	58	13.8	64	15.2	220		Moldova, Republic of
–	–	–	–	–	–	–	–	451 **		Russian Federation
0	0.0	0	0.0	0	0.0	0	0.0	1		Tajikistan
1	0.2	0	0.0	0	0.0	0	0.0	1		Turkmenistan
1,340	27.9	1,864	39.2	2,669	56.8	3,911	84.1	12,664		Ukraine
7	0.3	10	0.4	22	0.8	11	0.4	70		Uzbekistan
1,574		**2,202**		**3,209**		**4, 555**		**15,304**		**Total East**
9,566		**9,311**		**8,989**		**7,877**		**282,756**		**Total European Union (EU)**
11,549		**11,896**		**12,505**		**12,797**		**310,045**		**Total WHO European Region**

¶ Two independent states from June 2006; separate data not available for this update; data not available from Kosovo from 1999.
** December 2000 data; since 2001, only aggregate data are available, which cannot be adjusted for reporting delays; 151 cases were reported in 2001, 203 in 2002, 191 in 2003, 221 in 2004 and 592 in 2005.

Section 2
Prevalence of HIV infection among STI patients and STI clinic attendees

Key Points

- Patients with STI or attending STI services are an important sentinel population in which to monitor HIV.
- In the West, high HIV prevalence (up to 66%) has been reported among men who have sex with men (MSM) diagnosed with an acute STI.
- HIV prevalence among heterosexuals diagnosed with an STI is much lower (<10%) than among MSM.
- The reported prevalence of HIV can vary within a country, usually being much higher in major urban areas.

Recommendations for surveillance

- To seek to standardise further the reporting of HIV prevalence.
- To improve the comparability of data by reporting HIV prevalence for different risk groups (e.g. MSM or injecting drug users).
- To share best practice for the implementation of behavioural surveillance.

Recommendations for public health

- To strengthen HIV prevention among MSM attending STI services.
- To ensure that HIV and STI services are closely linked in order to provide complete sexual health care.
- To assure the accessibility of HIV and STI services to all communities.

2.1 Introduction

In Europe, HIV prevalence in the general population remains low and HIV infection is concentrated among high risk populations. However, heterosexuals with a sexually transmitted infection (STI) are at greater risk of acquiring HIV infection than the general population, not only because they are more likely to have engaged in high risk sexual behaviour, but also because STI can facilitate the transmission of HIV [1,2].

Heterosexual transmission of HIV is predominant in western Europe and is increasing in eastern and central Europe [3]. In the context of rising levels of STI [4] and sexual HIV transmission, monitoring of HIV among STI patients becomes increasingly important as a tool to evaluate the spread of HIV in the general population [5].

A European Union Concerted Action project to monitor HIV prevalence among STI patients, using a standardised protocol, including surveillance networks of 19 (mostly western) European countries, was established in the beginning of the 1990s [6]. However, since then, many of the systems have been discontinued or modified, some pre-existing systems (mostly eastern European) have continued and new systems established. Despite these earlier efforts, no overall standardised approach to HIV surveillance among STI clinic attendees currently exists.

We have collected data on HIV prevalence among STI patients and STI clinic attendees from national representatives and published studies for the period 2000-2005 [7-28]. Most data come from STI clinics or other health facilities with STI services, although data from private practitioners and from voluntary counselling and testing sites are also included. HIV prevalence data are presented separately for the following groups of patients:

- patients diagnosed with an acute STI (other than HIV): in this group (Annex 2.1), we have also included data on patients who were recruited with either clinical symptoms (Slovakia) or a suspicion of STI (Spain);
- STI clinic attendees: these data (Annex 2.2) concern persons attending STI clinics or services, many of whom may not have an STI.

The reported HIV prevalence in a given population will depend strongly on the proportion of high risk individuals recruited (e.g. men who have sex with men, injecting drug users). Data relating to commercial sex workers (CSW) are presented in section 3. In this section, wherever possible, data are presented for the following populations:

- heterosexuals (non-injecting drug users);
- men who have sex with men (MSM);
- injecting drug users (IDU).

Despite the lack of a standardised European approach, the data presented can give a useful indication of levels of HIV infection among specific populations of patients seeking care for STI. However, international comparisons and interpretations of trends can be hazardous due to differences in:

- target population: important differences in the organisation and utilisation of health services exist between countries. For example, in some countries, public STI clinics are used mainly by socially disadvantaged persons (who may also be at higher risk for HIV infection), while in others, such services are widely accepted and used by a much broader spectrum of society;
- time: changes in the composition of the studied population may occur over time. For example, the recent outbreaks of STI among MSM reported in several western European countries [9;13;24;26;29-34] may have resulted in an increase in HIV testing in this population.

The data reported are from three main categories of studies:

- seroprevalence studies (SP): these are based on unlinked anonymous testing (UAT) of STI patients and are often conducted using residual sera (e.g. from blood taken for syphilis serology). Such data have a reduced sampling

bias compared to diagnostic testing results, which was 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 [35];

- diagnostic testing (DT): refers here to the systematic reporting of results of all testing carried out with the primary objective of providing individuals with their serostatus. HIV testing may have been offered by the clinician either as part of routine testing or in the context of clinical care, or it may have been initiated by the individuals themselves. These data are subject to a participation bias depending on HIV testing practices, selective uptake of testing and exclusion of known HIV-positive individuals, all of which may change over time;
- self-reported studies (SR): HIV status is reported by the individual patient. The validity of a self-reported HIV status is lower than that obtained by the testing of a biological sample, especially as it has been demonstrated that a large proportion of STI clinic attendees are unaware of their true HIV status [36]. Nonetheless, self-reported status is more easily employed in the field as it avoids the difficulties of collecting biological samples in a community setting.

In the section below, data are grouped by three geographic areas: West, Centre and East (see technical note). However, due to the small number of studies, data are presented by combining Centre and East in section 2.2 and West and Centre in section 2.3.

2.2 HIV prevalence among patients with diagnosed STI

Data on HIV prevalence among patients with diagnosed STI are available from 16 studies in as many countries, most of which were reported from western Europe. Most countries have reported national data, some of which are available at regional level, while other countries have reported only regional data (e.g. France). Overall, reported HIV prevalence among patients diagnosed with an STI ranged from 0% in Serbia to over 49% in Germany (Annex 2.1).

West

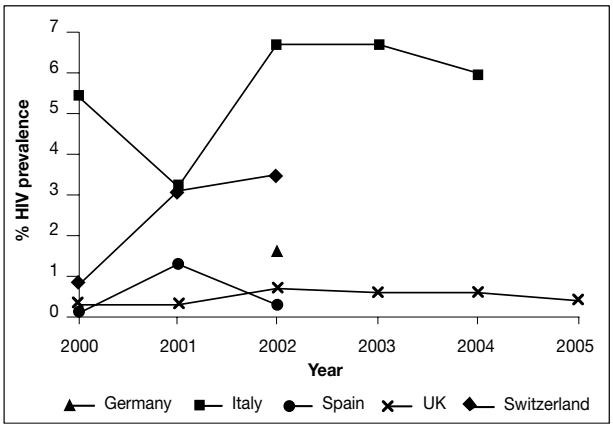
HIV prevalence data among individuals with diagnosed STI are presented for nine countries, two of which (Belgium and Denmark) have not provided data by identified risk group.

Heterosexuals

HIV prevalence data among heterosexuals with a diagnosed STI were available from five countries: Germany, Italy, Spain, Switzerland and the United Kingdom. In Spain, HIV prevalence was provided for individuals with a suspicion of an STI. In the remaining four countries, HIV prevalence was reported for those diagnosed with an acute STI (from one of four STI in Germany to one of 12 in Switzerland).

The highest prevalence was reported in Italy (6.7% in 2003) and in Switzerland 3.5% in 2002 (Figure 2.1; Annex 2.1). In the remaining three countries, reported HIV prevalence was <2%: 1.3% in Spain in 2001, 1.6% in Germany in 2002 and 0.4% in the United Kingdom in 2005. Regional data from the United Kingdom demonstrate important differences in HIV prevalence, with a higher prevalence in London (0.7%) compared to outside of London (0.3%) in 2005 (Annex 2.1).

Figure 2.1: Trends in HIV prevalence among heterosexual patients diagnosed with an STI in five western European countries, 2000-2005



Trends data were available for all countries except Germany. Increases were reported in Italy (from 5.4% in 2000 to a peak of 6.7% in 2002 and 2003), Switzerland (from 0.8% in 2000 to 3.5% in 2002) and the United Kingdom (0.3% in 2000 to a peak of 0.7% in 2002). In Spain, HIV prevalence among heterosexuals attending clinics for a suspicion of STI in 6 Spanish cities ranged from 0.1% in 2000 to 1.3 in 2001.

Men who have sex with men (MSM)

National data from six countries demonstrated a very much higher prevalence among MSM than among heterosexuals.

Among all countries which provided data, HIV prevalence was >10% with a maximum reported in Germany (49% in 2002) (Table 2.1; Annex 2.1). However, in Germany, HIV prevalence was self-reported among MSM diagnosed with an acute STI, while in Spain HIV prevalence was estimated from UAT studies among MSM with a suspicion of an STI.

Regional data were provided by France and the United Kingdom. In the United Kingdom in 2005, the prevalence

of HIV was four times higher among MSM in London (21%) than MSM outside London (5%) (Table 2.1; Annex 2.1). The HIV prevalence of 48% reported among MSM diagnosed with infectious syphilis in Paris may therefore not reflect the HIV prevalence of the whole of France.

Table 2.1: HIV prevalence (most recent year) among MSM diagnosed with an STI in six western European countries, 2002-2005

Country	Year	HIV prevalence	(N)
France (Paris)	2005	48%	(244)
Germany	2002	49%	(420)
Ireland	2002	19%	(112)
Italy	2004	34%	(79)
Spain	2002	13%	(168)
United Kingdom	2005	14%	(2,558)
London		21%	(1,380)
Outside London		5%	(1,178)

Centre and East

HIV prevalence among individuals with a diagnosed STI was available from seven countries, four in the Centre and three in the East.

All but one country reported data from diagnostic testing of patients, and one country provided details of risk groups (Annex 2.1). Studies included patients who had been diagnosed with one of 12 STI (Czech Republic) to patients who presented with clinical symptoms (Slovakia) or for whom the STI was not specified (the remaining five countries).

The highest HIV prevalence among the seven countries was reported from Estonia where, between 2000 and 2005, HIV prevalence ranged between 0.6% in 2002 and 1.5% in 2001 (Table 2.2; Annex 2.1). HIV prevalence of 0.8% was reported in Croatia and in the remaining six countries, HIV prevalence was ≤0.5%.

Table 2.2: HIV prevalence (most recent year) among patients diagnosed with an STI in seven central and eastern European countries, 2002-2005

Country	Year	HIV prevalence	(N)
Centre			
Croatia	2005	0.8%	(243)
Czech Republic	2005	<0.1%	(4,972)
Serbia, Regional	2005	0%	(235)
Slovakia	2002	0%	(869)
East			
Belarus	2005	0.1%	(51,967)
Estonia	2005	1.1%	(451)
Georgia	2005	0.5%	(1,769)

2.3 HIV prevalence among STI clinic attendees

Studies that have reported HIV prevalence among STI clinic attendees have been grouped separately from those among individuals with a diagnosed STI as this population is more likely to include many individuals at a lower risk of HIV (e.g. those who attend for regular check-ups).

West and Centre

HIV prevalence among STI clinic attendees are reported from six countries, of which two (Netherlands, Spain) have reported data by specific risk groups.

The highest HIV prevalence was among attendees of STI clinics in the Lisbon area of Portugal, where a prevalence of 8.7% was reported in 2000 (Annex 2.2). In the remaining five countries, HIV prevalence was ≤2%, except in FYR Macedonia in 2000 when a prevalence of 4.8% was reported (Table 2.3; Annex 2.2).

Table 2.3: HIV prevalence (most recent year) among STI clinic attendees in six western and central European countries, 2002-2005

Country	Year	HIV prevalence	(N)
West			
Israel (Tel-Aviv, Haifa)	2002	0.6%	(900)
Netherlands	2005	0.9%	(30,384)
hetero, Amsterdam	2005	0.4%	(10,435)
hetero, elsewhere	2005	0.2%	(15,847)
MSM, Amsterdam	2005	5.9%	(2,108)
MSM, elsewhere	2005	3.9%	(1,902)
Portugal (Lisbon)	2002	7.4%	(758)
Spain	2004	2.0%	(22,037)
heterosexuals	2004	0.9%	(10,854)
MSM	2004	5.2%	(4,717)
Centre			
Macedonia, FYR	2002	0.2%	(1,325)
Slovenia (7 regions)	2005	0.3%	(587)

In the Netherlands and Spain, HIV prevalence among MSM attending STI clinics was much higher (5% in Netherlands and 5.2% in Spain) than among heterosexuals (0.3% in the Netherlands and 0.9% in Spain) (Annex 2.2). Regional data from the Netherlands demonstrate that HIV prevalence was higher among MSM attending STI clinics in Amsterdam compared to the rest of the country except in 2002. However, among heterosexuals, these regional differences were less evident (Annex 2.2).

East

HIV prevalence data among STI clinic attendees were reported from eight countries, seven of which provided national results from diagnostic testing (Table 2.4).

The highest national prevalence of HIV was reported in Uzbekistan (1.8% in 2002) and two countries (Latvia and Ukraine) reported HIV prevalence of >0.5% (Table 2.4; Annex 1.2). In the remaining four countries, HIV prevalence was <0.5%.

Table 2.4: National HIV prevalence data (most recent year) among STI clinic attendees in seven eastern European countries, 2002-2005

Country	Year	HIV prevalence (N)	
Azerbaijan	2002	<0.1%	(3,113)
Kazakhstan	2005	0.1%	(67,265)
Latvia	2005	0.6%	(9,332)
Lithuania	2005	0%	(2,522)
Russian Federation	2003	0.2%	(1,447,066)
Ukraine	2002	0.7%	(40,570)
Uzbekistan	2002	1.8%	(628)

Regional data were reported from three countries (Table 2.5). In Ukraine in 2002, the national prevalence of HIV among STI clinic attendees was 0.7%, but prevalence was much higher in the capital Kiev (1.7%) and the major cities of Odessa (1.3%) and Nikolaev (3.3%). In Kazakhstan, the prevalence of HIV among STI clinic attendees in urban centres (i.e. 19 cities) was twice the national prevalence of 0.1%. In the city of Osh, Kyrgyzstan, an HIV prevalence of 1.5% was reported.

Table 2.5: Regional HIV prevalence (most recent year) among STI clinic attendees in three eastern European countries, 2002-2005

Country	Year	HIV prevalence (N)	
Kazakhstan (19 cities)	2005	0.2%	(5,248)
Kyrgystan (Osh)	2004	1.5%	(200)
Ukraine			
Kiev	2002	1.7%	(576)
Nikolaev	2002	3.3%	(151)
Odessa	2002	1.3%	(3,163)

2.4 Discussion

HIV transmission is ongoing in Europe, although its epidemiology is varied. In western Europe, sexual transmission is dominant, with reported cases mainly among MSM and persons originating from sub-Saharan Africa. In contrast, in eastern Europe, most newly diagnosed cases are among IDU although heterosexual transmission is rising (see section 1). At the same time, increases in STI have been reported in Europe. STI control is important not only because STI can facilitate HIV transmission, but also they are themselves a cause of serious morbidity.

In western Europe, the prevalence of HIV among heterosexual STI clinic patients was generally <2%, except for Italy and Switzerland. This reported prevalence was similar to that in central and eastern Europe, although results for subgroups were not available.

However, in western Europe, the prevalence of HIV among MSM STI patients was higher, generally 5% or more and in many countries very much higher. This represents a worrying situation, as a diagnosed STI among MSM both indicates that the person has recently engaged in unprotected sexual behaviour and facilitates the transmission of HIV [1].

In some communities of MSM, various safer sex strategies (e.g. serosorting and negotiated safety) may have contributed to the stabilisation of HIV and increases in STI incidence [37]. An awareness of one's HIV serostatus is a pre-requisite of such strategies and among MSM high levels of unknown HIV seropositivity have been reported [38]. Thus, MSM attending STI clinics represent a major target group in which to promote HIV testing as well as safer sex.

In many eastern countries, after the rapid increases in HIV among IDU, there is evidence of increasing heterosexual transmission [28,39]. We have found no evidence of increasing HIV prevalence among STI clinic attendees in this population. However, the low prevalence of HIV among STI patients in eastern Europe may be a consequence of the small overlap of HIV and STI services and differences in access to those services, especially in countries of the former Soviet Union which have inherited vertical and separate STI and HIV programmes [40].

Since STI clinics attract persons at increased risk of HIV, they are suitable places for HIV prevention and testing while providing STI treatment. However, not all STI clinics offer HIV testing services [41]. In one study in the Netherlands, the proportion of HIV-positive heterosexuals aware of their HIV status was 19% [20,41].

In many countries, ethnic minorities experience a much higher burden of STI [42-44] and HIV infection [3], and are more likely to be diagnosed late in the course of HIV infection [45,46]. This underscores the need to promote sexual health in migrant communities and these communities have been prioritised in the recent European strategy for HIV prevention [47]. Easy access to HIV/STI services, both for early diagnosis of STI/HIV infection as well as treatment and care must be ensured for all communities.

It is clear that those individuals attending STI services are an important sentinel population in which HIV surveillance must be ensured. Efficient and linked surveillance systems for STI and HIV are needed to guide interventions in a

rapidly evolving situation. Although efforts have been made to standardise HIV surveillance in this population [48, 49], the wide heterogeneity of services in the different countries make international comparisons difficult. Nonetheless, the surveillance of HIV among STI clinic attendees could be improved by the reporting of prevalence data for various risk groups, thereby providing more comparable data. Some countries have implemented behavioural surveillance in this population, and the lessons learnt should be shared with other European countries.

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Annex 2.1-2.2
HIV prevalence studies and diagnostic testing among STI patients and STI clinic attendees (2000-2005)

Annex 2.1. HIV prevalence studies and diagnostic testing among patients diagnosed with a sexually transmitted infection: numbers tested and HIV prevalence, by country and region (2000-2005)

Geographic area			2000		2001		2002	
Country	Coverage	Data[1]	N tested	%HIV+	N tested	%HIV+	N tested	%HIV+
West								
Belgium	National	SP[3]						
Denmark	National	SR[4]	168	4.2	153	7.8	261	9.6
France	Paris	DT[5]			123	61.8	239	50.6
	- MSM				*112*	*66.1*	*215*	*54.9*
Germany	National	SR[6]					1,022	21.1
	- MSM						*420*	*48.8*
	- heterosexuals						*185*	*1.6*
	- <25 years						*228*	4.4
Ireland	National	DT/SR[5]	86	12.8	306	18.6	203	14.3
	- MSM		*38*	*18.4*	*198*	*21.7*	*112*	*18.8*
Italy	National	SP[7]	1,383	12.6	2,034	8.3	2,009	9.8
	- IDU		*66*	*83.3*	*40*	*85.0*	30	*50.0*
	- MSM		*143*	*36.4*	*215*	*30.7*	*296*	*26.7*
	- heterosexuals (non-IDU)		*1,164*	*5.4*	*1,294*	*3.2*	*1,331*	*6.7*
	- <25 years		*328*	*4.3*	*406*	*2.5*	*394*	*2.8*
Spain	6 cities[8]	SP (UAT)[9,10]	2,857	1.7	2,351	2.4	2,567	2.0
	- MSM (non-IDU)		*207*	*10.1*	*129*	*10.1*	*168*	*13.1*
	- heterosexuals (non-IDU)		*699*	*0.1*	*856*	*1.3*	*989*	*0.3*
Switzerland	National	SP[7,11]	283	1.8	211	2.8	334	3.6
	- heterosexuals (non-IDU)[12]		*236*	*0.8*	*161*	*3.1*	*254*	*3.5*
United Kingdom	National	SP (UAT)[13]	27,638	1.0	30,038	1.3	30,318	1.7
	- MSM, London		*1,456*	*10.9*	*1,883*	*13.9*	*1,690*	*15.9*
	- MSM, outside London		*934*	*2.4*	*1,006*	*3.3*	*1,077*	4.2
	- heterosexuals, London		*8,862*	*0.7*	*10,611*	*0.7*	*10,926*	*1.3*
	- heterosexuals, outside London		*16,386*	*0.1*	*16,538*	*0.1*	*16,625*	*0.3*
Centre								
Croatia	National	SP[14]						
	- heterosexuals							
Czech Republic	National	DT[7]	3,650	0.00	3,713	0.08	4,580	0.07
Serbia	Regional	DT[14]						
Slovakia	National	DT[15]	1,173	0.00	1,537	0.13	869	0.00
East								
Belarus	National	DT[7]	69,415	0.04	60,999	0.06	53,865	0.07
Estonia	National	DT[7]	1,866	1.18	2,975	1.48	2,890	0.59
Georgia	National	DT[7]			1,602	0.19	1,104	0.45

1 SP - seroprevalence study, SR - self-reported, DT - diagnostic testing, UAT - unlinked anonymous testing.
2 Ref.= see text.
3 HIV status among patients diagnosed with 1 of eight STI: syphilis, gonorrhoea, chlamydia, trichomoniasis, genital herpes, genital warts, pelvic inflammatory disease, pediculosis pubis.
4 HIV status on syphilis and gonorrhoea report forms.
5 Syphilis cases.
6 HIV status among patients diagnosed with 1 of four STI: syphilis, gonorrhoea, chlamydia, trichomoniasis.
7 HIV status among patients diagnosed with 1 of 12 STI: syphilis, gonorrhoea, chlamydia, trichomoniasis, chancroid, male urethritis, genital herpes, genital warts, proctitis, mucopurulent cervicitis, pelvic inflammatory disease, pediculosis pubis.

Annex 2.1. HIV prevalence studies and diagnostic testing among patients diagnosed with a sexually transmitted infection: numbers tested and HIV prevalence, by country and region (2000-2005) (Cont.)

2003		2004		2005		Geographic area		
N tested	%HIV+	N tested	%HIV+	N tested	%HIV+	Ref.[2]	Country	Coverage
							West	
214	21.0	245	18.0	471	20.8	7-9	Belgium	National
270	13.0	534	10.1	561	11.6		Denmark	National
423	41.8	378	42.9	308	42.5	10,11	France	Paris
354	*48.0*	*320*	*48.4*	*244*	*47.5*			*- MSM*
						12	Germany	National
								- MSM
								- heterosexuals
								- <25 years
						13	Ireland	National
								- MSM
1,924	13.1	714	10.6				Italy	National
51	*66.7*	*12*	*75.0*					*- IDU*
393	*29.8*	*79*	*34.2*					*- MSM*
1,471	*6.7*	*617*	*6.0*					*- heterosexuals (non-IDU)*
382	*5.5*	*147*	*0.0*					*- <25 years*
						14	Spain	6 cities[8]
								- MSM (non-IDU)
								- heterosexuals (non-IDU)
						15	Switzerland	National
								- heterosexuals (non-IDU)[12]
31,675	1.5	33,040	1.5	27,231	1.7	16,17	United Kingdom	National
1,657	*16.9*	*1,464*	*18.2*	*1,380*	*21.4*			*- MSM, London*
1,276	*3.8*	*1,491*	*4.6*	*1,178*	*5.3*			*- MSM, outside London*
10,027	*1.0*	*9,666*	*1.1*	*8,163*	*0.7*			*- heterosexuals, London*
18,715	*0.3*	*20,419*	*0.3*	*16,510*	*0.3*			*- heterosexuals, outside London*
							Centre	
				243	0.82		Croatia	National
				175	*0.00*			*- heterosexuals*
4,736	0.11	4,698	0.09	4,972	0.06	18,19	Czech Republic	National
				235	0.00		Serbia	Regional
							Slovakia	National
							East	
47,820	0.09	51,796	0.12	51,967	0.11		Belarus	National
1,135	1.15	617	0.81	451	1.11		Estonia	National
1,221	0.41	2,276	0.22	1,769	0.45		Georgia	National

8 Alicante, Bilbao, Gijon, Madrid, Oviedo, Pamplona.
9 Persons attending specifically for HIV testing excluded.
10 STI clinic attendees with suspicion of STI.
11 HIV status self-reported in approximately 12% (tested in last 3 months).
12 90% male, 6% from a country with a generalised epidemic.
13 Patients screened for syphilis and diagnosed with an acute STI (infectious syphilis, gonorrhoea, chlamydia, trichomoniasis, chancroid/donovanosis/LGV, non-specific urethritis, scabies/pediculosis, first attack of HSV or HPV, molluscum contagiosum).
14 STI list not specified.
15 Patients with clinical symptoms.

Annex 2.2. HIV prevalence studies and diagnostic testing among STI clinic attendees: numbers tested and HIV prevalence, by country and region (2000-2005)

Geographic area				2000		2001		2002	
Country	**Coverage**	**Data[1]**	**Site[2]**	**N tested**	**%HIV+**	**N tested**	**%HIV+**	**N tested**	**%HIV+**
West									
Israel	Tel-Aviv, Haifa[4]	DT[5]	STI					900	*0.6*
Netherlands	National	DT	STI	11,712	*0.8*	15,365	*0.9*	19,999	*1.1*
	- MSM, Amsterdam			*546*	*5.7*	*965*	*4.7*	*1,481*	*3.8*
	- MSM, outside Amsterdam			*531*	*3.8*	*902*	*3.4*	*1,322*	*5.4*
	- heterosexuals, Amsterdam			*4,201*	*0.3*	*5,352*	*0.4*	*6,327*	*0.4*
	- heterosexuals, outside Amsterdam			*7,945*	*0.4*	*7,892*	*0.3*	*10,507*	*0.5*
	- IDU								
Portugal	Lisbon area	DT	STI	*737*	*8.7*	*820*	*5.7*	758	*7.4*
	- <25 years			*339*	*2.7*	*358*	*2.5*	*340*	*1.8*
Spain	National[6]	DT	STI	16,227	*2.7*	*18,112*	*2.3*	19,990	*1.9*
	- MSM (non-IDU)			*3,076*	*5.3*	*3,490*	*4.9*	*3,783*	*5.0*
	- heterosexuals (non-IDU)			*7,529*	*1.0*	*8,647*	*0.9*	*9,438*	*0.9*
Centre									
Macedonia, FYR	National	DT		126	*4.76*	*550*	*0.55*	1,325	*0.23*
Slovenia	7 regions[7]	SP (UAT)	STI, hosp.	452	*0.00*	*323*	*0.0*	546	*0.37*
East									
Azerbaijan	National	DT	STI, VCT					3,113	*0.03*
Kazakhstan	National	DT	STI, hosp.						
	Cities[8]	SP	STI						
Kyrgyzstan	Osh city	SP	STI						
Latvia	National	DT	STI, hosp.	15,378	*0.33*	*12,019*	*0.51*	10,101	*0.46*
Lithuania	National	DT	STI	8,265	*0.00*	*6,138*	*0.03*	1,328	*0.15*
Russian Federation	National	DT[5]	STI, hosp.	1,951,945	*0.12*	*1,765,526*	*0.25*	1,690,507	*0.20*
Ukraine	National	DT[5]	STI	114,843	*0.71*	*88,491*	*0.76*	40,570	*0.70*[9]
	- Kiev			*1,444*	*0.83*	*1,330*	*1.65*	*576*	*1.74*
	- Nikolaev			*994*	*3.72*	*387*	*2.84*	*151*	*3.31*
	- Odessa			*18,850*	*1.56*	*5,878*	*1.24*	*3,163*	*1.30*
Uzbekistan	National	DT	STI			*793*	*0.88*	628	*1.75*

1 DT - diagnostic testing, SP - seroprevalence study, UAT - unlinked anonymous testing.
2 STI - sexually transmitted disease clinics or other health-care facilities with STI services, hosp. - hospitals, VCT - voluntary counselling and testing centres.
3 References - see text.
4 Immigrant workers.

Annex 2.2. HIV prevalence studies and diagnostic testing among STI clinic attendees: numbers tested and HIV prevalence, by country and region (2000-2005) (Cont.)

2003		2004		2005			Geographic area	
N tested	%HIV+	N tested	%HIV+	N tested	%HIV+	Ref.[3]	Country	Coverage
							West	
							Israel	Tel-Aviv, Haifa[4]
19,100	*0.7*	27,210	*0.8*	30,384	*0.9*	20-26	Netherlands	National
1,387	*4.0*	*1,572*	*5.5*	*2,108*	*5.9*			*- MSM, Amsterdam*
1,492	*2.3*	*2,079*	*3.2*	*1,902*	*3.9*			*- MSM, outside Amsterdam*
5,978	*0.3*	*9,280*	*0.3*	*10,435*	*0.4*			*- heterosexuals, Amsterdam*
10,179	*0.2*	*13,847*	*0.2*	*15,847*	*0.2*			*- heterosexuals, outside Amsterdam*
35	*0.0*	*40*	*2.5*	*27*	*7.4*			*- IDU*
							Portugal	Lisbon area
								- <25 years
20,586	*2.1*	22,037	*2.0*				Spain	National[6]
4,180	*5.5*	*4,717*	*5.2*					*- MSM (non-IDU)*
10,025	*0.9*	*10,854*	*0.9*					*- heterosexuals (non-IDU)*
							Centre	
							Macedonia, FYR	National
613	*0.16*	489	*1.02*	587	*0.34*	27	Slovenia	7 regions[7]
							East	
							Azerbaijan	National
85,074	*0.05*	73,530	*0.05*	67,265	*0.05*		Kazakhstan	National
1,233	*0.49*	3,699	*0.41*	5,248	*0.21*			Cities[8]
		200	*1.50*				Kyrgyzstan	Osh city
10,097	*0.65*	9,123	*0.71*	9,332	*0.56*		Latvia	National
1,884	*0.11*	1,798	*0.00*	2,522	*0.00*		Lithuania	National
1,447,066	*0.20*					28	Russian Federation	National
							Ukraine	National
								- Kiev
								- Nikolaev
								- Odessa
							Uzbekistan	National

5 STI status not specified.
6 11 autonomous regions, 75% of Spanish population.
7 Ljubljana, Celje, Maribor, Novo mesto, Koper and 2 other (not specified).
8 Cities non specified: 4 in 2003, 14 in 2004, 19 in 2005.
9 Data for 6 months.

Section 3
Prevalence of HIV infection among commercial sex workers

Key points

- HIV prevalence among non-injecting drug user female commercial sex workers (CSW) is low (<1%), especially in the West.
- HIV prevalence among male and transgender CSW in the West is much higher (>10%).
- HIV prevalence is much higher among injecting drug user CSW, especially in the East, exceeding 40% in some cities of the Russian Federation.

Recommendations for surveillance

- To improve data comparability by reporting HIV prevalence separately for different sub-populations (e.g. injecting drug user CSW, male CSW).
- Indicators of high risk sexual behaviour of CSW with commercial partners should be standardised to those recommended by WHO and UNGASS.
- Other behavioural indicators should also be collected such as injecting drug use (IDU) and condom use with regular partners.
- HIV surveillance among CSW should involve those community-based organisations that represent CSW.

Recommendations for public health

- To prioritise and tailor interventions in the East for the control and prevention of HIV among CSW, especially IDU.
- To develop HIV prevention programmes for male and transgender CSW, especially – but not only – in the West.

3.1 Introduction

Commercial sex workers (CSW), both male and female, are at high risk for HIV infection and other sexually transmitted infections (STI). In countries with concentrated HIV epidemics, CSW are one of the groups in which high HIV prevalence (>5%) is observed. Furthermore, the clients of CSW may act as a "bridge" for HIV infection between higher and lower risk populations.

HIV/AIDS case reporting does not reflect the epidemic among CSW and thus in countries with low-level or concentrated HIV epidemics the surveillance of HIV infection among sex workers is important [1]. The dynamics of the HIV epidemic among CSW can be changed by targeted prevention [2]. Therefore, the monitoring of the HIV epidemic among CSW is not only an important component of the surveillance of HIV/AIDS but is also vital for planning, implementation and evaluation of prevention and care programmes targeted at CSW.

There are many types of sex work that differ by worksite, principal methods of soliciting clients and sexual practices for which the risk of HIV transmission can vary [3]. The high international mobility of CSW and consequent difficulties to access health care services, makes it an important European health care issue [4]. In recent years, increases in the number of migrant CSW, often from regions with higher risks of HIV and other STI, have been reported in many western European countries [5].

The percentage of women who engage in sex work has recently been estimated for the different regions and countries of the world [6]. Data were drawn from official sources, but the methods of estimation were rarely described and varied by region:

- East: the median percentage of women who had engaged in commercial sex work was 0.6% (range 0.1% in Turkmenistan to 1.5% in Azerbaijan and Latvia);
- Centre: the median percentage of women who had engaged in CSW was 0.6% (range 0.4% in the Czech Republic and Slovakia to 1.4% in Slovenia);
- West: the median percentage of women who had engaged in CSW was 0.4% (range 0.1% in Sweden to 1.4% in Germany).

Commercial sex work is highly stigmatised in most countries. The legal situation of prostitution varies in different European countries. In several western European countries, commercial sex is legal or controlled (Finland, Germany, Ireland, Latvia, Netherlands). In most eastern and central European countries it is prohibited.

3.2 HIV prevalence among CSW

For the period 2000-2005, data concerning HIV prevalence among CSW in 22 countries are currently included in the European HIV Prevalence Database (see Technical note). These data were obtained through 38 serosurveys or data collection systems [7-29] employing a wide variety of methods (see Annex 3) which may be broadly classified as:

- seroprevalence studies (SP): designed specifically to measure HIV prevalence and based on testing, usually unlinked anonymous (UAT), of serum or saliva;
- diagnostic (screening) testing (DT): the systematic reporting of the results of HIV testing carried out in settings where the primary objective was to provide individuals with their serostatus. HIV testing may have been offered by the clinician either as part of routine testing or in the context of clinical care or it may be initiated by the individuals themselves. These data are subject to a participation bias depending on HIV testing practices, selective uptake of testing and exclusion of known HIV-positive individuals, all of which may change over time;
- mandatory screening: in some countries regular and mandatory screening of registered CSW is undertaken in various settings including the street, brothels or

community outreach and other health services, such as STI clinics. These data reflect incidence rather than prevalence since individuals who test positive are no longer allowed to work as registered prostitutes and are thus no longer subject to regular screening.

While the majority of studies were conducted among female CSW, several also included male and transgender CSW. HIV prevalence among CSW depends on other risk factors such as injecting drug use (IDU), whether CSW are female or homosexual males or transgender. Therefore, HIV prevalence data will be presented in the following four sections:

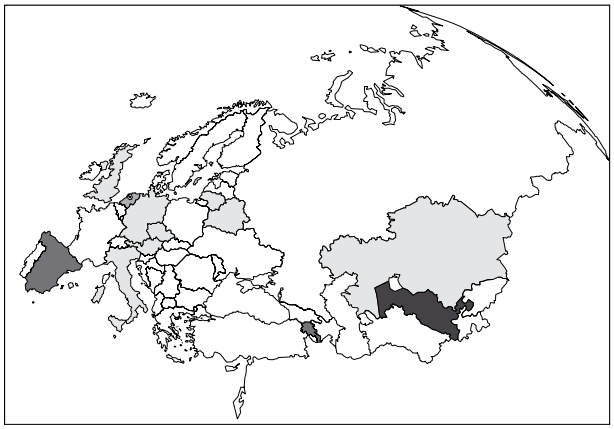
- female CSW (non-IDU);
- female CSW (IDU);
- female CSW and behavioural data;
- male and transgender CSW.

3.2.1 Female CSW (non-IDU)

For the period 2000-2005, data for female non-IDU CSW were available from 14 studies in 12 countries. Of these 14 studies, only 5 had recruited at least part of their sample from non-health care settings (e.g. brothels or the street).

The reported HIV prevalence among female non-IDU CSW was low (≤1%) in all countries except Uzbekistan (5.2% among street CSW in Tashkent) and Armenia (1.2% in CSW attending voluntary counselling and testing centres in 2000).

Figure 3.1: HIV prevalence among female non-IDU CSW in Europe, 2000-2005 (most recent year available)



HIV prevalence (%) among female CSW

1.51-1.6 | 0.51-1.0 | Data unavailable
1.01-1.5 | 0.0-0.5

In five countries, studies reported no HIV positive CSW (Annex 3):

- Austria: mandatory testing of registered CSW. However, a survey of illegal CSW, including CSW that were injecting drugs, reported a prevalence of 3.7%;
- Belarus: CSW recruited from the street or health services (2004);
- Italy: immigrant CSW recruited from health services in Sicily (2002);
- Lithuania: CSW recruited from the street (2002-2005);
- United Kingdom: CSW recruited from health services in Scotland (2001).

In two countries (Germany and Spain), HIV prevalence data were available for female CSW and heterosexuals attending STI clinics. In both countries, the prevalence of HIV was higher among heterosexuals in the general population than among CSW, although in Germany heterosexuals had been diagnosed with an acute STI (Table 3.1; Annexes 2.1 & 2.2).

Table 3.1: HIV prevalence among CSW and heterosexuals (HC) attending STI clinics, 2002-2005

		HIV prevalence (N)			
Country	**Year**	**CSW**		**HC**	
Germany	2002	0.3%	(290)	1.6%	(185)
Spain	2004	0.6%	(5,045)	0.9%	(10,854)

3.2.2 Female CSW (IDU)

Injecting drug use (IDU) is high risk behaviour for HIV infection. Data on drug use and HIV prevalence among female CSW was available from 14 countries, mostly from the East.

Only two studies reported data separately for IDU and non-IDU CSW: in two cities in the Netherlands (Amsterdam and The Hague) and Uzbekistan (Table 3.2). In each study, the prevalence of HIV among non-IDU CSW was lower than among IDU CSW, even though in Uzbekistan the prevalence of HIV among non-IDU CSW was high (5%; Table 3.2).

Table 3.2: HIV prevalence (%) among drug using and non-drug using female CSW, 2000-2005

		HIV prevalence (N)			
Country	**Year**	**IDU**		**Non-IDU**	
Netherlands					
Amsterdam	2003	11%	(53)	3%	(159)
The Hague	2005	18%	(11)	0%	(164)
Uzbekistan	2003	58%	(41)	5%	(407)

In the remaining 16 HIV seroprevalence studies conducted among female CSW, the proportion of IDU was reported but data not made available separately (Table 3.3; Annex 3). Of these 16 studies, an HIV prevalence of >5% was reported in 8 studies, all of which had been conducted in eastern Europe.

Table 3.3: Prevalence of HIV and percentage IDU (most recent year) among female CSW in eastern Europe, 2000-2005

Country	Year	N	%IDU	%HIV
Azerbaijan	2003	200	1%	9%
Georgia				
Tbilisi	2002	158	1%	0%
Kazakhstan	2005	1,960	12%	2%
Kyrgyzstan				
Bishkek, Osh	2004	352	5%	2%
Latvia	2002	92	80%	16%
Riga	2004	93	53%*	18%
Moldova, Republic of				
Kishinev	2003	151	11%	5%
Russian Federation				
Ekaterinbourg	2003	149	27%	15%
Moscow	2003	135	5%	14%
St Petersbourg	2003	108	93%	48%
Togliatti	2001	77	100%	62%
Ukraine	2001	646	35%	20%

* Percentage IDU among HIV-positive.

The highest HIV prevalence was reported in those studies with the highest percentage of IDU among the recruited CSW: in Togliatti City (100% IDU and 62% HIV-positive) and St Petersbourg (93% IDU and 48% HIV-positive). The lowest HIV prevalence was reported in those studies with the lowest percentage of IDU CSW: Tbilisi, Georgia (1% IDU and 0% HIV-positive). Thus, the reported HIV prevalence is very much related to the proportion of IDU among recruited CSW, especially in countries in the East where IDU is the predominant risk group.

However, in some countries in the East, despite low levels of IDU (i.e. <10%), high HIV prevalence was reported: in Azerbaijan (1% IDU and 8.5% HIV-positive); in Moscow (5% IDU and 14% HIV-positive); and in Tashkent, Uzbekistan (9% IDU and 10% HIV-positive) (Table 3.3; Annex 3).

In central and western Europe, where IDU is not the predominant risk group, high prevalence of IDU is not associated with high HIV prevalence, although in Poland, both HIV prevalence and drug use was at almost the same level at around 2% (Table 3.4; Annex 3).

Table 3.4: Prevalence of HIV and percentage IDU (most recent year) among female CSW in Europe, 2000-2005

Country	Year	N	%IDU	%HIV
West & Centre				
Austria	2002	246	80%*	4%
Bulgaria	2005	874	16%	2%
Poland	2002	400	2%	2%
Spain	2001	1,691	<4%	1%

* Percentage IDU among HIV-positive.

3.3 High risk sexual behaviour of female CSW

Sixteen HIV prevalence studies also collected data regarding recent high risk sexual behaviour among female CSW (Table 3.4). Although condom use with commercial partners is the indicator used to assess recent high risk behaviour, variations exist for the period over which this behaviour is measured. Condom use at last contact was most often employed (9 of 16). Other measures included condom use in the last months (4 of 16), consistent use of condoms (one study), availability of condom at interview (one study) or not specified (one study).

In the 16 studies, the median reported condom use with clients among female CSW was 78.5%. The lowest reported condom use with clients was among female CSW in Azerbaijan (9%; measure not specified) where a high HIV prevalence of 9% was reported (Table 3.4). The highest level of reported condom use was in Moscow where, although 96% of female CSW reported condom use at last contact, HIV prevalence was 14%.

Table 3.4: Prevalence of HIV and condom use with commercial partners (most recent year) among female CSW in Europe, 2001-2005

			Condom use	
Country	Year	%HIV+	%	Indicator
West & Centre				
Italy	2001	0%	84%	consistent
Netherlands	2003	5%	94%	last months
Poland	2002	2%	89%	last contact
East				
Armenia	2005	<1%	64%	last months
Azerbaijan	2003	9%	9%	non specified
Georgia	2002	0%	72%	last months
Belarus	2004	0%	77%	last contact
Kazakhstan	2005	2%	72%	at interview
Kyrgyzstan	2004	2%	82%	last contact
Latvia	2004	17%	80%	last months
Lithuania	2005	0%	70%	last contact
Moldova	2003	5%	82%	last contact
Russian Federation				
Moscow	2003	14%	96%	last contact
Ekaterinbourg	2003	15%	68%	last contact
St. Petersbourg	2003	48%	93%	last contact
Uzbekistan	2004	10%	53%	last contact

3.4 Male and transgender CSW

For the period 2000-2005, there were 12 studies that included male (or transgender) CSW in 10 countries.

HIV prevalence data are not presented separately for male and female CSW in four studies:

- in one study (Austria), the percentage of males was ~1% and this has been included with the studies among female CSW (section 3.2.1);
- in one study (6 cities in Spain), the proportion of males was low (<4%);
- in the remaining two studies (Bulgaria and Poland), the proportions of males were unspecified and HIV prevalence was low (≤1%).

HIV prevalence data were reported separately for male CSW in eight studies. Due to difficulties in accessing this population, the results for several years have been presented together for some countries.

HIV prevalence among male CSW ranged from 0% in the Czech Republic to 15% in Moscow (Table 3.5; Annex 3) and was generally much higher than among female CSW. However, it should be noted that high proportions of males were identified as homosexuals, and some of them indicated a history of injecting drug use.

Table 3.5: HIV prevalence reported among male CSW in Europe, 1999-2004

Country	Period	HIV prevalence (N)	
Belgium			
Antwerp	1999-2004	11%	(120)
Czech Republic			
Prague	2003	0%	(284)
Spain			
19 cities	2000-2002	12%	(418)
Russian Federation			
Moscow	2000	15%	(47)
United Kingdom			
London	2000-2003	9%	(257)
Scotland	2000-2001	2%	(51)

Two studies were among transgender CSW in Brescia, Italy and in three cities in the Netherlands. The recorded prevalence of HIV was 27% (85 individuals recruited 2002-2004) and 19% (69 individuals recruited 2002-2005) respectively and was much higher than among male CSW (Table 3.5).

3.5 Discussion

Throughout the region, data on HIV prevalence among commercial sex workers are relatively sparse compared with those for other groups at risk for HIV infection (e.g. IDU, men who have sex with men).

The low number of studies reported in the West may be in part due to earlier findings of low prevalence among non-IDU female CSW and sex work appears to have had little impact on the spread of the epidemic [30]. This situation appears unchanged, with low levels of HIV infection, generally below 2%, among non-IDU female CSW in the West and Centre.

We have noted that in two western European countries (Germany and Spain) HIV prevalence was lower among female CSW than heterosexuals attending STI clinics, although in Germany heterosexuals had been diagnosed with an acute STI and the number of individuals tested was not known [31]. Other investigators have reported increased levels of safer sex among CSW [4]. Furthermore, in Spain (Barcelona), lower rates of HIV and STI were observed in CSW workers than in heterosexuals attending STI clinics, which was attributed to recent commencement of prostitution and high rates of condom use [32].

The risk of HIV infection increases if CSW also inject drugs. High levels of IDU among CSW have been observed in many countries, especially those of the East. After the geopolitical changes in eastern Europe, there was a dramatic increase in the CSW population, many of whom also injected drugs. As a result of the HIV epidemic among IDU in the late 1990s [33], much higher HIV prevalence was reported in the East, especially in Latvia, the Russian Federation and Ukraine. In view of the overlapping of both sexual and IDU risk behaviour among a substantial proportion of CSW, sex work in the East may have a much deeper impact in the spread of HIV to the wider heterosexual community than in the West.

The prevalence of HIV among CSW depends on their risk behaviour, the stage of the epidemic, the level of the HIV epidemic among IDU and the overlap of both populations. In some studies (e.g. Azerbaijan, Moscow in the Russian Federation and Uzbekistan), the prevalence of HIV was high (≥5%) where levels of reported IDU were low (<10%) and may thus indicate ongoing heterosexual transmission of HIV infection. This may be a consequence of low condom use with commercial partners as reported in the study from Azerbaijan. In contrast, in Bulgaria, even though 16% of CSW were IDU, condom use was high (>95%) and HIV prevalence was less than 2% [34].

HIV prevalence among CSW can also depend on other factors, such as migration of CSW from regions with high HIV prevalence [4]. In the Czech Republic, HIV prevalence was much higher among female CSW than among IDU and most HIV-positive sex workers were migrants from regions with high or increasing HIV prevalence [17].

Few data are available regarding HIV prevalence among male and transgender CSW. In the West, HIV prevalence was higher among male than female CSW and even higher among transgender CSW, although lower than the

prevalence reported by other investigators [9]. In the West, men who have sex with men and transgender CSW are at particular risk of HIV infection as they themselves are part of a population in which high levels of HIV have been reported and to whom they provide sexual services to [33].

In the East, few data regarding HIV among men who have sex with men are available, although there is evidence of the existence of a hidden epidemic in this population [35]. We have found only one study (in Moscow), with very small numbers (<50), that investigated this population. Further research to evaluate the sexual health of male and transgender CSW is needed in the East.

Studies have shown that the success of HIV surveillance among CSW is dependent on close collaboration with key players in the local sex work scene, especially sex workers themselves, their organisations and care providers [36]. CSW are a vulnerable population and, in undertaking surveillance in this population, particular attention needs to be paid to human rights issues, with emphasis on consent, confidentiality and avoiding stigmatisation [36,37].

Behavioural surveillance among CSW is an important part of HIV surveillance and helps to interpret better other surveillance data, monitor changing trends over time and assess the effectiveness of behavioural interventions. These data also give additional information on the role, dynamics and potential for HIV spread of this population [36].

A wide variety of behavioural indicators have been used to assess high risk sexual behaviour among CSW and this has added to the complexity of making international comparisons. The most frequently found indicator was condom use with the latest commercial sex partner. WHO has included this as one of the major behavioural indicators among CSW in their recommendations for second generation surveillance and it is one of UNGASS target indicators [38]. Only nine of 16 studies have used this indicator and therefore there is a need to ensure wide adoption of this single indicator.

It is also important to collect information on other high risk behaviour, such as condom use with regular partners and injecting drug use. A lower frequency of condom use with regular partners than with clients has been reported in several eastern European countries [23].

Differences in the epidemiology of HIV among CSW exist within Europe. HIV prevalence is generally low (<5%) among female CSW in the West, but it is higher (>10%) among male and transgender sex workers. In the East, HIV prevalence among CSW is strongly linked to IDU, and interventions must address this problem also. However, as is suggested by a recent study in Moscow [39], the situation may vary not only from country to country, but also within a country [23]. Thus, it may not be possible to repeat the prevention experience of the West in the eastern and central Europe [40], where both traditional patterns of prostitution and current socio-economic conditions are very different. Therefore, it is of utmost importance to take into account the different legal status and social acceptance of CSW, and adapt methodological approaches to the local situation.

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Annex 3
HIV prevalence studies and diagnostic testing among commercial sex workers (2000-2005)

Annex 3. HIV prevalence studies and diagnostic testing among commercial sex workers (CSW): numbers tested and HIV prevalence, by country and region (2000-2005)

Geographic area				Population		2000	
Country	Coverage	Site[1]	Data[2]	Gender[3]	IDU%[4]	N tested	%HIV+
West							
Austria	Vienna	STI	DT, MS[6]	F, M (~1%)		952	0.3
	- registered CSW		*MS[6]*			*679*	*0.0*
	- illegal CSW		*MS[7]*		*80%[8]*	*172*	*1.2*
	- "barmaids"[9]		*DT*			*101*	*1.0*
Belgium	Antwerp	Street, brothels	SP	M			
Germany	National	VCT, STI, PP	SR	F[11]			
Italy	Sicily	VCT	SP	F[12]			
	Brescia	STI	SP	T[12]			
Netherlands	National	STI	DT	F[15]			
	3 cities[16]	Street, brothels	SP (UAT) S				
	- female non-IDU			*F*			
	- female IDU			*F*	*100%*		
	- transgender			*T*			
Spain	9 cities[17]	VCT	DT	F	<4%	1,438	0.8
	- non-IDU			*F*	*0%*	*1,429*	*0.7*
	6 cities[18]	STI	SP (UAT)	F, M (<4%)		1,918	0.8
	- female			*F*		*1,849*	*0.4*
	19 cities[19]	STI	DT	F	0%	3,708	0.5
	19 cities[19]	STI	DT	M	3%		
United Kingdom	Scotland	VCT, STI, hosp.	DT	F, M (15-25%)		162	0.6
	- female			*F*		*136*	*0.0*
	- male			*M*		*26*	*3.8*
	London	STI	SP	M	27%		
Centre							
Bulgaria	Cities[22]	Street, brothels	SP	F, M	16%		
Czech Republic	Prague and 2 regions[23]	Street, night clubs	SP S	F		797	0.1
	Prague	Street	SP S	M		280	0.7
Poland	National	VCT,STI, DTC, hosp.	DT	F, M		146	0.0
	13 cities[24]	VCT, DCT, street, brothels, night clubs	SP	F	2%		
East							
Armenia	National	VCT, STI	DT	F		168	1.2
	Yerevan and regions[25]	VCT, street	SP (UAT)	F	1%		
Azerbaijan	Baku	Street, brothels	SP	F	1%		
Belarus	6 cities[26]	Street, STI, hosp.	SP (UAT)	F			
Georgia	Tbilisi	Street	SP	F	1%		
Kazakhstan	National	STI	DT	F			
	19 cities[27]	Street, STI	SP	F	12%		
Kyrgyzstan	Bishkek, Osh		SP	F	5%		
Latvia	Riga	Street	SP (UAT)S	F			
	- IDU				*100%*		
	Riga and regions	Street	SR	F	53%[8]		
Lithuania	Vilnius	Street	SP	F		149	1.3
Moldova, Rep. of	Kishinev	Street	SP	F	11%		
Russian Federation	Moscow	Street	SP (UAT)	F, M (28%)	26%	170	15.3
	- male			M		*47*	*14.9*
	St.Petersbourg	Street	SP (UAT)	F	33%	90	16.7
	Togliatti	Community outreach among IDU	SP (UAT)S	F	100%		
	Moscow	Street	SP	F	5%		
	Ekaterinbourg	Street	SP	F	27%		
	St.Petersbourg	Street	SP	F	93%		
Ukraine	7 cities[28]	Street	SP (UAT)	F	35%		
Uzbekistan	Tashkent	Street, brothels	SP	F	9%		
	- IDU			*F*	*100%*		

1 STI - sexually transmitted infection clinics, hosp.- hospitals, VCT - voluntary counselling and testing sites, DTC - drug treatment centres, PP - private practitioners.
2 DT- diagnostic testing, MS - mandatory screening, SP - seroprevalence study, UAT - unlinked anonymous testing, S - prevalence study based on saliva HIV testing.
3 F - female, M - male, T – transgender.
4 Percentage of IDU in the population tested.
5 Ref.= see text.
6 Registered CSW are tested about every 6 weeks.
7 Tested after complaints of illegal sex work.
8 IDU among HIV+.
9 Unregistered women working as CSW in bars, tested voluntarily.
10 Study period: 1999 - 2004.
11 Diagnosed with syphilis, gonorrhoea, trichomoniasis.
12 Immigrants from Latin America.
13 Study period: March 2001 - July 2002.
14 Study period: April 2002 - January 2004.

Annex 3. HIV prevalence studies and diagnostic testing among commercial sex workers (CSW): numbers tested and HIV prevalence, by country and region (2000-2005) (Cont.)

2001		2002		2003		2004		2005		Ref.[5]	Geographic area	
N tested	%HIV+	N tested	%HIV+	N tested	%HIV+	N tested	%HIV+	N tested	%HIV+		Country	Coverage
											West	
1,034	0.9	1,184	0.8								Austria	Vienna
634	*0.0*	*642*	*0.0*									*- registered CSW*
215	*4.2*	*246*	*3.7*									*- illegal CSW*
185	*0.0*	*296*	*0.3*									*- "barmaids"*[9]
						120	10.8[10]			7	Belgium	Antwerp
		290	0.3								Germany	National
		118	0.0[13]							8	Italy	Sicily
				85	27.1[14]					9		Brescia
				1,073	0.7	1,368	0.3	1,018	0.5	10-13	Netherlands	National
												3 cities[16]
		91	*5.5*	*212*	*5.2*			*175*	*1.1*			*- female non-IDU*
				53	*11.0*			*11*	*18.0*			*- female IDU*
		15	*20.0*	*29*	*17.2*			*25*	*20.0*			*- transgender*
1,691	0.9										Spain	9 cities[17]
1,686	*0.8*											*- non-IDU*
1,326	1.2											6 cities[18]
1,300	*1.0*											*- female*
4,363	0.7	5,274	0.6	5,061	0.7	5,045	0.6					19 cities[19]
		418	12.2[20]							14		19 cities[19]
128	0.0										United Kingdom	Scotland
103	*0.0*											*- female*
25	*0.0*											*- male*
				257	8.9[21]					15		London
											Centre	
						413	1.7	874	1.0	16	Bulgaria	Cities[22]
718	0.1	673	0.3	811	0.4	436	0.0	1,250	0.2	17,18	Czech Rep.	Prague and 2 regions[23]
295	0.0	211	0.0	284	0.0							Prague
166	0.0	373	0.0	297	1.3	262	0.0	250	0.0	19,20	Poland	National
		400	2.3							21		13 cities[24]
											East	
										22	Armenia	National
		250	1.2					250	0.4			Yerevan and regions[25]
				200	8.5					23	Azerbaijan	Baku
		208	1.0			208	0.0			24	Belarus	6 cities[26]
		158	0.0								Georgia	Tbilisi
						4,155	0.2	3,903	0.1		Kazakhstan	National
				535	4.7	1,537	1.9	1,960	2.1			19 cities[27]
						352	1.7			25	Kyrgyzstan	Bishkek, Osh
78	7.7	92	16.3							26	Latvia	Riga
		74	*18.9*									*- IDU*
						93	18.3					Riga and regions
185	0.5	49	0.0	72	0.0	86	0.0	101	0.0		Lithuania	Vilnius
				151	4.6					23	Moldova	Kishinev
										27	Russian Fed.	Moscow
												- male
												St. Petersbourg
77	62.3									28		Togliatti
				135	14.1					23		Moscow
				149	14.8					23		Ekaterinbourg
				108	48.1					23		St. Petersbourg
646	19.5										Ukraine	7 cities[28]
				448	10.0					29	Uzbekistan	Tashkent
				41	*58.5*							*- IDU*

15 STI clinic attendees.
16 2002: Rotterdam, 2003: Amsterdam, 2005: The Hague.
17 Cartagena, Gijon, Grenada, Madrid, Malaga, Murcia, Sevilla, Tenerife, Vitoria.
18 Alicante, Bilbao, Gijon, Madrid, Oviedo, Pamplona.
19 Granada, Malaga, Sevilla, Oviedo, Gijon, Tenerife, Santander, Barcelona, Madrid, Murcia, Cartagena, Pamplona, Vitoria, Bilboa, San Sebastian, Logrono, Castellon, Alicante, Valencia.
20 Study period: 2000-2002.
21 Study period: 2000-2003.
22 Cities not specified: 4 in 2004, 8 in 2005.
23 North Bohemia, North Moravia.
24 Szczecin, Warszawa, Gdansk, Bialystok, Poznan, Zieliona Gora, Wroclaw, Chorzow, Rzeszow, Lublin, Lodz, Krakow, Swinoujscie.
25 2002: Shirak and Syunik; 2005: Shirak, Lori, Gegharkunik, Syunik.
26 Gomel, Mogilev, Brest, Grodno, Vitebsk, Minsk.
27 Cities not specified: 4 in 2003, 14 in 2004, 19 in 2005.
28 Donetsk, Lutsk, Nikolaev, Odessa, Poltava, Simferopol, Kharkiv.

Section 4
HIV and TB co-morbidity in Europe

Key Points

- Increases in HIV/TB co-morbidity have been reported by eastern European countries.
- In western Europe, migrants from Sub-Saharan Africa are at increased risk for HIV/TB co-morbidity.

Recommendations for surveillance

- Promote and offer HIV counselling and testing to all TB patients, with particular emphasis in countries with HIV prevalence among TB patients ≥5%.
- Improve reporting of TB cases among HIV-infected patients in all population groups.
- Improve reporting of HIV sero-status among TB cases.
- Conduct periodic surveys or sentinel surveys among TB patients when routine surveillance is not in place.
- Improve surveillance of TB drug resistance among HIV-infected patients.

Recommendations for public health

- Strengthen TB and HIV control and joint case management in eastern Europe.
- Target migrant populations, prisoners and IDU in western Europe to ensure access to both case management and disease control services.
- Reinforce infection control measures to prevent nosocomial transmission among co-infected patients.

4.1 Introduction

The HIV/AIDS epidemic has increased the global burden of tuberculosis and has thus highlighted the need to strengthen the links between TB and HIV/AIDS control programmes [1,2]. HIV has a major public health impact on the control of TB, with implications for both the individual and the community.

HIV infection in an individual can result in the endogenous reactivation of pre-existing infection with *Mycobacterium tuberculosis* and it can also increase the risk of rapid TB progression soon after infection or re-infection with TB.

The increased burden of HIV-associated TB can also increase the transmission of tubercle bacilli to the general population from patients co-infected with HIV and TB. TB outbreaks have been associated with HIV, which can involve multi-drug resistant strains [3,4]. Recently, clusters of XDR-TB (MDR-TB cases also resistant to at least one fluoroquinolone and one of the following drugs: capreomycine, amikacin canamycin) have been reported in South Africa and have been associated with HIV infection and rapid and high death rates [5].

We have evaluated the co-morbidity of HIV/TB by reviewing two types of data:

- AIDS cases diagnosed with TB from the European Non-Aggregate Data Set (ENAADS) collected by EuroHIV [6];
- estimates of HIV prevalence among TB patients using data collected since 2000 by EuroTB [7].

4.2 Trends in HIV, AIDS and TB in the WHO European Region

Recent trends in HIV and AIDS reporting are described in section 1 of this report for the West, Centre, East and the 27 countries of the European Union (EU) (see Technical note).

Since 1998, trends in the rate of HIV infection per million population can be summarized as follows:

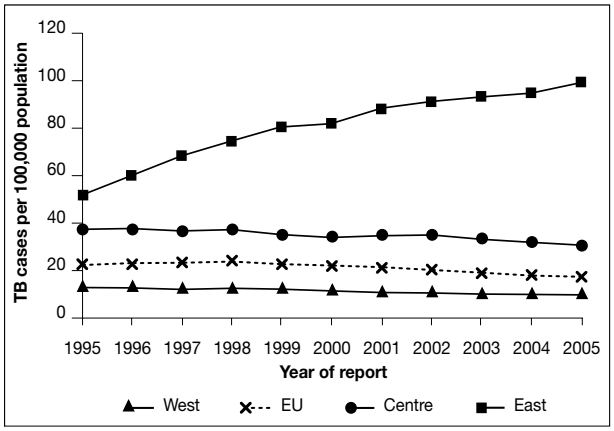
- East: a peak in 2001 (343 cases per million) mainly among injecting drug users. In 2005, the rate of HIV infection was 186 per million;
- Centre: low and stable rates of newly diagnosed cases of HIV infection (<10/million) from 1998 to 2005;
- West: 85 per million newly diagnosed cases of HIV cases were reported in 2005. This represents a steady increase since 1998, mostly among migrants and men who have sex with men (MSM);
- EU: a similar trend to that of the West given that most cases were reported from countries in western Europe.

Since 1990, the rate of AIDS cases diagnosed per million population can be summarised as follows:

- East: a rapid increase starting in the late 1990s reaching 34 per million in 2005;
- Centre: AIDS incidence has remained below 7 per million from 1998 to 2005;
- West: an epidemic peak in 1994 (67/million) followed by a rapid decline to 19/million in 2005;
- EU: a similar trend to that of the West given that most cases were reported from countries in western Europe.

The trends in the rates of TB notifications per 100,000 population (1995-2005) are presented in Figure 4.1.

Figure 4.1: Trends in the rates of TB cases in the WHO European Region, 1995-2005



Countries excluded: Andorra, Bosnia & Herzegovina, Georgia, Monaco, San Marino.

In the past decade, the TB notification rate has doubled in the East (from 52 to 99 cases per 100,000 population) and decreased in the other regions. However, TB incidence has always remained higher in the Centre (30/100,000 in 2005) than in the West (10/100,000) or the EU (23/100,000).

4.3 AIDS cases diagnosed with tuberculosis (AITB)

4.3.1 AITB case reports in the WHO European Region in 2005

EuroHIV has collected AIDS and HIV case reports using standardised case definitions and formats from national correspondents of the 53 countries of the WHO European Region.

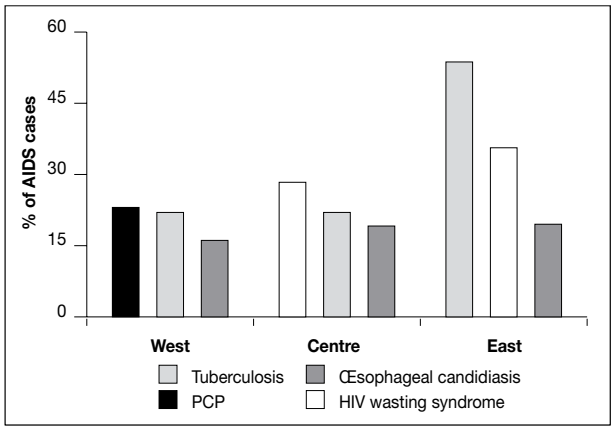
The European AIDS surveillance case definition for adults and adolescents was revised in 1993 to include pulmonary TB as an AIDS defining disease [8] in order to improve the representativeness of AIDS surveillance as a measure of people with serious disease [9]. In contrast, only extra-pulmonary tuberculosis is included as an AIDS defining illness in the European paediatric AIDS case definition [10].

AIDS data reported in 2005 from 46 of the 53 countries in WHO European Region were analysed and presented in this section. Seven countries were excluded because:

- AIDS data were not reported in 2005 in 4 countries: Cyprus, Kyrgyzstan, Norway and Russian Federation;
- AIDS cases were reported without a specified AIDS-indicative disease in 3 countries: the Netherlands, Romania and San Marino.

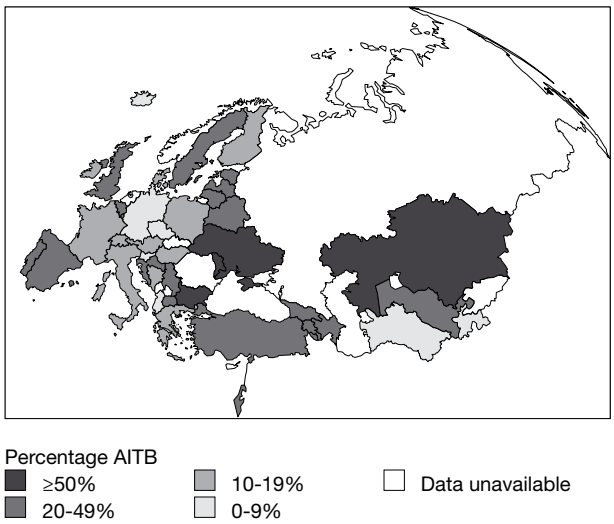
In 2005, 13,902 AIDS cases were reported, of which 4,531 (33%) had been diagnosed with TB as AIDS-indicative disease (AITB). Tuberculosis was the second most common AIDS-indicative disease in both western and central Europe (22% respectively) but in the East over half of AIDS cases (54%) were diagnosed with TB (Annex 4.1; Figure 4.2).

Figure 4.2: The three most common AIDS indicative diseases (%) among AIDS cases by region, WHO European Region, 2005



A gradient in the percentage of AITB cases can be observed across Europe, increasing from the West to the East (Figure 4.3).

Figure 4.3: Percentage of AIDS cases diagnosed with TB (AITB) in 46 European countries, 2005



In the West, 1,967 AITB cases were reported in 2005, representing 22% of AIDS cases (country range: 0-40%). In four countries, >30% of AIDS cases were diagnosed with TB as AIDS-indicative disease: Belgium (34%); Israel (40%); Portugal (38%); and the United Kingdom (32%).

In the Centre, the total number of AITB was small (92 cases, 22% of AIDS cases) and the largest number was reported in Poland (37, 20% of AIDS cases).

In the East, 2,472 AITB cases were reported in 2005 (54% of AIDS cases), the majority of which were reported from Ukraine (2,243; 91%). The percentage of AITB cases reported in 2005 ranged from 27% in Estonia (the only country in the East to have <30% AITB) to 65% in Kazakhstan. In Ukraine, 57% of AIDS cases were diagnosed with TB.

In the EU, the proportion of AITB cases was 22%, the same as that in the West and the Centre.

4.3.2 Characteristics of the adult and adolescent AITB population in 2005

Among AIDS cases reported in 2005, marked differences were observed between AITB cases and those with other AIDS-indicative illnesses (non-AITB).

The analysis was carried out on AIDS cases reported in 2005, aged ≥13 years with an indicative disease specified at AIDS diagnosis. A total of 13,386 AIDS cases were included in 38 countries, of which 4,527 (34%) were AITB.

Since the demographic profiles of AITB and non-AITB cases in countries of the EU were similar to those in the West due to the predominance of cases from this region, data for the EU are not presented in this section.

West

In the West (Table 4.1), compared to non-AITB cases, AITB cases were characterised by a lower proportion of men (χ^2= 30, p<0.001), younger median age (36 vs 40 years; Kruskal-Wallis=249, p<0.0001) and more likely to originate from Sub-Saharan Africa (χ^2=440, p<0.001). Significant differences were observed by transmission group (χ^2=281, p<0.001), with larger percentages of AIDS cases diagnosed with TB among IDU and heterosexuals and less among MSM. The percentage of persons known to have died was significantly lower among AITB than among non-AITB cases (χ^2=29, p<0.001).

Table 4.1: Characteristics of AITB and non-AITB cases in the West, 2005

	AITB N=1,964	Non-AITB N=6,796
Sex		
Male	69%	75%
Female	31%	25%
Age		
13-19	1%	1%
20-29	19%	10%
30-39	45%	38%
40-49	26%	33%
50-59	7%	13%
≥ 60	3%	7%
Origin		
Country of report	52%	73%
Other Europe	3%	4%
Sub-Saharan Africa	32%	12%
Asia	3%	1%
Latin America & Carribean	4%	4%
Other	6%	7%
Transmission		
MSM	10%	26%
IDU	33%	24%
HC	49%	40%
Other	8%	10%
Mortality		
Known to have died	11%	15%
Not known to have died	89%	85%

MSM: men who have sex with men.
IDU: injecting drug users.
HC: heterosexual contact.

Centre

In the Centre (Table 4.2), no statistical differences have been found between AITB and non-AITB cases for sex, median age, origin, transmission group and death.

Table 4.2: Characteristics of AITB and non-AITB cases in the Centre, 2005

	AITB N=92	Non-AITB N=297
Sex		
Male	82%	82%
Female	18%	18%
Age		
13-19	2%	1%
20-29	18%	21%
30-39	47%	33%
40-49	18%	28%
50-59	11%	13%
≥ 60	3%	4%
Origin		
Country of report	92%	93%
Other	8%	7%
Transmission		
MSM	22%	22%
IDU	33%	29%
HC	33%	32%
Other	13%	16%
Mortality		
Known to have died	21%	29%
Not known to have died	79%	71%

MSM: men who have sex with men.
IDU: injecting drug users.
HC: heterosexual contact.

East

In the East, the proportion of males among AITB cases was higher than among non-AITB cases (χ^2=82, p<0.001). AITB cases were more likely than non-AITB cases to be older (median age 34 v 33; Kruskal-Wallis=29, p<0.0001) and injecting drug users (χ^2 =23, p<0.001).

Over 85% of AIDS cases in the East were reported in Ukraine in 2005, but information on origin was not documented in this country.

Mortality in the East was lower among AITB cases (36%) than among non-AITB cases (41%; χ^2=8, p=0.005).

Table 4.3: Characteristics of AITB and non-AITB cases in the East, 2005

	AITB N=2,471	Non-AITB N=1,766
Sex		
Male	77%	64%
Female	23%	36%
Age		
13-19	0%	0%
20-29	26%	31%
30-39	47%	49%
40-49	23%	17%
50-59	4%	2%
≥ 60	0%	0%
Origin		
Country of report	9%	14%
Unknown	91%	86%
Transmission		
IDU	75%	69%
HC	20%	25%
Other	5%	6%
Mortality		
Known to have Died	36%	41%
Not known to have died	64%	59%

IDU: injecting drug users.
HC: heterosexual contact.

4.4 Trends in AITB reporting

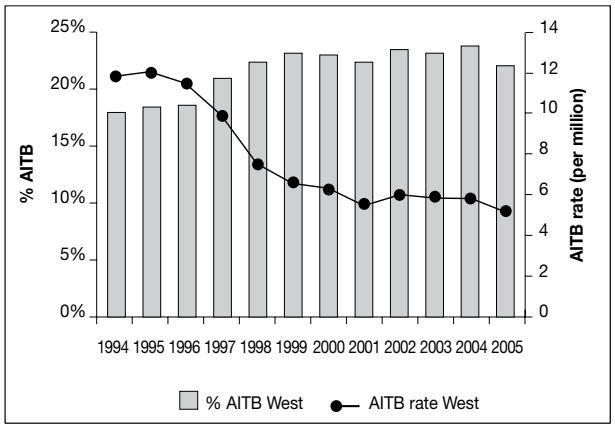
Trends in the rate of AITB (per million population) and the percentage of AITB, starting from 1994 (after the publication of the 1993 European AIDS surveillance case definition) to 2005 are presented in this section.

Countries were excluded from the trends analysis if:
- AIDS data had not been reported in ≥1 years between 1994 and 2005;
- less than 5 AITB cases had been reported over the period 1994-2005;
- for ≥1 year between 1994 and 2005 more than 20% of AIDS cases had been reported with an unspecified AIDS-indicative disease.

West

In the West, the rate of AITB was the highest in 1995 (when the AIDS epidemic was reaching its peak), with 12 per million population, since when this rate decreased and had halved by 1999 (6.5/million) and continued to decrease progressively to a low of 5.1 per million population in 2005. Between 1994 and 2005, the overall percentage of AITB cases increased from 18% to 22%. Figure 4.4 shows trends of pooled data in western European countries, but these vary from one country to another.

Figure 4.4: Percentage of AITB cases and AITB rates in the West, 1994-2005



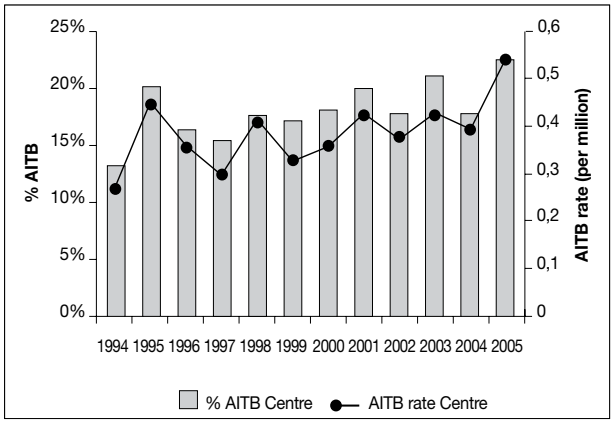
Countries included: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Luxembourg, Portugal, San Marino, Spain, Sweden, Switzerland, United Kingdom.

The mean annual change in the percentage of AITB cases from 1994 to 2005 has increased in 13 countries: between 2% and 3% in Luxembourg and the United Kingdom, between 1% and 2% in Sweden, Belgium, Israel, Ireland and less than 1% in Finland, Denmark, Switzerland, France, Germany, Italy and Greece; and decreased in 3 countries: Austria, Spain and Portugal.

Centre

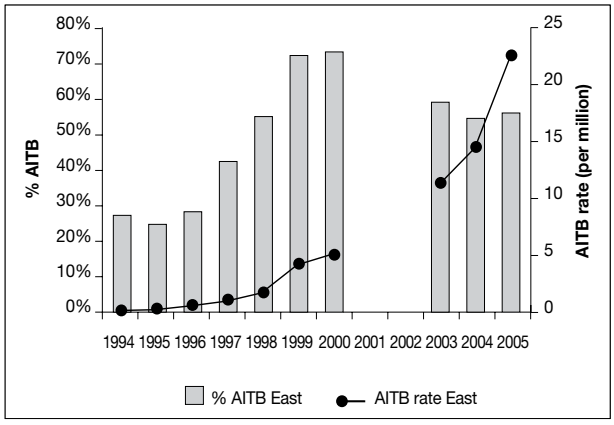
Among the eight central European countries included, no linear trend could be observed in the AITB rate from 1994 to 2005, although the AITB rate was the highest in 2005 with 0.5 cases per million population. The proportion of AITB cases increased from 13% in 1994 to 22% in 2005 (Figure 4.5). The mean annual change in percentage of AITB cases was positive in all the countries (country average +0.84%), except in Slovenia (-0.82%).

Figure 4.5: Percentage of AITB cases and AITB rates in the Centre (1994-2005)



Countries included: Bulgaria, Croatia, Czech Republic, Hungary, Poland, Serbia & Montenegro, Slovenia, Turkey.

Figure 4.6: Percentage of AITB cases and AITB rates in the East (1994-2005)



Countries included: Belarus, Estonia, Kazakhstan, Lithuania, Republic of Moldova, Ukraine, Uzbekistan.

East

The majority of AIDS cases in the East were reported in Ukraine (94%). In 2001 and 2002, a high percentage of unspecified AIDS-indicative diseases (>50%) were reported in Ukraine. In contrast to the trends analysis in the West and Centre in which countries not reporting AIDS identifying illnesses were excluded, data from Ukraine were included in the East, but the years 2001 and 2002 are not presented (Figure 4.6).

The rate of AITB and the percentage AITB were higher than the West or the Centre.

In the East, the rate of AITB per million population mirrors that of AIDS and has increased markedly since 1994, with 22.5 cases per million in 2005.

The percentage of AITB cases has rapidly increased since 1995, reaching a peak in 1999 (72%) and 2000 (73%) after which point the percentage declined but has remained over 50% (Figure 4.6).

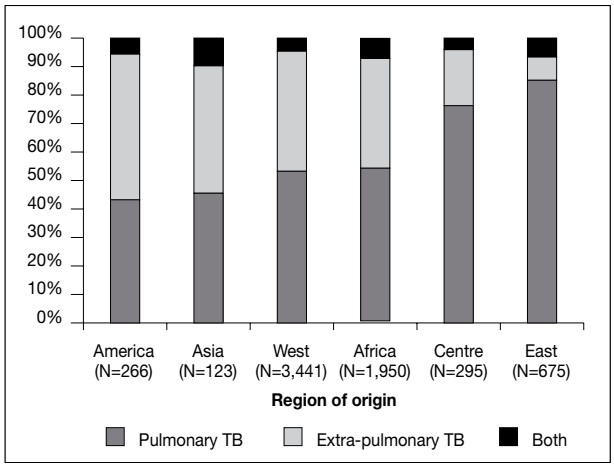
The mean annual percentage change in AITB cases was positive in all the countries included (country average +2.67%), except in Lithuania (-0.91%).

4.5 Site of disease in AITB cases in the WHO European Region

In TB patients, the site of the disease can be pulmonary (lung parenchyma, tracheo-bronchial tree and larynx) or extra-pulmonary (any site other than pulmonary). The proportion of extra-pulmonary TB can vary with the HIV sero-status and also with the origin of the patient [11-13].

Data on AITB cases aged 13 years or older, were pooled over a 3-year period for cases of known origin (N=6,750 cases from 2003 to 2005) to ascertain the proportion of the site of the disease (pulmonary TB, extra-pulmonary TB and both) by region of origin (Figure 4.7).

Figure 4.7: Site of TB among AITB cases (≥13 years) by region of origin, 2003-2005



The proportion of AITB cases with extra-pulmonary TB was over 40% among cases originating from Latin America (51%), Asia (45%), western Europe (42%) and Sub-

Saharan Africa (41%). The site of the disease was mainly pulmonary in AITB cases originating from the East (85%) and the Centre (76%). These differences in the proportion of AITB cases could be partly explained by divergences in methods of diagnosis.

These profiles are similar to those presented by EuroTB for all TB cases (EuroTB report 2005, Table 8) except for those from western Europe and Latin America and the Caribbean where the proportions of extra-pulmonary TB are higher among AITB cases than among TB cases.

4.6 HIV prevalence among TB patients and TB cases in specific populations

4.6.1 HIV prevalence among TB patients

HIV prevalence data reported among TB cases were available from 34 countries for the period 2000-2005 and were collected from two different surveys:

- HIV serostatus of notified TB cases, reported by 33 countries in aggregate format to EuroTB;
- similar data reported to EuroHIV including data from an additional country.

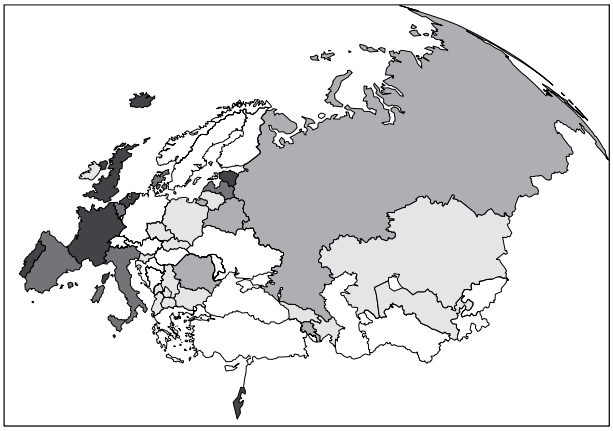
The percentage of TB cases with unknown HIV status was more than 90% or unknown in 20 countries. HIV prevalence may be underestimated in many countries due to incomplete HIV testing and reporting of HIV serostatus.

For the latest year available between 2000 and 2005, the highest prevalence of HIV among TB cases was reported in Portugal (15.4% in 2005) (Annex 4.2). In the same period, six countries (with >10 HIV-positive TB cases) reported an HIV prevalence of 5% or more: United Kingdom (8.3% in 2003), France (5.6% in 2001); and in 2005: Estonia (6.4%), Israel (5.4%), the Netherlands (5.3%) and Spain (5.0%).

In the West, five countries reported HIV prevalence among TB cases of <1%: Andorra, Finland, Ireland, Malta and Serbia. In all countries in the Centre, HIV seroprevalence was low (≤1.1%).

In 10 countries in the East (Figure 4.8), HIV sero-prevalence was the highest in Estonia (6.4%) and Latvia (3.5%). HIV prevalence of >1% was reported in Armenia (3% in 2004) and the Russian Federation (1.3%), and was ≤1% in the remaining six countries (Azerbaijan, Belarus, Georgia, Kazakhstan, Lithuania and Uzbekistan). However, it has been reported elsewhere, that HIV/TB co-infection in Georgia varied from 2.1% to 3.8% between 2000-2004 [14].

Figure 4.8: HIV prevalence among notified TB cases in 34 European countries, latest available year, 2000-2005



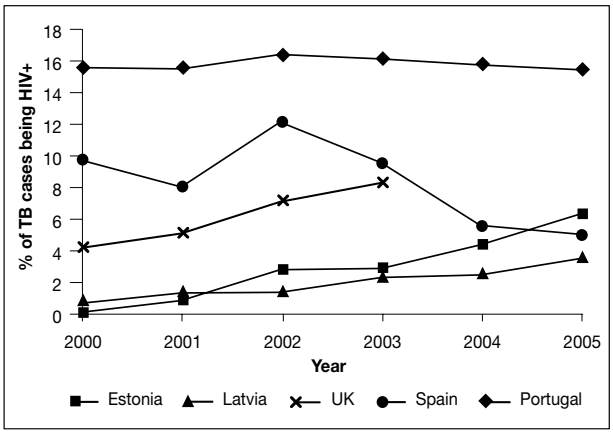
Twenty-one countries which reported >50 TB cases per year, provided HIV prevalence trend data (≥3 years) for the period 2000-2005. Five examples are presented in Figure 4.9.

In most of these countries (15/21), sero-prevalence has remained stable as illustrated by the prevalence in Portugal.

Only one country (Spain) reported a decrease in the prevalence of HIV among TB cases, declining from a peak of 12% in 2002 to 5% in 2005.

Four countries reported increases in the prevalence of HIV among TB cases: Armenia (0% to 2%), Estonia (0.1% to 6.4%), Latvia (0.7% to 3.5) and the United Kingdom (4.2 to 8.3 between 2000 and 2003).

Figure 4.9: Trends in HIV prevalence among TB cases in 5 countries, 2000-2005



4.6.2 HIV prevalence among TB cases in specific populations

The prevalence of HIV among TB cases has been reported in specific populations in 5 countries (Annex 4.3):

- among prisoners in Spain, 85/138 (62%) TB cases tested for HIV were found to be HIV-positive (mainly based on voluntary testing). In Estonia 7/24 (29%) prisoners with TB who were tested for HIV were HIV-positive. In Italy the proportion of HIV seropositivity among 80 prisoners with TB was 2.5%;
- in Denmark, the percentage of HIV seropositivity among migrants with TB was the highest in 2001 with 1.96% and has gradually decreased until 2005 (1.30%);
- in the Netherlands, HIV prevalence among TB patients was reported among drug users (29.2%), homeless patients (20.1%) and patients residing illegally in the country (9.1%) [15].

4.7 Discussion

In Europe, both HIV and TB are considered diseases of major public health importance [1]. The epidemiology of these diseases shares many features, the most salient common factor being the geographic distribution and the overlapping of vulnerable populations.

In the West, much – but not all – of the increase in newly diagnosed cases of HIV has been among migrants from Sub-Saharan Africa [16] where the incidence of both HIV and TB is high. AIDS cases diagnosed with TB are more likely to be migrants from Sub-Saharan Africa, and the proportion of AIDS cases diagnosed with TB has increased in many countries, especially those with large migrant populations. However, to date, the United Kingdom is the only country to have reported an increase in HIV prevalence among TB notifications [17].

In contrast, in a few western European countries (e.g. Portugal and Spain), the proportion of AIDS cases diagnosed with TB has decreased. At the same time, the prevalence of HIV among TB cases has either remained stable (Portugal) or declined (Spain). This phenomenon may be a result of the different migration flows, compared to that in other countries, or improved treatment and management of cases in these countries.

Most of the AITB cases diagnosed in the EU were reported in the West. Thus the general profile of HIV and TB co-infection in the EU is similar to that observed in the West. However, country profiles of HIV and TB co-infection in the EU reflect the wide diversity of member states. Recent increases of HIV prevalence among TB cases were observed in the Baltic States. In the EU countries from the Balkans, numbers of AITB cases were low, although Romania was not included (percentage of unspecified AIDS-indicative diseases >20%).

In the Centre, the rate of TB notifications is high (200/million) and is nearly twice that of the West. In contrast, rates of HIV and AIDS remain low and the epidemic is concentrated in at-risk populations. In all these countries, the prevalence of HIV among TB patients remains low (≤1%) and the impact of HIV on TB remains limited for the moment.

In the East, the epidemiology of both HIV and TB has been characterised by recent, rapid and large increases of both epidemics. Increases in the proportion of AIDS cases diagnosed with TB have been reported in several eastern European countries, especially in Estonia, Latvia and Ukraine. Recent increases in the prevalence of HIV among TB cases have also been reported in the Baltic States, although these levels remain below those in Odessa (7.5% in 2001) and Kiev (10% in 2002) in Ukraine [18, 19].

The combined surveillance of HIV and TB is recognised as critical in understanding the trends in the epidemics and in developing appropriate strategies for the control of both diseases in terms of public health interventions, advocacy, treatment and clinical needs [20].

Depending on the level of the HIV epidemic, different methods can be used to measure HIV prevalence among TB patients [21]. In most European countries which report HIV prevalence among TB patients, data are provided through routine HIV counselling and testing among TB patients. However, the proportion of unknown HIV status remains high in most of these countries. Thus HIV testing and reporting among TB patients should be improved in order to provide more accurate estimates.

The co-morbidity of HIV and TB has important implications in both case management and the public health control of both diseases. In countries with ≥5% HIV prevalence among TB patients (at least 7 European countries, including 6 EU member states), HIV/TB activities should include collaboration between TB and HIV/AIDS control programmes, and control measures to decrease the burden of TB in people living with HIV/AIDS and HIV in TB patients [22].

The reported increase in HIV, TB and HIV/TB co-morbidity in many eastern European countries underlines a need to reinforce control for both diseases. These should involve not only the prevention of HIV for the effective control of TB, but also ensure access to treatment and care services. In contrast, in the West, the increased risk for HIV/TB co-morbidity among migrants from Sub-Saharan Africa warrants targeted action in both case management and disease control.

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Annexes 4.1-4.3
HIV and TB co-morbidity in Europe

Annex 4.1. AIDS cases with pulmonary and extra-pulmonary TB as indicative disease, WHO European Region*, data reported in 2005

Geographic area	Country	Total AIDS cases	Total AITB	% AITB	Pulmonary AITB	% Pulmonary AITB	Extra-pulmonary AITB	% Extra-pulmonary AITB	% Disease unspecified †
West									
	Andorra	1	0	0%	0	-	0	-	0%
EU	Austria	66	9	14%	8	89%	1	11%	9%
EU	Belgium	172	58	34%	33	57%	25	43%	0%
EU	Denmark	56	8	14%	7	88%	1	13%	0%
EU	Finland	25	3	12%	3	100%	0	0%	0%
EU	France	1,329	248	19%	143	58%	105	42%	0%
EU	Germany	1,103	99	9%	35	35%	64	65%	0%
EU	Greece	122	17	14%	12	71%	5	29%	0%
	Iceland	1	0	0%	0	-	0	-	0%
EU	Ireland	63	12	19%	5	42%	7	58%	2%
	Israel	62	25	40%	20	80%	5	20%	2%
EU	Italy	1,577	170	11%	98	58%	72	42%	0%
EU	Luxembourg	8	2	25%	2	100%	0	0%	0%
EU	Malta	3	0	0%	0	-	0	-	33%
	Monaco	0	-	-	-	-	-	-	-
EU	Portugal	947	357	38%	194	54%	163	46%	11%
EU	Spain	2,200	626	28%	330	53%	296	47%	0%
EU	Sweden	49	12	24%	10	83%	2	17%	18%
	Switzerland	234	32	14%	19	59%	13	41%	0%
EU	United Kingdom	906	289	32%	203	70%	86	30%	0%
Total West		**8,924**	**1,967**	**22%**	**1,122**	**57%**	**845**	**43%**	**3%**
Centre									
	Albania	9	0	0%	0	-	0	-	11%
	Bosnia & Herzegovina	8	1	13%	1	100%	0	0%	0%
EU	Bulgaria	19	12	63%	12	100%	0	0%	0%
	Croatia	16	5	31%	3	60%	2	40%	0%
EU	Czech Republic	12	1	8%	1	100%	0	0%	0%
EU	Hungary	33	4	12%	4	100%	0	0%	3%
	Macedonia, F.Y.R.	12	5	42%	5	100%	0	0%	0%
EU	Poland	188	37	20%	29	78%	8	22%	5%
	Serbia & Montenegro ‡	61	15	25%	6	40%	9	60%	2%
EU	Slovakia	3	1	33%	1	100%	0	0%	0%
EU	Slovenia	13	1	8%	1	100%	0	0%	0%
	Turkey	37	10	27%	8	80%	2	20%	0%
Total Centre		**411**	**92**	**22%**	**71**	**77%**	**21**	**23%**	**41%**
East									
	Armenia	41	10	24%	10	100%	0	0%	46%
	Azerbaijan	55	14	25%	14	100%	0	0%	49%
	Belarus	128	36	28%	29	81%	7	19%	2%
EU	Estonia	30	8	27%	8	100%	0	0%	0%
	Georgia	120	30	25%	26	87%	4	13%	28%
	Kazakhstan	101	66	65%	65	98%	1	2%	5%
EU	Latvia	73	21	29%	20	95%	1	5%	48%
EU	Lithuania	10	4	40%	4	100%	0	0%	0%
	Moldova, Republic of	64	37	58%	37	100%	0	0%	0%
	Tajikistan	0	-	-	-	-	-	-	-
	Turkmenistan	0	-	-	-	-	-	-	-
	Ukraine	3,934	2,243	57%	2,068	92%	175	8%	3%
	Uzbekistan	11	3	27%	3	100%	0	0%	0%
Total East		**4,567**	**2,472**	**54%**	**2,284**	**92%**	**188**	**8%**	**5%**
Total European Union (EU)		**9,007**	**1,999**	**22%**	**1,163**	**58%**	**836**	**42%**	**5%**
Total WHO European Region		**13,902**	**4,531**	**33%**	**3,477**	**77%**	**1,054**	**23%**	**5%**

EU Countries which constitute the European Union as of 1 January 2007.
* Countries excluded: Cyprus, Kyrgyzstan, Netherlands, Norway, Romania, Russian Federation, San Marino.
† AIDS-indicative disease not specified.
‡ Serbia & Montenegro became 2 independent countries in June 2006; separate data not available.

Annex 4.2. HIV sero-status of notified TB cases in 34 countries, WHO European Region (2000-2005)

Geographic area		% unknown HIV status (latest year with data)	2000		2001		2002		2003		2004		2005	
	Country		TB cases	HIV + (%)	TB cases	HIV + (%)	TB cases	HIV + (%)	TB cases	HIV + (%)	TB cases	HIV + (%)	TB cases	HIV + (%)
West														
	Andorra	20%	-	-	-	-	-	-	11	(0.0)	7	(0.0)	10	(0.0)
EU	Belgium	18%	1,313	(4.0)	1,321	(4.5)	1,320	(3.9)	1,117	(6.3)	1,198	(4.6)	1,144	(4.5)
EU	Denmark	98%	548	(2.0)	511	(2.2)	-	-	393	(2.8)	385	(1.8)	424	(2.1)
EU	Finland	Unknown	-	-	-	-	-	-	-	-	-	-	361	(0.8)
EU	France	59%	6,714	(4.9)	6,465	(5.6)	-	-	-	-	-	-	-	-
	Iceland	18%	13	(0.0)	13	(0.0)	8	(12.5)	5	(20.0)	12	(8.3)	11	(9.1)
EU	Ireland	99%	395	(1.8)	381	(1.8)	408	(4.7)	407	(0.5)	431	(3.0)	461	(0.4)
	Israel *	Unknown	591	(4.7)	564	(4.4)	511	(4.7)	529	(6.8)	519	(2.5)	406	(5.4)
EU	Italy †	0%	-	-	-	-	-	-	-	-	404	(2.7)	-	
EU	Malta	0%	18	(0.0)	16	(0.0)	24	(0.0)	7	(14.3)	19	(5.3)	23	(0.0)
EU	Netherlands	78%	1,404	(4.7)	1,436	(4.7)	1,401	(4.4)	1,321	(4.9)	1,344	(3.4)	1,157	(5.3)
EU	Portugal	50%	4,494	(15.6)	4,387	(15.5)	4,431	(16.4)	4,148	(16.1)	3,854	(15.7)	3,536	(15.4)
EU	Spain	55%	8,395	(9.7)	7,453	(8.0)	7,626	(12.1)	7,467	(9.6)	7,766	(5.6)	7,820	(5.0)
EU	United Kingdom*‡	Unknown	5,990	(4.2)	6,211	(5.1)	6,497	(7.1)	6,584	(8.3)	-	-	-	-
Centre														
	Albania	>99%	631	(0.2)	572	(0.5)	612	(0.5)	-	-	581	(0.2)	540	(0.2)
EU	Bulgaria	>99%	-	-	-	-	-	-	-	-	3,232	(0.3)	-	-
EU	Czech Republic	>99%	1,200	(0.2)	1,350	(0.1)	1,200	(0.0)	1,162	(0.2)	-	-	-	-
	Macedonia, F.Y.R.	94%	-	-	-	-	-	-	-	-	-	-	658	(0.3)
	Montenegro	95%	-	-	-	-	-	-	-	-	-	-	170	(0.0)
EU	Poland	>99%	-	-	-	-	-	-	10,124	(0.1)	-	-	-	-
EU	Romania	63%	-	-	-	-	-	-	31,039	(0.5)	31,034	(0.5)	29,347	(0.6)
	Serbia	>99%	-	-	-	-	-	-	-	-	-	-	2,366	(0.1)
EU	Slovakia	23%	1,111	(0.0)	1,076	(0.0)	1,053	(0.0)	983	(0.1)	705	(0.0)	760	(0.1)
EU	Slovenia	76%	380	(0.5)	372	(0.5)	349	(0.3)	293	(0.3)	263	(1.1)	278	(0.0)
East														
	Armenia †	98%	-	-	1,343	(0.0)	1,393	(0.2)	1,570	(0.1)	269	(3.0)	2,322	(2.0)
	Azerbaijan *	Unknown	5,113	(0.1)	4,877	(0.2)	4,428	(0.2)	3,931	(0.2)	-	-	-	-
	Belarus *§	Unknown	-	-	5,505	(0.6)	5,139	(0.7)	-	-	5,410	(0.5)	5,276	(0.6)
EU	Estonia	9%	791	(0.1)	812	(0.9)	713	(2.8)	623	(2.9)	594	(4.4)	519	(6.4)
	Georgia	90%	-	-	-	-	-	-	-	-	-	-	6,448	(0.2)
	Kazakhstan	Unknown							23,918	(0.3)	23,163	(0.2)	22,303	(0.2)
EU	Latvia	96%	2,009	(0.7)	2,022	(1.3)	1,818	(1.4)	1,726	(2.3)	1,610	(2.5)	1,443	(3.5)
EU	Lithuania	Unknown	2,668	(0.1)	2,606	(0.1)	2,420	(0.0)	2,821	(0.2)	2,514	(0.3)	2,574	(0.3)
	Russian Fed. §	Unknown	-	-	-	-	-	-	-	-	-	-	119,226	(1.3)
	Uzbekistan	>99%	-	-	-	-	-	-	26,172	(0.6)	25,714	(0.5)	28,891	(0.5)

Source: EuroTB except for Kazakhstan and Lithuania (EuroHIV survey).

EU Countries which constitute the European Union as of 1 January 2007.
* HIV sero-status attributed though matching of TB and HIV case reports; proportion of cases with unknown HIV serostatus not available.
† Selected cases: DOTS patients in Italy, random testing in Armenia for 2004.
‡ TB cases over 15 years of age notified in England and Wales.
§ Among new TB cases only in 2001 and 2004.

Annex 4.3. HIV prevalence among TB cases in specific populations, 5 European countries (1993-2005)

Population	Country	Year	Total TB patients	TB patients tested for HIV	Total HIV+	% HIV+ among TB	% HIV+ among tested TB
Prisoners*	Italy	2002	80	80	2	2.5%	2.50%
		2001	449	80	80	17.8%	-
	Spain	2004	149	138	85	57.0%	61.59%
	Estonia	2005	25	24	7	28.0%	29.17%
Migrants*	Denmark	2000	548	353	7	1.3%	1.98%
		2001	511	333	10	2.0%	3.00%
		2002	419	272	7	1.7%	2.57%
		2003	393	237	5	1.3%	2.11%
		2004	385	238	5	1.3%	2.10%
		2005	385	259	5	1.3%	1.93%
Drug users†	Netherlands	1993-2001	384	384	112	29.2%	29.17%
Homeless†	Netherlands	1993-2001	209	209	42	20.1%	20.10%
Illegal residents†	Netherlands	1993-2001	375	375	34	9.1%	9.07%

* EuroHIV survey.
† Haar, 2006.

Technical note

All 53 countries of the WHO European Region participate in the HIV/AIDS surveillance activities coordinated by EuroHIV (European Centre for the Epidemiological Monitoring of 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 and AIDS

Data collection and management

Data on HIV and AIDS cases are reported to EuroHIV in a standard format. Individual data are reported without personal identifiers and elimination of duplicate reports between countries is therefore not possible. Since linkage between HIV and AIDS databases is not possible in all countries, two separate databases are maintained at European level (EHIDS, ENAADS: see below). New complete databases are provided at each update to allow validation and inclusion of follow-up data on previously reported cases.

According to the case definitions, a person with HIV and AIDS diagnosed at the same time should be reported in both ENAADS and EHIDS. In addition, persons with HIV infection (reported in EHIDS) may subsequently be diagnosed and reported with AIDS (in ENAADS). Therefore, the two databases partially overlap.

HIV infection

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).

Anonymous, individual data on all reported cases are sent annually to EuroHIV, according to a standard data file specification, by countries able to provide individual data. After validation, these data are merged into the European HIV Infection Data Set (EHIDS). From other countries, aggregate data (by sex, age group, transmission group and half-year of report) on new cases reported are provided annually, with no updating of previously reported data.

AIDS

Anonymous, individual data on all cases reported in each of the 53 countries since the beginning of the epidemic are reported annually to EuroHIV, according to a standard data file specification. After validation, these data are merged to form the European Non-Aggregate AIDS Data Set (ENAADS).

Case definitions

HIV infection case definition

A case of HIV infection is defined as an individual with HIV infection confirmed 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. Adult/adolescent cases are defined as those aged 13 years and over, and paediatric cases as those under 13 years.

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

AIDS case definition

Cases are reported according to a uniform AIDS case definition originally published in 1982 [1] and revised in 1985 [2,3], 1987 [4,5] and, for adults and adolescents (13 years and over), in 1993 [6,7]. The 1993 European AIDS surveillance case definition differs from the definition used in the USA in that it does not include CD4 lymphocyte count criteria. For children (less than 13 years), the case definition used in Europe [8] is essentially the same as that used in the USA.

AIDS indicative diseases

AIDS cases may be reported with a maximum of four AIDS-indicative diseases present at or within 2 months following AIDS diagnosis.

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 has not been recognised and who either (a) originate from a country with a generalised HIV epidemic (HIV prevalence consistently over 1% in pregnant women) [9]; 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.

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.

Reporting delays

Reporting delays refer to the time between diagnosis and report of this event at national level. Overall, around 50% of AIDS cases are reported by the end of the half-year within which they were diagnosed and 12% are reported more than 1 year after diagnosis. Recent trends in AIDS incidence are best assessed by analysing data by year of diagnosis with adjustments for reporting delays rather than by year of report. The adjustments are made [10] only for countries with at least 50 cumulative AIDS cases, assuming a maximum delay of 3 years (5 years for AIDS diagnosis in Switzerland because cases may be reported through death certificates, leading to longer delays; 4 years for AIDS in Spain, in line with national practice). Adjustments are the least reliable for the most recent year.

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

HIV prevalence data 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

The data in the report are provisional because of reporting delays (see above) and 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).

In most tables, data are presented by geographic area (see below); sub-totals are also shown for the 27 countries which constitute the European Union as of 1 January 2007 (population 492 million).

Country population denominators used to calculate rates are based on data from the United Nations Population Division [11].

Geographic areas

Based on geopolitical and epidemiological considerations, the 53 countries have been grouped into three geographic areas:

- West: 23 countries with a total population of 408 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*;

* Countries which constitute the European Union as of 1 January 2007.

- East: the 15 countries of the former Soviet Union with a total population of 284 million: Armenia, Azerbaijan, Belarus, Estonia*, Georgia, Kazakhstan, Kyrgyzstan, Latvia*, Lithuania*, Republic of Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan;
- Centre: the 15 remaining countries of the WHO European Region with a total population of 192 million: Albania, Bosnia and Herzegovina, Bulgaria*, Croatia, Cyprus*, Czech Republic*, Hungary*, Former Yugoslav Republic of Macedonia, Montenegro†, Poland*, Romania*, Serbia†, Slovakia*, Slovenia*, Turkey.

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* Countries which constitute the European Union as of 1 January 2007.

† Serbia & Montenegro became 2 independent states in June 2006; separate HIV/AIDS reporting data were not available for this report.

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	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 and STI Prevention Centre
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
Montenegro	Institute of Public Health of Montenegro, Podgorica
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	Authority sanitaria e socio-sanitaria, San Marino
Serbia	Institute of Public Health of Serbia, Belgrade
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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