Technical note

All 52 countries of the WHO European Region participate in the HIV/AIDS surveillance activities coordinated by EuroHIV (European Centre for the Epidemiological Monitoring of 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 AIDS and HIV infection

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 (ENAADS, EHIDS; see below). New complete databases are provided at each update to allow validation and inclusion of follow-up data on previously reported cases.

AIDS

Anonymous, individual data on all cases reported in each of the 52 countries since the beginning of the epidemic are reported to EuroHIV every 6 months, according to a standard data file specification. After validation, these data are merged to form the European Non-Aggregate AIDS Data Set (ENAADS).

HIV infection

Reporting of cases of newly diagnosed HIV infections started at different times in European countries and is now implemented in most of them (Table 1).

Anonymous, individual data on all reported cases are sent to EuroHIV every 6 months, 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 and transmission group) on new cases reported are provided every 6 months, with no updating of previously reported data.

Case definitions

AIDS

Cases are reported according to a uniform AIDS case definition originally published in 1982 and revised in 1985, 1986, 1987, and, for adults and adolescents (13 years and over), in 1993. 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 is essentially the same as that used in the USA.

HIV infection

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

Transmission groups

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

The category "heterosexual contact" proposed by EuroHIV includes persons in whom major risk factors for HIV infection other than heterosexual contact have not been recognised and who either (a) originate from a country with a generalised HIV epidemic (HIV prevalence consistently over 1% in pregnant women); or (b) had sex with either a bisexual male, an injecting drug user, a person with haemophilia (or other coagulation disorder), a transfusion recipient, a person originating from or living in a country with a generalised HIV epidemic, or an HIV-infected person not known to belong to one of the above categories; or (c) are strongly believed to have been infected through heterosexual transmission, although information on the partner(s) is not available.

*Nosocomial infection* refers to patients infected in healthcare settings. The category "other/undetermined" includes cases of occupational exposure in healthcare workers, cases with unusual modes of transmission not classifiable in other categories and cases with no or
End-year report 2003, No. 70

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.

Data presentation

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

AIDS data are presented by year of diagnosis or, for mortality, by year of death, with adjustment for reporting delays. HIV data are presented by year of report.

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.

Based on geopolitical and epidemiological considerations, the 52 countries have been grouped into three geographic areas: the West, 23 countries: 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*; the East, the 15 countries of the former Soviet Union: Armenia, Azerbaijan, Belarus, Estonia*, Georgia, Kazakhstan, Kyrgyzstan, Latvia*, Lithuania*, Republic of Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan; and the Centre, the 14 remaining countries of the WHO European Region: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus*, Czech Republic*, Hungary*, Former Yugoslav Republic of Macedonia, Poland*, Romania, Serbia and Montenegro, Slovakia*, Slovenia*, Turkey. The respective populations of these three areas are 401, 287 and 193 million. In most tables, data are presented by geographic area; sub-totals are also shown for the 25 countries which constitute the European Union as of 1 May 2004 (population 456 million).

Annual rates are calculated per million population. Country population denominators used to calculate rates are based on data from the United Nations Population Division.10

Reporting delays

Reporting delays refer to the time between diagnosis or death and report of this event at national level. Overall, around 50% of AIDS cases and 65% of AIDS deaths are reported by the end of the half-year within which they were diagnosed or died; respectively around 12% and 10% are reported more than 1 year after diagnosis or death. Reporting delays vary widely between countries and, for AIDS diagnosis, also between transmission groups. Therefore, recent trends in AIDS incidence and AIDS mortality are best assessed by analysing data by year of diagnosis and by year of death with adjustments for reporting delays rather than by year of report. The adjustments are made11 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). Adjustments are the least reliable for the most recent half-years.

A number of countries do not provide the date of death report—required to estimate reporting delays for deaths—and others have reported too few deaths for reliable estimation. For these countries, AIDS deaths are adjusted on the basis of delays in reporting of AIDS cases, reduced (by a factor 0.7) to take into account the more timely reporting generally associated with deaths. Adjustment of HIV data is not feasible at present as many countries continue to provide only aggregate data. However, in countries providing individual data, delays are generally shorter than for AIDS cases.

Under-reporting and under-diagnosis

No adjustments are made for under-reporting or under-diagnosis, and thus data presented do not take into account cases which will never be reported or diagnosed. National estimates of under-reporting range from 0% to 25% for AIDS cases12 and are not available for AIDS deaths or for HIV cases. The seriousness of late-stage HIV infection inevitably leads to care seeking, which limits the amount of under-diagnosis of AIDS cases, at least in countries with universal health care coverage and adequate diagnostic facilities. The overall proportion of HIV infections that have been diagnosed is unknown, and is believed to differ widely between countries and between sub-populations within countries. It is heavily dependent on HIV testing patterns among high risk populations.

* Countries which constitute the European Union as of 1 May 2004
Access to voluntary counselling and testing, and access to care, all of which vary by country.

**HIV tests**

Total numbers of HIV tests performed annually for diagnostic purposes (i.e. unlinked anonymous and blood donations excluded) are collected and presented once a year in this report, to help in interpreting HIV reporting data. It must, however, be stressed that these data are only very crude measures of HIV testing activities and should be interpreted with caution. First, they provide no information on who is being tested nor to what extent testing is targeted at high risk populations. A survey carried out by EuroHIV in 1997 indicated that only very few countries—primarily in the Centre and the East—were able to provide data on the number of tests done in specific populations such as IDU or STD patients.13 Second, they are derived from different sources in different countries and may not be exhaustive in all countries, and hence may not always be comparable.

**HIV prevalence assessment in specific populations**

Data on HIV prevalence from the participating countries are updated once a year and compiled in the European HIV Prevalence Database. This database contains aggregate data on HIV prevalence in various populations (e.g. pregnant women, blood donors) 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.

**References**

4. Centers for Disease Control. Revision of the CDC surveillance case definition for acquired immunodeficiency syndrome. MMWR 1987; 36: No.1S.