

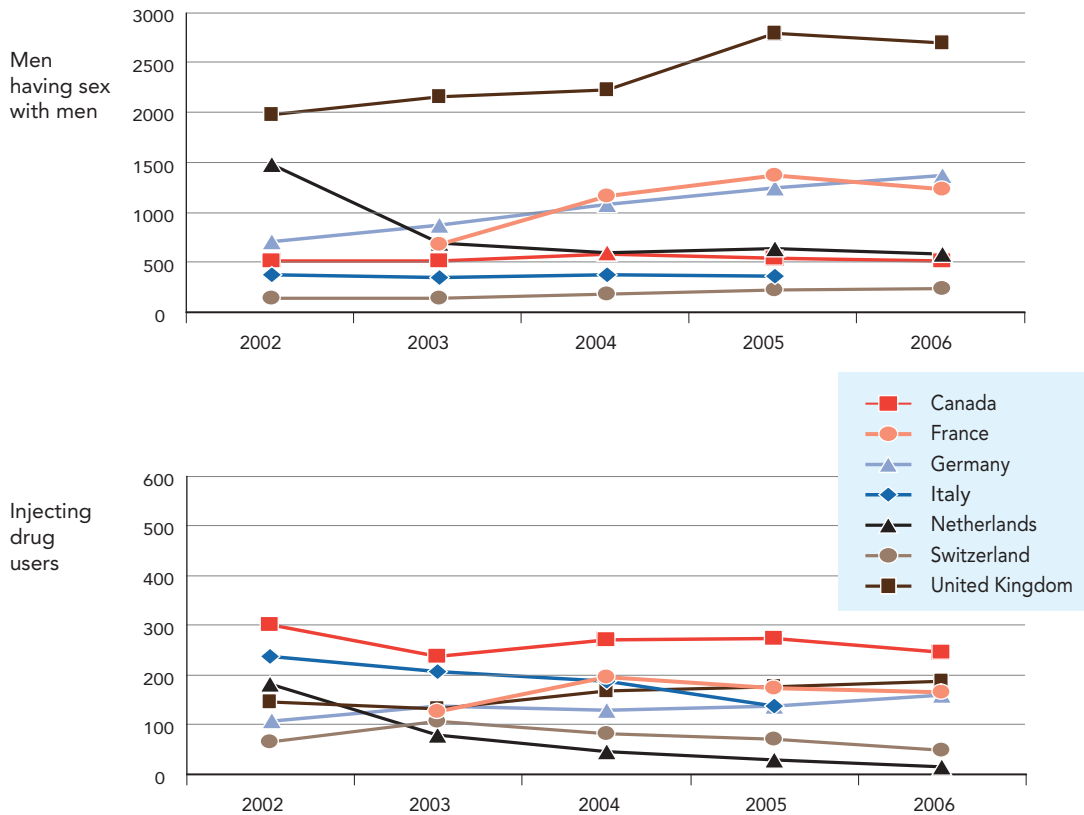
al., 2007). In Uruguay, for example, unprotected sex (mostly heterosexual) is believed to account for approximately two thirds of newly reported HIV cases (Montano et al., 2005). Most of the women are being infected by male sexual partners who acquired HIV during unprotected sex with another man or through use of contaminated drug injecting equipment (Ministerio de Salud de Peru, 2005; Cohen, 2006; Silva & Barone, 2006).

### North America, Western and Central Europe

The United States of America accounted for an estimated 1.2 million [690 000–1.9 million] of the 2.0 million [1.4 million–2.8 million] people living with HIV in North America, and in Western and Central Europe in 2007. Overall in those regions, 81 000 [30 000–170 000] people were newly infected with HIV in 2007. Comparatively few people—31 000 in a range of 16 000–67 000—died of AIDS last year.

**FIGURE 2.20**

HIV infections newly diagnosed in injecting drug users and men who have sex with men, by country, and year of report, 2002–2006



Sources: (1) Public Health Agency of Canada. HIV and AIDS in Canada. Selected Surveillance Tables to June 30, 2007. Surveillance and Risk Assessment Division, Centre for Infectious Disease Prevention and Control, Public Health Agency of Canada, 2007. (2) Epidemiologisches Bulletin (5. Oktober 2007/ Sonderausgabe B aktuelle daten und informationen zu infektionskrankheiten und public health). (3) The UK Collaborative Group for HIV and STI Surveillance. Testing Times. HIV and other Sexually Transmitted Infections in the United Kingdom: 2007. London: Health Protection Agency, Centre for Infections. November 2007. (4) EuroHIV. HIV/AIDS Surveillance in Europe. End-year report 2006. Saint-Maurice: Institut de veille sanitaire, 2007. No. 75. (5) EuroHIV. HIV/AIDS Surveillance in Europe. Mid-year report 2007. Saint-Maurice: Institut de Veille Sanitaire, 2007. No. 76.

**Recent epidemiological trends**

In North America, annual numbers of new HIV diagnoses have remained relatively stable over recent years, but access to life-prolonging anti-retroviral therapy has led to an increase in the estimated number of people living with HIV (Public Health Agency of Canada, 2006; US Centers for Disease Control and Prevention, 2007).<sup>13</sup> In Western Europe, new HIV diagnoses are increasing, as is the total number of people living with HIV (the latter also because of wide access to antiretroviral treatment).

**Main modes of HIV transmission**

These high-income countries have diverse epidemics, although their epidemiological profiles have diverged as the epidemic has evolved. In general, injecting drug use is accounting for a smaller share of new HIV infections than before.

*Sex between men*

Unprotected sex between men is still the main mode of HIV transmission in both

<sup>13</sup> This analysis is based mainly on reported HIV diagnoses. A significant limitation of using annual HIV diagnoses to monitor the HIV epidemic is that this yardstick does not represent the total incidence (because it may include infections that occurred several years earlier) and it only captures those people that have been tested for HIV. As a result, HIV trends based on reported HIV cases can be skewed by changes in the HIV testing intake or by changes in patterns of reporting. As far as possible, this analysis alerts readers to instances where such changes have occurred.

Canada and the United States—40% of new HIV diagnoses in Canada in 2006 and 53% in the USA in 2005 (Public Health Agency of Canada, 2007; US Centers for Disease Control and Prevention, 2007). Men who have sex with men continue to be the population group most at risk of acquiring HIV within most Western European countries. Indeed, the number of new HIV diagnoses attributed to unprotected sex between men has increased sharply in recent years in Western Europe, and appears to be associated with reported increases in higher-risk unprotected sex between men in several countries (Dodds et al., 2004; Balthasar, Jeannin & Dubois-Arber 2005; Moreau-Gruet, Dubois-Arber & Jeannin, 2006; Hamouda et al., 2007). In Germany, for example, the number of new HIV diagnoses among men who have sex with men rose by 96% (to 1370) between 2002 and 2006 (Robert Koch Institut, 2007).

#### *Heterosexual intercourse*

About one third (32%) of newly diagnosed HIV infections and AIDS cases in the United States in 2005 were attributable to high-risk heterosexual intercourse (US Centers for Disease Control and Prevention, 2007), as were 33% of new HIV infections in Canada in 2006. However, in Canada, a substantial proportion of those infections were in people born in countries with high HIV prevalence (mainly sub-Saharan Africa and the Caribbean) (Boulos et al., 2006; Public Health Agency of Canada, 2007). A similar situation was seen in Western Europe, where unprotected heterosexual intercourse accounted for the largest share (42%) of new HIV diagnoses in Western Europe in 2006 (compared with the 29% that were attributed to unprotected sex between men). Unprotected heterosexual intercourse is the main reported mode of transmission in most countries of Central Europe, except for Estonia, Latvia, Lithuania, and Poland, where the main mode is injecting drug use, and Croatia, the Czech Republic, Hungary, and

Slovenia, where it is unprotected sex between men (Hamers, 2006; Rosinska, 2006; Brucková et al., 2007; EuroHIV, 2007a).

#### *Injecting drug use*

Transmission by multiple use of contaminated injecting equipment accounts for 18% of new HIV diagnoses in the United States (2005) and 19% in Canada (2006) (Public Health Agency of Canada, 2007; US Centers for Disease Control and Prevention, 2007). In Western Europe, a diminishing proportion of HIV diagnoses (6%) are related to the use of contaminated injecting equipment in 2006 (EuroHIV, 2007b). In Denmark and the Netherlands, the number of new HIV diagnoses among injecting drug users fell by 72% and by 91%, respectively in 2002–2006 (EuroHIV, 2007b). In Central Europe, too, newly reported HIV diagnoses in injecting drug users have decreased (EuroHIV, 2007b).

## Middle East and North Africa

The limited HIV information available for the Middle East and North Africa indicates that approximately 380 000 [280 000–510 000] people were living with HIV in 2007, including the 40 000 [20 000–66 000] people who were newly infected with the virus last year.

#### **Recent epidemiological trends**

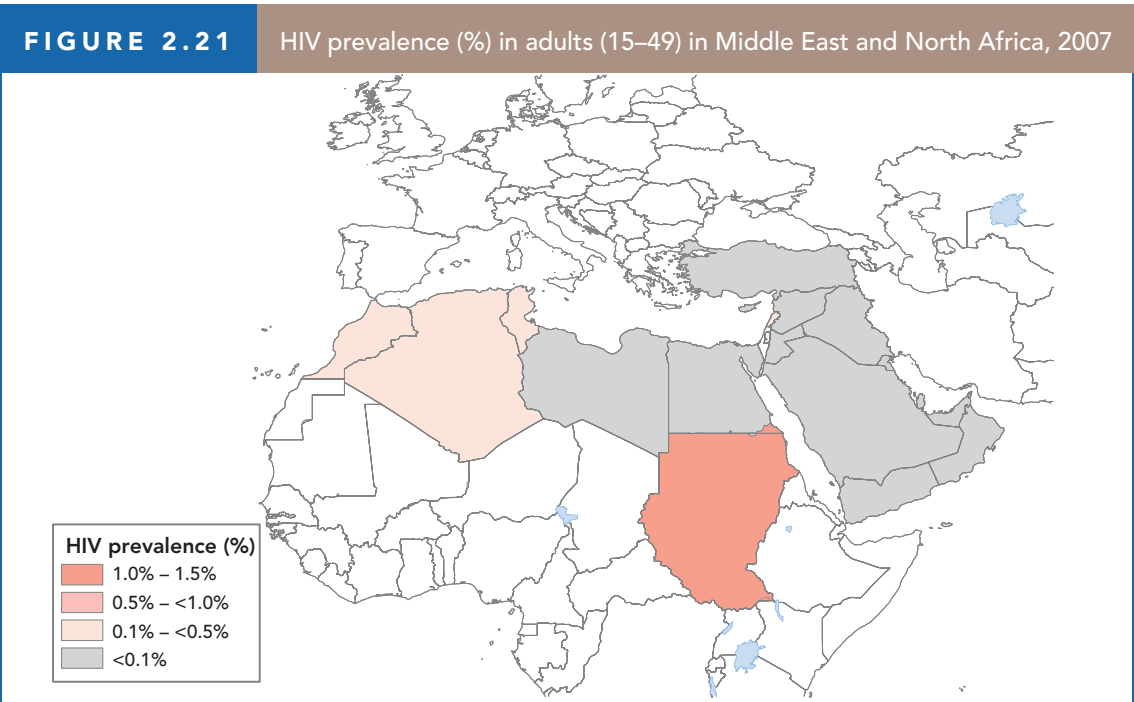
With the exception of the Sudan, the epidemics in this region are comparatively small.

#### **Primary sources of HIV transmission**

Varying combinations of risk factors are associated with the epidemic; chief among them are unprotected paid sex and the use of contaminated drug injecting equipment (Obermeyer, 2006).

#### *Injecting drug use*

The Islamic Republic of Iran is home to a serious drug-related epidemic, with HIV prevalence of



between 15% and 23% documented among male injecting drug users who make use of drop-in or drug-treatment services in Tehran (Zamani et al., 2005; Zamani et al., 2006). Exposure to contaminated drug injecting equipment is also the main route of HIV transmission in the Libyan Arab Jamahiriya and Tunisia, and it features in the epidemics of Algeria, Morocco, and the Syrian Arab Republic (Kilani et al., 2003; Ministry of Health and Medical Education [Iran], 2005; Mimouni & Remaoun, 2006; Obermeyer, 2006).

*Overlap of injecting drug use and sex work*

A combination of injecting drug use and sex work may be facilitating the spread of HIV in Algeria, Egypt, Lebanon, and the Syrian Arab Republic, where one third or more of surveyed injecting drug users said that they recently either

bought or sold sex. In the Syrian Arab Republic, more than half (53%) of the drug users interviewed in one study said they sold sex, and 40% of those users said they never used condoms (Ministry of Health [Syria] et al., 2007).

*Heterosexual intercourse*

Unprotected heterosexual intercourse is the main factor in Sudan’s epidemic—the most extensive in the region—with national adult HIV prevalence estimated at 1.4% [1.0%–2.0%] in 2007. In several other countries, increasing numbers of women are being diagnosed with HIV, most of them infected by husbands or boyfriends who had acquired HIV through injecting drug use or paid sex. In Morocco, for example, one third (33%) of women diagnosed with AIDS were married (Ministère de la Santé [Maroc], 2007).

### Sex between men

Although socially stigmatized and officially censured throughout the region, unprotected sex between men is probably a factor in several of the region's epidemics. A recent study in Egypt, for example, found that 6.2% of men who have sex with men were infected with HIV (Ministry of Health [Egypt] et al., 2006), while 9% prevalence was found among their counterparts in Khartoum State, Sudan (Elrashied, 2006).

## Oceania

Overall, an estimated 74 000 [66 000–93 000] people were living with HIV in Oceania in 2007, about 13 000 [12 000–15 000] of whom were newly infected in the same year.

### Recent epidemiological trends

Most of the region's epidemics are small, except in Papua New Guinea, where the annual number of new HIV diagnoses more than

doubled between 2002 and 2006, when 4017 new HIV cases were reported (National AIDS Council Secretariat [Papua New Guinea], 2007).

### Primary sources of HIV transmission

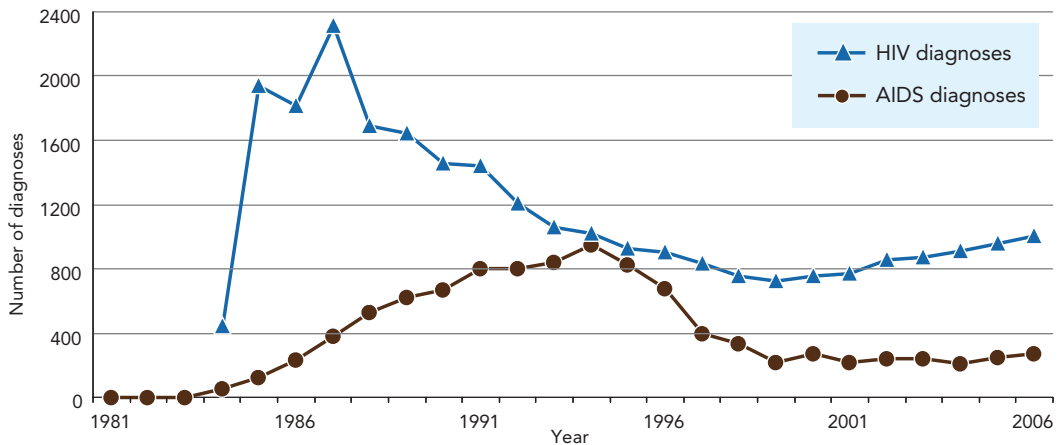
#### *Heterosexual intercourse*

Unprotected heterosexual intercourse is the main mode of HIV transmission in Papua New Guinea (National HIV/AIDS Support Project, 2006; National AIDS Council Secretariat [Papua New Guinea] & National HIV/AIDS Support Project, 2007), and unprotected paid sex in particular appears to be a central factor. In one recent survey, 60%–70% of truck drivers and military personnel, and 33% of port workers, said they had bought sex in the previous year (National AIDS Council Secretariat [Papua New Guinea] & National HIV/AIDS Support Project, 2007). Community-based studies in 10 provinces have shown that about 40% of participants were infected with at least one sexually transmitted infection (Institute of Medical Research, 2007).

**FIGURE 2.22** HIV prevalence (%) in adults (15–49) in Oceania, 2007



**FIGURE 2.23** Annual diagnoses of HIV infections and AIDS in Australia, 1981–2006



Source: National Centre in HIV Epidemiology and Clinical Research, 2007. Data available at [http://www.nchechr.unsw.edu.au/NCHECRweb.nsf/resources/SurvRep07/\\$file/ASR2007.PDF](http://www.nchechr.unsw.edu.au/NCHECRweb.nsf/resources/SurvRep07/$file/ASR2007.PDF)

*Sex between men*

Unprotected sex between men is the primary cause of HIV infection in Australia (National Centre in HIV Epidemiology and Clinical Research, 2007a) and New Zealand (Ministry of Health [New Zealand], 2007). After declining sharply in the 1990s, new HIV diagnoses in Australia have increased, from the 763 reported in 2000 to 998 reported in 2006 (Figure 2.23). There is evidence that the prevalence of unprotected sex between men has

increased or remained at high levels in recent years in several cities including Adelaide, Brisbane, Canberra, Perth (National Centre in HIV Epidemiology and Clinical Research, 2007b), and Sydney (Prestage et al., 2006). Unprotected sex between men also could be a factor in Papua New Guinea’s epidemic. When surveyed, more than one in ten (12%) young men said they had had sex with men, and condom use was rare (Maibani-Michie & Yeka, 2005).