CONSOLIDATED GUIDELINES ON PERSON-CENTRED HIV STRATEGIC INFORMATION: STRENGTHENING ROUTINE DATA FOR IMPACT

POLICY BRIEF ON ENHANCING MONITORING OF HIV TESTING AND TREATMENT

World Health Organization

BACKGROUND

Recent World Health Organization (WHO) guidelines for strategic information on HIV recommend improved monitoring and use of individual patient-level data to track the health status of people living with HIV, improve service delivery, track HIV epidemic trends and measure programme performance *(1)*.

In particular, new recommendations and guidance extend the scope of HIV patient monitoring to include HIV testing. With this addition, the guidance encompasses robust monitoring and linkage throughout the entire cascade of care, from diagnosis through treatment and chronic care. Integration of diseases and services is also supported with the inclusion of TB-HIV and vertical transmission and maternal and child health within the guidance for monitoring HIV testing and treatment.

Key recommendations on monitoring testing, early diagnosis and treatment

NEW 1. Promote the analysis and **use of routinely collected testing data** to optimize HIV testing services, reaching populations and settings with the largest proportion of people living with HIV who do not know their status and supporting early HIV diagnosis.

a) Improve the **monitoring of time to HIV diagnosis** to support rapid ART initiation and engagement in care, thus reducing morbidity and mortality.

UPDATE 2. Use of person-centred patient data is recommended to **continuously assess interruption of HIV treatment to improve re-engagement and retention in care.**

a) Strengthen the routine analysis and use of data to assess treatment interruption and facilitate tracing interventions to support ART re-initiation and re-engagement in care.

b) Longitudinal monitoring of people on ART is recommended, through linkage of data across services via improved referral and follow-up and integrated service delivery.

c) Use standardized and digitalized tools for health facilities and community-delivered services to optimize data collection, reporting and flow of data for linkage and monitoring.

NEW 3. Integrate and strengthen data collection and reporting of **differentiated service delivery** in HIV patient monitoring systems to improve treatment outcomes and programmatic efficiency.

a) Integrate and **strengthen data collection and reporting of differentiated service delivery** within the HIV patient monitoring system, linking to monitoring of community-delivered services while ensuring that health facilities retain overall responsibility for clinical care and follow-up.

b) Monitor the impact of differentiated service delivery on treatment outcomes, including retention, viral load (VL) suppression and programme efficiencies, for example, reduced clinical visits and staff time.

Key recommendations on monitoring testing, early diagnosis and treatment (continued)

UPDATE 4. **Data quality and use:** Include routinely scheduled data quality assessments in long-term data quality improvement to strengthen data use and improve HIV treatment outcomes.

a) **Integrate routine assessment of the quality of data on HIV treatment and VL testing** with broader, long-term data quality improvement processes to support a systems approach to strengthening data quality and use.

b) **Strengthen the use of data** by supporting enhanced data analysis, frequent feedback to data custodians and users, use of standardized information products, and mentorship and training to improve treatment outcomes and service delivery.

NEW 5. **Drug stock data: Use aggregated, deduplicated individual-level patient treatment data to more accurately inform drug inventory management**,[1] **dispensing, procurement and logistics** at national, district and facility levels, thus reducing drug wastage and stock-outs.

Broadly, the new Consolidated guidelines on person-centred HIV strategic information: strengthening routine data for impact aim to help countries improve how routine patient data are collected, analysed and used. They propose a minimum dataset that captures key events in an individual's interaction with the health system, recommend priority indicators for monitoring a person's health, and make key recommendations for data systems and use. In addition to monitoring of HIV prevention, testing and treatment, the guidelines address, HIV-related infections, using routine surveillance data to measure programme impact, supplementing routine patient data with data from other sources, and digital health data in HIV services.

STRENGTHENING MONITORING AND DATA USE TO IMPROVE REENGAGEMENT AND RETENTION IN CARE

Long-term retention in HIV care remains a key challenge for HIV programmes, with impacts on the health of people living with HIV, the emergence of HIV drug resistance and onward transmission of HIV. Monitoring retention or attrition from ART is critical for programme management. It is measured by the indicator ART.2 Total attrition from ART, recommended by WHO in the new guidelines as a core priority indicator.

Continuous monitoring and enhanced use at the facility and subnational levels of ART attrition data, disaggregated by priority populations, can identify gaps in the HIV care cascade that contribute to late presentation for care, loss to follow-up and treatment interruption. In addition, these data should be analysed to identify the reasons that individuals interrupt treatment or are lost to follow-up, including health system issues (for example, long waiting times, poor quality of service), sociodemographic issues and client- and treatment-related factors (for example, antiretroviral (ARV) toxicity).

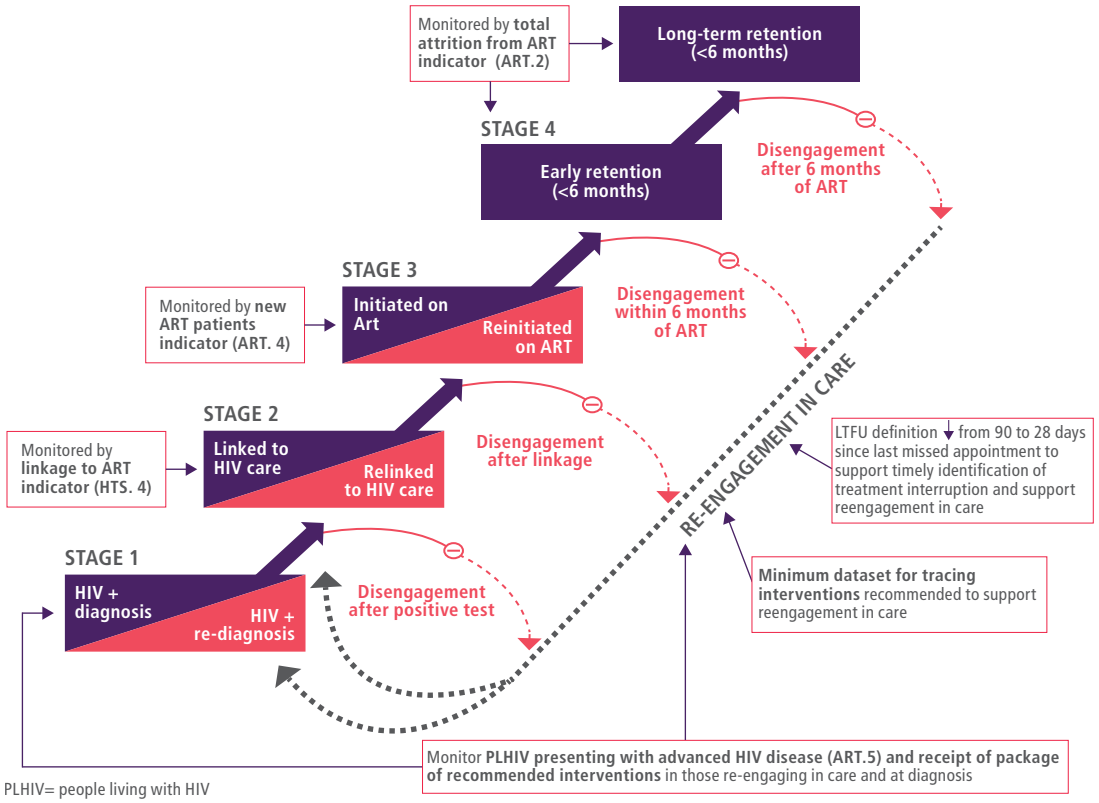
To support timely identification of treatment interruption and reengagement into care, the definition of lost to follow-up has been reduced from 90 days or more since the last missed appointment to 28 days or more, including missed ARV refills in either facility or community settings to account for differentiated service delivery. This reduced timeframe is important because treatment interruption or discontinuation may result in viral rebound, immune decompensation and/or clinical progression *(2,3)*.

[1] Drug stocks could include ART, PrEP and drugs for treating opportunistic infections and for opioid agonist maintenance therapy.

Recent programmatic data from 45 countries show that rates of treatment interruption are three times higher in individuals on ART for less than three months than among those on treatment for three months or more *(4)*. This observation underscores the importance of prompt identification of treatment interruption following ART initiation and support for reengagement into treatment.

Another key consideration for patient monitoring is that the HIV care cascade is cyclical, with individuals engaging and re-engaging in care at different points. This has been termed the "revolving door of HIV care" *(5)*. It is critical for understanding, monitoring and addressing treatment interruption. HIV patient monitoring should be adapted to reflect and monitor this dynamic cycle of engagement and reengagement in HIV services. Fig. 1 illustrates the cyclical cascade of HIV care and various approaches to person-centred longitudinal monitoring recommended by WHO.

Fig. 1 Monitoring treatment interruption, linkage to ART, ART initiation and reengagement in services within the dynamic cycle of HIV care



Source: Adapted from Ehrenkranz P et al. *(5)*.
Indicators: HTS.4 Linkage to ART: percentage of people newly diagnosed with HIV initiated on ART; ART.2 Total attrition from ART: number and percentage of people living with HIV on ART at the end of the last reporting period and those newly initiating ART during the current reporting period who were not on ART at the end of the current reporting period; ART.4 New ART patients: number of people living with HIV who initiated ART; ART.5 Late ART initiation: percentage of people living with HIV who initiate ART with a CD4 count of <200 cells/mm^3

Monitoring late ART initiation and advanced HIV disease to improve patient care and outcomes

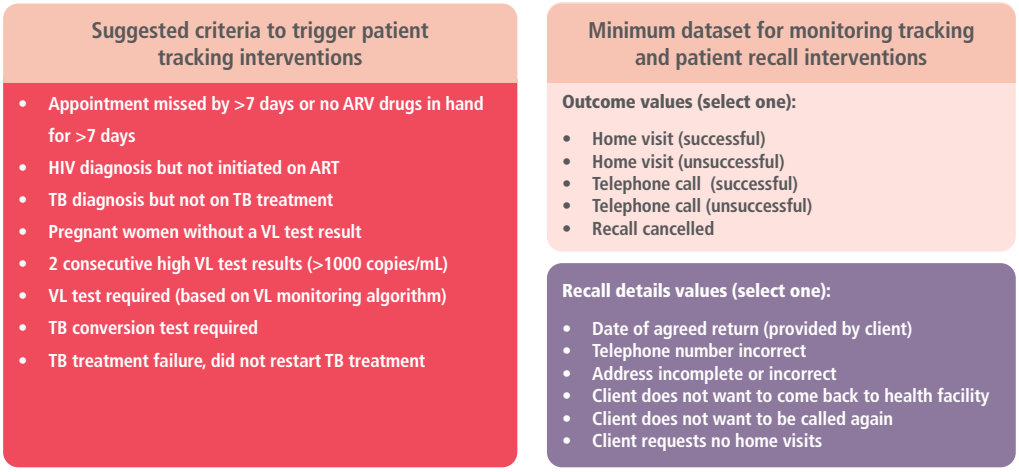
Late initiation of ART is a risk factor for treatment failure and is important to monitor. WHO recommends monitoring late initiation with the core priority indicator ART.5 Percentage of people living with HIV who initiate ART with a CD4 count of <200 mm^3. Late initiation of ART most likely reflects treatment interruption and disengagement from HIV care in facilities or community ART services as well as possible problems with linkage to care. Late initiators can include people with advanced disease (defined by a CD4 cell count of less than 200 cells/mm^3 and/or WHO clinical stage 3 or 4 disease in adults and adolescents *(6)*) who recently received an HIV diagnosis or who re-enter care. Monitoring people with advanced disease and their response to ART is important, given their greater risk of adverse events and mortality. Additionally, it is important to monitor receipt of the package of care for advanced HIV disease recommended by WHO for patient management and care *(6)*.

Enhanced use of data to support tracing interventions and reengagement in care

Interventions to identify individuals who disengage from care and to support their reengagement are a key WHO recommendation for differentiated HIV service delivery *(7)*. WHO recommends a minimum set of data elements that monitors tracing and patient recall interventions and suggests criteria to trigger such interventions (Fig. 2).

Patient monitoring tools can capture these data elements (see Web Annex H for a generic HIV care and treatment card that can be adapted for country use).

Fig. 2 Suggested criteria to trigger patient tracking and minimum dataset for monitoring tracking and patient recall interventions



ARV=antiretroviral; TB=tuberculous; VL=viral load

In addition, strengthening the linkage and flow of data between facilities and community service delivery sites in the context of differentiated service delivery is key for improved patient management and more accurate measurement of the real outcomes of individuals classified as lost to follow-up (LTFU). Standardized tools developed by WHO can help, such as the community monitoring ART tool (Web Annex I) and the transfer/referral form (Web Annex J).

LONG-TERM DATA QUALITY IMPROVEMENT AND USE TO STRENGTHEN PATIENT MANAGEMENT AND CARE

Accurate and timely data are critical for effective patient management, efficient use of resources, monitoring progress towards established targets and accurate and timely procurement of ARVs and laboratory commodities.

WHO recommends that countries develop strategies for improving both data quality and use and linking data quality assessment (DQA) with remedial actions.

Data quality improvement (DQI) encompasses a broad range of activities that include, but are not limited to, DQAs. The specific activities included in a DQI strategy will depend on context – data collection systems in use, monitoring and evaluation processes, available resources, existing supportive supervision and quality improvement processes, among other factors.

Ultimately, DQI is useful only if accompanied by enhanced data use to improve service delivery and health outcomes. Using data at the level of collection improves clinical care and management, strengthens the health service and improves the quality of the data. Enhanced data analysis and use can provide additional information to correct quality of care problems as well as to improve programme management and surveillance activities.

COUNTRY ADAPTATION AND IMPLEMENTATION

Table 1 summarizes key steps recommended to adopt and implement the new recommendations and considerations for HIV testing and treatment of the WHO 2022 consolidated HIV strategic information guidelines.

Table 1. Key steps for country adoption of WHO 2022 recommendations for HIV testing and treatment monitoring

Action	Description
1. Gather stakeholders	Key stakeholders discuss revision and updates required for HIV testing and treatment.
2. Review indicators and minimum dataset	Review the changes in the recommended key indicators and the minimum dataset; determine which to add to the existing health information system.
3. Review and update data system and tools for data collection	Review HIV patient monitoring tools (with the addition of data elements included in the minimum dataset); add, adapt or remove tools as necessary. Review digital health system and plans for transition from paper to electronic reporting, issues of interoperability, use of unique patient identifiers (if not already in use) and data security and governance issues.
4. Identify supervision structure	Confirm supervision structure if already existing. If none exists, plan who will carry out, supervise and support patient monitoring at community, facility, district, subnational and national levels, including for periodic review of the revised patient monitoring system.
5. Develop training materials and conduct training	Adapt existing (or develop new) training materials to prepare staff at all levels for the use of the revised patient monitoring tools; then train and retrain as necessary.
6. Review data quality and use	Review data quality and use guidelines and tools, if existing; if not, develop and implement.
7. Coordinate across programmes and partners	Include patient monitoring in programme budgets, funding proposals, strategic planning and policy documents to ensure sustainability and continuing improvement of the revised HIV patient monitoring system.

Photo: © WHO

REFERENCES

1. Consolidated guidelines on person-centred HIV strategic information: strengthening routine data for impact. Geneva: World Health Organization; 2022 (https://www.who.int/publications/i/item/9789240055315, accessed 15 August 2022).
2. Holkmann Olsen C, Mocroft A, Kirk O, Vella S, Blaxhult A, Clumeck N et al. Interruption of combination antiretroviral therapy and risk of clinical disease progression to AIDS or death. HIV Med. 2007;8:96–104.
3. Kousignian I, Abgrall S, Grabar S, Mahamat A, Teicher E, Rouveix E et al. Maintaining antiretroviral therapy reduces the risk of AIDS-defining events in patients with uncontrolled viral replication and profound immunodeficiency. Clin Infect Dis. 2008;46:296–304.
4. Sherock M, Bachanas P, Lee L, Biedron C, Aberle-Grasse J, Agaba P et al. High rates of interruptions in HIV treatment in people living with HIV on ART less than three months across the age continuum. Abstract number: PESAE08. Abstract supplement. 24th International AIDS Conference, 29 July–2 August 2022. J Int AIDS Soc. 2022;25:103-4 (https://onlinelibrary.wiley.com/doi/epdf/10.1002/jia2.25935, accessed 15 August 2022).
5. Ehrenkranz P, Rosen S, Boulle A, Eaton JW, Ford N, Fox MP et al. The revolving door of HIV care: revising the service delivery cascade to achieve the UNAIDS 95–95–95 goals. PLoS Med. 2021;18:e1003651. doi: 10.1371/journal.pmed.1003651.
6. Consolidated guidelines on HIV prevention, testing, treatment, service delivery and monitoring: recommendations for a public health approach. Geneva: World Health Organization; 2021 (https://www.who.int/publications/i/item/9789240031593, accessed 15 August 2022).
7. Updated recommendations on service delivery for the treatment and care of people living with HIV. Geneva: World Health Organization; 2021 (https://www.who.int/publications/i/item/9789240023581, accessed 15 August 2022).

FOR MORE INFORMATION, CONTACT:

World Health Organization
Department of Global HIV Hepatitis and Sexually Transmitted Infections Programmes
20, avenue Appia
1211 Geneva 27
Switzerland
E-mail: hiv-aids@who.int
www.who.int/hiv

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