

TECHNICAL REPORT

# ASSESSMENT OF HIV TESTING SERVICES AND ANTIRETROVIRAL THERAPY SERVICE DISRUPTIONS IN THE CONTEXT OF COVID-19: LESSONS LEARNED AND WAY FORWARD IN SUB-SAHARAN AFRICA

NOVEMBER 2021

HIV TESTING SERVICES





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# 1. BACKGROUND

The first human cases of COVID-19, the disease caused by SARS-CoV-2, were reported in December 2019 (1). On 30 January 2020 the World Health Organization (WHO) declared the SARS-CoV-2 outbreak a public health emergency of international concern (PHEIC), WHO's highest level of alarm (2). Since 2020, the COVID-19 pandemic has been responsible for the deaths of over 4.8 million people worldwide (3). In Africa, the first cases of COVID-19 were reported in February 2020. Since then, more than 6 million infections and close to 150 000 deaths have been reported (4).

The COVID-19 pandemic could have lasting effects on the HIV response in sub-Saharan Africa where there were approximately 20.6 million people with HIV, 870 000 new HIV infections and 460 000 HIV-related deaths in 2020 (4). In recent years, countries across sub-Saharan Africa have made considerable progress toward achieving the UNAIDS 95-95-95 targets.<sup>1</sup> Across eastern and southern Africa an estimated 89% of people with HIV know their status, 77% of people with HIV are on treatment and 70% of people with HIV have a suppressed viral load (4). However, there has been concern that the COVID-19 pandemic may have impeded critical efforts in Africa needed to achieve global goals to maintain declining HIV incidence.

The COVID-19 pandemic arrived in an evolving epidemiological context where some countries are experiencing a progressive decrease in HIV positivity in their testing programme as they are moving closer to the first 95 target (5). In recent pre-pandemic years, many sub-Saharan African countries had been adapting to changing epidemiology by transitioning from a wide-scale HIV testing services to more targeted testing. As a result, between 2018 and 2020, there was a 35% reduction in HIV testing targets in the President's Emergency Plan for AIDS Relief (PEPFAR) supported programmes globally (6). Between 2019 and 2020, the Global Fund reported HIV testing volumes decreasing by 22% (from 134M to 104M tests performed each year) (7).

A similar trend was reported during this period by the PEPFAR which indicated there was a 17% decrease in HIV testing volumes in countries receiving support (from 74M to 61M tests performed each year) (6). These reductions contribute to a large proportion of decreases in HIV testing across low- and middle-income countries.

Programmes focused on reaching key populations were also disrupted last year. According to a retrospective study of programmatic implementation, between 2019 and 2020, across 44 countries from four continents, HIV testing among key populations decreased by 10% among people who inject drugs and by 59% among sex workers (8).

Distinguishing changes in HIV testing services due to the COVID-19 pandemic from those resulting from evolving HIV testing strategies is crucial for adapting services and helping countries define their strategic mix of testing options moving forward. There is a need to focus, prioritize and plan for strategic efforts to prevent going further off the track toward achieving global targets and goals.

To support these efforts, WHO in partnership with ministries of health conducted an in-depth analysis of HIV testing services and antiretroviral therapy (ART) initiation prior to and during reported COVID-19 disruptions. Additional publicly available Global Fund and PEPFAR data was also reviewed and analysed. This analysis, and coordination with ministries of health, identified key service delivery adaptations utilized during COVID-19-related disruptions and formed the basis of this strategic guide.

This document focuses on current country needs, as well as plans for prioritization and potential surge support needs in the event of future disruptions. Although the data and implications are specific to sub-Saharan Africa, key principles and lessons can be applied elsewhere. For this report, Malawi, South Africa and Zambia serve as illustrative examples.

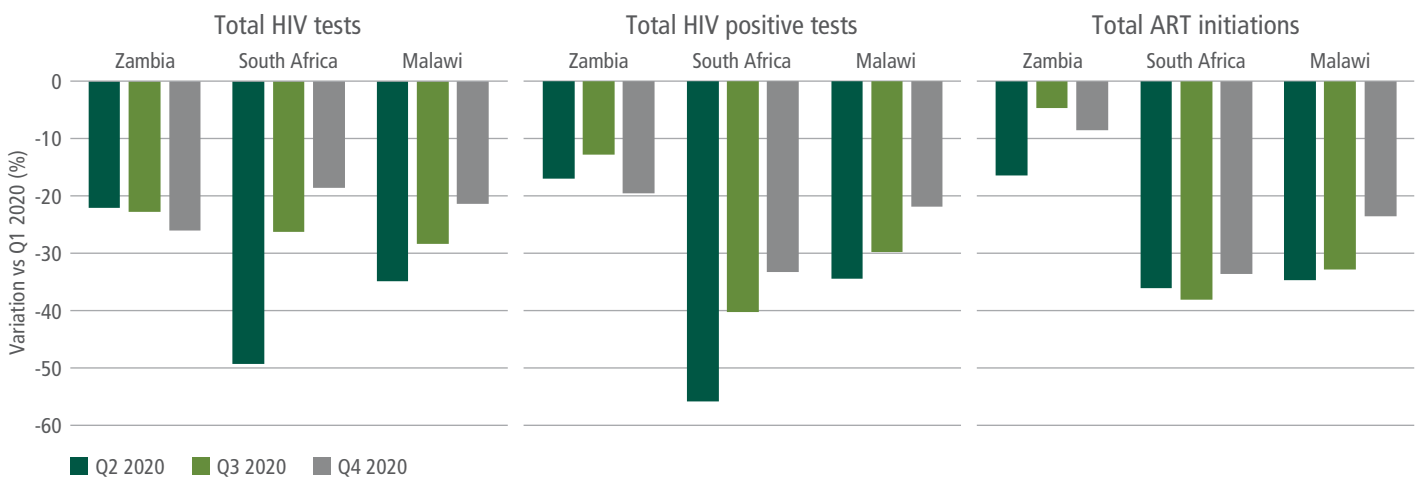
1. By 2025, 95% of people living with HIV know their status, 95% of those who know their status are on treatment, and 95% of those on treatment are virally suppressed.

## 2. COVID-19 DISRUPTIONS TO HIV TESTING SERVICES: LESSONS LEARNED

Ministries of health in Zambia, South Africa and Malawi provided routine, aggregated data on HIV testing, ART initiation and antenatal care (ANC) for 2020. Between April and June 2020 HIV testing volumes decreased by 22.3%, 49.9% and 34.8% in Zambia, South Africa and Malawi, respectively, compared to reporting between January and March 2020 (Fig. 1). The total number of HIV-positive test results decreased by 17.0%, 56.1% and 33.0% and the total number of people starting ART decreased by 16.6%, 35.3% and 36.8% in Zambia, South Africa and Malawi, respectively. A partial recovery in HIV testing volumes and diagnosis of HIV-positive cases took place in subsequent quarters and has continued into 2021.

While the data show decreased HIV testing volumes and HIV positivity in all three countries, we see more in detail how COVID-19 appears to have impacted HIV testing, identification of positive cases, and ART initiations in South Africa when compared with Zambia and Malawi. Notably, declines in HIV testing volumes were occurring pre-COVID-19 in Zambia and Malawi as part of a more targeted national HIV testing strategy.

**Fig. 1. Variation in the number of HIV tests, HIV-positive tests, and ART initiations per quarter in Zambia, South Africa and Malawi, 2020**



The chart compares the variation in the volume of HIV testing, HIV positive tests and ART initiations by comparing the first quarter 2020 (January to March) to subsequent quarters (April to June 2020; July to September 2020; and October to December 2020).

Q1 2020: Quarter 1, January to March 2020; Q2 2020: Quarter 2, April to June 2020; Q3: Quarter 3, July to September 2020; Q4: Quarter 4: October to December 2020; SA: South Africa

Source: Ministry of Health, Zambia; National Department of Health, South Africa; Department of HIV/AIDS, Ministry of Health, Malawi



## 2.1 Zambia: Resilient services

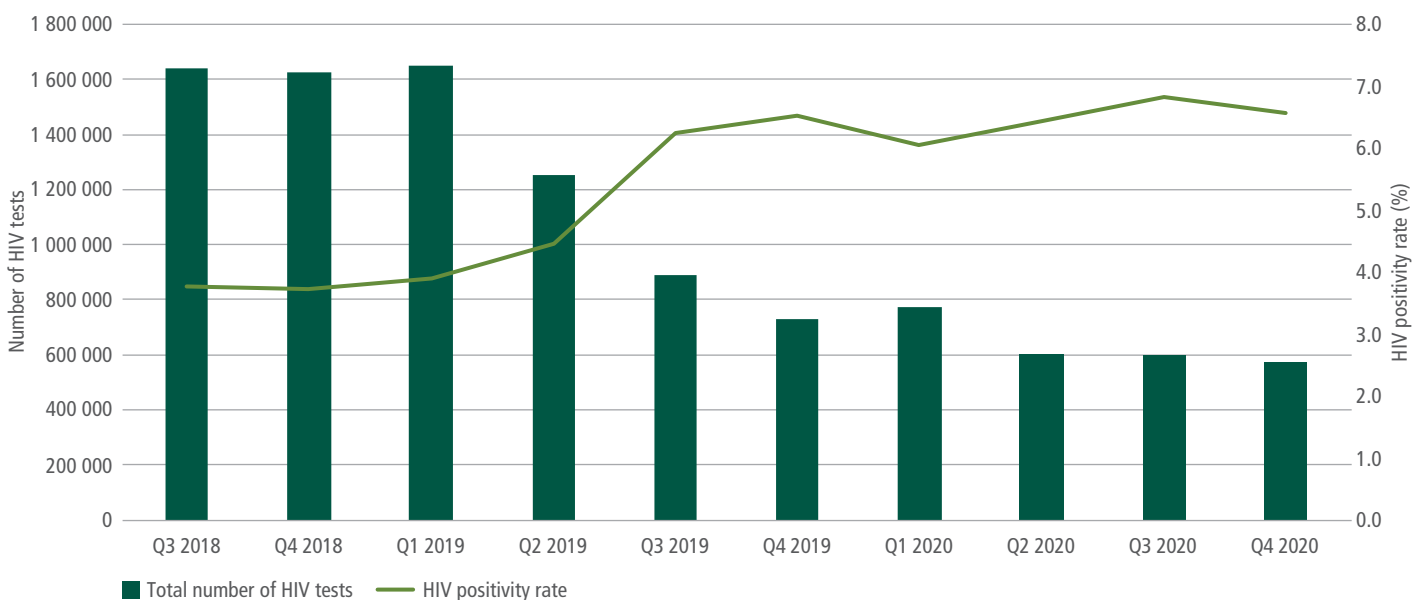
In Zambia, the reduction in HIV testing generally appeared to be caused by factors other than COVID-19. Initial decreases in HIV testing volumes started in 2018 and then continued through 2019 and 2020 (Fig. 2). Suspension of services or lockdowns were reportedly very limited and brief during the first year of the pandemic and ANC attendance and HIV testing coverage at ANC remained stable. The government also deployed a strategic communication strategy for health workers and the public to try to reduce service delivery disruptions.

As the country progresses toward reaching the UNAIDS targets, now estimated that 86% of people with HIV are aware of their status and that 81% of people with HIV are on ART (4), the Zambian government has been trying to adopt efficient ways of testing and focusing limited resources to reaching people with HIV who do not know

their status. The ministry of health, while still promoting access to HIV testing at all health facilities, implemented an HIV risk screening tool to focus services only toward those with high HIV risk and discontinued wide-scale door-to-door community testing due to its low HIV positivity rate. To boost testing and case finding among men, provider-assisted referral (often called partner notification or index testing) was scaled-up and HIV self-testing (HIVST) was expanded more widely in 2020.

As a result of this strategy, HIV positivity increased from 3.7% to 66.0% between January and March 2019 (Q3) and October-December (Q4) 2020. However, the number of HIV positive tests and ART initiations decreased by 26% and 20%, respectively, between 2019 and 2020. The cost-effectiveness of this new strategy, and impact of missing cases, should be reviewed considering the epidemiological evolution of the HIV pandemic and the impact of COVID-19 in Zambia.

**Fig. 2. Number of HIV tests and HIV positivity in Zambia per quarter, 2018–2020**



Q1: Quarter 1, January to March; Q2: Quarter 2, April to June; Q3: Quarter 3, July to September; Q4: Quarter 4: October to December

Source: Ministry of Health, Zambia

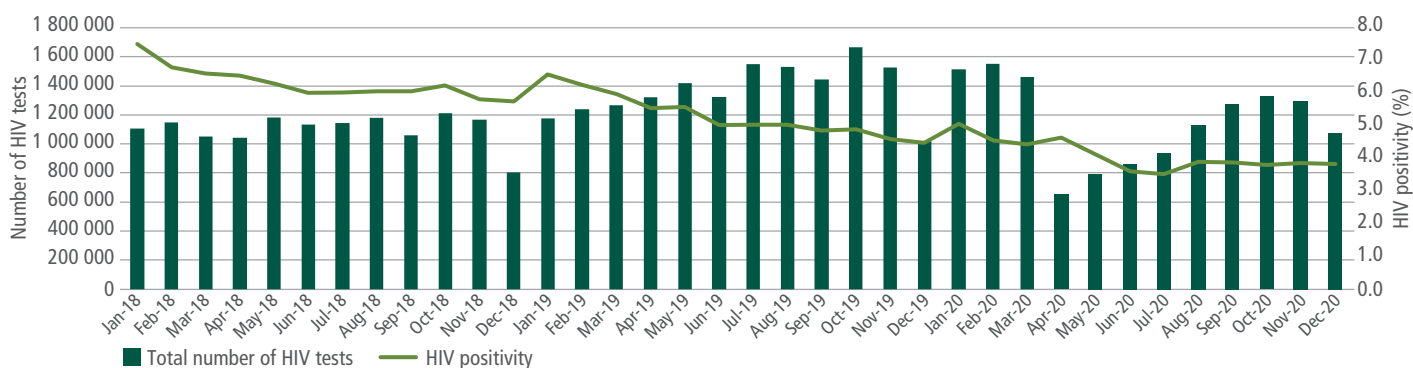
## 2.2 South Africa: Disruptions, particularly in geographies with greater restrictions

South Africa was initially severely affected by COVID-19 and implemented strict limitations of movement and physical distancing measures, potentially making it more difficult for many people to access HIV testing at health facilities. Some HIV testing services, especially community-based services, were either interrupted to limit transmission of COVID-19 or transferred staff normally dedicated to run those services to other tasks. However, a progressive recovery took place, and by December 2020, testing volumes were nearly back to pre-COVID-19 levels.

Despite these gains HIV positivity reduced by 22% between Q1 2020 and Q4 2020 (Fig. 3). This shift started prior to COVID-19 pandemic related disruptions, but accelerated and drove an overall reduction in HIV-positive diagnoses and ART initiations despite the recovery in HIV testing volumes during 2020.

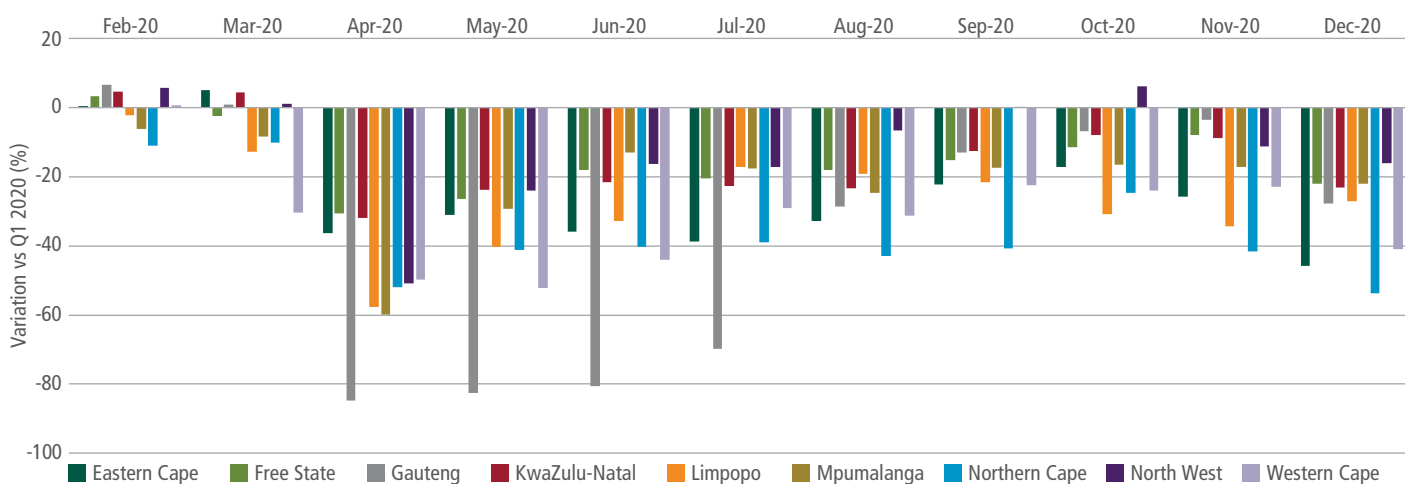
In South Africa, disruptions varied by province and were more severe disruptions to HIV testing in the urban province of Gauteng. HIV testing disruptions also started earlier in the Western Cape, compared to other provinces, and was the first province in South Africa reporting service delivery challenges due to COVID-19 in March 2020 (Fig. 4).

**Fig. 3. Number of HIV tests and HIV positivity per month, South Africa, 2018–2020**



Source: National Department of Health, South Africa

**Fig. 4. Variation in the number of HIV tests conducted, per month, across nine provinces in South Africa, 2020**



The chart compares the variation in HIV testing volumes by comparing the first quarter 2020 (January to March) to subsequent months throughout 2020.

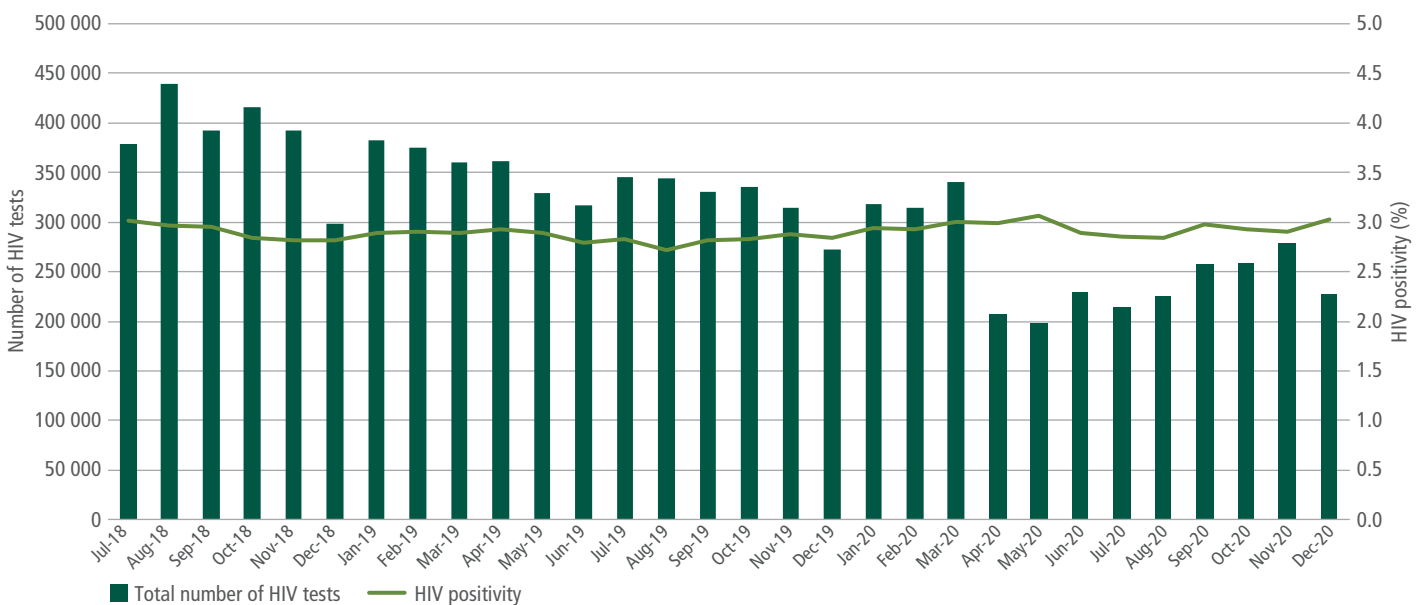
Source: National Department of Health, South Africa

## 2.3 Malawi: Reduced HIV testing pre-COVID-19

In Malawi, between 2018 and 2019, HIV testing had been on a slow steady decline until March 2020. In April 2020, HIV testing decreased by 39.2% compared to the previous month. In the following month, HIV testing volumes began slowly rising again until December 2020 (Fig. 5). Despite the changes in HIV testing volumes between 2018 and 2020, HIV positivity remained stable around 3% with little fluctuation.

Malawi was previously planning to reduce HIV testing in 2020 by adopting a more targeted testing strategy. Similar to South Africa, some community and non-ANC facility HIV testing services in Malawi were paused between April and August 2020, contributing to the reduction in HIV testing levels. Malawi did rapidly scaled-up HIVST during the pandemic with close to 400 000 HIVST kits distributed between July and December 2020. However, an increase in HIV positivity was not observed, suggesting further optimization of HIVST implementation is still needed alongside of greater efforts to close remaining gaps in HIV testing services.

**Fig. 5. Number of HIV tests and HIV positivity per month in Malawi, 2018–2020**



Source: Department of HIV/AIDS, Ministry of Health, Malawi

## 2.4 Factors affecting HIV testing services and ART initiations

The three country examples highlighted in this report, although located in the same region, present a diversity of situations, and indicate the importance of considering other factors when reviewing HIV testing and ART initiation data.

- COVID-19.** The pandemic did not affect countries at the same time or with the same severity, and public health COVID-19 prevention measures differed widely between countries. The measures themselves — when they were applied and how they were implemented — can also differ between countries or regions. In some cases, prevention measures resulted in closure or suspension of HIV testing to limit contact and deployment of HIV staff to COVID-19 services. The pandemic also impacted the demand for services differently. In some places, the COVID-19 pandemic led to an underutilization of services due to difficulties in accessing health facilities and/or by individual concerns about using essential services and potential risk of SARS-CoV-2 exposure.
  - Changes in testing strategy.** In the last few years, PEPFAR-supported countries, primarily in sub-Saharan Africa, significantly changed HIV testing strategies toward targeted HIV testing services focused on maximizing case detection among specific priority populations. This shift contributed to substantial reductions of HIV testing prior to, and during, the COVID-19 pandemic. Between 2018 and 2020, PEPFAR reported a 32% reduction in HIV testing; from 92.4M tests per year in Fiscal Year (FY) 2018, to 78.2 million during FY2019 and 62.4 million during FY2020. In 2020, despite COVID-19 disruptions in some countries, HIV testing volumes reported by PEPFAR-supported programmes exceeded targets.
  - Decrease in HIV positivity.** Countries that get closer to achieving the first 95 and second 95 target can see a decrease in HIV positivity. This trend reflects a decrease in the number of newly identified HIV-positive cases and subsequent ART initiations. This is to be expected as country epidemiology changes.
- COVID-19 severely impacted HIV testing services with important variations between countries in intensity and duration. Its global impact remains difficult to evaluate because of the complexity of factors influencing HIV testing and ART initiation, especially in sub-Saharan Africa where HIV testing strategies changed and were changing when the COVID-19 pandemic started and as countries get closer to achieving the first 95.
- Variations within countries.** Disruptions to HIV testing services varied not only between but also within countries, whether in terms of service delivery types, population or geography. In Malawi and South Africa, **geographical differences** were substantial, highlighting the need to perform subnational analysis when reviewing national HIV testing and ART initiation data.
  - Resilience.** Overall, HIV testing within ANC were very resilient and HIV status awareness in ANC services remained high. In Malawi, non-ANC, facility-based testing services (39% decrease in Q2 vs Q1 2020) and community-based testing services (18% decrease in Q2 vs Q1 2020) were more impacted than ANC services (14% decrease in Q2 2020 vs Q1). Building on the experience of those services that managed to maintain functional HIV testing services during the pandemic could help to improve preparedness and mitigate the impact of potential new waves of COVID-19 as well as to develop adaptation strategies.
  - Key populations.** Data reviewed generally did not include how services and programmes focused on reaching key populations may have been affected during the first year of the COVID-19 pandemic. In sub-Saharan Africa, routine data on HIV testing and ART initiations among key populations is limited, however some programmes have provided evidence that HIV testing services among some key populations was substantially disrupted (6,8). Because key populations remain disproportionately affected by HIV and underserved by existing services, understanding the impact of the pandemic on key population is critical for adapting service delivery so programmes can achieve their HIV testing, prevention and treatment targets.
  - Advanced HIV disease.** The COVID-19 pandemic could have impacted the diagnosis and ART initiation of people with advanced HIV. South Africa routinely reports CD4 count at ART initiation whereas Malawi records WHO stages at ART initiation. The number of individuals who initiated ART with advanced HIV decreased by 40% and 23% in Q2 2020 compared to Q1, in South Africa and Malawi, respectively. The decrease was proportional to the overall decrease in ART initiation, indicating that the proportion of patients with advanced HIV among those who initiated ART remained stable during Q2 2020. Research and follow-up are needed to assess the impact of the pandemic on ART initiation among patients with advanced HIV.

### 3. ACTIONS FOR ADAPTATION OF HIV TESTING SERVICES AND ART INITIATION MOVING FORWARD

There is still uncertainty about the future dynamics of the COVID-19 pandemic, including changes in transmission due to new variants of concern, and the roll-out of effective vaccines and/or treatments. However, the pandemic is likely to continue, so countries need to be prepared to mitigate the negative consequences on HIV testing and ART service delivery.

Public health measures to stem the spread of SARS-CoV-2 infections may need to be implemented, reinstated, or reinforced according to the severity of the pandemic and these measures will potentially be associated with new disruptions to other essential services, including HIV testing and ART. Some countries now face the double challenge of mitigating the risk of further disruptions to HIV testing services while having to recover from those that have already taken place and make up for lost ground.

Countries should maintain HIV testing services in the context of the ongoing and evolving response to COVID-19. This will require protecting health workers and clients, including finding ways to replace in-person contact and clinic visits.

Maintaining HIV testing services to diagnose people with HIV and link them to treatment remains vitally important (9). Prioritization of population groups or geographical areas may be needed if these cannot be maintained.

National HIV testing strategies and plans must be reviewed according to the local and national COVID-19 policies and the following actions could be considered.

- **Data analysis.** Routine analysis of HIV testing data and COVID-19 policies will help to quantify and contextualize the extent of service disruptions and to identify population groups, services, types of facilities or geographical areas most impacted. Such analyses can help improve preparedness and planning for mitigation strategies which focus on those most in need. These analyses should be repeated regularly to assess the impact of actions taken to mitigate the consequences of COVID-19 on uptake and delivery of HIV services. Efforts to include data for key populations should be prioritized.
- **Protecting and supporting health workers delivering HIV testing, prevention and treatment.** WHO provides guidance to help protect health workers from COVID-19; a range of WHO guidance documents and tools are available and are regularly updated (10).
- **Prioritization of services.** To minimize physical contact, HIV testing services with high HIV positivity and contributes to greatest number of HIV positive diagnoses should be prioritized, such as testing partners of people with HIV, key populations and their social contacts with high HIV risk. **HIVST can be considered to implement those models.**
- **Introducing and expanding HIVST,** especially outside of facilities, for example through pharmacies, community distribution or ordered online with pick-up or home delivery options, as it has the potential to limit physical contact between providers and clients, and decrease congestion in facilities by triaging out those who self-test negative (10). HIVST can also be considered for people taking post-exposure prophylaxis (PEP) and pre-exposure prophylaxis (PrEP) as part of prevention adaptations (10). Using virtual support and community-based dispensing of PrEP alongside HIVST has been used in many settings to maintain PrEP services (11).
- **In case of severe disruptions countries may have to prioritize HIV testing services for specific groups.** WHO developed operational guidance to maintain essential health services (12) where the following group prioritization regarding HIV testing was made:
  - Individuals suspected of advanced HIV or diagnosed with tuberculosis, malnutrition and sexually transmitted infections (STIs);
  - Sexual and/or drug injecting partners, and biological children of people with HIV;
  - Key populations and high risk social contacts;
  - Pregnant women as part of antenatal care and prevention of mother-to-child transmission efforts;
  - Children for early infant diagnosis (EID);
  - People eligible for and/or taking PEP/PrEP.

- **ART services.** Interventions to limit client volumes, such as extending to 6-monthly dispensing of ART and promoting ART dispensing outside of facilities is recommended by WHO (13). In addition, ART initiation should be offered on the same day as HIV testing to people who are ready to start (13).

People who were diagnosed with HIV but did not start ART, or those who may have discontinued ART, may enter HIV testing sites to re-engage in care. Due to COVID-19 disruptions, programmes may need to be prepared to service these clients and health workers may need to provide additional counselling messages and support.

- **Virtual interventions.** Virtual interventions for HIV programmes involve the use of both telephone and internet-based platforms to reach and engage clients in HIV testing, prevention and treatment services. They may help limit in-person outreach and HIV service delivery when needed. Online reservation platforms, community monitoring, adherence support and diffusion of essential information could be scaled up using virtual interventions. Many existing virtual approaches can be leveraged to provide access to HIV services, including testing and ART, and can include offer of medical consultations, self-assessment of risk before testing, provide accurate information, and track treatment adherence in clients.

Virtual interventions including on social media, dating apps or in systems developed for telemedicine may be particularly useful for reaching and maintaining services for key populations and delivering HIVST, mobile outreach and provider-assisted referral.

- **Scale-up success.** Expand or scale up successful local HIV testing adaptations that have helped to overcome difficulties linked to COVID-19. Experiences that limit the impact of COVID-19 on HIV testing services and ART initiations should be expanded rapidly. Use of virtual services through phone, internet or mobile apps for teleconsultation, counselling and linkage to care activities should be considered and rapidly expanded to overcome current and emerging challenges.
- **Information and messaging.** Underutilization of services and, more broadly fear of COVID-19, should be addressed through information campaigns. Localized strategies and action plans to manage infodemics are needed to prevent the spread, and combating, mis- and disinformation in the community. Focused messages are needed particularly for health workers and vulnerable communities, as well as for key populations who remain disproportionately affected by HIV worldwide; and both men and adolescent girls and young women in sub-Saharan Africa who comprise a significant number of the remaining people with HIV who do not know their status and not on ART.

Peer-led and video-based messages to encourage uptake of essential health services (such as HIV testing and ART) can be effective to increase demand (14). These approaches can also be leveraged for disseminating COVID-19 messages and services, such as masks and vaccines. In some high HIV burden settings, integration of HIV and COVID-19 outreach activities may be appropriate such as through testing services.



# REFERENCES

1. Zhu N, Zhang D, Wang W, Li X, Yang B, Song J, et al. A novel coronavirus from patients with pneumonia in China. 2019. *N Engl J Med*. 2020;382(8):727-733. Available from: <https://doi.org/10.1056/NEJMoa2001017>
2. Coronavirus disease (COVID-2019) situation reports. World Health Organization: Geneva; 2020. Available from: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>
3. Coronavirus resource center. Johns Hopkins Coronavirus Resource Center: Baltimore. 2021 [10 November]. Available from: <https://coronavirus.jhu.edu/>
4. UNAIDS. Seizing the moment. Global AIDS update. Joint United Nations Program on HIV/AIDS: Geneva; 2021. Available from: <https://www.unaids.org/en/resources/documents/2021/2021-global-aids-update>
5. Giguère K, Eaton JW, Marsh K, Johnson LF, Johnson CC, Ehui E, et al. Trends in knowledge of HIV status and efficiency of HIV testing services in sub-Saharan Africa, 2000–20: a modelling study using survey and HIV testing programme data. *Lancet HIV*. 2021; 8(5):E284-E293. Available from: [https://doi.org/10.1016/S2352-3018\(20\)30315-5](https://doi.org/10.1016/S2352-3018(20)30315-5)
6. PEPFAR panorama spotlight. Washington: United States: President's Emergency Plan for AIDS Relief. 2021 [10 November 2021]. Available from: <https://data.pepfar.gov/>
7. Global Fund. Results Report. Global Fund: Geneva. 2021 [1 November]. Available from: <https://www.theglobalfund.org/en/results/>
8. Rick F, Odoke W, van den Hombergh J, Benzaken AS, Avelino-Silva VI. Impact of coronavirus disease (COVID-19) on HIV testing and care provision across four continents. *HIV Med*. 2021; 00: 1– 9. Available from: <https://doi.org/10.1111/hiv.13180>
9. Zang X, Krebs E, Chen S, Piske M, Armstrong WS, Behrends CN, et al. The potential epidemiological impact of COVID-19 on the HIV/AIDS epidemic and the cost-effectiveness of linked, opt-out HIV testing: a modeling study in six US cities. *Clin Infect Dis*. 2020; 72(11):e828-e834. Available from: <https://doi.org/10.1093/cid/ciaa1547>
10. Country and technical guidance - Coronavirus disease (COVID-19). World Health Organization: Geneva; 2021. Available from: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance-publications>
11. Nguyen TV, Pham DM, Vo HS, Huynh MT, Dap TG, Pham Nguyen AT, et al. Web-based HIV self-test distribution encourages testing and linkage among young men who have sex with men and first-time testers in three provinces in Viet Nam. 11th International AIDS Conference (virtual); 18-21 July 2021. Available from: <https://theprogramme.ias2021.org/Abstract/Abstract/2483>
12. Maintaining essential health services: operational guidance for the COVID-19 context: interim guidance. World Health Organization: Geneva; 2020. Available from: <https://apps.who.int/iris/handle/10665/332240>
13. Consolidated guidelines on HIV prevention, testing, treatment, service delivery and monitoring: recommendations for a public health approach. World Health Organization: Geneva; 2021. Available from: <https://apps.who.int/iris/handle/10665/342899>
14. Consolidated guidelines on HIV testing service. World Health Organization: Geneva; 2019. Available from: <https://apps.who.int/iris/handle/10665/336323>





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