Evidence for Action: A critical tool for guiding policies and programmes for HIV prevention, treatment and care among injecting drug users

Injecting drug users (IDUs) are vulnerable to infection with HIV and other blood-borne viruses as a result of shared use of injecting equipment and drug solutions, as well as through unprotected sexual practices. Since sharing or use of contaminated injecting equipment and drug preparations is a very efficient mode of HIV transmission, HIV can spread rapidly among injecting drug users. Unprotected sex between HIV-infected injecting drug users and their partners can result in further HIV transmission both inside and outside of the injecting drug user networks.

Worldwide there are more than 13 million injecting drug users (Aceijas, Stimson, Hickman, & Rhodes, 2004). In some countries, HIV prevalence among certain populations of injecting drug users have exceeded 80% (Aceijas et al., 2004). Globally, it is estimated that injecting drug use accounts for between 5 and 10% of HIV infections. Today, injecting drug use with contaminated equipment is the major HIV transmission mode in many countries in Europe, Asia and Latin America, and is also driving HIV transmission in North Africa and the Middle East. In recent years, transmission among injecting drug users has been responsible for the world’s fastest spread of HIV infection, which has occurred in Eastern Europe and Central Asia (Rhodes & Simic, 2005).

However, experience shows that it is possible to prevent and even reverse major HIV epidemics among injecting drug users through a comprehensive package of interventions. A number of countries have demonstrated substantial successes in containing HIV epidemics related to injecting drug use. Effective harm reduction strategies were first implemented some 20 years ago and their impact on HIV transmission has been evaluated and documented. Despite such positive experiences in some countries, we continue to witness explosive HIV epidemics among injecting drug users across a range of countries (Ball, 1998).

Over the past few years, we have seen increasing political commitment to respond to HIV/AIDS epidemics associated with injecting drug use, ranging from international political statements (such as the United Nations General Assembly Special Session on HIV/AIDS Declaration of Commitment on HIV/AIDS (UNODC, 1998; UNAIDS, 2000, 2001; WHO, 2003) to national and provincial level policies in support of harm reduction. At the same time, we are seeing the evidence base necessary to guide effective policies and programmes growing and reflecting the contexts of a great diversity of countries, including both low- and middle-income countries. We are also seeing that new technologies, approaches and models of service delivery are being developed, which allow for more efficient assessment of situations and delivery of effective harm reduction programmes. And never before have we experienced such a huge investment in HIV/AIDS prevention, treatment and care programmes targeting drug users through such funding mechanisms as the Global Fund to fight AIDS, Tuberculosis and Malaria, the World Bank, bilateral donors and private foundations (The Global Fund to fight AIDS, Tuberculosis and Malaria, 2005).

There is increasing consensus that there is no single intervention or approach that will effectively prevent or control HIV epidemics associated with injecting drug use. A comprehensive package of interventions is required, which includes strategies that aim to: reduce the number of people injecting drugs; prevent HIV transmission among those who use drugs and their sexual partners; and provide treatment and care for drug users who are living with HIV (UNAIDS, 2005).

For those who are already injecting drugs or at risk of starting to inject, interventions include: community outreach; behaviour change communication; supply of sterile injecting equipment and safe disposal after use; drug dependence treatment, particularly opioid substitution treatment; voluntary and confidential HIV testing and counselling; prevention of sexual transmission among drug users, including condoms and prevention and treatment of sexually transmitted infections; HIV/AIDS treatment and care, including antiretroviral therapy and treatment for co-morbidities such as hepatitis and tuberculosis; primary health care, such as hepatitis B vaccination and vein care; policy and legislative reform and public education to create a supportive environment for harm
reduction and to reduce stigma and discrimination. Drug control measures that aim to reduce the number of people using drugs, particularly those who inject, without marginalizing drug users further and increasing risk behaviours, complement these harm reduction interventions (UNAIDS, 2005).

The opportunities to significantly impact on injecting drug use-related HIV epidemics are enormous. So why has the response been so slow and insufficient in many, if not most, countries? There are many barriers to the implementation of comprehensive HIV prevention programmes for drug users. The politically and socially controversial nature of interventions such as needle and syringe access and substitution therapy presents one of the major barriers. The marginalization of most drug users makes it very difficult for them to be reached. Negative attitudes to drug users makes it difficult for programmes to mobilize the necessary financial, political and community support required for effective operations. Numerous myths exist as to the effectiveness of different interventions and the willingness of drug users to change their behaviours. Local laws and regulations may prohibit the implementation of specific programmes. The list goes on (WHO, 2004a).

Where significant HIV epidemics exist among injecting drug users, decision-makers often opt for those interventions that are least controversial. Unfortunately, those interventions selected may also be the least effective. There is a clear need for decision-makers to have ready access to the necessary information to guide the development of evidence-based policies and programmes. The World Health Organization has responded by launching the “Evidence for Action on HIV/AIDS Prevention and Treatment for Injecting Drug Users” project. This project aims to synthesize the international evidence on the effectiveness of different interventions for the prevention, treatment and care of injecting drug users and to disseminate this information to policy-makers and programme managers. Reviews were undertaken on (WHO, 2004b, 2004c, 2004d, 2004e, 2004f, 2004g, 2005):

- Methods for assessing HIV risk and evaluation of programmes;
- Information, education and communication strategies;
- Needle and syringe programmes;
- Community-based outreach;
- Drug dependence treatment for HIV prevention;
- Prevention of sexual transmission of HIV among injecting drug users;
- Structural and environmental interventions;
- Interventions for young and new injectors;
- Interventions for highly vulnerable drug injectors, including prisoners, men who have sex with men, sex workers and indigenous injectors;
- HIV/AIDS treatment and care for drug users, including antiretroviral therapy.

This journal supplement includes a series of papers developed from some of these international reviews. The project found that there was great variation in the quantity and quality of research undertaken across the different interventions. The most controversial interventions, such as methadone treatment and needle and syringe programmes, tend to be the interventions that have been most rigorously evaluated. On the other hand, there tends to be a dearth of research on the less controversial interventions, such as behaviour change communication and public information programmes. This is consistent with the political imperative to have the necessary evidence and arguments to justify the implementation of unpopular policies and programmes.

The paper by Stimson et al. *Methods for assessing HIV and HIV risk among injecting drug users and for evaluating interventions* looks at three levels of assessment: basic assessment, which is suitable in situations of low awareness and information, routine surveillance, and enhanced surveillance, which requires more complex research and/or analyses of data collected from routine surveillance.

The main requirements for effective assessment are clear aims and objectives, as well as indicators and appropriate methodologies. Unfortunately many interventions lack these. In many developing and transitional countries, basic surveillance data are not available to provide comparative indicators. More difficult still is measuring the macro risk environment (i.e. the broader legal, social, cultural, economic and welfare environment) that places populations vulnerable or in which injecting drug use and HIV occur and responses are undertaken. International research and programme networks have played a key role in facilitating assessment capacity, the exchange of experience, the diffusion of assessment methods and competence, and in encouraging an assessment and evaluation mentality. The authors recommend comparative international research on different intervention approaches.

All three assessment levels require a mix of methods. As a consequence, public health surveillance for any setting needs to consider the relevance of a variety of methods for a comprehensive assessment of drug use and risk behaviours, and the risk and intervention environments. The authors concluded that assessment and evaluation should not proceed in an ad hoc fashion but should be part of a strategic plan for an information system that supports national and local policy development and planning for HIV/AIDS prevention, care and treatment.

The paper by Aggleton et al. on *Information, Education and Communication (IEC), HIV/AIDS and injecting drug use* distinguishes between six types of individual level intervention in which IEC has a role to play (mass reach interventions, outreach work, harm minimization, drug cessation/treatment programmes, voluntary and confidential counselling and testing, and risk reduction counselling) and two different styles of structural intervention (structural and environmental outreach work to tackle the structured vulnerabilities associated with HIV/AIDS).

In order to be effective, IEC approaches (whether free standing or in combination with other work) require clear and realistic goals. They need to use language that is both credible
and familiar, addressing sex- and drug-related differences as well as injecting-related concerns. Messages and approaches should be broken down to include actions differentiated on the basis of gender, sexuality, ethnicity, age and social class, among other variables. The direct involvement of drug users themselves in designing IEC materials and approaches is critical for ensuring that messages are appropriate to, and well accepted by, the target audience.

The authors note that the research questions remaining to be answered include: the utility and effectiveness of IEC interventions—either by themselves or in combination with other approaches; evaluation of IEC programmes on two levels, both in terms of their outcome (does an intervention influence behaviour?) and process (how an intervention works and assists in developing and refining programmes); comparison of the effectiveness of intervention with and without certain IEC components; and the cost-effectiveness of IEC activities both on their own and as part of structured HIV prevention programmes.

Though the evidence base is weak, the study finds that IEC can do little more than raise levels of knowledge, awareness and understanding; however, when combined with other measures, including service provision and a supportive social environment, more positive and sustainable effects can be achieved.

Over the last two decades, work with injecting drug users suggests that a 'package' of measures including IEC interventions, hold the potential to sensitize both the general population and injecting drug users to the potential risks associated with injecting, to the means available for safer injecting and sex, to the availability of voluntary counselling and testing (VCT) facilities, to drug dependence and antiretroviral treatment, and care options. IEC approaches can also assist policy-makers, opinion formers, religious leaders and community members develop a more realistic understanding of injecting drug users and their needs.

The study identifies some additional research questions and areas where improved research methodology is needed (i.e. pharmacy and vending machine evaluation, measures to reduce inappropriate disposal and the reform of restrictive injecting paraphernalia legislation).

Much effort has been expended on improving knowledge, changing attitudes and reducing risk behaviour, but unless the means for behaviour change also become more readily available, improved knowledge and attitudes do not result in reduced risk. Likewise, unless efforts to increase access to sterile injecting equipment are buttressed by other efforts to support behaviour change, risk reduction will remain unaffected. As such, the authors recommend the timely implementation of NSPs on a scale sufficient to impact on HIV transmission rates.

The authors find that principles of good practice include outreach workers (former and/or current injecting drug users) gaining the trust of injecting drug users, going to where the drug users and their networks congregate and at the times when they are at greatest risk and providing the means for behaviour change—drug using, injecting equipment use and sexual—and adopt safer behaviours? Are changes in behaviours associated with lower rates of HIV infection among injecting drug users?

The strength of the evidence is assessed using Hill’s criteria. Though individual studies on the effectiveness of outreach have methodological limitations, the cumulative literature satisfies Hill’s criteria. However, as there were multiple HIV prevention components, the relative contribution of outreach interventions cannot be disentangled from the other intervention components.

The authors find that the adjunct services (drug treatment, VCT and NSPs) available to vulnerable populations vary considerably. The authors find that principles of good practice include outreach workers (former and/or current injecting drug users) gaining the trust of injecting drug users, going to where the drug users and their networks congregate and at the times when they are at greatest risk and providing the means for behaviour change such as risk reduction information, needles and syringes where possible, and referrals.

The authors find a huge gap in most countries between the number of injecting drug users who want or could benefit from outreach services and the number of injecting drug users who actually receive them. Even though community-based outreach is a comparatively low-cost effective intervention and is, therefore, particularly well suited to resource-constrained settings and can be rapidly scaled up.
Plans are needed to link such evidence-based findings with technical assistance and training to enhance the capacity of regions and countries to introduce, scale up and sustain HIV prevention outreach to injecting drug users as part of a comprehensive HIV prevention strategy.

The paper by Des Jarlais et al. Interventions to reduce the sexual risk behaviour of injection drug users looks at a number of qualitative and meta-analyses reviews; most of which involved studies conducted in developed countries; while a few covered the smaller number of studies undertaken in resource-constrained countries. The paper assesses the generalizability of these results for use in developing programmes in resource-constrained countries.

The findings show that injecting drug users in both resource-rich and resource-constrained countries change their sexual risk behaviours to avoid HIV infection and to avoid transmitting HIV to their sexual partners; although the risk-reduction effect is moderate. The authors conclude that it is important to implement programmes to reduce sexual risk behaviour of injecting drug users given: the current evidence of the moderate effects of interventions; the fact that ‘some’ intervention to reduce the sexual risk behaviour of injecting drug users is more effective than providing no intervention; and that different combinations of intervention components, based on theoretical models, are associated with sexual risk reduction. The authors note that it is important to bear in mind that stigmatization of HIV/AIDS, or drugs or condom use may limit an intervention’s effectiveness.

There is a significant gap in the research concerning other vulnerable groups such as female injecting drug users, injecting drug users who sell or trade sex, young injecting drug users, injecting drug users in prisons and male injecting drug users who have sex with men. There is also a need for research on adapting interventions to different cultural or national settings, and to develop and evaluate new interventions that may produce greater reductions in sexual risk behaviours. However, the current gaps in the data should not be used as a rationale for failing to implement programmes to reduce injecting drug users’ sexual risk behaviour.

The authors recommend an extension of current practice: that all interventions to reduce injecting risk behaviour among injecting drug users also contain components to reduce sexual risk behaviour. Specific recommendations include: implementing educational or informative programmes that support public discussion of reducing HIV transmission; making condoms readily available, either free or at low cost, to injecting drug users; making voluntary and confidential HIV counselling and testing available as a strategy for behaviour change; that injecting drug users should have ready access to sexual health services, particularly services for the prevention and treatment of sexually transmitted infections (STIs); retaining injecting drug users in drug dependence treatment services and ensuring access to HIV treatment and care, including antiretroviral therapy (ART), as these provide opportunities for sexual risk reduction advice and counselling, and the provision of condoms; and the inclusion of current or new intervention components.

The cost of adding intervention components is likely to be very low and as such should become a standard part of programming.

The paper by Farrell et al. Effectiveness of drug dependence treatment in HIV prevention considers all categories of drugs that are commonly injected (e.g. heroin, cocaine, amphetamines and buprenorphine) and all forms of drug treatment (pharmacotherapy, abstinence-based and behavioural interventions either alone or in combination with pharmacotherapy).

Agonist pharmacotherapy programmes (e.g. methadone and buprenorphine substitution treatment) are available only for drug users who are primarily opioid dependent. There are over half a million people worldwide on methadone maintenance treatment (MMT) and it is estimated that this number will double in the coming decade. Such programmes remain controversial and many authorities are resistant to their implementation. The arguments against drug substitution treatment include: doubts about the effectiveness, questions about the financial benefits, and fear of diversion of drugs and increased drug use in the community.

While the data on HIV risk behaviour are limited, there is strong evidence that substitution treatment with either methadone or buprenorphine suppresses illicit opioid use and decrease injecting drug use and sharing of injecting equipment. Data on sex-related risk behaviour change are more limited, but suggest that methadone treatment is associated with a lower incidence of multiple sex partners or exchanges of sex for drugs or money, but no change, or only small decreases, in unprotected sex. To date there has been limited research on the impact of opioid agonist pharmacotherapy on ART outcomes. ART compliance improves in the stabilization phase of MMT; however, there are significant interactions between opioid substitution and ART, and clinicians need to monitor and adjust doses or drug regimens accordingly.

The only antagonist being used for opioid dependence relapse prevention treatment is naltrexone. There is currently insufficient evidence to draw firm conclusions as to its effectiveness. Behavioural interventions add to the effectiveness of drug substitution treatment, while the effectiveness of different types of psychological therapy alone has been found to be variable. Research on the cost effectiveness indicates that there is a large saving in the social and health care costs for every single unit of spending, indicating an overall cost benefit deriving from treatment.

Policy-makers need to consider the high social, public health and budgetary costs as well as the increases in HIV infection rates and the number of deaths if drug dependence treatment is not made available.

The reviews contained in this supplement show that while there are many areas, which require further research, the available evidence clearly indicates that a wide variety of cost effective harm reduction measures are available to pre-
vent or curtail HIV epidemics among injecting drug users. Some areas for additional research include: the optimal packaging of policies and interventions into a comprehensive programme—which interventions, at what intensity and coverage, and in what different combinations; more efficient service delivery models that respond to local contexts (particularly in resource-constrained settings) and reach those most vulnerable and marginalized; and how to better link drug dependence treatment, harm reduction, HIV/AIDS treatment and care, and drug control services to ensure common public health objectives are achieved.

Just as it is important to consolidate the evidence on the effectiveness of different interventions, it is also of critical importance to document and disseminate the evidence on interventions that are found to be ineffective or have negative consequences. Countries should seize this opportunity costs through investment in interventions that have little or no impact. We should expect that all interventions be scrutinized equally and that the same criteria be used to evaluate all interventions whether they are controversial or not. The “Evidence for Action” review project focused on those interventions that are largely delivered through the public health sector. It did not evaluate the effectiveness of a much broader range of drug prevention and control interventions on the prevention of HIV epidemics associated with injecting drug use.

As with many aspects of the response to HIV/AIDS, it is not the “know how” that is missing but rather the will to implement what are sometimes unpopular but effective measures. Policy-makers are in a unique position to implement these findings not just for the health and well-being of injecting drug users for society at large.

Acknowledgements

WHO has a strategic and systematic approach to its work on HIV/AIDS and drug use. Its work is organized under a number of components: establishing the evidence base; advocating for effective policies and programmes; developing normative standards, tools and guidelines; supporting countries to implement programmes; ensuring access to essential medicines (such as methadone and buprenorphine), diagnostics and commodities; and mobilizing resources.

The Evidence for Action on HIV/AIDS and Injecting Drug Use initiative guides WHO’s work on synthesizing the existing data and disseminating evidence on the effectiveness of interventions for HIV/AIDS prevention, treatment and care among drug users. This initiative, led by the WHO Department of HIV/AIDS, has brought together panels of experts from all WHO regions to review the evidence. The work has been technically supported by the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the United Nations Office on Drugs and Crime (UNODC) and financially supported by the Australian Agency for International Development.

The initiative has resulted in a wide range of publications that aim to make the evidence for the effectiveness of selected key interventions among injecting drug users accessible to a policy-making and programming audience. The Evidence for Action Policy Briefs summarize findings for public health policy and decision makers by giving a short overview on the background, evidence and policy and programming implications. Evidence for Action Technical Papers summarize the published literature and discuss implications for programming with a particular focus on resource-limited settings. These documents are available from the WHO Department of HIV/AIDS and can be accessed through the WHO website [link].

This special supplement of IJDP summarizes a range of review papers prepared as part of the Evidence for Action series and aims to expand the dissemination of this information.

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