

# MAKING THE INVESTMENT CASE

**COST-EFFECTIVENESS  
EVIDENCE FOR HARM REDUCTION**



In an era of shrinking international funding to address HIV, hepatitis C (HCV) and tuberculosis (TB), and competing priorities for domestic investment in health programmes, there is growing emphasis on ensuring value for money, efficient allocation of resources, and cost-effectiveness.

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Compelling evidence from across the world shows that harm reduction interventions are cost-effective and can be cost-saving<sup>1</sup> in the long-term. Advocates now need to make the investment case for harm reduction to donors, and increasingly to governments, as donors retreat.

This advocacy work has never been more important. HIV continues to rise among people who inject drugs<sup>2</sup>, yet harm reduction funding is in crisis. Financial support for an effective HIV response for people who inject drugs in low- and middle-income countries totalled US\$131 million in 2019 – just five per cent of the US\$2.7 billion that is needed annually by 2025.<sup>3</sup> International donor funding for harm reduction has reduced by one-quarter over the past decade.<sup>4</sup> Middle-income countries are increasingly vulnerable as donors either reduce or withdraw funding. While many governments are investing more in domestic health and HIV responses, few are substantially investing in harm reduction, even where the need is great.<sup>5</sup>

The following brief 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

There is a legitimate worry among advocates that, if too much focus is put on cost-effectiveness, governments and donors may prioritise finances over the quality of services being delivered, posing a threat to human rights-based, community-centred harm reduction.

In the face of this, the principle of ‘nothing about us without us’ must be staunchly upheld. 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. Sustainable financing for health and harm reduction requires equity, human rights and community to be central.

Considerable investment in programmes that aim to remove human rights barriers and reform punitive policies will be crucial if ending AIDS, TB, combating HCV, and achieving Universal Health Coverage by 2030 are to become more than a distant reality for people who use drugs.

# THE COST-EFFECTIVENESS OF HARM REDUCTION: EVIDENCE FROM SEVEN AREAS

## 1. Needle and syringe programmes are one of the most cost-effective public health interventions in existence

UNAIDS estimates the average cost of a needle and syringe programme (NSP) to be US\$23–71 per person per year.<sup>6</sup> When the cost of treating the HIV and HCV infections that NSPs prevent is considered, NSPs are among the most cost-effective of all public health interventions.<sup>7,8</sup>

An economic analysis of **Australia's** 2000-2009 NSP found that, for every Australian dollar invested, more than four dollars were made in healthcare cost savings. By preventing new HIV infections, the NSP enabled the government to avoid significant costs associated with lifelong treatment. When a broader range of costs were taken into consideration, including productivity gains and losses, AU\$27 were saved for every dollar invested.<sup>9</sup>

A study in Odessa, **Ukraine** found that providing NSP, alongside condoms and HIV-related information, via two stationary and one mobile site prevented around 790 HIV infections in just one year, saving US\$97 per HIV infection averted.<sup>10</sup> Even with relatively low coverage levels of between 20-38%, the project was found to be both effective and cost-effective for HIV prevention.

A study in **Bangladesh** indicates that early implementation of an NSP, when HIV prevalence among people who inject drugs is low, is more cost-effective than when prevalence is above 40%. However, both approaches were still found to be cost-effective.<sup>11</sup>

Similarly, research from Yunnan province in **China** found NSPs to be cost-effective and cost-saving. The US\$1.04 million spent on NSPs between 2002 and 2008 is estimated to have saved US\$1.38-1.97 million in HIV treatment and care costs due to the number of infections prevented.<sup>12</sup>

## 2. Opioid agonist therapy is cost-effective for individuals and society

Opioid agonist therapy (OAT) is more expensive than NSP, costing between US\$360-1,070 for methadone and US\$1,230–3,170 for buprenorphine per person per year, but it is still cost-effective.<sup>13</sup> OAT's cost-effectiveness increases when wider societal benefits, such as reduced crime and incarceration, are factored into the analysis.<sup>14</sup>

A study in **Indonesia** estimated that expanding OAT coverage from 5% to 40% in West Java would avert approximately 2,400 HIV infections, at a cost of around US\$7,000 per infection averted.<sup>15</sup> Similarly, in **Russia** evidence suggests OAT would be highly cost-effective, as it would save considerable healthcare costs associated with HIV and TB.<sup>16</sup>

Some studies compare the costs of different OAT. For example, a trial in Vancouver, **Canada** found heroin-assisted treatment was more cost-effective than methadone maintenance therapy among people with chronic opioid dependence. When crime-related costs and out-of-pocket expenses were considered, heroin-assisted treatment also became cost-saving.<sup>17</sup>

## 3. Combined harm reduction services are significantly more cost-effective than isolated services

Substantial evidence indicates that combining NSP, OAT and antiretroviral treatment (ART) is the most effective and cost-effective HIV strategy for people who inject drugs.<sup>18,19,20</sup>

A study from **Malaysia** found the combined implementation of NSP and OAT between 2006 and 2013 was both effective and cost-effective in preventing HIV, and that its cost-effectiveness would increase over time. The cost-effectiveness of this integrated programming had the potential to be even greater, had coverage been higher and if wider individual and societal factors been considered.<sup>21</sup>

In **Slovakia**, a study found that every Euro invested in harm reduction generated benefits worth three Euros, and every HCV infection averted would save €106,000 in treatment and quality-of-life costs over 25 years.<sup>22</sup>

Researchers in the **United Kingdom** found that a high coverage of combined NSP and OAT reduces the risk of acquiring HCV by 29-71%. NSP was found to be cost-effective (and cost-saving in some settings) for HCV prevention. Conversely, removing OAT and NSP would have a significantly detrimental impact on HCV epidemics. In one UK setting this would increase new HCV infections by 349% by 2031.<sup>23</sup>

#### **4. The peer distribution of naloxone is highly cost-effective**

Naloxone is a life-saving intervention as it is highly effective in reversing opioid overdose. Peer distribution programmes provide naloxone to people who are likely to witness an overdose, such as friends and family of people who use opioids, alongside training on how to administer it.<sup>24</sup>

One study from the **United States** found naloxone peer distribution to be highly cost-effective in preventing overdose-related deaths.<sup>25</sup> Similar results were found in a study in **Russian** cities.<sup>26</sup>

#### **5. Drug consumption rooms provide a high return on investment**

Drug consumption rooms vary in size, setting and approach, and therefore cost. Although they can be costly to establish, drug consumption rooms provide a high return on investment.<sup>27</sup>

In 2009, **Canadian** researchers concluded that Insite, Vancouver's supervised injection facility, provided a societal benefit of US\$6 million per year after implementation costs were accounted for.

Researchers in the **United States** examined the cost of introducing a supervised injecting facility in Baltimore, a city heavily affected by opioid overdoses. They found that an annual investment of US\$1.8 million for one supervised injection room would result in US\$7.8 million in savings.

#### **6. Inaction, reducing funds or closing services have negative economic consequences**

There is evidence that a decrease in, or total cessation of, harm reduction services can lead to a spike in HIV and/or HCV infections.

If **Switzerland** had discontinued harm reduction services in 2005, modelling suggests that 1,350 more people would have acquired HIV and needed costly treatment.<sup>28</sup>

A study in **Mexico** found that the Global Fund for AIDS, Tuberculosis and Malaria's withdrawal in 2013 dramatically reduced access to harm reduction, fewer outreach workers, and lower-quality harm reduction packs. This highlights the importance of responsible, paced transitions from donor funding to domestic support.<sup>29</sup>

In **Belarus**, an eight-month funding gap reduced syringe distribution by 75%, which in turn reduced this intervention's impact and cost-effectiveness. Without this gap, modelling suggests the programme would have averted 53% more HIV infections over eight months and 26% more over 22 months, and it would have cost 11% less to avert each infection.<sup>30</sup>

## 7. The economic cost of punitive drug policies

Many governments spend huge amounts on punitive drug policies. As well as violating human rights, this approach places a substantial economic burden on public health, society and the individual. Many countries imprison people for drug use and possession. This incarceration is expensive to fund and also incurs a huge public-health cost. HIV prevalence, for example, is up to 50 times higher among prisoners than among the general public.<sup>31</sup>

In several Asian countries, people who use drugs are sent to compulsory drug detention and rehabilitation centres, which UN agencies have condemned as ineffective and a violation of human rights. A study in **Vietnam** found detaining a person who injects drugs in a rehabilitation facility costs the local government 2.5 times more than providing them with OAT in the community for a year.<sup>32</sup>

Decriminalising personal drug use would save governments huge sums on law enforcement and incarceration, as exemplified by the **Portuguese** experience.<sup>33</sup> Reallocating just 7.5% of 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.<sup>34,35</sup> This would effectively end HIV among people who inject drugs – something countries have committed to doing but are far from achieving.



# REFERENCES

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