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Harm reduction programs among intravenous drug users. Where do we stand nowadays? An international review and proposals for the Greek reality.

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Summary. A variety of interventions fall into the category of harm reduction programs. These include the dissemination of information on how to reduce risks associated with injecting drug use (often through peer-led outreach), the provision of services which increase the safety of people who use drugs such as needle and syringe exchange programs and safe injecting facilities and a range of drug dependence treatment options including the medical provision of substitution for opiate dependence. At the international level, harm reduction is endorsed and promoted by multilateral agencies, which provide technical and financial support to governments and civil society for harm reduction initiatives across the world. There are presently 82 countries and territories worldwide that support harm reduction explicitly in national policy documents or through the implementation or tolerance of harm reduction interventions.In Greece, low threshold harm reduction services are available, mainly through services related to OKANA and KETHEA and a few independent non-governmental organizations (NGOs). Since the beginning of 2011, the number of newly diagnosed HIV infections has increased among intjecting drug users (IDUs) in Greece. Prior to the 2011 outbreak, the coverage of prevention services was low, with waiting period for opioid substitution treatment estimated at 89 months in 2010 and with minimal distribution of syringes. Harm reduction is intended to bring people who use drugs into contact with essential health and other services. Every state has an obligation to implement, as a matter of priority, national comprehensive harm reduction services, as part of their public health policy.

Key words: harm reduction, injecting drug users, opioid substitution treatment, syringe exchange programs, outreach programs, HIV infection,Greece.

Περίληψη. Ένα πλήθος παρεμβάσεων εμπίπτουν στην κατηγορία προγραμμάτων μείωσης βλάβης. Σε αυτές συμπεριλαμβάνεται η πληροφόρηση σχετικά με την ελαχιστοποίηση των κινδύνων που σχετίζονται με την ενδοφλέβια χρήση ναρκωτικών (συνήθως μέσα από προγράμματα βοήθειας ομάδων χρηστών), την παροχή υπηρεσιών που καθιστούν ασφαλέστερη την ενδοφλέβια χρήση, όπως τα προγράμματα ανταλλαγής για βελόνες και σύριγγες, την ύπαρξη χώρων ασφαλούς χρήσης, καθώς και μια γκάμα θεραπευτικών επιλογών για εξάρτηση από ναρκωτικές ουσίες.Σε διεθνές επίπεδο η έννοια της μείωσης της βλάβης έχει υιοθετηθεί και προωθείται από πολλούς εκπροσώπους, οι οποίοι παρέχουν τεχνογνωσία και οικονομική υποστήριξη σε κυβερνήσεις και ομάδες πολιτών, προκειμένου αυτές να αναλάβουν πρωτοβουλίες υπέρ της εφαρμογής της. Προς το παρόν, υπάρχουν 82 χώρες και περιφέρειες που υποστηρίζουν ρητά την πρακτική της μείωσης βλάβης, είτε με κυβερνητικές αποφάσεις, ή με την εφαρμογή η αποδοχή των παρεμβάσεων μείωσης βλάβης.Στην Ελλάδα παρέχονται χαμηλής στάθμης υπηρεσίες μείωσης βλάβης, κυρίως μέσω υπηρεσιών που συνδέονται με το ΟΚΑΝΑ και το ΚΕΘΕΑ, καθώς και λίγες ανεξάρτητες μη κυβερνητικές οργανώσεις (ΜΚΟ). Από την αρχή του 2011, ο αριθμός των νεοδιαγνωσθέντων HIV λοιμώξεων μεταξύ των χρηστών ενδοφλεβίων ουσιών (ΧΕΝ) έχει αυξηθεί στην Ελλάδα. Πριν από την επιδημική έκρηξη του 2011 η κάλυψη των θπηρεσιών πρόληψης ήταν χαμηλή, με τον χρόνο αναμονής για ένταξη σε θεραπεία αποκατάστασης να φτάνει τους 89 μήνες το 2010 και με ελάχιστη διανομή συριγγών.Σκοπός της πρακτικής της μείωσης βλάβης είναι να φέρει τους χρήστες ναρκωτικών σε επαφή με βασικές υπηρεσίες υγείας και

άλλων παροχών. Κάθε κράτος έχει υποχρέωση να εφαρμόσει, ως βασική προτεραιότητα, ολοκληρωμένες υπηρεσίες μείωσης βλάβης σε εθνικό επίπεδο, ως μέρος της πολιτικής Δημόσιας Υγείας.

Λέξεις κλειδιά: μείωση βλάβης, χρήστες ενδοφλεβίων ναρκωτικών, θεραπεία υποκατάστασης, προγράμματα ανταλλαγής συρίγγων, προγράμματα βοήθειας, HIV λοίμωξη, Ελλάδα.

INTRODUCTION

The term ‘ harm reduction’ refers to policies, programs and practices that aim to reduce the adverse health, social and economic consequences of the use of legal and illegal psychoactive drugs and are based on a strong commitment to public health and human rights. The term came to prominence after the emergence of HIV in Europe and elsewhere in the mid-1980s(1).

Harm reduction became widely established as a response to HIV/AIDS in the 1980s. Early policy and practice was pioneered by a number of European cities. By 2009, 31 countries in Europe had needle and syringe programs and opioid substitution treatment. Of the European countries reporting injecting drug use, only Iceland and Turkey have not implemented harm reduction measures. Europe had a significant impact on the diffusion of harm reduction globally and in 2009 there were 84 countries around the world that endorsed harm reduction in policy or practice(2).

A variety of interventions fall into the category of harm reduction. These include the dissemination of information on how to reduce risks associated with drug use (often through peer-led outreach), the provision of services which increase the safety of people who use drugs such as needle and syringe exchange programs and safe injecting facilities and a range of drug dependence treatment options including the medical provision of substitution for opiate dependence(4). Harm reduction approaches also seek to identify and advocate for changes in laws, regulations and policies that increase harms or that hinder the introduction or efficacy of harm reduction interventions and health services for people who use drugs(6).

DRUG-RELATED HARMS

Around the world, heroin and cocaine are the most commonly injected drugs, although the injecting of amphetamines is on the increase. Also, pharmaceudical preparations, such as buprenorphine, dextropropoxyphene compounds, benzodiazepines and barbiturates are also injected(7). Steroid misuse is not currently within the remit of the National Treatment Agency for Substance Misuse (NTA), although non-prescribed anabolic steroids and other performance and image enhancing drugs are under review as part of the NICE guidance on needle and syringe programs(8).

Drug- related mortality includes deaths that are directly attributed to the pharmacological action of one or several substances (drug-induced deaths) and deaths that are indirectly associated with drug use (e.g. accidents). Usual causes of death are acute toxicity (overdose), traffic accidents, violence, suicide, chronic conditions due to repeated use (e.g. cardiovascular problems)(9).Overdose occurs when a drug user accidentally or deliberately injects a larger dose of a drug, than the body can tolerate and can be fatal. The risk of overdose with illicit drugs is high because the drug content is unknown(10).

Mental health problems, usually associated with stimulant use are dose, frequency and mode of administration related, and might be mitigated by specific harm reduction measures(11).

Public nuisance is defined as offences that affect the local community as a whole rather than the individuals. Drug related public nuisance actually refers to a wide range of ‘deviant behaviors’(12). Public nuisance caused by IDUs injecting in public can be a large problem in cities with many drug users and drug user communities. Some IDUs dispose of their needles and other injection equipment in streets, school yards or other public places, where people could be harmed(13).

DRUG-RELATED INFECTIOUS DISEASES

People who inject drugs may be at increased risk of infections such as HIV and hepatitis B and C. The proportion of HIV infections caused by injecting drug use is 50-90% in eastern Europe, cental and eastern Asia and the Pacific, 25-50% in North America and western Europe, 10-25% in Latin America, 1-10% in southern and south-eastern Asia and less than 1% in Sub-Saharan Africa(7).

Transmission of blood-borne viruses has been also associated with stimulant use, due to high-frequency use, as well as, increased high-frequency sexual behaviors. HCV rates are very high, even among recent initiates to cocaine injection. Frequent injection pattern of cocaine use is responsible for the failure of syringe exchange programs. Moreover, home-produced stimulants such as several kinds of amphetamines

are injected up to 10 times daily and are associated with increased sexual activity, as well as sharing of equipment at home drug preparation(14).
Other infectious diseases such as hepatitis A, sexually transmitted diseases, tuberculosis, tetanus, botulism and human T-lymphotropic virus may affect drug users(15)(16).

Injecting drug users' perception of sexual risk is responsible for them being at increased risk of developing sexually transmitted infections (STIs), that are a major global cause of acute illness, infertility, long-term disability and even death, with severe medical and psychological consequences for millions of men, women and infants(17). Stimulant use is associated with infrequent condom use, amphetamine use preceding sex, risk behaviors among young gay men and trading sex for drugs and money(14).

HARM REDUCTION IMPLEMENTATION

The main mechanism responsible for most of drug-related health risks is unsafe injecting practices including sharing of needles or syringes and other injection materials. Furthermore, sexual transmission of HIV among IDUs remains a significant issue in areas where HIV or other STI epidemics are established, or drug use intersects with sex work. IDUs are one of the most at risk groups for HIV and AIDS and a real threat exists that HIV may be transmitted from IDUs to the population.

At the international level, harm reduction is endorsed and promoted by multilateral agencies, which provide technical and financial support to governments and civil society for harm reduction initiatives across the world. Evidence-based technical papers, policy documents and best pracrice guidelines outline the importance of harm reduction and encourage governments to expand access to these services.

The World Health Organisation (WHO), with co-sponsorship from UNAIDS and UNODC has produced several policy briefings on HIV and injecting drug use. The papers cover needle and syringe exchange, opioid substitution therapy, injecting drug use in prisons, antiretroviral treatment for people who inject drugs anf preventing HIV transmission through drug dependence treatment and ouyreach(18).

In 2008, the UNODC, in co-operation with the international Narcotics Control Board, released a discussion paper, which lists a series of essential harm reduction interventions, but stops short of supporting safer injection sites(19).

Almost ten years ago, UNAIDS and the International Parliament Union developed a 'Handbook for legislators on HIV/AIDS, Law and Human Rights'. Among its recommendations are amending criminal legislation relevant to people who inject drugs, so that HIV prevention efforts are not hampered and harm reduction in prisons(20).

Harm reduction is also supported by the UN Committee on Economic, Social and Cultural Rights. In 2006, UN member states made the commitment to work towards universal access to HIV prevention, care and treatment services by 2010. UNAIDS provided guidance for the development of national indicators and is now monitoring progress towards these objectives(21).

In 2008, WHO, UNODC and UNAIDS released detailed guidance on setting targets related to HIV prevention, care and treatment for people who inject drugs. This guidance highlights an essential package of comprehensive harm reduction measures, including needle and syringe exchange, opioid substitution therapy, voluntary HIV counseling and testing, antiretroviral treatment, STI prevention, condom programming, targeted information, education and communication, hepatitis A,B and C diagnosis and treatment, vaccination for HAV and HBV, as well as tuberculosis prevention, diagnosis and treatment(22).

There are presently 82 countries and territories worldwide that support harm reduction explicitly in national policy documents (71 countries) or through the implementation or tolerance of harm reduction interventions such as needle exchange (77 countries) or opioid substitution therapy (63 countries). The North America, Oceania and Western Europe regions are supportive to harm reduction. Countries that do not fully implement harm reduction programs are: Afghanistan, Bangladesh, Cambodia, Hong Kong , PDR Laos, Pakistan, Malaysia and Thailand in Asia; Armenia, Kazakhstan, Tajikistan and Russia in Eurasia; Paraguay in Latin America; Egypt, Lebanon and Palestine in Middle East and North Africa; and South Africa, Tanzania and Zanzibar in Sub-Saharan Africa(18).

NEEDLE AND SYRINGE EXCHANGE PROGRAMS (NSPs)

NSPs supply needles and syringes, as well as other equipment used to prepare and inject illicit drugs (filters, mixing containers and sterile water). The majority of NSPs are run by pharmacies and drug services. The key aim is to reduce transmission of blood-borne viruses and other infections caused by sharing injecting equipment. Services may include advice on safer injecting practices, advice on how to

avoid an overdose, information on safe disposal of injecting equipment and access to blood-borne virus testing, vaccination and treatment services(23).

Through NSP services, injecting drug users (IDUs) can seek help to stop injecting drugs, including access to drug treatment (opioid substitution therapy, OST) and encouragement to swich to non-injecting methods of drug taking(24). Moreover, other health or welfare services may be included (including condom provision). While NSPs can help reduce the harm caused to people who inject drugs, the consequent reduction in the prevalence of blood-borne viruses benefits wider society(25)(26).

Best practice recommendations suggest that it should not be required from clients to return used needles in order to give them clean ones, although they should be encouraged to(27). However,used needles and syringes can serve as means of transmitting blood-borne pathogens such as HIV, HCV and HBV, which can survive in dried blood. Apart from specialist and pharmacy needle exchanges secure 'bins' can be provided in the community- particularly in 'hotspots' where used injecting equipment is regularly discarded(28).

Syringe vending maschines (SVMs) can dispence injecting equipment when a client iserts coins to the appropriate value, or without a payment. They can be installed on outside walls, usually at health centres or central spots. A trial conducted in Cambera, Australia evaluated the effectiveness of a type of vending machine that sold packs containing syringes, alcohol swabs, a plastic spoon, cotton wool balls and a 'safer injecting' advice card. The SVM clients reported that they used the machines for a variety of reasons, most prominently because the other outlets were closed (73%), because it was more convenient to use the machines (53%) and because they did not like going to the other outlets (28%)(29).

OPIOID SUBSTITUTION THERAPY (OST)

Opiate substitution is prescribed for maintenance therapy and mainly involves the use of methadone or buprenorphine. Slow-releasing morphine is also used in Austria. By 2009, there were 65 countries and territories worldwide that provided OST for drug dependence, almost half of which were in Europe. All European countries where injecting drug use is reported, with the exception of Iceland and Turkey, prescribe methadone and/or buprenorphine as treatment for opioid dependence(30).

The size and the scale of the programs vary enormously. While countries such as Spain and the United Kingdom have large numbers of OST sites, at least 10 European countries have fewer than 20 sites providing OST(31). According to UN target-setting guide, reaching 40% or more of people using opioids with OST is cited as 'good coverage'(32).

A small number of European countries (the Netherlands, Switzerland and the United Kingdom) prescribe injectable OST medicines for those who cannot or do not wish to stop injecting. The prescription of pharmaceutical heroin (diacetylmorphine) remains limited to few European countries (the Netherlands, Denmark, Germany, Switzerland and the UK)(33).

DRUG COSUMPTION ROOMS (DRCs) AND SAFE INJECTING FACILITIES (SIFs)

The serious health and public order problems associated with drug injecting in public places, have led to the establishment of drug consumption rooms (DRCs) in several countries. DRCs are protected places for the hygienic consumption of preobtained drugs in a non-judgemental environment and under the supervision of trained staff. They are official services, funded from local or regional budgets, or by churches. They are distinct from illegal 'shooting galleries' which are run for profit by drug dealers, as well as from consumption fascilities provided within the framework of drug prescription programmes, where drugs are supplied to users(34).

The establishment of DRCs has been concidered controversial and has led to disagreement between the International Narcotics Contron Board (INCB) and some UN Member states on one hand and other Member States on the other, about the interpretation of the international drug conventions, obliging States to limit the use of narcotic drugs strictly to medical and scientific purposes(35). Some of the main objectives of DRCs are to promote the health of service users by establishing a safe environment that enables more hygienic drug consumption, to reduce mortality in the target population, as well as to reduce public drug use and associated nuisance and avoid increase of crime around places where IDUs inject drugs(12).

In 2011, in more than 50 European cities, spaces where drugs can be consumed under the direct supervision of health staff have been integrated into specialized fixed-site facilities. The facilities provide opportunities for health education and disease prevention and for immediate intervention by professionals in

cases of overdose(36). Moreover, safe injecting facilities (SIFs) attract a sometimes 'hidden' population of HIV-positive IDUs who are in high risk for adverse health outcomes, such as the ones who inject heroin at least daily. It is encouraging that , according to an evaluation trial of a SIF in , Vancouver, Canada, the facility also attracted people who frequently inject cocaine and are therefore in much higher risk to acquire or transmit infectious diseases, including HIV(37). Homelessness was also associated with more frequent SIF use(38). Homelessness has been strongly associated with public injecting and shaping of risky behavioral practices.

HIV TESTING AND ANTIRETROVIRAL TREATMENT (ART)

The EMCDDA (2010) guidance recommends a provider-initiated, voluntary and confidential approach to testing and counseling. All the above should be recommended by a healthcare provider to people attending facilities as a standard component of medical care, however the individual should be informed about the tests and their potential consequences and give their (informed) consent to taking them, without fear of coercion or negative consequences(39). Recommended tests for all IDUs are serology testing for HIV, hepatitis B, C, D (if there is evidence of recent hepatitis B), hepatitis A and syphilis. Swabs for culture from abcesses and skin lesions, biochemical analyses and general blood tests as well as tests for tuberculosis are recommended. The frequency with which a client should be re-examined and re-tested depends on the individual risk of exposure to infectious agents. In cases of ongoing injecting drug use examination and testing should be offered at least once every 6 to 12 months(40).

In the past years, interesting scientific evidence is accumulating for the effectiveness of biomedical interventions to prevent the transmission of HIV. Infected people may become less contagious when the viral load is suppressed by antiretroviral therapy (ART). Early treatment for HIV, prevention of mother-to-child transmission, post-exposure prophylaxis, male circumcision, consistent condom use, behavior change communication and possibly targeted pre-exposure prophylaxis are the most effective tools to prevent HIV transmission on individual and population levels(41) (42). Almost half of the cases present late in the course of infection, cannot benefit from early treatment and are at risk of disease progression. In the context of the Joint United Nations Program on HIV/ AIDS (UNAIDS, 2011) political declaration is to achieve zero new infections, no AIDS-related deaths and zero discrimination by 2015(43).

Worldwide, for large numbers of people who inject drugs, access to antiretroviral treatment (ART) is especially poor. The majority of injecting drug users receiving ART in developing and transitional countries were in Brazil. In some countries, particularly in Sub-Saharan Africa, access to ART is very limited and marginalized populations are generally the last to benefit. The reluctance of clinicians to prescribe ART to people who inject drugs is cited as a common barrier to accessing treatment, despite UN best practice guidelines clearly stating the evidence-base for treatment success and the necessity of providing ART to people who inject drugs. In some countries, accessing ART services is simply not an option due to the severe stigma and discrimination associated with both HIV and drug use. Also, as with NSP and OST services, the associated costs are often prohibitive, the lack of confidentiality poses too great a risk and there is a fear of arrest or harassment(44).

REDUCING DRUG-RELATED DEATHS

Opioids (including prescription opioid medications and heroin) are major causes of drug overdose deaths. Naloxone is the standard of care for treatment of potentially fatal respiratory depression caused by opioid overdose (45). Naloxone can be given in hospital, by paramedics and is occasionally prescribed to drug users themselves. In 2010 at least 188 local opioid overdose prevention programs that distributed naloxone existed in the United States(46).

Reducing drug-related deaths requires a multi-strategic plan, including special training in the use of naloxone of paramedics in emergency ambulance crews as well as caretakers and users themselves and training of police custody officers to deal with overdose incidents. In the UK training of custody officers was a multi-agency initiative, with police receiving training from local drug treatment and harm reduction service providers. This was reported to work best when there were good partnership arrangements in place between drug treatment and criminal justice agencies. In some cases the training was done in-house by the police force(46).

A dedicated drugs helpline called 'Talk to Frank' is available throughout England for callers who are experiencing problems with their drug use or are worried about the drug use of others. A helpline can provide information about the risks and effects of drugs and can refer the caller to local services such as

needle exchange schemes, where more practical help is available on issues such as advice on safer injecting(47).

OUTREACH SERVICES

Despite the specialist and pharmacy needle exchanges, in some areas there are still access needs for particular communities or users. Outreach is a delivery mechanism for a range of interventions and services, which can include mobile exchange vans (also focused on providing general health and drugs information), house-hold interventions (home visits, to bring injecting equipment to the homes of clients, including blood-borne virus testing and vaccination), detached outreach workers (providing a basic needle distribution and harm reduction services on the street) and satellite clinics, run by harm reduction nurses and drugs workers, in areas which have limited access to fixed-site services (a drop-in within a health center on particular days)(48). The implementation of outreach programs has shown that IDUs in a variety of places and time periods changed their baseline drug-related and sex-related risk behaviors following their participation in such interventions(49). Detached outreach services could expand to include bars, cafes, clubs, 'shooting galleries', railway stations, prisons, housing projects, hostels, syringe exchange sites, brothels and schools(50).

PEER DRIVEN INTERVENTION (PDIs)

Peer driven interventions differ from the outreach model, in not having salaried peer educators, but rather involving a much larger number of drug users through a chain referral process. Drug users educate their peers on specific elements of HIV risk reduction information and recruit them to come to a project, where they can receive more risk reduction information, new needles/syringes and condoms and have the opportunity to become recruiters themselves. Drug users receive modest rewards for visiting the storefront, recruiting new participants and returning used needles/ syringes. Recruiters also receive graduated rewards based on how well their recruits perform on a test of the specific risk reduction(51) (52).

Harm reducing peer support is based on the idea that peer workers can act responsibly as important information distributors and support mentors, even if themselves use drugs or work in the sex industry, The strength of peer activity lies in the similar lifestyles of the peer workers and the people they are helping. Peer workers can ultimately change attitudes, habits, beliefs and risk behaviors in their own social networks(53). An example of this is the Snowball Education Program is aimed at preventing the spread of HIV and hepatits among injecting drug users and has originally been developed in Belgium in 1987(54).

COMBINATION INTERVENTION

As a 'combination intervention', harm reduction comprises a package of interventions tailored to local setting and need, including access to drug treatment(55). In reducing the harms of drug injecting, a harm reduction package may combine OST, NSPs, DRCs and counseling services with peer interventions, as well as actions to lobby for policy change(56).

Whenever possible, interventions should be combined to achieve synergistic effects. Evidence suggests that the biggest reduction of HIV, HCV and injection risk behaviour can be achieved by providing both high coverage of needle and syringe programmes and opioid substitution treatment(57)(58). Just as the effectiveness of OST and NSP services may be enhanced when combined, there is an 'enhanced impact' relationship between participation in OST and adherence to HIV treatment and care among IDUs. It is likely that additional services such as vaccination, TB treatment and HIV testing and would still further prevent disease transmission among people who inject drugs(59)(37).

NGOs

As well as strong support for harm reduction from multilateral, bilateral and international donor agencies, the role of international non-governmental organizations (NGOs) in harm reduction advocacy and implementation is crucial. The International Federation of the Red Cross and Red Crescent Societies, Medecins du Monde, the International Harm Reduction Development Program, CARE International, the HIV/AIDS Alliance and the International Harm Reduction Association are just some of the organizations supporting or directly involved in harm reduction initiatives globally. NGOs and community-based organizations are integral to the harm reduction response, both in the provision of essential services and through their involvement in local, national and regional advocacy initiatives(61)(62)(63).

HARM REDUCTION IN PRISONS

Incarceration is a common component of the life histories of injecting drug users (IDUs). As many as 75-90% of IDUs report ever being incarcerated. In addition to that, IDUs are overrepresented among prisoners, accounting for as much as 25-40% of the prison population. Once incarcerated, some IDUs continue to inject drugs on the inside(64). WHO estimates that, anywhere between 2- 74% of prisoners inject drugs during their incarceration. There is also evidence that prisoners who did not inject prior to their incarceration may initiate injection in prison(2).

Although illicit drugs are often available in prisons, sterile needles are not, making injection in prison a significant public health concern. A single syringe can circulate widely, being stored and re-used for months or years among large number of inmates(65). It is estimated that over 60% of IDUs who inject in prison may also share syringes(66). Despite recommendations by the WHO, the joint United Nations Office on Drugs and Crime (UNODC) that prisoners should be offered, at least the same access to sterile syringes, as they would have in the community, prison-based syringe exchange programs remain relatively rare. The majority of them are located in western Europe (Switzerland, Germany, Spain) while some have initiated in former Soviet Republics (Moldova, Kyrgystan, Belarus)(67). In areas where prison based syringe exchange programs (SEPs) have been established, they are considered to be of insufficient size or number to meet demand. These findings suggest that prisons should look carefully to policies which might reduce the rate of injecting risk behaviour. Prison methadone maintenance treatment (PMMT) is clearly one(68) (69).

Most jails and prisons do not provide condoms to prisoners because of concerns of possible negative consequences. Since 1989 the jail system of San Francisco, California, has provided condoms to male prisoners through 1-on-1 counselling sessions. Given the limitations of this approach, a free condom-dispensing machine was installed in a jail. Particularly large increases in condom uptake were reported among those in high-risk without any increase in sexual activity being observed(70).

Current approaches to the diversion of drug users away from custodial sentences also clearly have the potential to reduce the transmission of blood-borne viruses in prisons. Some prisons have established so-called druf-free units (DFUs), which are separate living units within a prison, that focus on limiting the availability of drugs. House prisoners have volunteered to sign a contract promising to remain drug-free(71). The establishment of DFUs recognizes that, often, because drug use is so common, anyone who is not using drugs, or is attempting abstinence in prison, may experience substantial difficulties. Mandatory testing programmes (MDTs) are used in several prison systems in England, Canada, Australia and the USA. These programs are intended to discourage prisoners from consuming illicit drugs through the imposition of penalties on prisoners who test positive. MDTs may contribute to reducing the use of cannabis, however, they seem to have little effect on the use of opioids(72).

In terms of hepatits C in prisons, the majority has chronic hepatits C. Cases of contracting the disease within prison have been proven(73). Being in prison is a risk factor arising not only from intravenous drug use, but from activity like tattooing using non-sterile equipment, sexual assaults, other violence and self harm. Bleach or other disinfectants for sterilizing needles and syringes have been made available in a wide range of prison systems in different parts of the world, without any serious safety or security problems being reported.

THE SITUATION IN EUROPE

New data on HIV in Europe demonstrate that HIV remains a public health problem in the European Union (EU) and European Economic Area (EEA) where more than 27,000 newly diagnosed HIV infections were reported during 2010 (an increase of 4% compared to 2009). Outbreaks of HIV in this group have been reported in some countries recently where the prevalence of HIV and hepatitis C remains high. Data on reported newly diagnosed HIV infections related to injecting drug use for 2010 suggest that HIV infection rates are still increasing in Estonia, Iceland, Latvia, Lithuania as well as Bulgaria and one region in Italy. The increases in HIV transmission in Greece and Romania reported in 2011 were not observed in HIV prevalence or case reporting data before 2011(74).

During 2005-2010, a declining prevalence of HCV infection at either national or sub-national level in IDUs was reported from 6 countries and an increase was seen in five (Austria, Bulgaria, Cyprus, Greece and Romania and 2 regions in Italy. Studies on young IDUs showed increases in Austria, Bulgaria, Cyprus and Greece(75) (76). Where increasing prevalence of HCV infection coincides with low coverage of effective prevention measures, there may be a potential for increased HIV transmission- as shown in Greece

and Romania. This suggests that prevalence of HCV infections in new IDUs may be a timely indicator of injecting risk among IDUs. In Greece, the prevalance of HCV infections in IDUs showed an increase of 14.1% in 2006 compared to 2005. and the high rates of HCV infection appear to remain stable(77).

Opioid substitution treatment and needle and syringe programmes are the most effective measures for preventing infectious diseases among IDUs and are available across EU. After a massive scale up of such measures since the mid 1990s, particularly in the western part of EU opioid substitution treatment currently is estimated to reach about one in two problem opioid users in the EU. However, this overall rate masks important differences between countries, with estimated coverage ranging from 2%(Latvia) to 68% (Malta) Greece is at about 30%. Similarly, syringe coverage shows wide variation across Europe (less than 10 syringes per estimated IDU per year in Greece 2009).

THE GREEK REALITY

The Organisation Against Drugs (OKANA) is the legally authorized national drug coordinator and also delivers structured drug treatment (OST, harm reduction services and therapeutic programs). OKANA works under the auspices of the Ministry of Health and Solidarity. KETHEA runs therapeutic community programmes and harm reduction services, funded by the state and national and International donors.

Overall, low threshold harm reduction services are available mainly through services related to OKANA and KETHEA and a few independent NGOs (PRAKSIS, Streets of Athens and Medecins du Monde). The International Drug Policy Consortium (IDPC) South East European NGO Drug Policy Network, during their meeting in September 2010 noted that OST and harm reduction is well established in Greece. However, OKANA is highly dependent on political and state support and faces difficulties in implementing its programs'(74).

HIV/ GREECE 2011: EPIDEMIOLOGICAL SITUATION

Since the beginning of 2011, the number of newly diagnosed HIV infections has increased among IDUs in Greece. Between 9 and 16 cases were reported annually among IDUs during 2006-2010, representing 2-3% of the total newly diagnosed HIV infections, while during the first 10 months of 2011, cases among IDUs sharply increased to 190, representing approximately 25% of all reported HIV cases. The increase was located primarily in Athens(78).

Prior to the 2011 outbreak, the coverage of prevention services was low, with waiting period for opioid substitution treatment estimated at 89 months in 2010 and with minimal distribution of syringes (about 6 sterile syringes per IDU per year in 2009). In response to the outbreak, the Greek authorities sought to rapidly expand opioid substitution treatment services offering information, voluntary testing, referrals and sterile needles and syringes.

Overall, the state of health currently in Greece has deteriorated during the fiscal crisis(79). In an effort for national debts to be paid, budget cuts in 2009 and 2010, have resulted in loss of one third of the country's street-work outreach programmes(80). A large proportion of the newly diagnosed HIV infections are associated to an increase in prostitution. One authoritative report described what is referred to as 'deliberate self infection' by individuals to obtain access to benefits of 700 euro per month and admission to OST programmes(79).

PRISONS IN GREECE

Greek prisons are considered to be the most overcrowded ones in Europe. Since 1990, the majority of convicted prisoners in Greece have served a sentence for a drug-related offence (32.3% in 2006). Drug trafficking, an offence that in Greece includes possession of relatively small quantities of drugs, has grown to become the most common drug-related conviction offence. In the same year, about 50% of convicted drug traffickers were themselves drug users.

The Greek prison estate consists, among other facilities, also of therapeutic prisons, including hospitals, psychiatric wards and drug rehabilitation units. However harm reduction programs such as drug-free wings are available in only a small number of prisons, there is lack of methadone maintenance treatment and post-release support programs for drug users do not exist, increasing the risk of death by overdose upon release(81). Furthermore, access to prisons has been limited for medical NGOs.
The prevalence of illicit drug use in Greek prisons seems to be among the highest in Europe. The overwhelming majority, nine out of ten cases, prisoners of Korydallos were injecting drug users. Drug overdose is by far the most common cause of death, according to prisoner allegations and media

reports(82). There is no official data on prevalence of infectious diseases in Greek prisons, however, the absence of established harm reduction provisions such as needle exchange programs results in starting sharing needles and syringes in prison(82).

CONCLUSIONS

Abstinence-based approaches to drug dependence

Traditional abstinence-based approaches to drug dependence aim to stop drug use permanently, but few clients achieve abstinence, even in the short term, as many abstinence-based services have acknowledged. As a result, it is as important to provide harm reduction services to clients who may relapse soon after leaving treatment.

There are two types of abstinence-based approaches to drug dependence: self help groups and therapeutic communities (TCs). Self-help groups (such as Narcotics Anonymous, NA) meet regularly to support one another towards the goal of achieving or maintaining abstinence. TCs are a treatment approach, where clients live in small, structured communities, some of which were originally developed for the treatment of psychiatric patients(83).

The emergence of HIV among IDUs has caused some TCs to reconsider their abstinence-only focus. These TCs have begun to integrate harm reduction services into their abstinence-based treatment programs. Under this treatment model, harm reduction and abstinences-based approaches to drug use are regarded as complementary. The shift has been described as a move from a goal of 'abstinence only' to 'abstinence eventually'(84).

Use reduction versus harm reduction

A central debate in drug policy concerns the risks of use reduction (meaning trying to control use per se) vs harm reduction (trying to reduce the harmfulness of drug use). The term harm reduction is politically charged. Whilst it is official policy in many countries (e.g. Australia, the Netherlands and the United Kingdom), it has been denounced elsewhere (notably by US policy makers) as a deceitful ploy used by covert advocates of legalization(85).

What makes use reduction and harm reduction controversial is the fear that driving down one term might inadvertently drive up the other term. Critics of use reduction argue that efforts to suppress use displace use into more harmful forms. Critics of harm reduction argue that reducing harmfulness might increase use. This could happen because potential users respond to objective changes in risk. Higher risks might deter use; lowering those risks reduces that deterrent. Moreover, the government funding supervised injection facilities might be interpreted as an endorsement of drug use(86).

Caulkins (2009) used a mathematical model to evaluate whether harm reduction can act as multiplier effect creating situations where harm reduction can increase total harm even if its proximate effect on initiation is less than proportionate. The lesson for policy makers might best be summarized as: Harm reduction is least likely to be problematic when one is confident that the drug problem is not in a state where modest perturbations favoring greater initiation can be multiplied into large changes in use. It can safely be implemented late in an epidemic, when use has stabilized near endemic levels(85) (87). Reframing the debate in a way that addresses specific drug epidemics dynamics might help the opposing sides find common ground and achieve policy change by consensus rather than polarized non-debates.

Law enforcement

Multi-sectoral collaboration and the active support and cooperation of diverse stakeholders including political leaders and the police, as well as the general community, are critical to the success of HIV prevention programs for IDUs, particularly those involving needle and syringe exchange, pharmacy sales of needles and peer education. Participation in such programs may expose IDUs to law inforcement action and community stigmatization.

Negative effects of actual and perceived law enforcement actions on HIV prevention programs for drug users such as the fear of arrest, reduces drug users' participation in needle and syringe exchange programs, thus increasing sharing of injection equipment and other unsafe behaviors. Arrest of needle/syringe program volunteers reduces coverage of the target populations of IDUs and the number of needle/ syringes distributed. Fear of arrest discourages the summoning of emergency medical services in cases of drug overdose(88).

Drug use is illegal. HIV infection is also stigmatized. Although a broader view of police discretion may be justified, harm reduction advocates should not simply expect law inforcement officers to 'look the other way' when illegal activity occurs. Political and social imperatives may require the strict inforcement of drug laws and periodic crackdowns on drug users(89). In this context, continued law inforcement presence and activity, as well as ongoing stigmatization and discrimination, will likely influence and perhaps limit IDUs participation in HIV prevention programs. This may occur whether or not police have agreed to support such interventions or in fact have allowed them to function unimpeded(90).

It is possible to work with regional leaders to pave the way for a more humane understanding of drug use and an approach more oriented to treatment and disease prevention than to punishment.

The Media

It is widely accepted amongst workers in the drug field that one of harm reduction's greatest barriers is media mispresentation. Often workers face the dilemma of whether to be proactive and actively discuss harm reduction messages or quietly continue with their work hoping that valuable messages will be disseminated effectively(3). However, media coverage would not only disseminate valuable information to the general public, but also increases an understanding of the concept of harm reduction within the community. The fact that abstinence is an important element of harm reduction is often ignored by the mainstream press and definitely not understood by the public at large. This has led many people to believe that the philosophy actively encourages drug use(5). These misunderstandings can only be addressed be encouraging discussion around harm reduction principles. Media training should be an important part of drug workers' training. This includes training on how to talk to the media, as well as knowing ones rights in respect to the media and how stories are structured.

The human right to harm reduction

The right to health is enshrined in Article 25 of the Universal Declaration of Human Rights. Increasingly, UN human rights monitors have begun to interpret the provision of harm reduction interventions as necessary for states to be compliant with the right to health. The right to access to OST and other HIV prevention services, the right to access to accurate information are strongly supported by the UN Committee on Economic, Social and Cultural Rights. According to the Committee, harm reduction is not only an essential public health intervention, but also enhances the right to health of people who inject drugs(18).

Harm reduction and the rights to life and to freedom from torture, inhuman or degrading treatment and arbitary detention.

Harm reuduction is intended to bring people who use drugs into contact with essential health and other services. However, fear of ill treatment at the hands of police, coercive drug treatment and other disproportionable measures that violate human rights can have the effect of driving people underground and away from such essential services, thereby increasing their volnurability to HIV infection. The 2003 'War on Drugs' in Thailand, which resulted in the extrajudicial killings of over 2,800 people, has had a lasting impact on whether people who use drugs access health care services. China has used the UN's International Day Against Drug Abuse and Illicit Drug Trafficking to conduct public executions of drug offenders. Coercive drug treatment is employed in a number of countries, such as China, where those arrested for drug possession and use can be consigned to forced detoxification centres without trial. Investigations have uncovered extreme ill-treatment in the name of rehabilitation, such as administering of electric shocks to 'patients' while they view pictures of drug use(42).

Harm reduction and the right to non-discrimination

In relation to HIV prevention, UNAIDS has stated that any laws enacted to prevent discrimination against people living with HIV should also protect groups made more volnurable to HIV/AIDS due to the discrimination they face. However, national drug control efforts often stigmatize people who use drugs by focusing overwhelmingly on criminalization. Such approaches, rather than identifying and assisting those in need, may well help to perpetuate those conditions that lead to discrimination(18).

Drug user acivism

Harm reduction and the community of people who use drugs have a symbiotic connection. Most important in this relationship is the acknowledgement that voices of drug user activists are fundamental for shaping the response to all problems related to illegal drug use. In this sense, drug user activism is harm reduction.

Drug user activists are becoming increasingly involved in the drug policy debate. In July 2007, the International Network of People who Use Drugs (INPUD), the first international drug user organization, was registered and since then it has been represented at international conferences and high-level meetings including the EU Civil Society Task Force and the Comission on Narcotic Drugs(91).

Suggestions

Today, despite endorsement by UNAIDS, WHO, UNICEF, UNESCO, UNODC and the World Bank and the overwhelming evidence in favor of harm reduction as an effective HIV prevention strategy, the global state of harm reduction is poor. All over the world, people who use drugs remain marginalized, stigmatized and criminalized, with increasing vulnerability to HIV and decreasing access to essential health care services. In such environments, the full guarantee of the right to the highest attainable standard of health for people who use drugs is impossible.

In seeking to reduce drug-related harm, without judgement and with respect for the inherent dignity of every individual, regardless of lifestyle, harm reduction stands as a clear example of human rights in practice. What began as a health- based intervention in response to HIV must today be recognized as an essential component of the right to the highest attainable standard of health for people who inject drugs. Every state therefore has an obligation to implement, as a matter of priority, national comprehensive harm reduction services for people who use drugs.

In many ways, the scientific debate has been won and only ideological or moralistic criticisms remain. However, there are still numerous obstacles to the universal implementation of harm reduction, including resource shortages, re-emerging ‘war on drugs’ approaches, legal restraints on substitution treatments, vociferous anti-harm reduction bodies and limitations on NGO operations in many developing and transitional countries. In order to overcome these barriers and move forward, harm reduction must become a truly global approach.

References

1. COOK, Catherine, BRIDGE, Jamie and STIMSON, Gerry V. *The diffusion of harm reduction in Europe and beyond* [online]. S.l. 2010. [Accessed 15 May 2012]. Available from: http://www.drugtext.org/EMCDDA-Harm-Reduction/chapter-2-the-diffusion-of-harm-reduction-in-europe-and-beyond.html. DRUGTEXT

2. RHODES, Tim and HEDRICH, Dagmar. *Harm Reduction: Evidence, Impacts, and Challenges* [online]. 2010. S.l.: s.n. [Accessed 15 May 2012]. Available from: http://www.emcdda.europa.eu.

3. MONTAGNE, Michael. Drugs and the Media: An Introduction. In: *Substance Use & Misuse*. 6 May 2011, Vol. 46, no. 7, pp. 849–851.

4. FRASER, S., HOPWOOD, M., MADDEN, A. and TRELOAR, C. “Towards a global approach”--an overview of Harm Reduction 2008: IHRA’s 19th International Conference. In: *Int J Drug Policy*. 2009, Vol. 20, pp. 93–7.

5. OLLEY, Neil. Drugs and Popular Culture: Drugs, Media and Identity in Contemporary Society. In: *British Journal of Criminology*. 1 May 2008, Vol. 48, no. 3, pp. 415–418.

6. HAMMETT, Theodore M., BARTLETT, Nicholas A., CHEN, Yi, NGU, Doan, CUONG, Dao Dinh, PHUONG, Nguyen Minh, THO, Nguyen Huu, VAN, Ly Kieu, LIU, Wei, DONGHUA, Meng, SHAOMI, Xiang, CHEN, Huabin, QUYEN, Hoang Ngoc, BROADHEAD, Robert S. and DES JARLAIS, Don C. Law enforcement influences on HIV prevention for injection drug users: In: *International Journal of Drug Policy*. August 2005, Vol. 16, no. 4, pp. 235–245.

7. WHO. *Policy and programming guide for HIV/AIDS prevention and care among injecting drug users.* S.l. 2005.

8. MURRAY, Tim. *Good practice in harm reduction.* London. National Treatment Agency for Substance Misuse, 2008.

9. HICKMAN, Matt, VICKERMAN, Peter, ROBERTSON, Roy, MACLEOD, John and STRANG, John. Promoting Recovery and Preventing Drug-Related Mortality: Competing Risks? In: *Journal of Public Health*. 1 September 2011, Vol. 33, no. 3, pp. 332–334.

10. HICKMAN, Mathew, HOPE, Vivian, COLEMAN, Barbara, PARRY, John, TELFER, Maggie, TWIGGER, John, IRISH, Charles, MACLEOD, John and ANNETT, Hugh. Assessing IDU Prevalence and Health Consequences (HCV, Overdose and Drug-Related Mortality) in a Primary Care Trust: Implications for Public Health Action. In: *Journal of Public Health*. 1 September 2009, Vol. 31, no. 3, pp. 374–382.

11. JONES, Deborah L., WALDROP-VALVERDE, Drenna, GONZALEZ, Peggy, MACK, Alison, KUMAR, Adarsh M., OWNBY, Ray, WEISS, Stephen M. and KUMAR, Mahendra. Mental health in HIV seronegative and seropositive IDUs in South Florida. In: *AIDS Care*. 2009, Vol. 22, no. 2, pp. 152–158.

12. RHODES, Tim, KIMBER, Jo, SMALL, Will, FITZGERALD, John, KERR, Thomas, HICKMAN, Matthew and HOLLOWAY, Greg. Public injecting and the need for "safer environment interventions" in the reduction of drug- related harm. In: *Addiction*. 1 October 2006, Vol. 101, no. 10, pp. 1384–1393.

13. MEISE, Maja, WANG, Xi, SAUTER, Marie-Luise, BAO, Yan-ping, SHI, Jie, LIU, Zhi-min and LU, Lin. Harm reduction for injecting opiate users: an update and implications in China. In: *Acta Pharmacologica Sinica*. 6 April 2009, Vol. 30, no. 5, pp. 513–521.

14. SHOPTAW, Steven and REBACK, Cathy J. Methamphetamine use and infectious disease- related behaviors in men who have sex with men: implications for interventions. In: *Addiction*. 1 April 2007, Vol. 102, no. s1, pp. 130–135.

15. YUAN, Jean, INAMI, Gregory, MOHLE-BOETANI, Janet and VUGIA, Duc J. Recurrent Wound Botulism Among Injection Drug Users in California. In: *Clinical Infectious Diseases*. 1 April 2011, Vol. 52, no. 7, pp. 862–866. 16. FRIEDLAND, Gerald. Infectious Disease Comorbidities Adversely Affecting Substance Users With HIV: Hepatitis C and Tuberculosis. In: *JAIDS Journal of Acquired Immune Deficiency Syndromes*. December 2010, Vol. 55, pp. S37–S42.

17. DECKER, Michele R, WIRTZ, Andrea L, BARAL, Stefan D, PERYSHKINA, Alena, MOGILNYI, Vladmir, WEBER, Rachel A, STACHOWIAK, Julie, GO, Vivian and BEYRER, Chris. Injection Drug Use, Sexual Risk, Violence and STI/HIV Among Moscow Female Sex Workers. In: *Sexually Transmitted Infections* [online]. 27 January 2012, [Accessed 26 May 2012]. DOI 10.1136/sextrans-2011-050171. Available from: http://sti.bmj.com/content/early/2012/01/27/sextrans-2011-050171.

18. COOK, Catherine and KANAEF, Natalia. *The Global State of Harm Reduction 2008. Mapping the response to drug-related HIV and hepatitis C epidemics.* London. International Harm Reduction Association, 2008.

19. BARRETT, Damon. Unique in International Relations? A Comparison of the International Narcotics Control Board and the UN Human Rights Treaty Bodies. In: *SSRN eLibrary* [online]. 1 February 2008, [Accessed 26 May 2012]. Available from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1473198. 20. *Handbook for Legislators on HIV/AIDS, Law and Human Rights: Action to Combat HIV/AIDS in View of its Devastating Human, Economic and Social Impact.* UNAIDS & IPU. S.l.: s.n., [no date].

21. BARRETT, Damon. Security, development and human rights: Normative, legal and policy challenges for the international drug control system. In: *International Journal of Drug Policy*. March 2010, Vol. 21, no. 2, pp. 140–144.

22. DONOGHOE, Martin C, VERSTER, Annette D and MATHERS, Bradley. *WHO, UNODC, UNAIDS Technical Guide for Countries to Set Targets for Universal Access to HIV Prevention, Treatment and Care for Injecting Drug Users.* [online]. Geneva. WHO- World Health Organisation, 2009. [Accessed 26 May 2012]. Available from: http://www.hivpolicy.org/bib/HPP001676.htm.

23. TILSON, H. *Preventing HIV infection among injecting drug users in high risk countries: an assessment of the evidence*. Washington, DC. Institute of Medicine of the National Academies, 2007.

24. TOPP, Libby, DAY, Carolyn A, IVERSEN, Jenny, WAND, Handan and MAHER, Lisa. Fifteen years of HIV surveillance among people who inject drugs: the Australian Needle and Syringe Program Survey 1995–2009. In: *AIDS*. March 2011, Vol. 25, no. 6, pp. 835–842.

25. GIBSON, David R., FLYNN, Neil M. and PERALES, Daniel. Effectiveness of syringe exchange programs in reducing HIV risk behavior and HIV seroconversion among injecting drug users. In: *AIDS*. 2001, Vol. 15, pp. 1329–1341.

26. *Needle and syringe programmes: providing people who inject drugs with injecting equipment.* London. National Institute for Health and Clinical Excellence (NHS), 2009.

27. STRIKE C, Leonard L. *Ontario needle exchange programs: Best practice recommendations.* Toronto. Ontario Needle Exchange Coordinating Committee, 2006.

28. DEVANEY, Madonna and BERENDS, Lynda. Syringe Disposal Bins: The Outcomes of a Free Trial for City Traders in an Inner-City Municipality Australia. In: *Substance Use & Misuse*. January 2008, Vol. 43, no. 1, pp. 139–153.

29. MCDONALD, D. The evaluation of a trial of syringe vending machines in Canberra, Australia. In: *Int J Drug Policy*. 2009, Vol. 20, pp. 336–9.

30. COOK, C. *Harm reduction policies and practices worldwide: an overview of national support for harm reduction in policy and practice.* London. International Harm Reduction Association, 2009.

31. Drug treatment overviews. In: *European Monitoring Cemter for Drugs and Drug Addiction, EMCDDA* [online]. 2009. Available from: www.emcdda.europa.eu/responses/treatment-overviews. 21 May 2012

32. *HIV/AIDS:comprehensive harm reduction package.* [online]. 2009. S.l.: World Health Organisation, WHO. [Accessed 21 May 2012]. Available from: http://who.int/hiv/topics/idu/harm_reduction/en/index.html. 21 May 2012

33. HEDRICH, Dagmar, PIRONA, Alessandro and WIESSING, Lucas. From margin to mainstream: The evolution of harm reduction responses to problem drug use in Europe. In: *Drugs: Education, Prevention, and Policy*. January 2008, Vol. 15, no. 6, pp. 503–517.

34. SCHERBAUM, Norbert, SPECKA, Michael, SCHIFANO, Fabrizio, BOMBECK, Johannes and MARRZINIAK, BääRbel. Longitudinal Observation of a Sample of German Drug Consumption Facility Clients. In: *Substance Use & Misuse*. January 2010, Vol. 45, no. 1-2, pp. 176–189.

35. LLOYD, Charlie and GODFREY, Christine. Commentary on Pinkerton (2010): Drug consumption rooms—time to accept their worth. In: *Addiction*. 9 July 2010, Vol. 105, no. 8, pp. 1437–1438.

36. HEDRICH, D. *European Report on Drug Consumption Rooms*. Lisbon. European Monitoring Centre for Drugs and Drug Addiction, 2004.

37. SMALL, Will, SHOVELLER, Jean, MOORE, David, TYNDALL, Mark, WOOD, Evan and KERR, Thomas. Injection Drug Users' Access to a Supervised Injection Facility in Vancouver, Canada: The Influence of Operating Policies and Local Drug Culture. In: *Qualitative Health Research*. 1 June 2011, Vol. 21, no. 6, pp. 743–756.

38. SMALL, Will, AINSWORTH, Liz, WOOD, Evan and KERR, Thomas. IDU Perspectives on the Design and Operation of North America's First Medically Supervised Injection Facility. In: *Substance Use & Misuse*. 15 March 2011, Vol. 46, no. 5, pp. 561–568.

39. GRANICH, Reuben M, GILKS, Charles F, DYE, Christopher, DE COCK, Kevin M and WILLIAMS, Brian G. Universal voluntary HIV testing with immediate antiretroviral therapy as a strategy for elimination of HIV transmission: a mathematical model. In: *The Lancet*. 2008, Vol. 373, no. 9657, pp. 48–57.

40. *Guidelines for testing HIV, viral hepatits and other infections in injecting drug users:a manual for provider-initiated medical examination, testing and counselling.* 2010. S.l.: European Monitoring Center for Drugs and Drud Addiction, EMCDDA.

41. WOOD, E., HOGG, R. S., LIMA, V. D., KERR, T., YIP, B., MARSHALL, B. D. L. and MONTANER, J. S. G. Highly Active Antiretroviral Therapy and Survival in HIV-Infected Injection Drug Users. In: *JAMA: The Journal of the American Medical Association*. 6 August 2008, Vol. 300, no. 5, pp. 550–554.

42. WOLFE, Daniel, CARRIERI, M Patrizia and SHEPARD, Donald. Treatment and care for injecting drug users with HIV infection: a review of barriers and ways forward. In: *The Lancet*. Vol. 376, no. 9738, pp. 355–366.

43. JORDAN, M. R., BENNETT, D. E., WAINBERG, M. A., HAVLIR, D., HAMMER, S., YANG, C., MORRIS, L., PEETERS, M., WENSING, A. M., PARKIN, N., NACHEGA, J. B., PHILLIPS, A., DE LUCA, A., GENG, E., CALMY, A., RAIZES, E., SANDSTROM, P., ARCHIBALD, C. P., PERRIENS, J., MCCLURE, C. M., HONG, S. Y., MCMAHON, J. H., DEDES, N., SUTHERLAND, D. and BERTAGNOLIO, S. Update on World Health Organization HIV Drug Resistance Prevention and Assessment Strategy: 2004-2011. In: *Clinical Infectious Diseases*. 27 April 2012, Vol. 54, no. suppl 4, pp. S245–S249.

44. MATHERS, Bradley M, DEGENHARDT, Louisa, ALI, Hammad, WIESSING, Lucas, HICKMAN, Matthew, MATTICK, Richard P, MYERS, Bronwyn, AMBEKAR, Atul and STRATHDEE, Steffanie A. HIV prevention, treatment, and care services for people who inject drugs: a systematic review of global, regional, and national coverage. In: *The Lancet*. 2010, Vol. 375, no. 9719, pp. 1014–1028.

45. BACA, Catherine T. and GRANT, Kenneth J. Take-home naloxone to reduce heroin death. In: *Addiction*. 2005, Vol. 100, pp. 1823–1831.

46. BURRIS, Scott, NORLAND, Joanna and EDLIN, Brian R. Legal aspects of providing naloxone to heroin users in the United States. In: *International Journal of Drug Policy*. 2001, Vol. 12, pp. 237–248.

47. MCAULEY, Andrew, LINDSAY, George, WOODS, Maureen and LOUTTIT, Derek. Responsible management and use of a personal take-home naloxone supply: A pilot project. In: *Drugs: Education, Prevention & Policy*. 2010, Vol. 17, no. 4, pp. 388–399. 48. COYLE, S. L. 113 (Supplement 1): *Outreach based HIV prevention for injecting drug users: a review of published outcome data.* Rockville. National Institute on Drug Abuse, 1998.

49. RUDOLPH, Abby E., CRAWFORD, Natalie D., LATKIN, Carl, HEIMER, Robert, BENJAMIN, Ebele O., JONES, Kandice C. and FULLER, Crystal M. Subpopulations of Illicit Drug Users Reached by Targeted Street Outreach and Respondent-Driven Sampling Strategies: Implications for Research and Public Health Practice. In: *Annals of Epidemiology*. April 2011, Vol. 21, no. 4, pp. 280–289.

50. MIKA MIKKONEN, Jaana Kauppinen. *Outreach work among marginalised populations in Europe.* Amsterdam. Foundation Regenboog AMOC, 2007.

51. Training Drug Treatment Patients to Conduct Peer-Based HIV Outreach: An Ethnographic Perspective on Peers' Experiences, Substance Use & Misuse, Informa Healthcare. In: [online]. [Accessed 25 May 2012]. Available from: http://informahealthcare.com/doi/abs/10.3109/10826080903452439.

52. LI, Jianghong, WEEKS, Margaret R., BORGATTI, Stephen P., CLAIR, Scott and DICKSON-GOMEZ, Julia. A Social Network Approach to Demonstrate the Diffusion and Change Process of Intervention From Peer Health Advocates to the Drug Using Community. In: *Substance Use & Misuse*. 20 March 2012, Vol. 47, no. 5, pp. 474–490.

53. MACKENZIE, Sonja, PEARSON, Charles, FRYE, Victoria, GÓMEZ, Cynthia A., LATKA, Mary H., PURCELL, David W., KNOWLTON, Amy R., METSCH, Lisa R., TOBIN, Karin E., VALVERDE, Eduardo E. and KNIGHT, Kelly R. Agents of Change: Peer Mentorship as HIV Prevention Among HIV-Positive Injection Drug Users. In: *Substance Use & Misuse*. 20 March 2012, Vol. 47, no. 5, pp. 522–534.

54. SADLER, Georgia Robins, LEE, Hau- Chen, LIM, Rod Seung- Hwan and FULLERTON, Judith. Research Article: Recruitment of hard- to- reach population subgroups via adaptations of the snowball sampling strategy. In: *Nursing & Health Sciences*. 1 September 2010, Vol. 12, no. 3, pp. 369–374.

55. KIMBER, Jo, COPELAND, Lorraine, HICKMAN, Matthew, MACLEOD, John, MCKENZIE, James, DE ANGELIS, Daniela and ROBERTSON, James Roy. Survival and cessation in injecting drug users: prospective observational study of outcomes and effect of opiate substitution treatment. In: *BMJ□: British Medical Journal*. 2010, Vol. 341. DOI 10.1136/bmj.c3172.

56. VAN DEN BERG, Charlotte, SMIT, Colette, VAN BRUSSEL, Giel, COUTINHO, Roel and PRINS, Maria. Full participation in harm reduction programmes is associated with decreased risk for human immunodeficiency virus and hepatitis C virus: evidence from the Amsterdam Cohort Studies among drug users. In: *Addiction*. 1 September 2007, Vol. 102, no. 9, pp. 1454–1462.

57. PALMATEER, Norah, KIMBER, Jo, HICKMAN, Matthew, HUTCHINSON, Sharon, RHODES, Tim and GOLDBERG, David. Evidence for the effectiveness of sterile injecting equipment provision in preventing hepatitis C and human immunodeficiency virus transmission among injecting drug users: a review of reviews. In: *Addiction*. 1 May 2010, Vol. 105, no. 5, pp. 844–859.

58. CRAINE, N., HICKMAN, M., PARRY, J. V., SMITH, J., WALKER, A. M., RUSSELL, D., NIX, B., MAY, M., MCDONALD, T. and LYONS, M. Incidence of Hepatitis C in Drug Injectors: The Role of Homelessness, Opiate Substitution Treatment, Equipment Sharing, and Community Size. In: *Epidemiology & Infection*. 2009, Vol. 137, no. 09, pp. 1255–1265.

59. SYLLA, Laurie, BRUCE, R. Douglas, KAMARULZAMAN, Adeeba and ALTICE, Frederick L. Integration and co-location of HIV/AIDS, tuberculosis and drug treatment services. In: *International Journal of Drug Policy*. August 2007, Vol. 18, no. 4, pp. 306–312.

60. MALTA, Monica, MAGNANINI, Monica, STRATHDEE, Steffanie and BASTOS, Francisco. Adherence to Antiretroviral Therapy Among HIV-Infected Drug Users: A Meta-Analysis. In: *AIDS and Behavior*. 2010, Vol. 14, no. 4, pp. 731–747.

61. ROBSON, Noorzurani. The Transition to Harm Reduction: Understanding the Role of Non-Governmental Organisations in Malaysia. In: *SSRN eLibrary* [online]. 1 July 2011, [Accessed 26 May 2012]. Available from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2049216.

62. HAMMETT, Theodore M, WU, Zunyou, DUC, Tran Tien, STEPHENS, David, SULLIVAN, Sheena, LIU, Wei, CHEN, Yi, NGU, Doan, JARLAIS, Des and C, Don. "Social evils" and harm reduction: the evolving policy environment for human immunodeficiency virus prevention among injection drug users in China and Vietnam. In: *Addiction*. 20 November 2007, Vol. 103, no. 1, pp. 137–145. 63.

MAGUET, Olivier and MAJEED, Murtaza. Implementing harm reduction for heroin users in Afghanistan, the worldwide opium supplier. In: *International Journal of Drug Policy*. March 2010, Vol. 21, no. 2, pp. 119–121.

64. LARNEY, Sarah and DOLAN, Kate. A Literature Review of International Implementation of Opioid Substitution Treatment in Prisons: Equivalence of Care? In: *European Addiction Research*. 2009, Vol. 15, no. 2, pp. 107–112.

65. JAHANI, Mohammad R, KHEIRANDISH, Parastoo, HOSSEINI, Mostafa, SHIRZAD, Hadi, SEYEDALINAGHI, Seyed A, KARAMI, Nazli, VALIOLLAHI, Pegah, MOHRAZ, Minoo and MCFARLAND, Willi. HIV seroconversion among injection drug users in detention, Tehran, Iran. In: *AIDS*. February 2009, Vol. 23, no. 4, pp. 538–540.

66. WERB, Daniel, KERR, Thomas, SMALL, Will, LI, Kathy, MONTANER, Julio and WOOD, Evan. HIV Risks Associated with Incarceration Among Injection Drug Users: Implications for Prison-Based Public Health Strategies†. In: *Journal of Public Health*. 1 June 2008, Vol. 30, no. 2, pp. 126–132. 67.

JÜRGENS, Ralf, BALL, Andrew and VERSTER, Annette. Interventions to reduce HIV transmission related to injecting drug use in prison. In: *The Lancet Infectious Diseases*. January 2009, Vol. 9, no. 1, pp. 57–66.

68. LARNEY, Sarah, TOSON, Barbara, BURNS, Lucy and DOLAN, Kate. Effect of prison- based opioid substitution treatment and post- release retention in treatment on risk of re- incarceration. In: *Addiction*. 1 February 2012, Vol. 107, no. 2, pp. 372–380.

69. LINES, Rick, STÖVER, Heino, DONOGHOE, Martin C. and LAZARUS, Jeffrey V. Monitoring harm reduction in European prisons via the Dublin Declaration. In: *International Journal of Prisoner Health*. 2009, Vol. 5, no. 4, pp. 251–255.

70. SYLLA, Mary, HARAWA, Nina and GRINSTEAD REZNICK, Olga. The First Condom Machine in a US Jail: The Challenge of Harm Reduction in a Law and Order Environment. In: *American Journal of Public Health*. June 2010, Vol. 100, no. 6, pp. 982–985.

71. BONNYCASTLE, Kevin Denys and VILLEBRUN, Charles. Injecting Risk Into Prison Sentences A Quantitative Analysis of a Prisoner-Driven Survey to Measure HCV/HIV Seroprevalence, Risk Practices, and Viral Testing at One Canadian Male Federal Prison. In: *The Prison Journal*. 1 September 2011, Vol. 91, no. 3, pp. 325–346.

72. JÜRGENS, Ralf, BALL, Andrew and VERSTER, Annette. Interventions to reduce HIV transmission related to injecting drug use in prison. In: *The Lancet Infectious Diseases*. January 2009, Vol. 9, no. 1, pp. 57–66. 73. VESCIO, M F, LONGO, B, BABUDIERI, S, STARNINI, G, CARBONARA, S, REZZA, G and MONARCA, R. Correlates of hepatitis C virus seropositivity in prison inmates: a meta-analysis. In: *Journal of Epidemiology and Community Health*. 1 April 2008, Vol. 62, no. 4, pp. 305 –313.

74. HALLAM, Christopher. *Drug policies and harm reduction in South East Europe*. London. International Drug Policy Consortium, IDPC, 2011.

75. AGORASTOS, Agorastos, ZURHOLD, Heike, VERTHEIN, Uwe, PETRIDOU, Anna and HAASEN, Christian. Addiction services in Cyprus: Results of an EU Twinning Project. In: *Drugs: Education, Prevention, and Policy*. October 2011, Vol. 18, no. 5, pp. 340–352.

76. APOSTOLOU, Thanasis. Meeting Report- Drug Policies in South East Europe: Towards Regional Cooperation. In: *SSRN eLibrary* [online]. March 2010, [Accessed 26 May 2012]. Available from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1909949.

77. RAPTOPOULOU, M, TOULOUMI, G, TZOURMAKLIOTIS, D, NIKOLOPOULOU, G, DIMOPOULOU, M, GIANNOULIS, G, VASILIADIS, T, SKOUTELIS, A, ANAGNOSTOU, O, HATZIS, G and MANOLAKOPOULOS, S. Significant epidemiological changes in chronic hepatitis C infection: results of the nationwide HEPNET-GREECE cohort study. In: *Hippokratia*. 2011, Vol. 15, no. 1, pp. 26–31.

78. PARASKEVIS, D and NIKOLOPOULOS, G. HIV-1 outbreak among injecting drug users in Greece, 2011: a preliminary report. In: [online]. 2011. Available from: http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19962. 36

79. KENTIKELENIS, Alexander, KARANIKOLOS, Marina, PAPANICOLAS, Irene, BASU, Sanjay, MCKEE, Martin and STUCKLER, David. Health effects of financial crisis: omens of a Greek tragedy. In: *The Lancet*. 2011, Vol. 378, pp. 1457–1458.

80. SEMENZA, Jan C, TSOLOVA, Svetla and LIM, Tek-Ang. Economic Crisis and Infectious Disease Control: A Public Health Predicament. In: *The European Journal of Public Health*. 1 February 2012, Vol. 22, no. 1, pp. 5–6.

81. CHELIOTIS, Leonidas K. Suffering at the Hands of the State: Conditions of Imprisonment and Prisoner Health in Contemporary Greece. In: *European Journal of Criminology*. 1 January 2012, Vol. 9, no. 1, pp. 3–22.

82. KOULIERAKIS, G. Drug use and related precautions prior to imprisonment, inside prison and intentions after release among Greek inmates. In: *Addiction Research & Theory*. January 2006, Vol. 14, no. 3, pp. 217–233.

83. MCKEGANEY, Neil. Harm reduction at the crossroads and the rediscovery of drug user abstinence. In: *Drugs: Education, Prevention, and Policy*. 30 April 2012, pp. 1–8.

84. *Integration of harm reduction into abstinence-base therapeutic communities: a case study of We Help Ourselves, Australia*. S.l. World Health Organistation, WHO, Western Pacific Region, 2006.

85. CAULKINS, Jonathan P., TRAGLER, Gernot and WALLNER, Dagmar. Optimal timing of use reduction vs. harm reduction in a drug epidemic model. In: *International Journal of Drug Policy*. November 2009, Vol. 20, no. 6, pp. 480–487.

86. RHODES, Tim. Risk environments and drug harms: A social science for harm reduction approach. In: *International Journal of Drug Policy*. May 2009, Vol. 20, no. 3, pp. 193–201.

87. CAULKINS, Jonathan P., FEICHTINGER, Gustav, TRAGLER, Gernot and WALLNER, Dagmar. When in a drug epidemic should the policy objective switch from use reduction to harm reduction? In: *European Journal of Operational Research*. 16 February 2010, Vol. 201, no. 1, pp. 308–318.

88. COOPER, Hannah L.F., BOSSAK, Brian, TEMPALSKI, Barbara, DES JARLAIS, Don C. and FRIEDMAN, Samuel R. Geographic approaches to quantifying the risk environment: Drug-related law enforcement and access to syringe exchange programmes. In: *International Journal of Drug Policy*. May 2009, Vol. 20, no. 3, pp. 217–226.

89. O'NEILL, Maria. A Europe that Protects: Moving to the Next Stage of Cross-Border Law Enforcement Cooperation. In: *The Police Journal*. June 2011, Vol. 84, no. 2, pp. 125–150.

90. MAZEROLLE, Lorraine, SOOLE, David and ROMBOUTS, Sacha. Drug Law Enforcement A Review of the Evaluation Literature. In: *Police Quarterly*. 1 June 2007, Vol. 10, no. 2, pp. 115–153.

91. FRIEDMAN, Samuel R., SCHNEIDER, Eric and LATKIN, Carl. What We Do Not Know About Organizations of People Who Use Drugs. In: *Substance Use & Misuse* . 20 March 2012, Vol. 47, no. 5, pp. 568–572.