

MAKING THE INVESTMENT CASE

ECONOMIC EVIDENCE FOR HARM REDUCTION (2024 UPDATE)

Globally and domestically, funding for global health is decreasing. International funding to address HIV, hepatitis C (HCV) and tuberculosis (TB), and competing priorities for domestic investment in health programmes mean that funding is shrinking. It is crucial that available resources are allocated efficiently, ensuring value for money and cost-effectiveness.

Strong evidence from across the world shows that harm reduction interventions are cost-effective¹ and can be cost-saving² in the long-term. Advocates often need to make the investment case for harm reduction to donors, and increasingly to governments as donors retreat.

This advocacy has never been more important. HIV is rising among people who inject drugs³, yet funding for harm reduction is in crisis. Financial support for an effective HIV response for people who inject drugs in low- and middle-income countries totalled US\$151 million in 2022 – just 6% of the US\$2.7 billion that is needed annually by 2025⁴. International donor funding for harm reduction has halved in real terms since 2007⁵. Middle-income countries,

particularly in the Middle East and North Africa, are increasingly vulnerable to rising HIV infections among people who use drugs because donor funding for harm reduction is rarely available to them. While many governments are investing more in domestic health and HIV responses, few are properly investing in harm reduction, even where the need is great. The number of countries investing in their own harm reduction responses and the amount invested has fallen since 2019⁶.

The following brief⁷ provides the evidence advocates need to show the cost-effectiveness of harm reduction and the economic value that increased investment in such interventions will bring.

KEEPING THE QUALITY OF SERVICES AND COMMUNITIES AT THE CENTRE

Understandably, some advocates are concerned that, if too much focus is put on cost-effectiveness, governments and donors may prioritise finances over the quality of services, posing a threat to human rights-based, community-centred harm reduction.

Here, the principle of ‘nothing about us without us’ is key. Communities must be at the centre of all decisions that relate to their health, including financial ones. Economic analyses should not be the only basis on which budget decisions are made. Equity, human rights and

communities must be at the centre of financing for health and harm reduction or it will not be sustainable. Much greater investment in programmes that aim to remove human rights barriers and reform punitive policies is needed if ending AIDS, TB and HCV and achieving universal health coverage by 2030 are ever to be achieved for people who use drugs.

OPIOID AGONIST THERAPY

Opioid agonist therapy (OAT)⁸ prevents HIV and HCV and is recommended by the World Health Organization (WHO) as a priority intervention for people who inject drugs⁹. OAT improves people's quality of life and has a number of benefits for society.¹⁰

While the cost of providing OAT varies due to supply and service delivery factors, studies show similar costs per client per day for methadone across a number of settings, such as Nairobi, **Kenya** (US\$1.49)¹¹, **Vietnam** (US\$1.01) and **Indonesia** (US\$1.11).

In **Iran**, the evidence shows that OAT centres are extremely cost-effective due to the number of HIV infections they prevent.^{12,13} A 2014 study found that OAT prevented 86 new annual HIV infections and cost around US\$471 per person per year, while a 2017 study found that OAT centres prevented 128 new HIV infections over a one-year period.

In 2016, a study in **Vietnam** found voluntary community-based methadone maintenance therapy (MMT¹⁴) was more cost-effective than centre-based compulsory rehabilitation in reducing drug use, saving an estimated US\$2,545 per person over three years¹⁵. Centre-based compulsory rehabilitation cost over three times more over three years than community-based MMT. Compulsory

rehabilitation also causes large loss-of-opportunity costs due to the time that people are unable to work.

Research shows that investing in scaling up OAT provision is cost-effective. For example, a modelling study from **Ukraine** found that increasing OAT capacity and coverage by 2 to 13 times existing levels in three major cities would be cost-effective when measured by the number of quality-adjusted life years gained.¹⁶

Take-home OAT, also called unsupervised dosing, is proven to be an effective and cost-effective treatment for opioid dependence. A 2017 study from **Australia** found that take-home, self-administered buprenorphine-naloxone was effective in reducing heroin use and saved US\$3,798 in treatment costs over a 12-week period (this also took into account lower costs for law enforcement due to reduced crime).¹⁷

Some studies compare the different types of OAT. For example, studies from **Belgium** and **Canada** show that heroin-assisted treatment and injectable hydromorphone are more cost-effective than methadone maintenance therapy among people who use opioids.^{18,19}

Multiple studies from the **US** and **Australia** between 2020 and 2023 found that providing OAT in prison and other closed settings is cost-effective in reducing heroin use and preventing overdose deaths, and it also saves money.^{20,21} An **Australian** study comparing types of OAT provided to people in prison and other closed

settings found that depot buprenorphine, which is a long-acting injectable form of buprenorphine, was the least costly treatment option, costing AU\$151.00 (US\$101.00) per person per month²². A study in New South Wales, **Australia** found that prescribing people OAT after they had been released from prison and other closed settings was a cost-effective way to reduce overdose-related deaths in the first six-months after release.²³

OAT's cost-effectiveness has also been demonstrated in specific settings and

populations, including in emergency departments,^{24,25} primary care,^{26,27} and for pregnant people.^{28,29} Studies in the **US** found that emergency department-initiated buprenorphine, the expansion of hospital-based OAT prescribing and integrating OAT in primary care could improve life-expectancy, increase the reach and accessibility of these services, and be cost-effective in treating opioid dependence when reduced criminal legal system costs were included.^{30,31}

NEEDLE & SYRINGE PROGRAMMES

Needle and syringe programmes (NSP)³² are proven to be effective in reducing HIV and HCV transmission in many different settings.^{33,34} This is why the WHO recommends NSP as part of the essential package of interventions for people who inject drugs.³⁵ NSP are one of the most cost-effective of all public health interventions, although costs vary.^{36,37} In 2023, unit costs per syringe distributed ranged from US\$0.08 to US\$20.77, depending on context.³⁸

There is a significant body of evidence that proves NSP cost-effectiveness, including from the **US**,³⁹ **Australia**,⁴⁰ and the **UK**.^{41,42,43} Despite the higher cost of implementing NSP at the level of coverage needed to prevent HCV

(which is more infectious than HIV), research from the **UK** shows NSP to be cost-effective for reducing HCV transmission among people who inject drugs. In **Scotland**, researchers estimated long-term cost-savings of up to 250% of the original investment.⁴⁴ Evidence from the **UK** found that replacing high dead space syringes with detachable low dead space syringes (LDSS) in NSP is likely to be cost-saving for reducing HCV transmission.^{45,46}

A modelling study from the **US** assessed the cost-effectiveness of scaling up the country's NSP response. It found that, for every dollar invested in NSP, US\$6.38-7.58 would be saved in HIV treatment.⁴⁷

A 2018 study examining NSP in **Eastern Europe and Central Asia** found that increasing NSP coverage (at a cost of less than US\$0.50 per syringe distributed), in

combination with antiretroviral treatment (ART) and other HIV services, would be cost-effective and highly effective at reducing HIV and HCV transmission.⁴⁸

In **Malaysia**, researchers showed that the national NSP was cost-effective and cost-saving. Even at lower coverage levels, NSP prevented 12,191 HIV infections, saving MYR 45.53 million (US\$9.6 million) in treatment costs between 2006-2013.⁴⁹

In Yunnan province in **China**, NSP was found to be cost-effective and cost-saving. The US\$1.04 million spent on NSP between 2002-2008 resulted in an estimated cost-saving of US\$1.38-1.97 million due to the number of HIV infections, meaning less had to be spent on HIV treatment and care.⁵⁰

NALOXONE DISTRIBUTION

Naloxone peer-distribution programmes⁵¹ provide naloxone to the people who are most likely to witness an opioid overdose, such as friends and family of people who use opioids, and train them on how to use it if someone overdoses. Administering naloxone is a life-saving intervention.

A 2020 study from the **US** found that naloxone distribution is cost-effective in preventing overdose deaths when distributed to the peers of people who use drugs and others most likely to witness an overdose, plus the general public. High distribution to these two groups prevented 21% more overdose deaths compared with minimum distribution.⁵² Another **US** study, in the same year, found that even distributing naloxone once to community pharmacies would

prevent 14 additional overdose deaths per 100,000 people and be cost-effective.⁵³

A study in **Australia** found that giving naloxone to people who are receiving OAT was cost-effective and is likely to save more than 650 lives between 2020 and 2030.⁵⁴

DRUG CONSUMPTION ROOMS

Drug consumption rooms (DCR)⁵⁵ vary in size, setting, approach, and therefore cost. Although they can cost more to set up than other harm reduction services, they have been proven to be cost-effective.

In 2014, a study in Vancouver, **Canada** found that an unsanctioned DCR for smoking crack and crystal methamphetamine had saved US\$1.32 million per year by preventing HCV infections and related treatment costs.⁵⁶

INTEGRATED HARM REDUCTION SERVICES

While providing these harm reduction services in isolation is proven to be cost-effective, the evidence strongly shows that combining harm reduction services, as well as combining harm reduction services with HIV and HCV treatment and prevention services, is the most cost-effective, cost saving strategy.

In 2023, researchers in **India** found that integrated NSP, OAT and wider harm reduction support⁵⁹ was cost-effective for HIV prevention,

In 2019, a study in Seattle, **US** estimated that establishing a DCR would save US\$4.22 in associated healthcare costs for every dollar spent on operational costs.⁵⁷

In 2020, US research found that operating a DCR programme in Boston, Philadelphia, San Francisco, Atlanta, Seattle and Baltimore would all be cost-effective and would reduce the number of lives lost to overdose.⁵⁸

averting 996 HIV infections over three years.⁶⁰

In **Malaysia**, implementing NSP and OAT together was found to be effective and cost-effective in preventing 12,653 HIV infections and saving RM47.06 million (US\$9.9 million) between 2006-2013.⁶¹

In **China**, combined NSP and OAT programmes prevented 5,678 HIV infections between 2005-2010, saving US\$4.4 million in HIV treatment and care costs.⁶²

A 2019 study from **Mexico** found high coverage harm reduction and HCV treatment to be the most cost-effective for meeting HCV elimination

strategy goals. It also found that combining NSP and general harm reduction education prevented 869 HIV infections between 2015-2018, potentially saving over MX\$600,000 (around US\$40,000).⁶³

A modelling study from **Eastern Europe and Central Asia** found scaling up combined NSP, OAT and ART for people who inject drugs would be cost-effective in **Georgia**, and cost-saving in **Kazakhstan** and the **Republic of Moldova**. In **Tajikistan**, the combination of NSP, OAT, ART and HIV diagnosis was very cost-effective. Increasing coverage of all interventions (including HCV treatment using direct-acting antivirals) was always the most effective approach for reducing HIV and HCV transmission.⁶⁴

Research from the **UK** found that combined high coverage of NSP and OAT reduced the risk of HCV infection by 29-71% compared with minimal harm reduction coverage. This modelling showed that removing OAT and NSP would make the country's HCV epidemic worse; in one part of the UK it was estimated that removing OAT and NSP would increase HCV infections by 349% by 2031.⁶⁵

THE COST OF INACTION, REDUCING FUNDS OR CLOSING HARM REDUCTION SERVICES

There is a growing body of evidence that shows that decreasing or ending harm reduction services will directly lead to a spike in HIV and/or HCV infections. For example, when the Global Fund to Fight AIDS, Tuberculosis and Malaria ended grants in **Romania** and **Serbia**,

programme closures and a spike in infections followed.^{66,67}

In Belarus, an eight-month funding gap for harm reduction services reduced syringe distribution by 75% and reduced the impact and cost-effectiveness of the intervention. Without this funding gap, modelling suggests 53% more HIV infections would have been prevented.⁶⁸

A modelling study in **Switzerland** found that, if the country had stopped services instead of implementing harm reduction programmes in 2005, an HIV outbreak would have occurred and an estimated 1,351 more people would have become HIV positive.⁶⁹

THE ECONOMIC COST OF PUNITIVE DRUG POLICIES

Many governments spend huge amounts on punishing people who use drugs; far more than they spend on harm reduction investment.⁷⁰

This approach violates human rights, and it places a big economic burden on public health, society and individuals. Many countries imprison people for drug use and possession.⁷¹

In 2019, the Ministry of Law and Human Rights in **Indonesia** spent around 42% of its total budget on managing prisons, including the food for people in prison. If Indonesia decriminalised personal possession of small amounts of drugs, the burden on prisons and other closed settings would be reduced by 40%.⁷²

The Australian drug budget for the year 2021/2022 was reported to be AU\$5.45 billion (US\$3.63 billion), of which 64% went to law enforcement, 27% went to treatment, 7% went to prevention and just 1.6% went to harm reduction.⁷³ A 2023 study in **Australia** demonstrated the cost-effectiveness of decriminalisation by modelling what would happen if the country's cannabis cautioning scheme was applied to all drugs. It found this policy change would reduce the costs of law enforcement by more than 50% and also generate income for the government.⁷⁴

Research from **Eastern Europe and Central Asia** finds that decriminalising drug use

could greatly reduce HIV transmission in the region as it would enable more people who inject drugs to access OAT, and ART if they are living with HIV. This would be made possible by redirecting funds for policy and law enforcement to harm reduction and HIV treatment.⁷⁵

The experience in **Portugal** shows both the effectiveness and cost-effectiveness of drug decriminalisation.⁷⁶ Since personal possession of all drugs was decriminalised in 2001, the social costs of drug use, including the costs of drug-related deaths, criminal proceedings and incarceration, have fallen by more than 18%.⁷⁷ This cost-saving is in addition to a decrease in drug-related deaths. It is also in addition to a reduction in HIV and HCV infections associated with injecting drug use, which is linked to increased treatment and harm reduction services.⁷⁸

A modelling study shows that reallocating just 7.5% of global drug control spending (US\$7.66 billion) would result in a 94% reduction in new HIV infections among people who inject drugs, and a similar reduction in AIDS-related deaths by 2030.^{79,80} This would effectively end HIV among people who inject drugs.

CONCLUSION

The evidence strongly supports the economic and society-wide benefits of investing in harm reduction. OAT, NSP, naloxone distribution and DCRs are proven to be cost-effective & cost-saving across diverse global settings. Consistent with guidance from the WHO and UNAIDS, combining multiple harm reduction strategies makes them even more cost-effective and impactful, and will significantly reduce HIV and HCV transmission. There is also compelling evidence of decriminalisation of drugs as an economically beneficial approach.

Despite this, harm reduction remains underfunded in most parts of the world.

Governments can achieve global health targets, such as ending AIDS and achieving universal health coverage by 2030, if they increase investment in proven solutions, and this means investing in harm reduction and reforming punitive drug policies. Ignoring the evidence and failing to act will cost far more in the long-term.

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