Infectious diseases

EMCDDA 2001 selected issue

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with tobacco in 'joints' in recreational and nightlife settings. The result of such changes may weaken the taboos against 'base/crack' smoking, which have existed and which have been providing informal controls to prevent diffusion of crack into mainstream recreational drug culture. These signs of erosion in informal social controls over the use of 'base/crack' cocaine make early response all the more urgent.

A positive utilitarian, and 'up-market' image of cocaine powder and perhaps also of cocaine 'base/crack', combined with the existence of affluent potential consumers, could lead to a diffusion of cocaine use in the EU, including 'base/crack'. This potential for diffusion should be treated with caution as biased news coverage about 'base/crack' can lead to the construction of myths about its use, which may divert attention from persistent structural problems facing some inner city areas (9).

Sources

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Infectious diseases

Prevalence and trends

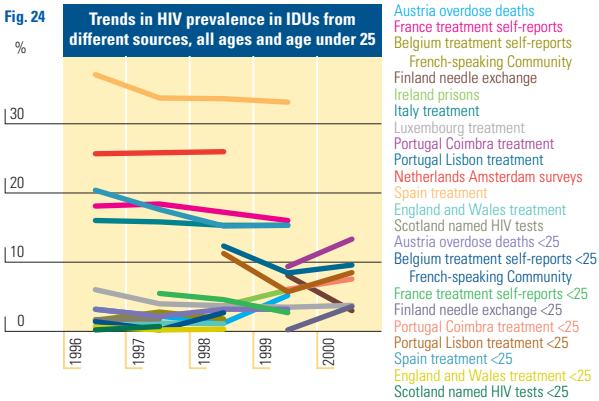
HIV

The prevalence of HIV infection differs much between countries — and within countries, between regions and cities. Although divergent sources and data-collection methods make comparisons difficult, available data indicate average levels of infection among different subgroups of injecting drug users (IDUs) that roughly vary from about 1 % in the United Kingdom to 32 % in Spain (see Figure 8, Chapter 1).

HIV prevalence seems to have stabilised in most countries since the mid-1990s after the sharp declines that followed the first major epidemic among IDUs in the 1980s (see Figure 24). In some countries (Austria, Luxembourg, Ireland, the Netherlands, Portugal and Finland) transmission may again be increasing among subgroups of IDUs (See box on page 16, Chapter 1).

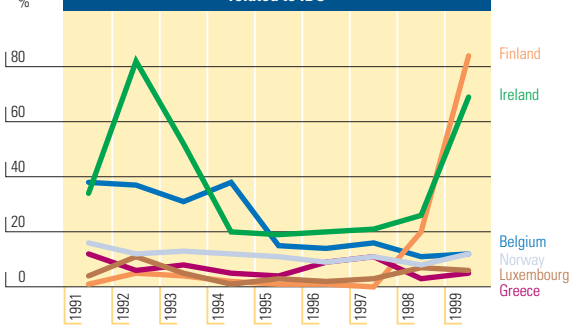
Recent transmission may be clearer if one looks specifically at prevalence in IDUs aged less than 25. HIV infections in this group must have occurred on average more recently, as most IDUs start injecting at between the ages of 16 and 20 (1, 2). The trends in this age group, as far as data are available, are more marked than general prevalence and sometimes even in the opposite direction. In Finland, for instance, a large outbreak occurred in 1998–99, as can be seen from HIV notifications data (Figure 25). After 1999, overall prevalence declined, as indicated by data from needle exchanges (Figure 24); however, prevalence in young IDUs increased from 0 % in 1999 to about 4 % in 2000. This might indicate that once new infections among older injectors began to decline due to saturation (most persons at risk have become infected) and/or behaviour change of those at risk, new infections mainly took place among younger injectors, who often have higher levels of risk behaviour.

Fig. 24 **Trends in HIV prevalence in IDUs from different sources, all ages and age under 25**



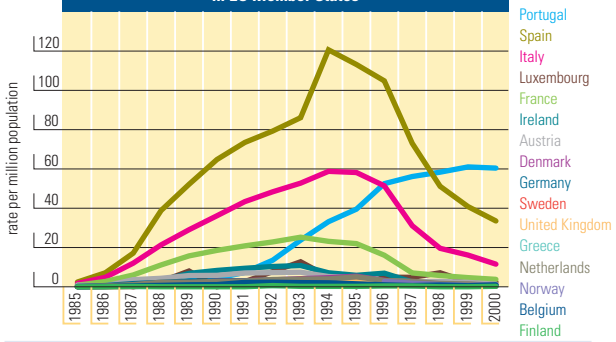
Sources: National focal points. For primary sources see complementary statistical tables at http://www.emcdda.org.

Fig. 25 Notified cases of HIV related to IDU



NB: Data for Ireland are positive HIV tests in IDUs.
Sources: National focal points.

Fig. 26 Incidence of AIDS related to IDU in EU Member States



NB: Cases reported by 31 December 2000, adjusted for reporting delays.
Source: European Centre for the Epidemiological Monitoring of AIDS.

In several countries, HIV prevalence is consistently higher in female IDUs than in male IDUs. This may be due to higher levels or different ways of needle sharing and/or higher sexual risk of female IDUs.

AIDS

The countries that have been most affected with AIDS among IDUs are mainly in the south-western part of the EU, notably Portugal, Spain, France and Italy [23]. Incidence of AIDS varies greatly between countries, as does HIV, but the general trend is downward (Figure 26). This decline is probably the result of new treatments among IDUs that delay the onset of AIDS. Therefore, AIDS incidence is now considered as a less reliable indicator of HIV transmission than before about 1996. Spain, which had the highest yearly AIDS incidence among drug users, has recently been surpassed by Portugal, the only country not showing a decrease. This may indicate limited uptake of HIV treatment (as shown by a recent study) and/or increased HIV transmission during the 1990s. However, the increase in Portugal shows signs of levelling off during 2000.

Hepatitis C

Prevalence of hepatitis C infection is higher and more similar across the EU than prevalence of HIV. Between 40 % and over 90 % of IDUs are infected with hepatitis C virus (HCV), even in countries with low rates of HIV infection such as Greece (see Figure 9, Chapter 1). Chronic HCV infection incurs substantial health problems, and in the long run (decades) may lead to serious health consequences, including severe liver damage and premature death. The proportion of chronic infections that lead to severe health problems is still very unclear, but there are recent indications that in IDUs it may be lower (perhaps 5 to 10 %) than previously thought (20 to 30 %) (3, 4). The extremely high levels of HCV infection among IDUs in Europe may, however, still lead to a large health burden due to liver disease among (ex-) IDUs over the coming decades.

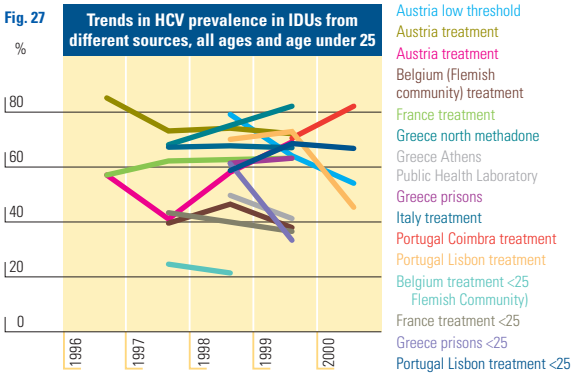
Trends in hepatitis C infection, for the few countries which could provide these, show both important decreases and increases in Austria, Portugal and Greece depending on source (geographic location) and age group (Figure 27). These may reflect different populations of IDUs with a different epidemiology of infections. However, it is also possible that the trends reflect testing policies that relate to the recent introduction of HCV testing. For example, those with highest risk may participate first when a voluntary HCV test is offered such that prevalence in subsequent years appears to decline. Only following the trends over a longer period can confirm the apparent trends. This potential bias may be less important for HIV tests, which have been available for many years.

Hepatitis B

Prevalence of antibodies against hepatitis B virus (HBV) is also high, but seems less similar across the EU than prevalence of HCV. In the case of hepatitis B, the presence of antibodies indicates whether one has ever been infected, unlike for HCV and HIV, where a positive antibody test mostly indicates current infection. However, antibodies against HBV may also indicate vaccination. This means that vaccination practices, which may differ much between countries, need to be taken into account when interpreting HBV antibody prevalence. The proportion with no antibodies indicates IDUs who are still at risk of infection and should receive vaccination. Vaccination of IDUs is especially important as hepatitis B (also hepatitis A or D) infection can be very dangerous and even deadly if one is already infected with another hepatitis virus, such as HCV. In the EU, roughly between 20 and 60 % of

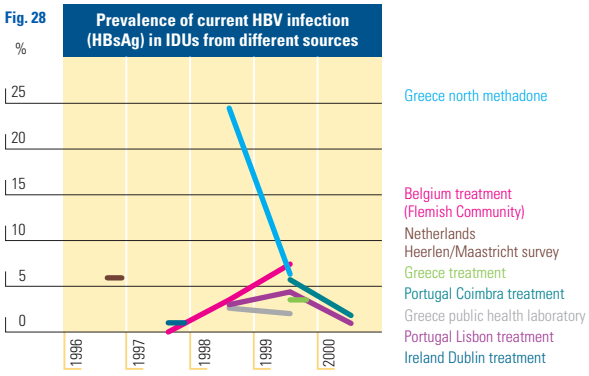
[23] Figure 16 OL: AIDS cases diagnosed in 1999 in injecting drug users per million population (online version).

Fig. 27 **Trends in HCV prevalence in IDUs from different sources, all ages and age under 25**



Sources: National focal points. For primary sources see complementary statistical tables at http://www.emcdda.org.

Fig. 28 **Prevalence of current HBV infection (HBsAg) in IDUs from different sources**



Sources: National focal points. For primary sources see complementary statistical tables at http://www.emcdda.org.

IDUs have antibodies against hepatitis B. Self-reported data from studies in some countries suggests that only about 10 to 30 % of IDUs may have been fully vaccinated (5, 6, 7, 8). This suggests that a large potential health gain through vaccination exists (24).

Easier to interpret than HBV antibodies is the prevalence of HBsAg (the serological marker that indicates that the hepatitis B virus is still present). This indicates current hepatitis B infection, which can be either recent or chronic infection. The level of HBsAg thus indicates the potential for severe long-term complications and for spread to others through injecting risk behaviour or sexual transmission. Prevalence of HBsAg is only available from a limited number of countries, but appears to differ much and is in some cases high (Figure 28). In northern Greece, IDUs in methadone programmes may have experienced an important outbreak of hepatitis B infection prior to 1998, as levels were extremely high in 1998 but strongly declined between 1998 and 1999. In Belgium, data from IDUs in treatment indicate a steady increase in current HBV infection (HBsAg) between 1997 and 1999. In Portugal, recent data indicate a decline in current HBV infection. In Norway, notification data indicate a strong increase in HBV (and HAV) infections among IDUs.

Other STDs, TB, endocarditis and Clostridium outbreak

Other infectious diseases that can be important among IDUs are TB, which is not transmitted by injecting drug use but is especially high among drug users in Spain and Portugal, due to its strong association with HIV infection and AIDS. Other sexually transmitted diseases (STDs), such as syphilis and gonorrhoea, can also be high among drug users, especially drug-using street prostitutes, if they have no access to low-threshold medical services. This may cause important transmission to non-drug users, while these STDs also form an important risk factor for HIV infection. Injecting drug users further often have high prevalence of other infections which can be life threatening, such as abcesses on injecting sites or endocarditis (infection of the heart valves), which can often easily be treated if services are available.

Between April and August 2000, a very large outbreak of *Clostridium novyi* infection occurred in Scotland, Ireland, England and Wales, resulting in 104 cases of severe illness and 43 deaths among young people. The outbreak was probably related to contaminated heroin in combination with specific modes of injection (intramuscular or subcutaneous rather than intravenous). It showed, in a dramatic way, how large the potential is for severe health problems among IDUs, which can be much larger and more life-threatening than health problems due to other and more prevalent patterns of drug use.

Determinants and consequences

Injecting drug use

Among drug users, infections such as HIV and hepatitis B and C are mainly transmitted through injecting drug use. This is largely due to sharing of injecting materials such as needles and syringes, and sharing of paraphernalia such as cotton, water and spoons. It is probable that in situations of increasing injecting drug use populations of injectors are especially vulnerable to rapid spread of HIV and hepatitis.

The timing and magnitude of the AIDS epidemics in different countries may have largely been determined by timing and magnitudes of epidemics of injecting drug use.

(24) Figure 17 OL: Prevalence of antibodies against hepatitus B virus among injecting drug users in EU Member States, 1996–2000 (online version).

These epidemics of injecting drug use probably occurred earlier in northern European countries such as the Netherlands (1970s and 1980s) but remained relatively contained, while occurring later in southern European countries such as Spain, Italy and Portugal (1980s and 1990s) and at higher rates. The occurrence of HIV epidemics may have therefore depended on a delicate balance between timing and magnitude of injecting drug use epidemics, awareness of AIDS (not existing in early years) and the timing and large-scale introduction of preventive measures.

The importance of injecting among drug users (in Europe mainly of heroin alone or together with other substances), may further depend on preferences and cultural habits of drug users or on the type of heroin available on the market (water-soluble and injectable or not). Also price and purity probably play a role, as injecting heroin is more efficient and therefore cheaper than smoking it. Fear of AIDS is thought to have much less influence on the decision to inject or not.

At the moment, it is not known how to prevent injecting drug use. Injecting drug use, or heroin use by any route, may depend on a range of personal and societal factors such as behavioural and/or family problems and unemployment. Substitution treatment, however, can be very effective in reducing injecting and injecting risk behaviour among heroin users (9).

Injecting drug use has decreased strongly during the 1990s in most, but not all, countries. As a consequence, rates of injecting drug use (measured among opiate users entering treatment) differ strongly, from a low of about 10 % in the Netherlands to a high of about 70 % in Greece. Recent trends in injecting are not available except for Ireland, where they show a continuous increase, consistent with a recent increase in the number of IDU-related HIV positive tests.

Injecting risk behaviour

Among IDUs, spread of infections is mainly determined by injecting risk behaviour, notably 'needle sharing' (giving or receiving a used needle from or to another person). Transmission is also possible through the sharing of injecting equipment such as water, cotton or spoons, which are probably even more important in the case of hepatitis B and C. Unhygienic injecting may even cause transmission of hepatitis if no materials are shared, for example via blood contamination of hands, tables or other surfaces.

Other risk behaviours include front or backloading (injecting heroin from one syringe into another in order to measure even shares). Preliminary data on needle sharing indicate that this is, in general, still very high among IDUs, ranging from 10 to 17 % in the Netherlands (recent borrowing of used needles), to 64 % in Ireland (needle sharing in last four weeks) and 75 % in England and Wales (sharing of needles and paraphernalia) (25). Most of these data may still underestimate the amount of risk behaviour through indirect sharing (front or backloading), sharing of materials other than needles, etc. On the other hand, needle sharing often occurs between steady partners who both know they are not infected, which may be relatively safe.

Sexual risk behaviour

Sexual transmission of HIV and HBV is much less efficient than transmission through needle sharing, while sexual transmission of HCV is thought to be very low. However, when the level of infection (prevalence) is high among IDUs, sexual transmission and transmission from mother to child of HIV and HBV may become important. IDUs may thus form so-called core groups or pockets of infection for continued transmission to the wider population. An efficient way of preventing sexual transmission is the use of condoms. Condom use has greatly increased among drug users since the 1980s, especially among sex workers who usually report high rates of condom use with their clients. However, condom use is usually low with private partners who therefore remain a major risk group for infection.

Consequences and costs

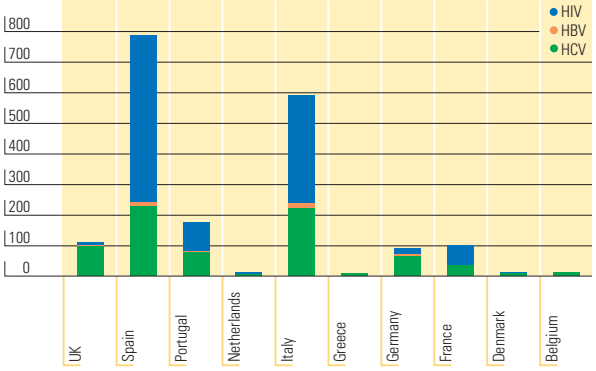
The consequences of an infection with HIV are severe. HIV infection leads to AIDS on average after about 10 years, which by that time incurs great costs to the individual and to society due to chronic infections, hospitalisations and premature death.

Infection with hepatitis B in the majority of cases resolves itself spontaneously, however, in an important proportion of cases (2 to 8 % among adults, 10 to 15 % in adolescents and much higher in children) it leads to chronic infection, which in the long term can lead to severe liver disease and premature death. As hepatitis B and HIV can easily be transmitted sexually or from mother to child, these infections among IDUs are an important threat to the population at large.

Hepatitis C remains chronic in most cases (possibly 70 to 80 %) and therefore IDUs are still a potential major

(25) Table 6 OL: Needle sharing among injecting drug users in some EU Member States (online version).

Fig. 29 **Estimated future healthcare costs of one year of drug-related infections for HCV, HBV and HIV, in millions of euro for 10 EU countries (total for EU as a whole EUR 1.89 billion – 1995 price level)**



Source: M. J. Postma, L. G. Wiessing and J. C. Jager, 'Pharmaco-economics of drug addiction; Estimating the costs of HCV, HBV and HIV infection among injecting drug users in EU-countries', Bull Narc. (in press).

source of infection. Hepatitis C infection, like hepatitis B, has the potential of severe liver disease and premature death in the long run (decades). The combination of different hepatitis infections (including hepatitis A) at the same time can be especially dangerous and often leads to acute liver failure and death.

A preliminary estimate of future health care costs of one year of drug-related infections of HIV, HBV and HCV in the EU amounted to about 0.5 % of the total EU budget for health care (Figure 29).

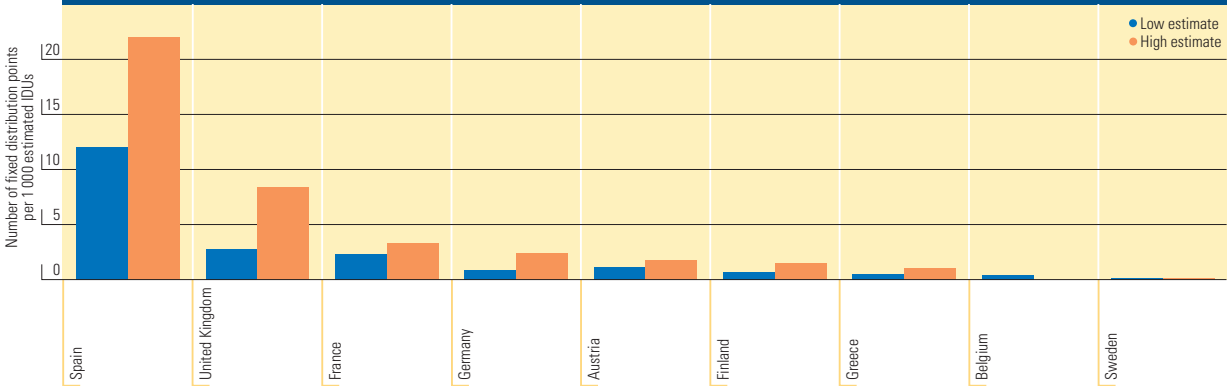
Harm-reduction responses

In most of the EU, the introduction of harm-reduction measures — such as increased access to sterile needles and syringes, greater availability of condoms, and HIV counselling and testing — has helped to control HIV transmission among injectors. Substitution treatment, which can greatly reduce the frequency of injecting, is also available in all Member States, mostly in the form of oral methadone, but in most countries large improvement is still possible in terms of coverage. (See Chapter 2, demand reduction, treatment, substitution treatment).

While there is evidence that harm-reduction measures have helped to reduce the prevalence of hepatitis C among injectors, it has not controlled its spread (10). The persistence of hepatitis C infection among young injectors requires innovative approaches to harm reduction. The introduction of medically supervised injecting rooms and controlled heroin distribution are two such approaches being considered by some EU countries. However, both pose ethical and legal difficulties and may necessitate a change in drug laws. In those countries where injecting rooms have been established (United States, Australia, Germany, Switzerland and the Netherlands), their effectiveness has yet to be assessed.

Important aspects for gauging the availability of harm-reduction measures are provision of services and coverage of the IDU population. Based on estimates of problem drug use and rates of IDU among opiate users in treatment, preliminary estimates have been derived of the size of the IDU population in EU countries. Using these estimates a rough picture emerges of the provision of syringe exchange programmes (SEPs) (distribution points) per country (see Figure 30) and the number of needles exchanged through syringe exchange programmes per 1 000 IDUs per year [26]. Although country specific estimates may not be reliable, overall it appears that syringe exchange programmes in most countries for which data are available are still not providing a sufficient number of clean needles for IDUs, with the possible exception of the United Kingdom (England and Wales) and Spain.

Fig. 30 **Provision of syringe exchange programmes in some EU countries**



Source: *Estimating coverage of harm reduction measures for injection drug users in Europe*, Lisbon, EMCDDA, 2001.

[26] Figure 18 OL: Syringes distributed or exchanged through syringe exchange programmes per estimated IDU per year (online version).

A French study estimated the average number of injections for a daily injector (in the previous month) to be 3.6 per day, implying more than 1 300 injections per year per daily injector. (93 % of the sample of needle exchange attenders were daily injectors.) (11) However, this average may strongly depend on substances injected (opiate users who also inject cocaine may inject much more frequently) or income (IDUs with little money may inject much less). Better and country specific estimates of IDU population size and number of injections are needed in order to assess the coverage of syringe exchange programmes and thus their potential for effective prevention of drug-related infections ([27]) ([28]).

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Synthetic drugs

This section completes the data and analysis provided in other sections of the annual report with a summary of the main questions, concerns and challenges surrounding synthetic drugs.

Spread of use

While the global picture in 2000 confirms that the spread of synthetic drugs use in the EU has generally stabilised, upward trends in ecstasy use are still observed in some regions where cities or holiday resorts are more likely to attract young European tourists owing to their location and larger offer of youth-oriented events. More generally, urban areas where youth cultures have been established may continue to provide a setting for 'recreational drugs' to anchor and develop.

Cross-analysis of qualitative surveys suggests that the consumption of synthetic drugs has spread beyond the 'techno scene' to discotheques, nightclubs and also private settings. Other settings are also reported. For example, a 1998 study found that, in Greece, 35 % of student ecstasy users have used the drug at football matches.

Behaviours and patterns of use

A growing behaviour trend is not so much the consumption of one particular drug above another, but rather a tendency to instrument different drugs in relation to needs and situations.

Changing patterns in youth behaviour have been highlighted in some Member States as a subject for more in-depth investigation.

- Most countries underline the phenomenon of quickly changing patterns among a broad public to experiment and/or combine different substances to get 'high' and/or to balance the respective effects.

- In the Netherlands, the phenomenon of 'ecstasy-fatigue' is currently being assessed. The reasons for this trend may be due to various factors, for example that there is no logo proof of exact contents or a heightened awareness (raised through the media) of the adverse residual effects on mood and feelings. The question as to whether cocaine plays an alternate role as a basic

([27]) Table 7 OL: Provision, utilisation and coverage of syringe exchange programmes (SEPs) for injecting drug users (IDUs) and coverage of pharmacies in some European countries, as reported by national focal points, 2000 (online version).

([28]) Table 8 OL: Provision of HIV counselling and testing, HIV treatment and HBV vaccination for injecting drug users (IDUs) in some European countries, as reported by national focal points, 2000 (online version).