Transforming lives and empowering communities: evidence, harm reduction and a holistic approach to people who use drugs

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Abstract

Purpose of the review: We reviewed the global state of harm reduction for people who use and/or inject drugs.

Key findings: While harm reduction is now the key response to HIV among people who use drugs globally, intervention coverage remains sub-optimal, exacerbated by chronic under-funding, declining donor support and limited domestic investment, particularly in low-and middle-income countries. We describe the current environment and review recent innovations and responses, including peer distribution of naloxone, low dead space syringes, drug consumption rooms and drug checking services. However, despite efforts by people who use drugs and supporting partners to sustain harm reduction services and to develop and implement novel interventions, programmes are often under-scaled and under-resourced and people who use drugs continue to face significant barriers to accessing services.

Summary: There is an urgent need to bring existing harm reduction programmes to scale and to broaden their scope, as well to complement them with innovative interventions targeting new populations and new substances. Under and disinvestment in harm reduction and the absence of enabling legal environments threatens to undermine the global HIV response and exacerbate the morbidity and mortality associated with the current epidemic of opioid overdose.

Key words: HIV, injection drug use, harm reduction, investment, community mobilisation

Introduction

Despite high rates of mortality and morbidity among people who use drugs, access to effective interventions remains limited. In 2016, an estimated 275 million people globally used illicit drugs, including 10.6 million people who injected drugs [1]. In the same year, an estimated 450,000 people died of drug-related poisonings and drug-related infections, including HIV and viral hepatitis, and 1.3 million people who inject drugs were living with HIV [1]. Outside sub-Saharan Africa, people who inject drugs (PWID) and their sexual partners account for a quarter of new HIV infections [2] and the World Health Organization (WHO) has estimated that 23% of new hepatitis C virus (HCV) infections globally are attributable to injection drug use [3].

Harm reduction is a pragmatic human-rights-based public health approach to policies, programmes and practices that aims to reduce the harms associated with drug use without necessarily reducing drug consumption [4]. While it is well documented, evidenced and acknowledged that harm reduction interventions reduce the negative health and social impacts of drug use and are both cost-effective in the short term and cost-saving in the long term, coverage is limited and significant barriers to service access remain [5].

In 2009, the WHO, United Nations Office on Drugs and Crime (UNODC) and UNAIDS described and secured high-level political support for a comprehensive package of harm reduction interventions [6]. In 2014 (updated 2016), the WHO consolidated recommendations relating to HIV prevention, diagnosis, treatment and care for key populations into a comprehensive package of essential health interventions, which also includes structural interventions to address barriers to accessing services [7] (Table 1). Evidence also indicates that harm reduction interventions, including needle and syringe programs (NSP), opioid

Table 1: WHO Comprehensive package for key populations [6]

Health Sector Interventions	
1	HIV prevention (condoms. lubricants, PrEP, PEP, VMMC)
2	Harm reduction interventions for substance use, in particular needle and syringe programs (NSP), opioid substitution therapy (OST) and naloxone for overdose management
3	HIV testing and counselling (HTC)
4	HIV treatment and care
5	Prevention and management of co-infections and other comorbidities, including viral hepatitis, TB, and mental health conditions
6	Sexual and reproductive health interventions
Critical enablers	
1	Supportive legislation, policy, and financial commitment, including decriminalization of behaviors of key populations
2	Addressing stigma and discrimination
3	Accessible, available and acceptable health services
4	Community empowerment
5	Addressing violence against people from key populations

6. World Health Organization (WHO). *Consolidated guidelines for HIV prevention, diagnosis, treatment and care for key populations*. Geneva: WHO; 2014, Update 2016.

substitution therapy (OST) and anti-retroviral therapy (ART), are synergistic, with combined approaches more effective than partial approaches [5]. In particular, OST increases the retention of PWID in ART, regardless of ongoing injection drug use [8]. WHO also recommends pre-exposure prophylaxis (PrEP) to all people at substantial risk. However, while PrEP clearly offers benefits for those managing the sexual health risks of taking drugs as part of sex work or to enhance sex and reduce inhibitions (including ChemSex), there are concerns about the acceptability and ethics of PrEP for PWID, including the potential to divert resources from efforts to secure scale up of the core UN package of interventions [9].

The harm reduction crisis

Drug-related deaths are increasing globally and the target set in the *2011 Political Declaration on HIV* to halve HIV transmission among PWID by 2015 was missed by 80% [1]. The implementation and scale up of harm reduction programmes has stagnated. In 2018, 86 countries had one or more NSPs; a reduction of four from 2016. Over the same period, the number of countries (n=86) offering OST increased by only six [10]. A 2017 systematic review concluded that <1% of PWID live in settings with sufficient coverage of these lifesaving interventions, with insufficient data available to estimate ART coverage among PWID living with HIV [11].

These targets have been missed for several reasons. First, harm reduction is still considered politically sensitive and morally unacceptable in some settings. While China, the Russian Federation and the United States account for almost half the global population of PWID and China has the largest OST programme in the world, harm reduction coverage in all three countries remains sub-optimal. Low-and middle-income countries experienced an estimated

90% shortfall in funding in 2017 [4]. Faced with dwindling donor support and limited domestic investment, most harm reduction programmes in these settings remain modest in scale, HIV-focused, and ill-equipped to deal with new challenges. This is especially the case in Eastern Europe and central Asia, where domestic support for harm reduction is limited and HIV incidence continues to rise [4] (see the paper on Central Asia in the current issue).

Secondly, the availability, strength and variety of drugs continues to increase [1, 10]. In North America and parts of Western Europe a growing opioid overdose crisis is linked to the increased presence of fentanyl in the heroin supply chain [12]. At the same time, substances such as amphetamine type stimulants (ATS), cocaine and its derivatives, and New Psychoactive Substances (NPS) are increasingly used and trafficked globally [1]. Harm reduction needs to continue evolving beyond its historic focus on HIV in people who inject opioids to ensure its relevance for people who obtain and use other substances in other ways.

People who use drugs continue to face structural barriers accessing health and social care. While some countries have decriminalized drug use and possession for personal use, thirty-five countries retain the death penalty for drug related offences [10]. Stigma and discrimination, and a lack of specialist knowledge within health services discourages people who use drugs from accessing health care [13]. Women who use drugs have particular vulnerabilities, including increased risk of HIV and viral hepatitis, and they often experience violence from intimate partners and law enforcement officials [14]. As people who use drugs get older, they face social isolation, chronic health conditions and complex needs requiring a specialist response [15].

How can harm reduction respond in the current environment?

The harm reduction sector, drug user movement and supporting partners are responding with creativity and innovation to address issues of sub-optimal coverage, reductions in funding, changes in drug markets, and barriers to service access and retention.

Understanding local injecting patterns and practices and consulting PWID allows for the procurement of acceptable injecting equipment of sufficient range and quality to achieve harm reduction objectives. Low dead space syringes reduce the blood residue inside used syringes to help prevent transmission of blood-borne viruses [16]. Concerted efforts are needed to ensure that this new technology becomes the norm and not a missed opportunity.

The strategic use of vending machines and mobile, outreach and pharmacy programmes can ensure that injecting equipment is accessible and available in adequate quantities to prevent the need to share and reuse needles and syringes [17]. By working as outreach workers in NSPs and supporting the distribution of injecting equipment through secondary outlets, peers help ensure that injecting equipment is available at the points and times people need it. Peer educators also disseminate safer injecting advice and assess and refer people with injection-related injuries for treatment [18]. Through 'needle patrols', drug user groups help can help remove drug-related litter, reducing community tensions [19]. Take home naloxone programs have facilitated the roll out of a safe and effective antidote to opioid overdose in many countries. Peer-to-peer distribution of naloxone is key to achieving scale up and reaching active drug users [20, 21].

An evolving response to people who use stimulants is being driven by a recognition of the relationship between infectious diseases and stimulant use and by documenting emerging good practice [22]. The provision of glass pipes for smoking stimulants, the Czech Republic's provision of gel capsules to facilitate oral consumption of stimulants [23], and the distribution of safer inhalation kits [24], all help to reduce the risks linked to different routes of administering stimulants. They also offer alternatives to the risky pattern of rapid, repeated injecting common with stimulants [24]. Drug user groups have been pioneers driving both peer-based responses and professional partnerships, illustrated by the Crack Squad in the UK [25] and the Urban Survivors Union in the US [26].

The success of drug checking at festivals has led to pilots in public drug services in the UK, The Netherlands and other countries, which test the value of providing people who use drugs with information about content and quality the substances they plan to consume [27]. Fentanyl testing strips have been introduced in parts of the US to enable people who use drugs to identify drugs contaminated with fentanyl and support the adoption of appropriate risk reduction strategies. [28].

More than 120 drug consumption rooms (DCRs) have now been implemented in Australia, Canada, and a number of European countries [29]. DCRs can be delivered in fixed locations or through mobile buses allowing consumers to access services and reduce drug-related deaths [30]. North American drug user groups recently pioneered pop-up 'Overdose Prevention Sites' [31] designed provide a low threshold alternative to more clinical DCRs. The recent outbreak of HIV among homeless drug users in Glasgow highlights the vulnerability of people living and using drugs on the street [32], while an earlier outbreak in Athens emphasizes the additional vulnerability of refugees and migrants who use drugs [33].

The perception of people who use drugs as non-adherent to prescribed medications encourages overly regulated, high-threshold and expensive models of service delivery which impede the scale up and accessibility of services [34]. People on OST and those with chronic health conditions like HIV, TB and viral hepatitis are ideal candidates for treatment literacy programmes that support informed self-management of medicines and a dynamic partnership with healthcare providers [35]. Integrating OST and ART improves individual and population-level outcomes for PWID living with HIV, including improved access, retention and adherence to treatment, and a 45% increase in viral suppression, key to achieving treatment as prevention [36]. It is also essential that the drug treatment components of these programmes are based on evidence and not on ideology [7]. For example, since 2008 the UK has shifted towards a politically informed recovery agenda, with a reduced policy focus on harm reduction and providers incentivized to deliver drug-free outcomes. This has been accompanied by a 4% decrease in treatment seeking and record numbers of drug-related deaths [37].

Evidence from Australia supports the feasibility of eliminating hepatitis C as a public health threat, with recent data showing high uptake of hepatitis C treatment among PWID and, for the first time, a corresponding decline in population-level viraemia [38]. The economic case has persuaded countries such as Georgia, Portugal, and the UK to eliminate hepatitis C [39]. These pioneers are charting a course for the global community to commit to eliminating hepatitis C within a generation. However, continued collaboration between UNITAID and pharmaceutical companies is required to ensure that hepatitis C treatment, and other life-saving pharmacotherapies for people who use drugs, are available in the Global South through the Medicines Patent Pool.

Pioneering work on the dark web suggests the potential to reach out to people who use drugs with HIV self-testing kits as part of an engagement strategy [40]. In Finland, harm reduction services have opened a virtual clinic on a Finnish-language dark website creating a new form of interaction with people who use drugs seeking trustworthy information about drugs and health [41].

Harm reduction services have developed specialist services for women that offer a safe space and specialist services such as sexual and reproductive health and pregnancy, neonatal and child-care support [42]. Specialist treatment models have been implemented in Tanzania to engage women who use drugs in OST while they are still smoking heroin to reduce the heightened risk of blood-borne viral infections faced by women if they initiate injection use [43]. Women who use drugs are mobilising together and challenging male-dominated drug user networks to diversify and engage women [44].

As the Global Fund re-directs its resources in some countries harm reduction advocates and programmers and drug user organisations need to be supported to monitor changes, lobby for domestic investment, and work to sustain harm reduction through these periods of transition. This illustrates the strategic support role of regional and global civil society networks. Universal Health Coverage [45] commitments also create opportunities to advocate for the inclusion of harm reduction and other evidence-based interventions in national health service packages, as well as to prioritise community-based and led services.

There is increasing recognition that the criminalization of people who use drugs is counterproductive to human rights and public health objectives and that decriminalization of drug use and possession has the potential to reduce barriers to providing harm reduction

services [46]. The decriminalization of drug use in Portugal is one measure in a comprehensive national drug policy which includes high coverage of a range of quality harm reduction interventions, has proven cost effective, and has reduced the number of new HIV infections among people who use drugs from ~1800 per year in 1999 to 18 in 2018 [47, 48, 49]. More recently, following an objective review of the evidence and a dynamic dialogue with drug user and civil society organisations, Norway has also transformed its approach to harm reduction and drug policy reform [50]. Within the current legal environment, UNODC is providing sensitisation training for law enforcement officials to help address the harms that often arise for people who use drugs when interacting with the police and while in prison [51].

Conclusions

While the right to health framework obligates all countries to implement comprehensive harm-reduction programmes and policies [52], people who use drugs still face barriers to accessing these life-saving interventions [53]. Despite increasing recognition and acceptance of harm reduction as an evidence-based and cost-effective response, in many settings these programmes remain small scale and under-resourced, vulnerable to economic and political pressures. WHO, UNODC and UNAIDS have developed a set of indicators with indicative targets for countries to use to monitor performance of harm reduction programmes which focus on OST and NSP coverage and availability, as well as related outcomes and impacts [6].

There is an urgent need to scale up evidence-based harm reduction programmes and to complement them with novel and innovative interventions. Not only do programmes need to reach more people who inject opioids, but services must be diversified to reach people who use other substances such as stimulants. At the same time, harm reduction must go beyond HIV

prevention and address broader health and social needs and, in particular, the scale-up of hepatitis C prevention, testing and treatment to meet the 2030 global target to reduce the number of new hepatitis C infections by 90% [54].

Funding mechanisms also need to be re-assessed to counter shifting donor priorities with local advocacy, capacity building, and domestic engagement. A recent report by Harm Reduction International noted that there are sufficient resources to end the HIV epidemic among PWID if Governments are willing to divert a small proportion of the resources currently spent on prohibition towards investment in science, effective delivery of services, and in drug users and their organisations [55]. Recent mathematical modelling indicated that redirecting just 7.5% of drug control spending globally (US$7.5 billion) would be enough to provide high coverage of key harm reduction interventions globally, resulting in a 94% reduction in new HIV infections among PWID by 2030 [55].

Harm reduction interventions are supported by a strong evidence base and successful examples from countries around the world where high coverage of harm reduction has averted HIV epidemics [56], and stabilised new infections and reduced HIV prevalence [57], among people who inject drugs. Continued advocacy and political courage to work towards the decriminalization of drug use and possession is required to create an enabling legal environment for harm reduction. This would bring people who use drugs in from the margins and facilitate community mobilization as a valued and critical part of the harm reduction response. Finally, it is critical to continue advocacy and support to policy makers to understand the flexibilities of the conventions for drug policy reforms to address the unmet needs of people who use drugs in ways that enhance their health and respect their human rights.

Key points

- A pragmatic, evidence-based approach to drug use, harm reduction is the key response to HIV among PWID globally.
- Harm reduction coverage remains sub-optimal, exacerbated by chronic under-funding, declining donor support and limited domestic investment, particularly in low-and middle-income countries.
- People who use drugs continue to develop and implement novel interventions to reduce harm however, programmes are often under-scaled and under-resourced.
- There is an urgent need to scale up existing harm reduction programmes and to broaden their scope of health and social issues, as well to complement them with innovative interventions targeting newly identified populations and new and emerging substances.
- Universal Health Coverage (UHC) presents an opportunity for countries to include harm reduction as part of national health packages.
- Under and disinvestment in harm reduction and the absence of enabling legal environments threatens to undermine the global HIV response and exacerbate the morbidity and mortality associated with drug overdose.

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