

HIV IN THE TIME OF COVID-19:  
**The Case for Investment**



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# 1 Introduction

The COVID-19 pandemic has highlighted the critical importance of investing in public health and ongoing innovation to protect communities against infectious diseases. Faced with competing demands and economic strain caused by the COVID-19 pandemic, estimated to be up to \$28 trillion globally, it is critical that governments maintain vital funding and resources needed to tackle the HIV epidemic.<sup>1</sup>

At a time when health workers are on the frontline of the fight against COVID-19, the reprioritization of resources away from HIV to this pandemic and other public health demands is potentially catastrophic.<sup>2</sup> Without action, reduced funding for HIV threatens to undermine global targets set by UNAIDS (including 95-95-95) and the World Health Organization (WHO), alongside national commitments to end the HIV epidemic by 2030, and risks reversing decades of progress made to date.<sup>3</sup>

The history of the HIV epidemic has shown how the reduction of critical public health resources during an acute crisis can lead to greater societal and economic harm. Progress against HIV has been hard won over decades, with scientific advancements drastically improving the lives of people living with HIV (PLWH) and people at risk of HIV infection, but there is more that needs to be done to help end the epidemic. The key components of this response – testing, prevention, antiretroviral treatment, biomedical innovation, and community-based organizations – must continue to receive the investment they require to ensure progress towards ending HIV.

In 2021, the UK government's funding for UNAIDS is 83 percent lower than in 2020 (from £15 million to £2.5 million annually) due to the "seismic impact of the pandemic."<sup>4</sup> UNAIDS responded to note that these cuts affect the provision of life-saving HIV prevention and treatment services globally and impact the support to upholding the human rights of some of the most marginalized people.<sup>5</sup>

This paper presents the case for investment in HIV and illustrates the long-term health and socio-economic impact of funding cuts in HIV prevention, testing, treatment and care. Urgent action is required by governments to protect HIV funding and to continue in our collective efforts to eliminate HIV as a significant health and socio-economic burden.

# 2 Harmful Impacts of Funding Cuts in HIV

Decades of investment and research in virology – including HIV – have enabled the scientific and healthcare community to rapidly and effectively mobilize against COVID-19. Lessons learned from fighting the HIV epidemic, including surveillance, prevention and public awareness strategies, have catalysed the public health response. HIV health workers have played a considerable role in combatting the COVID-19 pandemic, lending their resources and services to address this public health threat. Despite these efforts, some governments are now reducing public health budgets, refocusing available funding to COVID-19 and signalling the prospect of future austerity measures.<sup>6,7,8</sup> Further restrictions to already stretched resources will inhibit progress towards ending HIV, a goal that was already off track before the COVID-19 outbreak.<sup>9</sup> There is an urgent need for governments around the world to maintain or increase funding for HIV if we are to end the epidemic by 2030 globally.

## Spending Cuts Can Lead to New HIV Infections and Greater Healthcare Costs

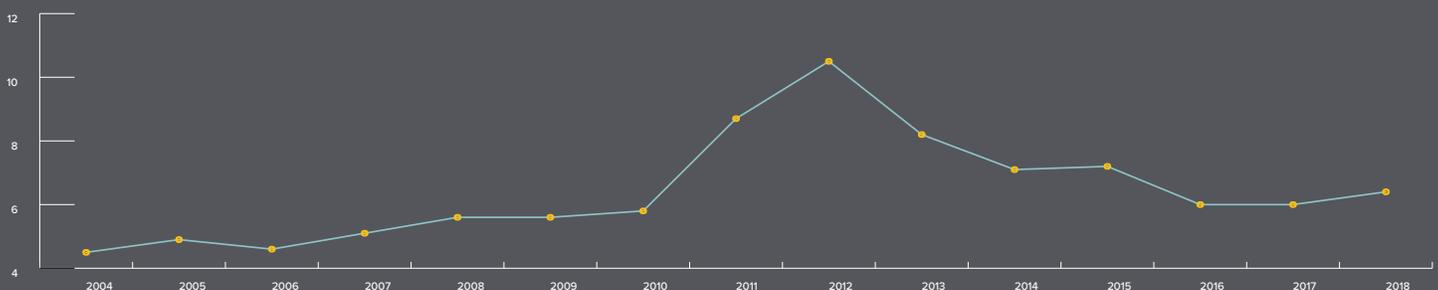
Global economies have already started to slip into recession as a consequence of the ongoing pandemic.<sup>10</sup> Financial support for HIV has been on a downward trajectory over the past decade indicating that a growing number of countries may not consider HIV a public health priority.<sup>11</sup> Studies suggest a direct link between economic downturns and the long-term impact on public

health across generations, regions and socio-economic groups.<sup>12</sup> Public health spending cuts taken during periods of economic contraction have also been shown to worsen HIV outcomes. For example, budget cuts in Greece during an economic recession (2009-10) resulted in the de-funding of harm reduction interventions such as needle exchanges and opiate substitution services that are key HIV prevention programs. This, coupled with the general economic instability, contributed to the rise in HIV infections in vulnerable parts of Greece, like Athens. The study concludes that “Big Events”, such as the economic recession, can lead to increased HIV infections, especially if they lead to social, economic, and cultural change.<sup>13</sup> Greece ultimately saw a 200 percent increase in HIV cases from 2011-2013<sup>14</sup> while neighboring countries that did not make budget cuts to their HIV programs saw no spikes in new HIV cases during that timeframe.

There is no guarantee that budget cuts made due to COVID-19 will be temporary, which could lead to the long-term reduction of essential HIV programs, treatment and care services and broader education efforts. This could also exacerbate existing HIV-related inequities, resulting in a greater burden of HIV risk and infection within vulnerable communities that are in need of the most support.<sup>16,17</sup> Ultimately, reducing financial support for HIV could directly lead to new HIV infections and would result in an even greater need for investment in healthcare services in the future.

HIV/AIDS Surveillance in Greece (December 2018)<sup>15</sup>

HIV DIAGNOSES PER 100,000 POPULATION IN GREECE



# 3 Protecting Funding for HIV Prevention, Testing and Treatment is Critical for Ending the HIV Epidemic

Every new HIV infection represents a significant and ongoing cost to the healthcare system. While scientific advances in antiretroviral therapy have enabled people with HIV to live a near-normal lifespan, their healthcare needs are generally higher compared to those not living with HIV. A U.S. focused study found that lifetime healthcare costs were up to seven times higher for people living with HIV than individuals without HIV.<sup>18</sup> The causes of these additional costs are varied, but include specialized HIV care, antiretroviral treatment and the management of comorbidities. While comparisons across healthcare systems are challenging due to different structure and organization, studies within the UK, Germany and Canada all demonstrate that yearly and lifetime healthcare costs of people with HIV are significant.<sup>19,20,21,22</sup>

Given the higher healthcare system costs associated with HIV, clear policies are required to protect funding in HIV prevention and testing programs to minimize new HIV infection rates. It is also important that funding used to support HIV services and care, including programs that optimize access to the best-in-class antiretroviral therapy (ART), are protected, so people living with HIV can live long, healthy lives and not pass the virus on to others.

# 4 Funding is Critical for HIV Prevention Efforts

Maintaining funding for HIV prevention efforts can help reduce the spread of the virus by increasing awareness among groups most at risk for HIV. Public efforts requiring investment include campaigns that educate, raise awareness and normalize HIV prevention efforts (including but not limited to publicly available condoms, free testing services and pre-exposure prophylaxis, also known as PrEP) within at-risk communities.<sup>23</sup>

Community-based HIV testing and counselling (HTC) with linkage to prevention, care and treatment services is the primary choice to stop HIV transmission at individual and community levels.<sup>24</sup> This, combined with behavioural interventions have been found to be more effective in increasing the uptake of HIV testing as well as other outcomes. Syringe Services Programs (SSPs), community-based services for persons who inject drugs, are associated with an estimated 50 percent reduction in HIV incidence.<sup>25</sup> Incorporating more efficient testing in these community-based settings will allow for additional testing for individuals who may not engage in traditional testing settings.

Prevention methods, including PrEP and safer sex practices, are essential tools in the effort to end the HIV epidemic; PrEP is a highly effective way for people at risk for HIV to prevent getting HIV by taking a daily antiretroviral medicine. When used as prescribed, PrEP has been shown as an effective strategy in preventing the spread of HIV across countries and community settings.<sup>26,27</sup>

In the U.S., a modeling study found that states with the highest levels of PrEP uptake had the greatest reductions in new HIV infections, independent of viral suppression rates. The reduction in new HIV infections translates to a significant reduction in healthcare utilization, making PrEP a cost-effective public health strategy. For example, in Germany, the use of PrEP is estimated to provide over €5.1 billion in economic savings over 40 years.<sup>29</sup>

However, even in areas where PrEP is established, utilization is low when compared to the number of men and women at-risk for HIV who could benefit from PrEP. This is particularly true among populations most at risk such as men who have sex with men, immigrants, indigenous people and communities of color.

In Germany, the use of PrEP is estimated to provide over €5.1 billion in economic savings over 40 years.<sup>29</sup>

# 5 Investing in HIV Testing can Contribute to Public Health Benefits and Promote Early Diagnosis of HIV

Knowing one's HIV status is a key entry point for life-saving care and services regardless of a positive or negative test result – this is referred to as a status neutral approach to HIV. Those who are diagnosed with HIV can be linked to care and treatment services as quickly as possible to achieve and maintain viral suppression, protecting their own health and preventing HIV transmission. HIV testing also enables people who are HIV-negative but at-risk for HIV to engage in a discussion about their HIV risk and options for prevention. By continuing to fund the integration of HIV testing in clinical or community settings, healthcare systems can reduce the undiagnosed rate of HIV within the community and minimize the potential for additional healthcare costs associated with late diagnosis and onward transmission.

The expansion of both routine and targeted HIV testing is needed to increase early HIV diagnosis and connect them to life-saving treatment and care, to enable them to live healthier and longer lives and preventing the onward spread of HIV. Despite progress in recent years, the total percentage of people living with HIV globally who know their status remains lower than the new 95-95-95 targets set by UNAIDS.<sup>30</sup> COVID-19 has exacerbated this, causing disruption to HIV testing services and significant decline in volumes of testing throughout 2020. The financial impact of COVID-19 and decreasing funding allocation for HIV risks these 95-95-95 targets not being met – countries must remain vigilant in adequately funding these testing measures in order to meet the UNAIDS targets.<sup>31,32</sup>

## HIV Prevention England Awareness Campaign

### Action

- National HIV Testing Week promotes the benefits of regular testing and treatment for both the individual and the community in the UK. In 2021, it was rolled out virtually and without physical testing due to COVID-19 through online awareness activities and the distribution of at-home testing kits.

### Outcome

- 8,200 HIV test kits requested and a 92% increased awareness of HIV testing amongst target audiences and local community
- 97% of surveyed stakeholders felt the effort was a valuable addition to their HIV prevention efforts.
- HIV Prevention England concluded the campaign maintained its effectiveness despite COVID-19 restrictions.

Source: HIV Prevention England. 2021. National HIV Testing Week 2021 recap. Available at: <https://www.hivpreventionengland.org.uk/2021/03/25/national-hiv-testing-week-2021-recap/>. Last accessed September 2021.

## Failure To Diagnose HIV Creates Significant Health and Financial Burden

Underdiagnosis and late diagnosis of HIV can have a significant negative health impact and financial burden for people living with HIV. Late diagnosis of HIV leads to worse prognosis, reduced quality of life, higher morbidity and, if left untreated, can progress to AIDS, which can result in higher financial burden. In contrast, early diagnosis supported by access to regular HIV testing can improve health outcomes and reduce mortality rates associated with HIV through earlier initiation of antiretroviral therapy. Once HIV is controlled through antiretroviral treatment, people living with HIV can expect to live nearly as long as those without HIV.<sup>34</sup>

Undiagnosed HIV can also drastically increase the spread of new HIV infections through onward transmission. In 2016, an estimated 38 percent of new HIV infections in the U.S. originated from just 15 percent of people living with HIV who did not know their status.<sup>35</sup> Stopping the spread of new infections is critical to reducing additional economic burden on healthcare systems.

## Late Diagnosis Increases the Costs of HIV

Scientific advancements in HIV testing and the availability of routine HIV testing, rapid HIV testing and at-home testing kits have contributed to more people being tested for HIV. However, barriers to timely HIV testing remain, resulting in late diagnoses. Nearly half (48 percent) of people living with HIV in Europe during 2010-2016 were diagnosed late.<sup>36</sup> People with a late HIV diagnosis have a 10 times higher risk of dying within the first year after diagnosis than those diagnosed early.<sup>27</sup> Late diagnosis has also been consistently shown to increase the costs of HIV through higher healthcare utilization and higher mortality, particularly when HIV has developed into AIDS.<sup>27</sup>

These trends are irrespective of variation between healthcare systems. In Japan, as many as 30 percent of the HIV/AIDS cases in 2017 were detected after the development of AIDS. Late presentation of HIV in Italy has been shown to increase total costs for people living with HIV across all ages, particularly in those aged above 50 years old. In the UK, estimates suggest that the annual direct costs of a late HIV diagnosis can be twice as high (£14,000 per case compared to £28,000).<sup>17</sup>

Percentage of individuals with a late presentation of HIV infection (defined as a CD4 count of <350/mm <sup>3</sup> and/or an AIDS-event at HIV-diagnosis) <sup>30</sup>	
France	48.6 (47.1-50.0)
Germany	56.8 (55.2-58.4)
Italy	52.0 (50.8-53.3)
Spain	44.3 (43.2-45.5)
United Kingdom	43.5 (42.1-44.8)

## Routine HIV Testing is a Cost-Effective Strategy

Providing HIV testing at no cost has proven to be an effective and cost-efficient way to increase the testing rate, preventing onwards transmission. The integration of HIV testing into the routine provision of clinical care in a broad range of healthcare settings can also expand the reach of HIV testing – for example, adding HIV to routine testing in hospitals in an ‘opt-out’ approach

can potentially reduce stigma and fear. Furthermore, funding the rollout of self-testing kits is increasing the accessibility, convenience and reach of HIV testing and driving wider uptake. The cost-effectiveness of scaling HIV testing is clear, even in low prevalence, high income countries.<sup>40</sup>

## Integrated Testing for the Future

The decision between targeted and routine screening should be considered by governments as outlined in the Washington D.C., DoH case study below. However, it is important to highlight that the expansion of testing has been a critical component to identifying, isolating and tracing cases of COVID-19 and there has been a heavy reliance on pre-existing laboratory systems built by HIV and tuberculosis (TB) programs. Laboratory technologies today allow for a single device to diagnose and measure multiple diseases,<sup>41</sup> increasing capacity and cost-efficiency, such as the infectious disease surveillance system South Korea has in place.<sup>42</sup>

Continued investment of scaling up infrastructure to support integrated testing efforts can help provide significant health system efficiencies and cost savings and expand access for patients in need.<sup>35</sup>

### Washington DC, Department of Health DoH

#### Action

- Washington D.C., Department of Health (D.C., DoH) made routine, ‘opt-out’ screening an integral part of its HIV prevention initiatives. A cost-effectiveness study assessed the relative benefit of funding targeted and routine testing as part of a combined approach.

#### Outcome

- The combined strategies of targeted and routine testing have been successful in reducing new infections and transmission in D.C., decreasing new diagnoses by 42% and incident infections by 29%.
- Routine testing averted 34.30 transmissions per year. Targeted testing resulted in higher positivity rates (1.33% vs. 0.44%).
- Targeted testing was found to be narrowly more cost-effective per diagnosis and per transmission averted, both approaches were deemed cost-effective due to high lifetime costs associated with HIV infection.

Source: Castel AD, Choi S, Skillicorn J, et al. Comparing cost-effectiveness of HIV testing strategies: targeted and routine testing in Washington, DC. PLOS One. 2015;10:e0139605.

# 6 Improving Health Outcomes through Expanding Access to HIV Treatment

Over the last thirty years, advances in treatment have helped people living with HIV live longer and have transformed HIV from a fatal disease to a manageable chronic condition. Many people living with HIV have benefited from having access to a broad range of therapies, including newer, innovative medicines that are highly effective, have an improved safety profile, and can lead to better long-term health outcomes. Furthermore, when a person living with HIV is taking ART as prescribed, their viral load will usually become undetectable. Achieving and maintaining an undetectable viral load in the long term not only preserves the health of people living with HIV and reduces the risk of comorbidities, but also has the added public health benefit of preventing transmission of the virus to others.<sup>7</sup>

As progress in scientific innovation looks towards long-acting prevention and treatment regimens, and ultimately, a functional cure, healthcare systems have the potential to improve the health outcomes of people living with HIV and reduce the risk of HIV transmission by ensuring access to innovative HIV medicines.

## Equitable Access to Innovative HIV Treatment Regimens Must Be Protected

Antiretroviral therapies (ART) have contributed to an estimated global economic benefit of \$1.05 trillion between the years of 1995-2015. The benefit to societies and economies can be measured in lower death rates, longer lives and lower healthcare utilization, all of which contribute to the growth of economies through continued employment and productivity. Therefore, further expansion of treatment to reach all people living with HIV represents a cost-effective investment.<sup>43</sup>

The medical management of HIV is complex; healthcare providers must consider a broad range of factors making a prescribing decision for each patient, including a patient's specific drug resistance profile, other illnesses or comorbid conditions, potential side effects and interactions with other medications a patient is taking, pill burden and timing of treatment initiation. Certain HIV treatment regimens can be initiated on the same day as diagnosis and before results of baseline testing are available (a treatment approach known as "Rapid Start" or "Rapid Initiation of ART"), which can result in better engagement and retention in care, shorter time to viral suppression, increased rates of viral suppression, and decreased mortality.<sup>44</sup>

Healthcare providers, in consultation with their patients, are best equipped to select the most appropriate HIV regimen for an individual patient. Faced with increasing costs associated with COVID-19 and under pressure to reduce the costs of treating HIV, private and public payors may face pressure to increase barriers to newer, innovative HIV treatments by restricting access, introducing tenders or shifting costs to patients.

However, open and affordable access to innovative HIV medicines is necessary to ensure healthcare provider and patient choice. Coverage and reimbursement of HIV treatments should be underpinned by strong policies that prioritize equitable access and affordability to reduce variability between different patient populations and promote broad access to effective and innovative treatment.<sup>45</sup>

<sup>7</sup>While effective viral suppression with antiretroviral therapy has been proven to substantially reduce the risk of sexual transmission, a residual risk cannot be excluded. Centers for Disease Control and Prevention (CDC) states that there is effectively no risk of sexual transmission of HIV in individuals with an undetectable viral load

# 7 Investing in Community-Led Interventions Can Expand Access to HIV Care

Community-based organizations (CBOs) play a critical role in connecting at-risk and underserved communities (e.g. those who live in remote locations far from healthcare facilities, those without secure housing status, etc.), who may typically not be able to access the healthcare system, with HIV testing, prevention, care and treatment services.<sup>46</sup> These organizations contribute to the provision of outreach, service and education to communities that may otherwise be removed from traditional healthcare settings helping to address the systemic inequities and barriers to accessing care. The COVID-19 pandemic is placing increasing demand on services based within these communities, while simultaneously reducing their already limited financial capabilities and staffing.

The COVID-19 pandemic has also hindered fundraising activities across the HIV community.<sup>47</sup> Organizations are concerned that previously committed funds will be diverted to fight COVID-19 instead of reserved for its intended purpose in tackling HIV.

While qualifying the economic benefit of CBOs is challenging as organizations may not dedicate resources to evaluating effectiveness,<sup>48</sup> the evidence available suggests that many are in fact highly effective. In Canada, it was estimated that community-based HIV prevention programs had saved the healthcare system \$6.5 billion CAD since the 1980s. For every \$1 invested, the prevention program was estimated to save around \$5 in treatment costs.<sup>20</sup> Although more research could be done on the economic value provided by CBOs, it is thought that CBOs possess untapped potential for addressing health-related needs and are ideally suited to address other issues as they emerge.<sup>49</sup>

## BCN Checkpoint

### Action

Projecte dels NOMS-Hispanosida created BCN Checkpoint in 2006, a CBO for MSM's in Barcelona. BCN Checkpoint offers HIV testing, peer counselling and linkage to medical care free of discrimination as well as services for other STI's and vaccination against hepatitis A and B.

### Outcome

- National HIV Surveillance data between 2007-2011 suggest that BCN Checkpoint was responsible for detecting over a third of HIV diagnosis in the region (36.3%).
- The number of people returning to the center for a test increased 23-fold, suggesting that it was very well received by the MSM community and successfully linked 90% of diagnosed PLWH to care.
- The authors concluded interventions such as BCN checkpoint that focus on key populations at risk, reduces the time and resources more than other approaches.

Source: Meulbroek M, Ditzel E, Saz J, et al. BCN Checkpoint, a community-based centre for men who have sex with men in Barcelona, Catalonia, Spain, shows high efficiency in HIV detection and linkage to care. HIV Med. 2013;14(Suppl.3):25-28.

## Government Support Could Be Critical to Continued Services

Philanthropic giving tends to drop during economic recessions, creating a shortfall that may trigger the closure of community organizations over the long-term. Governments should follow the example of the U.S., which awarded \$216 million over five years to 90 CBOs nationwide to deliver HIV services<sup>50</sup> and expand the availability of best practices and education to groups that may otherwise be missed.

Governments must also consider the disproportionate impact of funding decisions on underserved communities through regular audits, reports and benchmarking that measures equity of access to HIV technology and services. Collating this information is critical to identifying gaps and directing resources to where they are needed. Strategic investment, in partnership with local community leaders, is integral to ensure no one is left behind when it comes to advances made in HIV. It is essential for governments to step in and provide the backstop to CBOs. Providing a framework for guaranteed resources to these critical community partners must be established before this invaluable part of the HIV health infrastructure is lost.



# Policy Recommendations

To protect the ability of healthcare systems to maintain and continue progress made towards ending the HIV epidemic to date, domestic public funding of HIV prevention, testing, diagnosis, treatment and care services should be increased or maintained – at least mirroring inflation targets. Cuts in HIV funding are false economies that would lead to longer-term negative social and economic consequences. In these recommendations for government, at national and sub-national levels, we make a positive case for investment in HIV.

## Overall Approach:

Invest in a virtuous circle of actions that support and sustain each other, including:

- » Increased funding that supports broad and equitable access to HIV testing, prevention, treatment and care services
- » Sustainable financing that supports access to innovative HIV treatment and prevention medicines and takes a long-term view of the value of investment in HIV
- » Rigorous measurement of outcomes associated with government investment in HIV to inform future funding decisions

## Recommendations:

- » Increase dedicated funding for HIV and build strong political commitment for investing in efforts to end the HIV epidemic.
- » Ensure adequate funding to support equitable HIV prevention, testing and treatment access and optimal health outcomes, particularly for those most impacted by and vulnerable to HIV.
- » Introduce financing and legislation to ensure routine and targeted HIV testing, including self-testing, is available to all, either at a low cost or no cost at all.
- » Adopt and pay for the most effective HIV prevention programs and innovative treatments and preventative therapies.
- » Provide sustainable financing to support adoption of and access to innovative HIV treatment options and reimbursement decisions that incorporate long-term health benefits and cost efficiencies of HIV medicines
- » Scale up investments for health organizations and CBOs that provide HIV education, testing, prevention, treatment and care services to communities that are disproportionately impacted by HIV.

# 9 Conclusion

As the world faces a new global health crisis, it cannot lose sight of another: the ongoing HIV epidemic. The intense focus on the current acute threat of COVID-19 risks drawing resources and attention away from the attainable goal of ending the HIV epidemic by 2030.

It may be tempting to think that progress that has been made over decades in HIV means that HIV requires less attention than in previous years. However, the reality is that underinvestment in HIV risks weakening the very healthcare systems that are preventing the virus from surging. The opportunity cost for reducing funding for HIV prevention, testing and treatment is too high. Failing to take action at a political level not only threatens the opportunity to end the HIV epidemic by 2030, but also undermines the investments made in the last few decades. Governments must take action to protect funding for HIV, or risk facing a reemerging threat to public health.

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