

COVID-19 AND HIV:

1 MOMENT

2 EPIDEMICS

3 OPPORTUNITIES

How to seize the moment to learn, leverage and build a new way forward for everyone's health and rights



Contents

- 2** Foreword
- 3** Key messages
- 4** Introduction
- 6** Learning from the HIV response to effectively address COVID-19
- 14** Leveraging the HIV infrastructure to strengthen, accelerate and sustain responses to COVID-19
- 19** Reimagining systems for health
- 25** Key recommendations for the COVID-19 response
- 27** References

Foreword

The COVID-19 pandemic has exposed the inadequacy of investments in public health, the persistence of profound economic and social inequalities and the fragility of many key global systems and approaches.

Given the epic dimensions of the emergency, the world needs unity and solidarity—led by a large-scale, coordinated and comprehensive health response, and a focus on the needs of developing countries.

Our decades-long fight against HIV offers essential lessons.

This new report by UNAIDS examines how the experience of tackling HIV can help inform and guide effective, efficient, people-centred and sustainable COVID-19 responses.

In fighting HIV, the world was confronted with a new, serious and multifaceted health crisis. Successful international efforts were rooted in a focus on innovation, respect for human rights and gender equality, community-based solutions and a commitment to leave no one behind.

Decades of investment in the HIV response have created platforms that are proving useful in battling COVID-19—just as they were in responding to the 2014–2015 Ebola outbreak in western and central Africa.

By being smart and strategic, we can leverage the HIV infrastructure to accelerate COVID-19 responses.

Just as we must use the COVID-19 response to reimagine economies and institutions to be more fair and inclusive, we must also reimagine health systems to meet the challenges of the twenty-first century.

By heeding the lessons of the HIV response, COVID-19 action can be people-centred, flexible, innovative, equitable and outcome-driven.

By working together, we can ensure that national health responses deliver on the promise of the 2030 Agenda for Sustainable Development and the health and well-being of all.

ANTÓNIO GUTERRES
United Nations Secretary-General

Key messages

This report is on three key issues:

- ▶ How key lessons learned from the HIV response should inform COVID-19 responses.
- ▶ How the HIV infrastructure is already driving COVID-19 responses and has the potential to catalyse accelerated progress through shared services and expansion.
- ▶ How the COVID-19 response, informed by the history of responding to HIV, offers a historic opportunity to build a bridge to adaptable results-driven systems for health that work for people.

Learning from the HIV response

- ▶ COVID-19 responses should place affected communities at the centre of the response: in governance and planning, direct service delivery and community monitoring and accountability.
- ▶ COVID-19 responses should be grounded in human rights and equality, with particular attention being paid to creating an enabling environment and removing punitive, arbitrary and discriminatory legal and policy measures that increase marginalization and undermine access to essential prevention and treatment services.
- ▶ To be effective, COVID-19 responses must be multisectoral and address social and structural inequalities that increase vulnerability and slow service uptake.

Leveraging HIV investments and infrastructure

- ▶ COVID-19 responses have the potential to build on the substantial infrastructure, research and policies that HIV investments have created, something that is already occurring in many settings but could be maximized through comprehensive, strategic action.
- ▶ COVID-19 responses must leverage the know-how, analytical capacity and strategic information systems developed through HIV investments to fully optimize the agility of COVID-19 services to adapt to an evolving evidence base, improve performance over time and effectively identify and reach communities at risk of being left behind.
- ▶ Political leadership for HIV has been strong, consistent, courageous, ambitious, inclusive and driven by scientific evidence—signposts for effective leadership in the COVID-19 response. Leaders of the HIV response are being tapped at the global, national and front-line clinical levels to respond to COVID-19.

Reimagining systems for health: new and improved systems for health

- ▶ Lessons learned from the HIV response provide critical insights for countries to reimagine systems for health that are optimally effective, accountable, inclusive, equitable, rights-based and sufficiently resourced and COVID-19-relevant services should be accessible, integrated, tailored and people-centred.

Introduction

Although no health challenge over the past century has equalled COVID-19 in the speed of its spread, this is not the first pandemic that the modern global community has faced. As countries grapple with the steadily worsening COVID-19 pandemic, they are already tapping into the experience from, and investments in, the HIV response: applying lessons learned, leveraging systems and identifying the dynamic changes needed to build a new way forward towards systems for health that are optimally effective, accountable, inclusive, equitable and sufficiently resourced, with services that are accessible, integrated, tailored and people-centred.

There are, of course, important differences between HIV and COVID-19, including modes of transmission, incubation and infectiousness period and health effects, and any response to COVID-19 must be strategically tailored to the pandemic's unique attributes. However, lessons learned from the HIV response offer sound guidance for fighting COVID-19—on building political commitment, engaging communities, prioritizing research and accountability, galvanizing innovation in service delivery, mobilizing sectors beyond health and grounding responses in the principles of human rights and equality. Strategic, planned efforts to leverage HIV infrastructure can optimize the health impact and sustainability of COVID-19 responses.

This latest global health emergency also offers historic opportunities. We must address these dual epidemics—not by taking away from the HIV response for the COVID-19 response, but rather by being agile and innovative to support the continuation of HIV services while also appropriately leveraging and expanding on key elements from HIV. By taking on board lessons learned through HIV, fighting COVID-19 can aid in reimagining systems of health to accelerate the health-related commitments of the 2030 Agenda for Sustainable Development. At the same time that the HIV experience helps to inform COVID-19 responses, the unfolding response to the COVID-19 pandemic will undoubtedly yield lessons that can benefit both the HIV response as well as broader efforts to strengthen health systems.

This report focuses on three key issues: (1) how key lessons learned from the HIV response should inform COVID-19 responses; (2) how the HIV infrastructure is already driving COVID-19 responses and has the potential to catalyse accelerated progress through strategic action; and (3) how the COVID-19 response, informed by the history of responding to HIV, offers a historic opportunity to build a bridge to adaptable results-driven systems for health that work for people.



The impact of COVID-19 on access to HIV services

COVID-19 is not only directly causing high morbidity and mortality, it is also disrupting essential systems for health and undermining programmes to address HIV and other global health priorities. The global HIV response is heavily dependent on generic medicine manufacturers in India, a country that began to emerge from a national lockdown to slow the spread of COVID-19 in May 2020. As the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) reported, COVID-19 control measures at the point of origin and destination for essential health commodities are already resulting in considerable delays in the delivery of medicines and other health commodities. Repurposing HIV clinic and health-care workers, travel restrictions, messaging that keeps people away from services, emerging human rights abuses and worsening social and economic contexts are also disrupting continuity of services.

Service disruptions associated with COVID-19 are impacting global efforts to end the epidemics of HIV, tuberculosis and malaria (1). According to modelling exercises from the HIV Modelling Consortium in collaboration with the World Health Organization (WHO) and UNAIDS, a six-month 50% disruption in HIV treatment could lead to 300 000 extra AIDS-related deaths in sub-Saharan Africa over a one-year period, a region where 440 000 people died of AIDS-related illnesses in 2019—bringing us back to 2011 AIDS-related mortality levels (1). Likewise, a six-month service disruption in programmes to prevent mother-to-child transmission of HIV could cause new HIV infections among children to increase by 40–80% in high-burden countries (2).

This report highlights how the HIV response can help to jump-start an accelerated, effective response to COVID-19 in ways that can help to ensure that such efforts do not come at the expense of other essential health priorities. At the same time that the world undertakes focused efforts to slow the spread of COVID-19, it must also redouble efforts to ensure an uninterrupted supply of essential commodities and services to respond to HIV and other global health priorities. Agility and commitment will be required to prevent disruptions in HIV services associated with the COVID-19 crisis. In working to sustain HIV responses in the midst of a continuously unfolding complex global health emergency, partners with an HIV focus have an opportunity to learn important new lessons. With current HIV spending substantially off the pace needed to reach the Fast-Track Targets to end the AIDS epidemic (3), the world urgently needs to substantially increase investments in the responses to both HIV and COVID-19.

Learning from the HIV response to effectively address COVID-19

HIV and COVID-19 differ in many respects, but they also share important characteristics, each emerging as a poorly understood disease with limited treatment and prevention options, a rapid spread throughout the world, a disproportionate impact on the most vulnerable and the cause of profound stresses on health and social support systems and economies. By incorporating key lessons from HIV, the global response to COVID-19 can adopt a rapid and continuous learning curve, avoid early errors and reduce the negative impact on public health.

Communities must be leaders and central actors in effective responses to COVID-19

Community engagement, buy-in and leadership are essential when addressing health and development crises. This is especially true for COVID-19, as the necessary mitigation interventions depend on appropriateness to the local context and strong social trust and must be done in a way to avoid profound social and economic harms. During Ebola outbreaks in Africa in recent years, early community resistance, mistrust of government and health systems, fear, stigma and misinformation hindered efforts to bring outbreaks under control (4).

The leadership and engagement of communities remain central features of the HIV response. In fact, the roles of community-led organizations in governance and planning, direct service delivery and community monitoring and accountability are key infrastructure elements of resilient HIV response systems. Communities are actively involved in HIV governance at the global and national levels. Courageous community activism led to some of the most important breakthroughs in the HIV response, speeding the development of life-saving medicines, pioneering innovations to ensure affordable pricing for essential commodities and pressuring governments to move from denial to commitment in confronting HIV. Civil society groups are leading efforts to strike down punitive laws that drive heavily affected populations away from services, such as longstanding laws criminalizing same-sex sexual conduct that were invalidated in recent years in Botswana and India. Communities also serve as irreplaceable accountability watchdogs for the HIV response, such as in western and central Africa, where community monitoring is alerting officials to dangerous medicine stock-outs and generating data that is informing national HIV responses. In addition, communities deliver essential HIV prevention, treatment and harm reduction services and provide critical non-biomedical support that improves health outcomes, reaching underserved people who are not effectively engaged by health facilities.



Communities: innovative pioneers in the HIV response

Communities of affected people who serve affected people pioneered innovations that have moved HIV testing, treatment delivery and adherence support from facilities to communities, decongesting overburdened health clinics and generating outcomes that are as good as and often superior to those reported in health facilities (5). Implementing community-led service models required flexibility and far-reaching health policy change, such as encouragement of task-shifting for clinical service delivery, endorsement of service delivery by lay providers and approval of new, community-centred health tools, such as HIV self-testing kits. Community workers go door to door to deliver essential testing and treatment services, build demand for testing, prevention and treatment services and provide peer support that improves retention in care (6). Prevention programmes for sex workers have shown that community empowerment and the active involvement of sex workers increase consistent condom use with their clients. In 2017, the most recent year for which comprehensive data are available, 25% of bilateral HIV spending and 19% of multilateral assistance was channelled through nongovernmental and civil society partners.¹

¹ UNAIDS estimates, 2019.

Most people with COVID-19 will have mild cases that are managed in the community. In many low- and middle-income countries with fragile health systems, community-based management will be needed for more severely affected people owing to the scarcity of health resources. Robust community resilience will be required to address the extraordinary socioeconomic effects of the COVID-19 crisis (7).

Drawing lessons from the HIV response, COVID-19 responses should place COVID-19-affected communities at the centre of the response: fully and officially involved in planning, implementing and evaluating the response. COVID-19 responses must empower and capacitate communities to optimize their role in responding to the pandemic. Already in COVID-19 responses, communities are stepping forward to lead local COVID-19 responses, challenging misinformation and stigmatization, delivering essential supplies to the vulnerable and organizing local support systems (8). By empowering and partnering with communities, responses can achieve a reach, impact and equity that government facilities could never realize on their own. This will require political commitment to recognize community-led organizations as essential service providers and to allocate essential resources to affected communities and their civic organizations. According to a survey of 160 civil society organizations by the Civil Society Institute for HIV and Health in West and Central Africa conducted in May 2020, most (72%) HIV-focused organizations were already working to raise COVID-19 awareness among the general population, even though little or no funding had been made available for their efforts. An early assessment showed that formal participation of civil society in national COVID-19 response governance was largely absent.

COVID-19 responses must be grounded in the principles of human rights and equality

The emergence of COVID-19 has led to attacks on racial/ethnic minorities (9, 10), bans on immigration (11), increases in domestic violence among households in lockdown (12), increases in women's unpaid caregiving work (13, 14) and misuse of emergency powers to lessen human rights protections for the most vulnerable (15). Addressing the specific needs of individuals—based on their gender, ethnicity, age, disability status, immigration status, occupation, sexual orientation and gender identity, involvement in sex work, drug use, incarceration status, among others, and finding solutions in collaboration with vulnerable communities—is critical for a successful response that leaves no one behind. For both HIV and COVID-19, women play critical roles as front-line health workers and community leaders and caregivers, and measures are needed to enable support for women in those roles and to enable them to play active roles in key decision-making bodies. Adhering to international human rights and equality normative principles in efforts to address an emerging disease is not only a legal obligation but also a matter of fairness, effectiveness and practicality, as individuals whose rights are respected are more likely to contribute to disease control initiatives or seek services when they need them.



A key lesson of the HIV response: the negative effects of human rights violations

The history of the HIV response vividly demonstrates how public health responses are undermined by stigma, discrimination and human rights abuses, with studies consistently finding that people who have experienced stigma and discrimination are less likely to access health services and have worse health outcomes (16). Stigmatizing attitudes towards people living with HIV, while declining, remain far too common, and are especially directed towards key populations (3). Scientifically unsound prosecutions of people living with HIV have occurred in recent years in more than 70 countries (17), and national laws and policies often specifically target the populations at greatest risk of HIV, including in 66 United Nations Member States that criminalize consensual same-sex sexual acts (3) and the many countries that routinely criminalize one or more aspects of sex work as well as drug possession for personal use. The unfinished business in the HIV response of eliminating human rights violations provides a cautionary tale for other responses regarding the urgent importance of identifying and responding to violations early and often.

As the negative impacts of social exclusion, discrimination and human rights abuses on the HIV response became apparent, a concerted effort was made to firmly ground the HIV response in human rights principles and approaches. The 1996 International Guidelines on HIV and Human Rights paved the way for the 2001 Declaration of Commitment on HIV/AIDS, unanimously adopted by the United Nations General Assembly, which stressed that “realization of human rights and fundamental freedoms for all is essential to reduce vulnerability to HIV/AIDS” (18). HIV-related political

declarations of the United Nations have consistently recognized the fundamental rights of women to agency and health, including their right to decide freely on matters related to their sexuality and their sexual and reproductive health. Those declarations have also recognized that coercive and discriminatory law enforcement practices and the use of criminal law for public health ends actually undermine the very public health programmes they claim to support and drive marginalized people further underground.

As human rights have been centralized in the HIV response, important achievements have been made. Numerous countries have repealed or invalidated punitive laws that reinforce discrimination and drive vulnerable communities away from essential services. Accountability and oversight mechanisms have been created and made accessible to people living with HIV and their communities. And courts in all regions have enforced and operationalized the right to health by expanding access to treatment. These gains remain incomplete, however, as the persistence of HIV-related stigma and discrimination and the disturbing prevalence of punitive, coercive laws and policies continue to slow progress in the HIV response—an important cautionary sign that COVID-19 responses should heed.

The experience of the HIV response offers important guidance for COVID-19 responses regarding the critical importance of human rights to effective public health efforts. Many of the key human rights principles needed for responses to both HIV and COVID-19 have been captured in the UNAIDS publication *Rights in the time of COVID-19: lessons from HIV for an effective, community-led response*. One important lesson of the HIV response is that measures to reduce HIV-related stigma and discrimination have drawn important strength from the visibility and leadership of people living with HIV, suggesting that communities of COVID-19 patients have a meaningful role to play in reducing COVID-19-related stigma, myths and misconceptions. To address the effects of COVID-19 on women and girls, integrated services that adapt services for survivors of violence in the context of COVID-19 will be needed, especially given the increases in violence against women reported in many settings following public health orders or recommendations to shelter at home. COVID-19 responses must be sensitive to and informed by an understanding of gender norms and power dynamics and actively work to reduce the vulnerability of women and girls through efforts to ensure equal and robust access to secondary education and economic opportunities. At the same time that COVID-19 responses take on board the human rights and equality lessons of the HIV response, they should also take notice of the unfinished business of the HIV response, particularly the harmful consequences of punitive legal and policy frameworks on disease control efforts (19).

Granular, real-time data improve the efficiency and impact of health responses

COVID-19 responses will need robust strategic information systems capable of delivering timely, accurate data on the pandemic in order to identify new outbreaks, guide decision-making regarding COVID-19 control measures and determine whether responses are having their desired effects. Strategic data for COVID-19 will need to be disaggregated by sex, age, race/ethnicity and other demographic variables to enable more timely, focused responses.

In this regard, there is much to learn from the HIV response, which has created arguably the most accurate, timely and comprehensive health-related strategic information and data. Countries report annually on HIV epidemiological indicators (e.g. new HIV infections, AIDS-related deaths), service coverage for HIV diagnoses, treatment and prevention and national multisectoral policies on HIV, gender equality and human rights. With the support of international partners, countries now monitor

HIV investments, which in turn allows for more strategic decisions on allocating resources to where they will have the greatest impact, even when those decisions are not politically popular. Over time, HIV data systems have become increasingly granular, disaggregating by age and gender and generating subnational HIV estimates and outcomes. In many countries, size estimations for key populations and outcomes along service cascades are not only at the national but also at the subnational and service site levels. Civil society engagement in the national strategic information systems has been critical, and community monitoring continues to generate strategic data that are informing programmatic and strategic planning and accountability.



The role of strategic information in the HIV response

Data systems have markedly enhanced the adaptability and strategic focus of the HIV response. Subnational data on HIV burden and trends have enabled countries to allocate finite available resources towards the locations in the greatest need, maximizing the impact of national responses. Nigeria, for example, used strategic information to reorient its HIV strategy to focus on three clusters of states responsible for the large majority of new HIV infections, while geographic mapping of key populations enabled Kenya to better focus programmes for the groups at the highest risk of acquiring HIV. Granular data identifying key service gaps that are contributing to new HIV infections among children informed Zimbabwe's revision of its national prevention strategy to improve outcomes at key stages of the service cascade, increasing the number of new child infections averted. HIV investment analyses have aided countries such as Namibia, South Africa and the United Republic of Tanzania to identify efficiencies in the national response that improve returns on investments and buttress the long-term sustainability of HIV programmes through policy changes, programmatic innovations and more targeted and strategic resource allocations.

The expertise, analytical capacity and surveillance and monitoring systems developed through HIV funding have great potential to support COVID-19 responses. Indeed, this is already occurring in some countries, such as Argentina, where the national HIV programme's coordinator of monitoring and research has been assigned to the country's COVID-19 epidemiology committee. A 2019 study of Global Fund investments in Kenya, Uganda and Viet Nam found that more than one third of spending buttressed systems and activities identified by WHO as critical to a country's capacity to prevent, detect and rapidly respond to emerging public health threats (20).

Effective and sustained political will is vital to the success of epidemic responses

COVID-19 cannot be effectively addressed without committed leadership. To respond to the pandemic, countries must unite diverse stakeholders in a common undertaking, with agreed milestones for success, earn the trust of the public through consistent, accurate messaging, mobilize essential financing, rapidly adapt systems to respond

to new and evolving challenges and undertake strategic and results-driven planning for the use of finite resources. Leadership for COVID-19 must not only be strong but also wise, effectively and fairly balancing health promotion with measures to mitigate economic and social harms.

The HIV response is a global health pioneer in building and sustaining essential political leadership. The United Nations has played a critical role as the steward of a series of political declarations adopted by the General Assembly that have framed and guided the global HIV response and driven accountability for results. Senior political leaders, parliamentarians and regional bodies have championed the response to HIV, the Group of Seven (G7) and Group of Twenty have elevated HIV as a global priority, faith-based leaders emerged as pillars of national responses and recent years have seen greater engagement on HIV by the private sector, as reflected by the launch of the Business Alliance to End AIDS by 2030, the impact of which can be maximized through active inclusion and support from workers' organizations. The commitment of countries themselves is evident from steady increases in domestic HIV investments, which in 2019 accounted for 57% of all HIV-related expenditure worldwide (3).

Political commitment for HIV has not always arisen on its own, as community activism has played a central role in focusing decision-makers on the urgent need to address the HIV pandemic. People living with HIV, communities and civil society have contributed essential passion, intelligence and strategic insight, giving concrete meaning to the right to health.

HIV leadership has not only been consistent and vocal but also audacious and ambitious. Although the early target of 3 million people on HIV treatment by 2005 was regarded by many as unrealistic, as of December 2019, 25.4 million people (67%) were on antiretroviral therapy (3). Similar scepticism greeted the G7 pledge to provide at least US\$ 60 billion in HIV assistance to sub-Saharan Africa in 2007–2012, yet this commitment was kept, helping to spur extraordinary health gains across the region (21). In South Africa, home to one in five people living with HIV, early denial about the seriousness of the HIV epidemic has been supplanted by inspired political leadership, with the domestic public sector now covering more than 76% of all HIV-related spending in the country (22).

A multisectoral response is essential

Social, economic and structural factors, including poverty, hunger, joblessness, lack of education and income support, crowded housing conditions, literacy, social norms and customs and lack of clean running water, are affecting the ability of vulnerable households to adhere to physical distancing rules and the impact that COVID-19 is having.

Within households, COVID-19-related mobility restrictions are contributing to increases in violence against women and children in some contexts. School closures are posing an unprecedented challenge to young people's right to education, with more than 90% of the world's student population affected by closures. The propensity for COVID-19 to spread rapidly in overcrowded prisons, migrant camps, the poorest and most crowded neighbourhoods and tourist and travel centres (such as beach resorts, cruise ships and transport) necessitates the engagement of diverse departments and sectors. In short, COVID-19 responses will fail if they fail to catalyse robust responses from the sectors that address essential human needs, including social welfare, labour, housing, food and nutrition support, water and sanitation, and education.

Social and structural factors play a similarly central role with respect to HIV. Malnutrition and food insecurity reduce HIV treatment adherence (23) and increase HIV risk behaviours (24), and limited educational attainment and limited access to comprehensive sexuality education increase girls' vulnerability to HIV (25, 26). In contrast, education, including good quality comprehensive sexuality education, improves health outcomes and encourages positive health-seeking behaviours, such as HIV testing. Indeed, the linkage between education and health is increasingly clear. A recent study in Eswatini found that the provision of financial incentives to help girls stay in school reduced the odds of acquiring HIV among adolescent girls and young women by 37% (27).

Taking account of the pivotal role of social and structural factors in health outcomes, the HIV response has been conceptualized and carried forward as a multisectoral undertaking that synergizes the efforts of diverse sectors. Among 90 countries reporting pertinent data to UNAIDS in 2019, 78 reported having a national HIV strategy in place developed through a multisectoral process (28). A similarly expansive partnership is needed to guide COVID-19 responses, although early signs are concerning, as national COVID-19 task forces typically include few, if any, civil society representatives or experts in social and structural issues (29). The very formation 25 years ago of the UNAIDS Joint Programme—the only Joint Programme in the history of the United Nations—was driven by the recognition that it would take the expertise and influence of health and non-health agencies to drive meaningful impact, in partnership with both Member States and communities. Members of the Joint Programme exert global leadership to scale up HIV-sensitive social protection systems, ensure integration of food and nutrition support in HIV programmes, address the unique needs of people living in humanitarian settings and harness the multifaceted role of education to reduce HIV vulnerability and increase individual and community resilience.



The importance of global coordination

An effective response to COVID-19 demands strong global coordination. The urgency of a well-coordinated multilateral response is clear, as a COVID-19 outbreak that is left unattended anywhere represents a threat to the entire global community.

The HIV response illustrates how strong global coordination can benefit efforts to address a pandemic disease. UNAIDS is a unique entity within the United Nations and combines the efforts of 11 multisectoral Cosponsors² and a Secretariat responsible for coordinating and synergizing diverse sectors at the global, regional and country levels. The membership of UNAIDS helps to ensure that the global HIV response engages a broad range of key sectors, including health, education, development, labour and employment, finance and social protection. Through the multisectoral makeup of UNAIDS, the global HIV response also takes account of the needs of groups that are often left behind, including girls and women, children, adolescents and young people, people affected by humanitarian emergencies, people who use drugs, people in prisons or other closed settings and sexual and gender minorities. Through inclusive global leadership that synergizes both health and non-health actors and interventions, the UNAIDS Joint Programme offers a potentially useful example for a COVID-19 response that is people-centred, effective and sustainable.

² The Cosponsors of UNAIDS are the Office of the United Nations High Commissioner for Refugees (UNHCR), United Nations Children's Fund (UNICEF), World Food Programme (WFP), United Nations Development Programme (UNDP), United Nations Population Fund (UNFPA), United Nations Office on Drugs and Crime (UNODC), United Nations Entity for Gender Equality and the Empowerment of Women (UN Women), International Labour Organization (ILO), United Nations Educational, Scientific and Cultural Organization (UNESCO), World Health Organization (WHO) and World Bank.

Leveraging the HIV infrastructure to strengthen, accelerate and sustain responses to COVID-19

Over the past 20 years, the global community has made unprecedented investments in efforts to respond to HIV (30). Those HIV investments are generating historic results, sharply lowering the annual number of new HIV infections and AIDS-related deaths (22, 31) and driving a remarkable 10-year increase in life expectancy in sub-Saharan Africa (32).

The extensive, dynamic infrastructure created to respond to HIV has long been used to address multiple health issues and is now being leveraged to assist the response to COVID-19. This infrastructure extends beyond health facilities, encompassing community-led service delivery models as well as actors and interventions outside the health sector. This multifaceted infrastructure is already informing and accelerating COVID-19 responses, and further exploration is needed to identify strategic sharing of and rapid expansion of this infrastructure in order to address the rapidly expanding COVID-19 crisis while maintaining critical gains in the response to HIV.

Of particular relevance to COVID-19 responses are important insights that the HIV field has developed through navigating an evolving relationship between disease-specific programmes and more integrated systems and service platforms. Even as the UNAIDS Secretariat and Cosponsors have worked to strengthen HIV-specific approaches, they have also led efforts to bring the HIV response out of isolation through accelerated integration and contributions to broader health systems strengthening. As just one example, WHO and the World Bank, two UNAIDS Cosponsors, are helping to spearhead the UHC2030 initiative, which aims to create a movement for accelerating equitable and sustainable progress towards universal health coverage.

HIV leaders are already helping to drive and guide the response to COVID-19

Early responses to COVID-19 have looked for strategic and logistical guidance from the HIV response. Leaders of the HIV response, recognized for their abilities to deliver results for people at scale, are now leading or actively contributing to national COVID-19 responses. The International AIDS Society, which has convened the largest HIV-related international scientific conferences for nearly 40 years, hosted a virtual, international COVID-19 conference to share the latest scientific findings on the pandemic at a critical early moment in the response. Unitaid, a multilateral, market-shaping organization created by five national governments in response to the global HIV epidemic, is actively engaged in international efforts to ensure ready access to COVID-19 vaccines, diagnostics and treatments. The Global Fund, created as a key outcome of the 2001 United Nations General Assembly Special Session on HIV/AIDS, has stepped forward to make up to US\$ 1 billion available to help countries fight COVID-19.



How national HIV leaders are driving national COVID-19 responses

In South Africa, a global leader in HIV prevention research is heading the medical advisory committee for the COVID-19 response, while the director of the national AIDS coordinating body is helping to coordinate a multisectoral advisory forum for the COVID-19 response (33). In the United States of America, key leaders of the national COVID-19 response include the head of the United States President's Emergency Plan for AIDS Relief (PEPFAR) and the director of the United States government agency that drove the development of antiretroviral therapy. In Ethiopia, the head of the national AIDS coordinating body has been reassigned to support the Minister of Health in COVID-19 planning, while the director of the Minister of Health's HIV directorate is now coordinating care and treatment services for COVID-19. National AIDS directors in countries such as Angola, Brazil, China, the Democratic Republic of the Congo, Guatemala, Guinea, the Islamic Republic of Iran, Kenya, Malawi, Mexico, Nigeria and Zambia are serving as members of national planning and decision-making bodies for national COVID-19 responses (33).

Essential HIV infrastructure and policies are already providing the foundation for national responses to COVID-19

Health system weaknesses are among the greatest of all challenges that low- and middle-income countries face in responding effectively to COVID-19. The population-based density of physicians in low-income countries is one-tenth the density in high-income countries (34), and all of Africa has fewer than 2000 working ventilators, a key intervention for the treatment of severe cases of COVID-19, compared with more than 170 000 in the United States (35). Within the United Nations system, WHO leads the efforts to strengthen health systems and ensure their ability to address people's health needs.

Unlike the HIV response, which essentially had to build an infrastructure from the ground up, COVID-19 responses have the potential to piggyback on the important infrastructure that HIV investments have created. For example, the newly trained and credentialed health personnel that HIV investments have deployed, including more than 280 000 new health-care workers trained by PEPFAR alone (36), are currently assisting as first responders to COVID-19 in many low- and middle-income countries.

COVID-19 responses are also immediately benefiting from laboratory systems that have been vastly expanded and improved as a result of HIV investments. Each year, PEPFAR provides US\$ 140 million in support to more than 3000 laboratories, including 28 national laboratories, primarily in sub-Saharan Africa. WHO is leading a consortium of diagnostics experts and agencies to strengthen COVID-19 testing, developing a hub-and-spoke network of reference laboratories and procuring and broadly distributing both high-throughput and Cepheid cartridges. The African Union and the Africa Centres for Disease Control and Prevention's new PACT (Partnership to Accelerate COVID-19 Testing in Africa) is working with UNAIDS to leverage the

HIV response's community links and sentinel surveillance sites to support diagnosis and contact tracing for COVID-19. Especially with the increasing emphasis of HIV investments in multiplex laboratory technologies, such as GeneXpert systems that allow for efficient screening of multiple health issues, the value of HIV-generated diagnostic platforms for COVID-19 is clear.



HIV laboratory investments are driving broad improvements in diagnostic capacity

The HIV response has galvanized important regional initiatives to strengthen the quality and breadth of laboratory infrastructure across Africa, including the African Society for Laboratory Medicine, which facilitates information-sharing and professional development among African laboratory professionals, and the WHO-supported Strengthening Laboratory Management Toward Accreditation initiative, a mentoring and training programme that by 2020 had enabled quality improvements and formal accreditation of 185 laboratories in Africa, Asia, Latin America, the Caribbean and Oceania. In countries such as Nigeria, the Republic of Moldova and Tajikistan, HIV laboratories are already contributing to the collection and analysis of samples for COVID-19 testing (33).

In the age of COVID-19, service delivery systems created through HIV investments are serving as primary service sites for people experiencing COVID-19. In Morocco, for example, the 17 HIV treatment reference centres are now functioning as the first line for COVID-19 treatment services. Likewise, Mozambique has designated certain HIV clinics as service sites for suspected or confirmed COVID-19 cases. This repurposing can be truly successful only if accompanied by shifts and flexibilities that ensure the continuation of HIV treatment services through alternative community-based and distance-supported models.

Infrastructure elements that support and enable HIV responses are also adapting to support COVID-19 responses. An example includes the procurement and supply management systems strengthened through HIV investments; on its own, procurement by the Global Fund accounts for 10% of the global public health market (37). The systems and know-how made possible through the HIV response can help to oversee commodity procurement and supply management for COVID-19 commodities, including testing kits and components, personal protective equipment, current and future treatments and eventually one or more preventive vaccines.

The HIV infrastructure's work in addressing the expanding and evolving COVID-19 crisis extends well beyond the health sector. In New York City, the HIV nongovernmental organization Housing Works, which helped to pioneer a model of people-centred, supportive housing for homeless people living with HIV, opened two shelters specifically for homeless people who have tested positive for COVID-19 (38).

Service models pioneered by the HIV response are directly applicable to COVID-19

COVID-19 responses can benefit from community-centred service models pioneered by the HIV response (39, 40). Those innovations rely on task-shifting, trained peer and lay providers, multimonth prescriptions for medicines, community mechanisms for treatment delivery and health monitoring and flexible working linkages between community sites and health facilities. They have helped to decongest health clinics, brought services closer to the people who need them and increased the control that is invested in the hands of people and communities (5, 39, 41).



COVID-19 is accelerating the scale-up of innovative HIV service models

The COVID-19 emergency is contributing to the even more rapid expansion of the WHO-recommended differentiated service delivery models for HIV, as multimonth dispensing of medicines for HIV, tuberculosis and opportunistic infections is being implemented to free up the capacity of health workers to manage COVID-19. Numerous countries, including Belarus, the Dominican Republic, Ethiopia, Malawi, Mozambique, Papua New Guinea, Thailand, South Africa and Viet Nam, have accelerated the roll-out of multimonth dispensing in response to COVID-19. This has the added benefit of reducing contact between health-care workers and people living with HIV, reducing the risk of COVID-19 transmission. According to a 2020 survey among all countries that UNAIDS offices represent, 56% of countries (49 countries) report a change in multimonth practice due to COVID-19. However, it's important to be vigilant—gains are subject to confidence in medicine stocks—in ensuring continuity of supplies at the national and site levels in order to allow full continuation of multimonth dispensing. Where stock levels are low, we will see new restrictions, therefore national and global partners must work together in solidarity to actively manage continued access to medicines.

Leveraging community-centred service models is essential for effective national responses to COVID-19. An overriding priority for COVID-19 responses, in countries of all income strata, is to keep people who do not need acute services out of the formal health-care system, in order to prevent health systems from collapsing, minimize further transmission and preserve finite health resources. Key community measures that can aid in effective responses to COVID-19 include community-led diagnosis, community education on prevention as well as how to recognize COVID-19 signs and symptoms, community-based management of mild to moderate cases, engagement of workplaces in prevention and mitigation efforts, provision of hygiene kits and personal protective equipment, support to people in isolation, supporting prevention of transmission within COVID-19-affected households and rapidly linking people with facility-based care when needed.

These service models are already informing COVID-19 responses in some settings. For example, in Burkina Faso community-based HIV organizations are engaged in the COVID-19 response, using differentiated approaches to mobilize communities, follow up contacts of people with confirmed COVID-19 diagnosis and re-engage people who have been lost to follow-up (33).

Reimagining systems for health

To ensure healthy lives and promote well-being for all at all ages, systems for health must be sufficiently flexible and adaptive to respond to people's needs, preferences and circumstances and optimally equitable and inclusive. All key stakeholders—people, political leaders, the scientific community and sectors beyond health—must work in partnership and alignment to advance strategic health aims.

Use of the term “systems for health” here is purposeful. Improving the health and well-being of the world's people requires action that extends well beyond the health sector. Only if we strategically align action in the biomedical, behavioural, social and structural spheres will it be possible to develop approaches that are fit for the purpose of achieving the health goals and targets in the 2030 Agenda for Sustainable Development.

The emergence of COVID-19 has highlighted the underlying weaknesses in our systems for health. These systemic flaws are neither new nor previously unrecognized, but they have yet to elicit the broad global attention they require. Ironically, the system characteristics needed to respond to a new disease are essential for promoting good health outcomes more generally:

- ▶ Flexibility.
- ▶ Innovation.
- ▶ Equity.
- ▶ The tailoring of services for the most vulnerable.
- ▶ A capacity to synergize biomedical and non-health interventions.
- ▶ A sufficiently data-driven approach to recognize and respond to challenges as they emerge.

The HIV response offers an approach for reimagining systems for health in a way to ensure their readiness to meet the challenges of the twenty-first century, in accordance with the Sustainable Development Goals (42). By taking the lessons of the HIV response to heart, COVID-19 responses can aid in the transformation of systems for health.

Ensure that systems for health are inclusive, just and equitable

One of the distinguishing features of the HIV response has been its commitment to leave no one behind. The HIV response mobilized and empowered marginalized communities, put people living with HIV at the centre of the response, scaled up community-led service models to reach underserved communities and courageously and consistently advocated for the removal of legal and policy barriers, such as punitive laws. In this regard, the HIV response is a forerunner of the Sustainable Development Goals, which aim to “reach the furthest behind first” (43).

Persistent gaps and flaws in our systems for health have undermined the ability of the HIV response to realize its vision of health equity and justice. In far too many settings, health services are reserved for “citizens”, depriving migrant populations of their human right to health; along this line, the recent decision by the Government

of Botswana to provide free antiretroviral therapy to all residents, regardless of their citizenship status, is an important step towards aligning national programmes with the professed principles of the HIV response. Likewise, while the HIV response has prioritized the provision of antiretroviral therapy free of charge, realization of this approach has been impeded by the imposition in many settings of user fees for health services. Recent progress has been made in eliminating formal and informal user fees for HIV and antenatal care services in Cameroon and Côte d'Ivoire, but progress in this regard remains fragile and incomplete and must be applied across all health services.

With its disproportionate impact on the most vulnerable, COVID-19 poses an additional, immediate and profound challenge to efforts to reach the furthest behind first. Older people and those with pre-existing health conditions are most at risk for COVID-19-related mortality. In many high-income countries, COVID-19 case and death rates have been markedly higher among racial and ethnic minorities (44–46). Numerous COVID-19 outbreaks have been reported in prisons and other closed facilities (47), as well as in homeless populations (48). Substantial COVID-19 transmission, illness and mortality have also been reported among migrant workers in parts of Asia and the Middle East, as their vulnerability is exacerbated by their economic dependence, limited agency and the crowded conditions in which they live (49, 50). To be effective, social protection measures implemented in response to COVID-19 must ensure coverage for all marginalized populations.

Concerted efforts by the HIV response to close service gaps and eliminate health disparities offer a way forward for optimally inclusive COVID-19 responses. The HIV response has invested focused efforts to ensure that no one is left behind, including the multicountry, multisectoral DREAMS initiative, which has markedly reduced new HIV diagnoses among adolescent girls and young adults (36), targeted investments that have resulted in a near-universal availability of HIV treatment services in humanitarian settings and focused advocacy and technical support that led to the launch of a landmark strategy by the Southern African Development Community to ensure protection and equitable HIV service access among key populations (51). Groups that are most vulnerable to stigma, discrimination, violence and criminalization are at HIV-related decision-making tables and report regularly on the realities their communities face on the ground. Granular data collection, timely analysis of strategic data and flexible service systems capable of adapting rapidly to close gaps have played critical roles in improving the equity of national HIV responses.



Leaders call for a People's Vaccine

The HIV movement has insisted that health is a fundamental right that must be available to all. Among other things, activists and supportive leaders focused on barriers to access to medicines by speeding up clinical trials and regulatory approval processes, focusing on pricing and affordability and promoting generic competition, including through the use of TRIPS (Trade-Related Aspects of Intellectual Property Rights) flexibilities, voluntary licences and procurement by both domestic and donor development assistance programmes. The boldness and audacity of the HIV movement calls on us to be bold, visionary and courageous today in responding to the global COVID-19 emergency.

As international discussions and funding commitments to accelerate the urgently needed research and development of COVID-19 vaccines got under way, a group of more than 150 current and former world leaders and experts led by the President of South Africa, Cyril Ramaphosa, and backed by civil society, academics, thought leaders and philanthropic organizations, united in a powerful call to all governments and other actors to ensure a People's Vaccine.

In an **open letter**³ they urged that any quality-assured vaccines, treatments and tests for COVID-19 be free of exclusive rights, produced at sufficient scale, distributed equitably and made available to all people, in all countries, free of charge. As Mr Ramaphosa remarked, "Nobody should be pushed to the back of the vaccine queue because of where they live or what they earn."

As we embark on the most urgent quest in modern science, the leaders' vocal public call must be heeded. We must learn from the painful lessons of the HIV pandemic, as for years those who could afford HIV treatment experienced swift, marked improvements in their quality of life while millions who could not afford it died. It took years of activism to ensure wide access, and there is still much work to do. We must do better now. Access and affordability must be embedded at the outset of innovative initiatives, with transparency, inclusion and equity guiding the decisions made by governments, innovators and funders.

This crisis is challenging us to rise to the moment. We must ensure that no one is left behind in accessing a COVID-19 vaccine. The vaccine must be a global public good with universal availability and affordability—a People's Vaccine. We are in the fight of our lives. We are in it together, and we will come out of it stronger, together.

³ https://www.unaids.org/en/resources/presscentre/featurestories/2020/may/20200514_covid19-vaccine-open-letter

Enable “precision public health” by providing individuals and communities with a range of service options

To meet the needs of diverse individuals and communities, a differentiated range of service options is required. However, far too often people, many of them living in challenging circumstances, are expected to adapt themselves to health service systems, rather than having systems in place that are specifically designed to meet the needs of the people who use them.

The HIV response has learned that a one-size-fits-all approach will not optimize health outcomes for all populations. These insights prompted the HIV response to transition from an early emphasis on national one-size-fits-all public health approaches to expedite initial service scale-up, to more differentiated strategies to sustain good-quality services for the long term. These models have enabled a form of “precision public health”, in which health interventions are tailored to the needs of specific places, populations and consumers. Likewise, while health facilities generally focus on biomedical interventions, the HIV response has worked to synergize both health and non-health investments, generating holistic, people-centred systems for health that extend well beyond the health sector.



From standardized to differentiated HIV service delivery

The expanded spectrum of service options for HIV include facility-, community- and workplace-based approaches and encompass both traditional health professionals and trained lay health personnel. Differentiation can be applied at the place, population or individual levels. In the case of HIV testing, for example, an early emphasis on scaling up facility-based, stand-alone HIV counselling and testing centres has given way to a growing array of testing approaches, including community-led testing (through community outreach, hotspot testing or mobile services), provider-initiated counselling and testing in diverse health service settings, door-to-door home-based testing by community health workers, multidisease community testing campaigns, community testing campaigns and HIV self-testing kits that allow people to learn their HIV status in the privacy of their own home. Likewise, the early focus of the HIV response on creating service sites specifically designed for the delivery of antiretroviral therapy has been complemented by service models that allow HIV treatment services to be delivered in the community, through community health workers, peers or community networks. Those paradigm shifts depended on an openness to doing things differently, often in the face of early resistance from established players, and a remarkable flexibility in implementing radical policy changes where indicated.

Through the differentiated service models pioneered by the HIV response, health facilities are not necessarily the first stop in the delivery of HIV services. Through self-care models, advocacy and mobile and Internet technology, people living with HIV have supported one another to operate as active, controlling agents in the management of their own health and the health of their families and communities. These models are especially suited to COVID-19, as most COVID-19 care management will occur in community settings. Widespread uptake of these models through HIV and COVID-19 responses can also yield transformative lessons about how best to reimagine systems for health to meet the needs of people and to maximize returns from inevitably finite human resources for health.

Maximize the flexibility and adaptability of services

By using granular, real-time performance monitoring systems, HIV programmes have incorporated reflection, innovation and accountability as fundamental attributes of HIV service delivery. A similar spirit will be required for COVID-19 programmes, as the populations in need of services will have widely varying circumstances and vulnerabilities, necessitating programmes that are optimally agile and open to change.

In another important feature of relevance to the COVID-19 response, the HIV response has demonstrated there need not be a trade-off between service reach and service quality. The two can and should go hand in hand in order to maximize



Driving continuous quality improvement through ongoing monitoring and evaluation

Monitoring of HIV service cascades has encouraged innovation and a continuous quality improvement of HIV programmes, and the emergence of robust community monitoring systems has ensured that what HIV programmes are delivering is what has been promised. By monitoring outcomes at each essential stage of service delivery, such as diagnosis, linkage to care, treatment initiation, retention in care and viral suppression, HIV programmes have the ability to rapidly identify where service break-downs or bottlenecks are occurring and to devise locally tailored strategies for closing those gaps. In 30 health facilities in Kenya and Uganda, for example, rigorous, ongoing monitoring of HIV service cascade outcomes led to innovative practices that improved service quality and outcomes, including designated out-of-facility testing, special clinic days for specific groups of underserved people, specified service pathways for people with special needs and challenges and transition to multimonth dispensing and community distribution channels (52). Disaggregation of service data by age and gender has enabled HIV programmes to know when specific groups are not benefiting equitably and to innovate to ensure that no one is left behind. For example, when a major HIV demonstration project in rural communities in Kenya and Uganda detected suboptimal rates of HIV testing of men, the project adapted its design to better serve men, virtually erasing gender disparities in testing uptake after implementing men-only testing services and discussion groups (53, 54).

health outcomes. The HIV response has exhibited a commitment to the continuous improvement of service quality. Indeed, in many countries, HIV-focused practices for performance monitoring and improvement, such as the PEPFAR-funded HIVQUAL initiative, are now being mainstreamed to drive quality improvement in non-HIV-related health services.

Ensuring the adaptability of programmes requires investments in granular programmatic data collection and analysis, commitments to use that data to make change and a programmatic culture that is open to change when needed. Programmatic monitoring and evaluation must be results-driven, prioritizing outcome measures (e.g. number of people on antiretroviral therapy who are virally suppressed) over process measures (e.g. number of facilities administering antiretroviral therapy or the number of people receiving HIV treatment).

The COVID-19 response will require a similarly sophisticated approach to data collection, including robust support for community monitoring, and a comparable commitment to adapt approaches as required. COVID-19 treatment programmes will need to know which patients are thriving and which are not as well as the service components and characteristics that are contributing to suboptimal outcomes. As learning about effective COVID-19 preventive and therapeutic interventions is at a nascent stage, a willingness to innovate and reconsider standard practices will be essential.

Key recommendations for the COVID-19 response

Having catalysed an unprecedented global mobilization that has succeeded in reversing a pandemic that has claimed more than 32 million lives, the HIV response is a natural source of guidance for responding to the new pandemic of COVID-19. Experience from the HIV response offers several key lessons for the rapidly evolving response to COVID-19.

COVID-19 responses should benefit from learning from the HIV experience. The people charged with planning and implementing COVID-19 responses at all levels—community, national, regional and global—should adopt and adapt lessons learned from the HIV response to ensure that COVID-19 responses are optimally effective, accountable, inclusive, equitable and sufficiently resourced and that COVID-19 services are accessible, integrated (where relevant), tailored and people-centred. As the global response to COVID-19 will inevitably generate innovations and important lessons in health systems, socioeconomic responses and new knowledge across the 2030 Agenda for Sustainable Development, careful efforts are needed to document, share, adapt and implement the learnings where appropriate.

Communities must be at the centre of COVID-19 responses. Communities should build on their existing infrastructure, networks and relationships to expand the delivery of health services, identify vulnerable people and provide them with needed support, document human rights violations and barriers to COVID-19 prevention and health care and alert national decision-makers of emerging challenges that must be addressed. While communities work to strengthen and accelerate COVID-19 responses, communities must be supported and sufficiently resourced to enable them to maintain and build on their existing roles in service provision for HIV and other health and social priorities. To optimize community contributions to COVID-19 responses, governments should formally include community representatives in COVID-19 planning, implementation and evaluation processes and provide the needed resources to facilitate their involvement, including ensuring their uninterrupted access to personal protective equipment.

COVID-19 responses should be guided by human rights principles and practices. As the COVID-19 pandemic underscores the imperative of governments to respect, protect and fulfil human rights, COVID-19 responses should be grounded in human rights. Towards this end, punitive and discriminatory legal and policy measures that increase marginalization and decrease access to prevention and treatment services must be removed. UNAIDS has issued detailed guidance to policymakers on key action steps to ensure strong human rights underpinnings for an effective COVID-19 response (19).

COVID-19 responses should be gender-sensitive and transformative. COVID-19 has revealed the gendered nature of the health crisis and the critical need for gender-transformative responses, taking into account the differential impacts on men and women, including profound socioeconomic effects on women and girls and higher mortality among men.

COVID-19 demands a multisectoral, all-of-government, all-of-society response. The effective management of COVID-19 responses, from planning, to implementation, to evaluation, must ensure the coordination and meaningful engagement of all sectors, governmental and societal, and affected communities, to ensure coherent, synergistic approaches that holistically meet the needs of people and address the social and structural inequalities that can increase vulnerability and disrupt services.

COVID-19 responses should leverage the HIV infrastructure. COVID-19 responses should continue to build on the substantial service infrastructure (e.g. testing facilities, treatment platforms, health personnel, networks of community health workers), research capacity (e.g. the many well-established HIV vaccine trial sites and networks that are being used for phase I/phase II trials of dozens of COVID-19 vaccines) and access-enabling policies (e.g. pooled procurement mechanisms, health services free of charge) that HIV investments have created. The leveraging of the expansive HIV infrastructure is already occurring in many settings, but could be maximized through more comprehensive, strategic action. This leveraging must not come at the expense of the HIV services themselves.

COVID-19 strategic information data must be used to guide action, increase accountability and improve programme performance. It is imperative that COVID-19 responses be evidence-informed. COVID-19 planners should leverage the know-how, analytical capacity and strategic information systems developed through HIV investments to fully optimize the agility of COVID-19 services to adapt to an evolving evidence base, improve performance over time and effectively identify and reach communities at risk of being left behind.

COVID-19 responses will require strong political leadership. Bold, consistent, courageous, ambitious, inclusive and driven by scientific evidence—these are signposts for effective leadership in the COVID-19 response, at all levels. A willingness to allocate sufficient financial resources is one important test of health leadership. WHO guidance should be the blueprint for all leaders, to ensure the multilateral coordination that is essential as we seek to overcome a challenge that respects neither geographic nor political boundaries.

We must use COVID-19 to reimagine systems for health. COVID-19 has exposed the weaknesses in systems for health, which have proved to be under-resourced, unprepared to address the surge of the pandemic or unable to sustain other essential health services. The key attributes of systems for health that are prepared to address a major new health crisis—agility, results-driven, inclusive, welcoming and people-centred—are the same characteristics required to address all other health conditions. With the flaws of current systems at the front of our minds, we must use the COVID-19 challenge as an opportunity to reimagine systems for health that work for people, maximize efficiency and effectiveness, attract sufficient resources and engage communities as essential partners for health. Only if we reimagine multisectoral systems for health can we hope to achieve the vision of Sustainable Development Goal 3.

References

1. Hogan AB, Jewell BL, Sherrard-Smith E, Vesga JF, Watson OJ, Whittaker C, et al. Potential impact of the COVID-19 pandemic on HIV, tuberculosis, and malaria in low-income and middle-income countries: a modelling study. *Lancet Glob. Health*. 2020.
2. Jewell BL, Mudimu E, Stover J, Ten Brink D, Phillips AN, Smith JA, et al. Potential effects of disruption to HIV programmes in sub-Saharan Africa caused by COVID-19: results from multiple mathematical models. *The Lancet HIV*. 2020.
3. UNAIDS. Seizing the moment: tackling entrenched inequalities to end epidemics. Geneva: UNAIDS; 2020.
4. Claude K, Underschultz J, Hawkes M. Social resistance drives persistent transmission of Ebola virus disease in eastern Democratic Republic of Congo: a mixed-methods study. *PLoS ONE*. 2019;14(9):e0223104.
5. UNAIDS. Community-based antiretroviral therapy delivery: experiences from MSF. Geneva: UNAIDS; 2015.
6. UNAIDS. Power to the people. Geneva: UNAIDS; 2019.
7. United Nations. Shared responsibility, global solidarity: responding to the socio-economic impacts of COVID-19. New York: United Nations; 2020.
8. Wickramanayak J. Meet 10 young people leading the COVID-19 response in their communities. In *Africa renewal*. New York: United Nations; 2020.
9. Tavernise S, Oppel R. Spit on, yelled at, attacked: Chinese-Americans fear for their safety. *New York Times*. 2020.
10. Burke J, Akinwotu E, Kuo L. China fails to stop racism against Africans over COVID-19. *The Guardian*. 2020.
11. Ordonez F. Trump says he'll suspend immigration for 60 days over coronavirus fears. *NPR.org*. 2020.
12. Taub A. A new COVID-19 crisis: domestic abuse rises worldwide. *New York Times*. 2020.
13. United Nations Secretary-General. Women's economic empowerment in the changing world of work. New York: United Nations Economic and Social Council; 2016.
14. United Nations. Policy brief: the impact of COVID-19 on women. New York: United Nations; 2020.
15. UNAIDS. UNAIDS condemns misuse and abuse of emergency powers to target marginalized and vulnerable populations. Geneva: UNAIDS; 2020.
16. UNAIDS. Confronting discrimination. Geneva: UNAIDS; 2017.
17. Cameron S, Bernard E. Advancing HIV justice 3: growing the global movement against HIV criminalisation. Amsterdam: HIV Justice Network; 2019.
18. Declaration of commitment on HIV/AIDS. New York: United Nations; 2001.
19. UNAIDS. Rights in the time of COVID-19. Lessons from HIV for an effective, community-led response. Geneva: UNAIDS; 2020.
20. Global Fund to Fight AIDS, Tuberculosis and Malaria. Step up the fight: focus on building resilient and sustainable systems for health. Geneva: Global Fund to Fight AIDS, Tuberculosis and Malaria; 2019.
21. African Union, New Partnership for Africa's Development, UNAIDS. Delivering results toward ending AIDS, tuberculosis and malaria in Africa: African Union accountability report on Africa-G8 partnership commitments. Geneva: UNAIDS; 2013.
22. UNAIDS. UNAIDS data 2020. Geneva: UNAIDS; 2020.
23. Berhe N, Tegabu D, Alemayehu M. Effect of nutritional factors on adherence to antiretroviral therapy among HIV-infected adults: a case control study in northern Ethiopia. *BMC Infect. Dis*. 2013;13:233.
24. The systemic threat of food insecurity and HIV. *Lancet HIV*. 2020;7:E75.
25. Myunda B et al. Educational attainment as a predictor of HIV testing uptake among women of child-bearing age: analysis of 2014 Demographic and Health Survey in Zambia. *Front Public Health*. 2018;6:192.
26. del Amo J et al. Inequalities by educational level in response to combination antiretroviral treatment and survival in HIV-positive men and women in Europe. *AIDS*. 2017;31(2):253-262.

27. Gorgens M et al. Sitakhela Likusasa Impact Evaluation: results of a cluster randomized control trial (cRCT) of financial incentives for HIV prevention among adolescent girls and young women (AGYW) in Eswatini (abstract TUAC0205LB). Mexico City: 10th IAS Conference on HIV Science; 2019.
28. UNAIDS. Laws and policies analytics. 2019, <http://lawsandpolicies.unaids.org>.
29. Rajan D et al. Governance of the COVID-19 response: a call for more inclusive and transparent decision-making. *BMJ Glob. Health.* 2020;5:e002655.
30. Dieleman J et al. Spending on health and HIV/AIDS: domestic health spending and development assistance in 1888 countries, 1995-2015. *Lancet.* 2018;381(10132):799-1829.
31. UNAIDS. AIDSinfo, <https://aidsinfo.unaids.org>.
32. Bank W. Life expectancy at birth, total (years) - Sub-Saharan Africa. 2019, <https://data.worldbank.org/indicator/SP.DYN.LE00.IN?locations=ZG>.
33. UNAIDS. Internal UNAIDS data. 2020.
34. Physicians (per 1000 people). 2019, <https://data.worldbank.org/indicator/SH.MED.PHYS.ZS>.
35. Maclean R, Marks S. 10 African countries have no ventilators. That's only part of the problem. *New York Times.* 2020.
36. PEPFAR. PEPFAR 2019 annual report to Congress. Washington, DC: United States Department of State, Office of the United States Global AIDS Coordinator and Health Diplomacy; 2019.
37. Global Fund to Fight AIDS, Tuberculosis and Malaria. Focus on sourcing and procurement. Geneva: Global Fund to Fight AIDS, Tuberculosis and Malaria; 2018.
38. Vincent I. Housing Works CEO opens coronavirus homeless shelters in NYC. *New York Post.* 2020.
39. World Health Organization. Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection. Geneva: World Health Organization; 2016.
40. Roy M et al. A review of differentiated service delivery for HIV treatment: effectiveness, mechanisms, targeting, and scale. *Implem. Sci.* 2019;16:324-334.
41. Tsondai P et al. High rates of retention and viral suppression in the scale-up of antiretroviral therapy adherence clubs in Cape Town, South Africa. *J. Int. AIDS Soc.* 2017;20(Supp.4):21649.
42. Bekker L et al. Advancing global health and strengthening the HIV response in the era of the Sustainable Development Goals: the International AIDS Society-Lancet Commission. *Lancet.* 2018;392(10144):312-358.
43. Transforming our world: the 2030 Agenda for Sustainable Development (A/Res/70/1). New York: United Nations; 2015.
44. United States Centers for Disease Control and Prevention. Provisional death counts for coronavirus disease (COVID-19). 2020, https://www.cdc.gov/nchs/nvss/vsrr/covid_weekly/.
45. Ro C. Coronavirus: why some racial groups are more vulnerable. *BBC.com.* 2020.
46. Mueller B. Coronavirus killing black Britons at twice the rate of whites. *New York Times.* 2020.
47. Phillips K. More than 1,500 federal prisoners now have COVID-19 as officials expand testing. *USA Today.* 2020.
48. Tobolowsky F et al. COVID-19 outbreak among three affiliated homeless service sites - King County, Washington, 2020. *MMWR.* 2020;69(17):523-526.
49. Yeung J et al. Singapore's migrant workers are suffering the brunt of the country's coronavirus outbreak. *CNN.com.* 2020.
50. Chulov M. Migrant workers bear brunt of coronavirus pandemic in Gulf. *The Guardian.* 2020.
51. Southern African Development Community. Regional strategy for HIV and prevention, treatment and care and sexual and reproductive health and rights among key populations. Gaborone: Southern African Development Community Secretariat; 2018.
52. Kandasami S et al. Can changes in service delivery models improve program quality and efficiency? A closer look at HIV programs in Kenya and Uganda. *J. AIDS.* 2019;81(5):533-539.
53. Camlin C et al. Men "missing" from population-based HIV testing: insights from qualitative research. *AIDS Care.* 2016;28(Supp.3):67-73.
54. Havlir D et al. HIV testing and treatment with the use of a community health approach in rural Africa. *New Eng. J. Med.* 2019;381:219-229.



UNAIDS
Joint United Nations
Programme on HIV/AIDS

20 Avenue Appia
1211 Geneva 27
Switzerland

+41 22 791 3666

unaids.org