MIDDLE EAST AND NORTH AFRICA

AIDS epidemics in this region are diverse. An estimated 68 000 [41 000–220 000] people acquired HIV in 2006, bringing to 460 000 [270 000–760 000] the total number of people living with the virus in the region. AIDS killed approximately 36 000 [20 000–60 000] people in the past year. Most reported HIV infections have been in men, but the proportion of infected women is increasing (UNAIDS, 2006).

Uneven (and, in many places, inadequate) HIV surveillance systems make it difficult to gauge precisely the patterns and trends of the epidemics in many countries of this region—especially among most-at-risk groups such as injecting drug users, sex workers and men who have sex with men. However, improved data collection in some countries (such as **Algeria**, **Iran**, **Libya** and **Morocco**) show that localized HIV epidemics exist across the region, while a generalized epidemic persists in **Sudan**.

Inadequate HIV surveillance in many countries of this region makes it difficult to discern the patterns and trends of their diverse epidemics—especially among most-at-risk groups such as injecting drug users, sex workers and men who have sex with men.

Sudan has by far the biggest AIDS epidemic in this region. Adult HIV prevalence was 1.6% [0.8%–2.7%] in 2005 and some 350 000 [170 000–580 000] people were living with HIV. HIV prevalence of over 2% has been found among women seeking antenatal care in the White Nile state, for example (Ministry of Health Sudan, 2006). There are fears that HIV transmission could accelerate and broaden in the aftermath of more than two decades of war, as the lives of former refugees and displaced persons gradually return to normal. For example, HIV prevalence as high as 4.4% has been found among some formerly displaced adults in Yei in the south, along the Ugandan border (Kaiser et al., 2006). More prevention efforts are being mounted in the south, including voluntary counselling and testing initiatives (in Juba, for example), and a handful of antiretroviral treatment sites are now operating.

The epidemic is not confined to the south, however (Ministry of Health Sudan, 2005). A 2005 study among police officers in Khartoum State, for example, found that 1% were HIV-infected. Knowledge of HIV was extremely poor: only 2% of the men knew that condoms can prevent HIV transmission (Abdelwahab, 2006). In addition, unsafe sex between men appears to be a contributing factor in the epidemic in Khartoum State, according to another study which found HIV prevalence of 9.3% among men who have sex with men. Almost all the men participating in the study claimed to have more than one sexual partner, and two thirds said that they had sold sex. Just over half the men were unaware of the risk of HIV infection during unprotected anal sex and only 3% of them said that they used condoms consistently (Elrashied, 2006).

High HIV prevalence among injecting drug users has been documented in several countries, notably **Iran** and **Libya**. However, injecting drug use occurs in many other countries of this region, and the use of non-sterile injecting equipment appears to be common. Various studies show that as many as four in ten injecting drug users in **Algeria**, five in ten in **Egypt** and **Morocco**, and six in ten in **Lebanon** have used non-sterile syringes.

Given the large number of injecting drug users in **Iran**—as many as 137 000, according to the Ministry of Health and Medical Education (Gheiratmand et al., 2006)—the high HIV infection levels found among injecting drug users in this country is a major concern. Almost one in four (23%) injecting drug users participating in a recent study in the Iranian capital, Tehran, were found to be HIV-infected (Zamani et al., 2006), as were 15% of those receiving treatment at centres in the same city in an earlier study (Zamani et al., 2005). In both instances, a history of using non-sterile injecting equipment in prison was the main factor associated with infection, underscoring the need for harm reduction programmes in prisons and other places of incarceration. In Marvdasht, 85% of injecting drug users said that they had used drugs in prison and 19% said that they had used non-sterile injecting equipment there (Day et al., 2006). The Iranian authorities have recognized that prisons are a risk environment, and condoms and substitution therapy are being provided in some detention facilities. Meanwhile, other research is revealing varied injecting behaviour in different social groups (with between 30% and 100% of injecting drug users using non-sterile syringes, depending on their socioeconomic status)—a reminder of the need to tailor harm reduction and other HIV programmes appropriately (Razzaghi et al., 2006).

In **Iran**—and elsewhere in this region—substantial proportions of young people, including injecting drug users, are sexually active. A majority of injecting drug users seeking treatment in Tehran are sexually active, yet only half the injecting drug users participating in a 2005 study said they had ever used a condom during sex (Zamani , 2005). More broadly, some 28% of 15–18-year-old male youths taking part in another study were sexually active. Yet half of them had never seen a condom, and fewer than half knew that condoms could prevent sexually transmitted infections (Mohammadi et al., 2006). When high school students in Tehran were surveyed, one third of the respondents believed HIV could be transmitted by mosquitoes and one fifth thought they could acquire the virus in public swimming pools (Tavoosi et al., 2004). Such generalized ignorance and lack of preventive behaviour puts young people at considerable risk of HIV infection.

Iran has expanded its HIV response considerably in recent years. Clean syringe distribution and methadone treatment projects are operating, and government clinics now provide free HIV counselling, testing and treatment. **Libya**, where HIV prevalence of 18% has been found among prisoners (Sammud, 2005), will need to follow suit and expand its response in order to control the HIV epidemic.

Unprotected sex (including during paid sex and sex between men) is the other major factor in the region's epidemics. HIV infections levels of 9%–10%, 2.2% and 4.4% have been found among female sex workers in Saida and Tamanrasset in **Algeria** (Fares et al., 2004), **Morocco** (Ministère de la Santé Maroc, 2005) and **Sudan** (Federal Ministry of Health Sudan, 2002), respectively. Indeed, in **Algeria** and **Morocco**, unprotected sex accounts for the majority of reported HIV infections, and women represent an increasing proportion of people living with HIV (Ministère de la Santé Maroc, 2005). At some antenatal clinics in the south of Algeria, more than 1% of pregnant women have tested HIV-positive (Institut de Formation Paramédicale de Parnet, 2004). In **Saudi Arabia**, almost half (46%) of reported HIV cases have been attributed to unprotected sex. There, two thirds (67%) of all HIV cases have been reported in three cities: Jeddah, Riyadh and Damman (Al-Mazrou et al., 2005).

Effective HIV prevention programmes that target most-at-risk populations can still prevent wider and more serious HIV epidemics in several countries in the Middle East and North Africa. Progress in providing antiretroviral therapy in this region remains slow, with only 4000 people estimated to be on treatment at the end of 2005 (compared with about 1000 at the end of 2003). It is estimated that some 75 000 people in the region need antiretroviral therapy (WHO/UNAIDS, 2006).