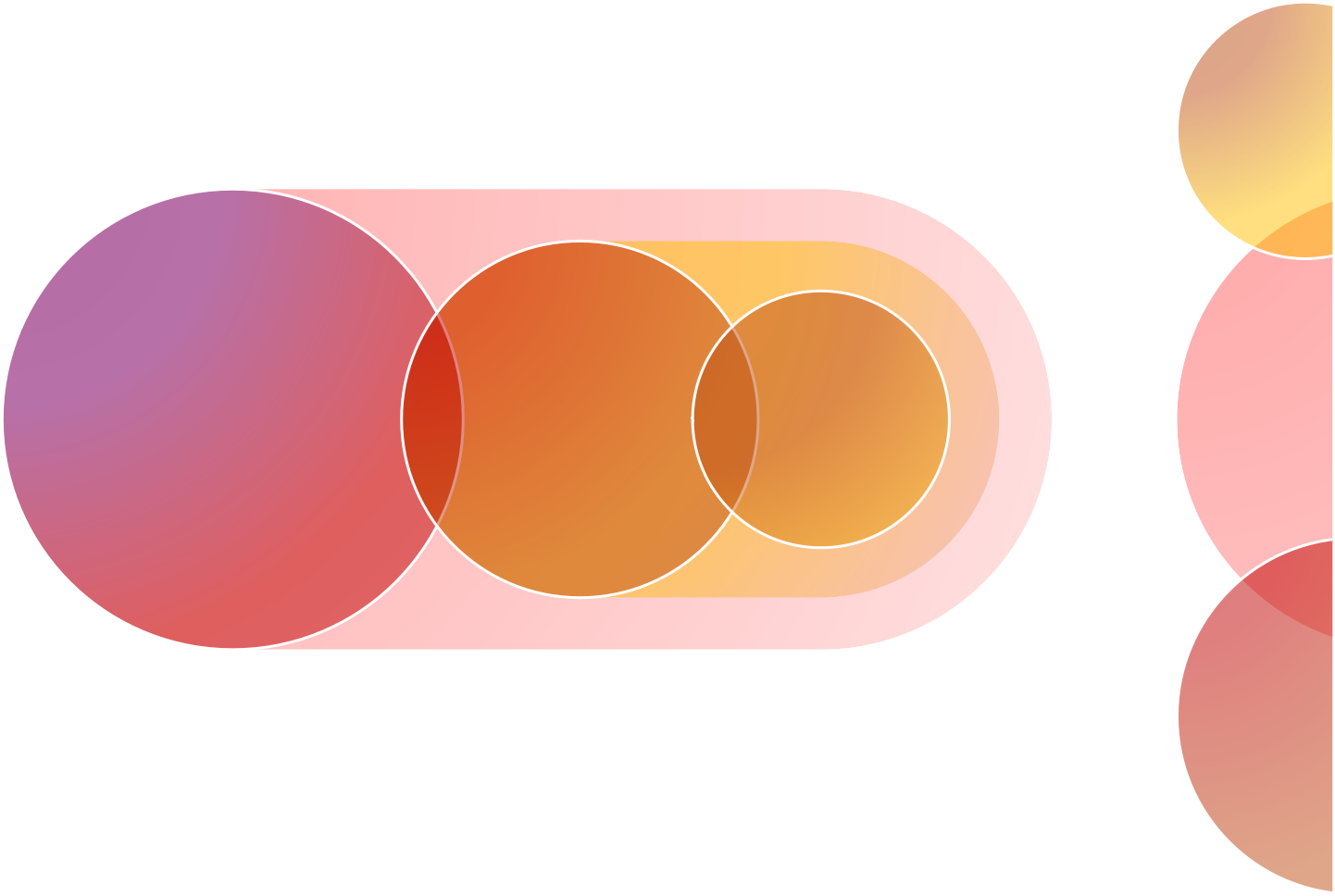
Advanced HIV Disease



Monitoring and Evaluation Toolkit

December 2024

AHD Monitoring and Evaluation Toolkit

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AHD Monitoring and Evaluation Toolkit

Dictionary of Terms

Dictionary of Terms for clarification on the terminology used herein.

Dictionary of Terms		
1	Advanced HIV Disease	In adults, adolescents, and children older than five years AHD is defined as having a CD4 cell count <200cells/mm3 or a WHO clinical stage 3 or 4 event. All children younger than five years of age are considered to have advanced HIV disease, unless they have been receiving antiretroviral therapy for more than one year and are clinically stable [1,2,3,4].
2	People likely to experience AHD	People living with HIV presenting who have never been on antiretroviral therapy, individuals who had previously initiated ART and who stop HIV treatment and people who have treatment failure are likely to experience AHD should be assessed for advanced HIV disease and should be offered the advanced HIV disease package as appropriate. [1,5]
3	A seriously ill adult	This is defined as having any of the following danger signs: respiratory rate ≥30 breaths per minute; heart rate ≥120 beats per minute; or unable to walk unaided. Other clinical conditions, such as body temperature ≥39°C, can also be considered based on local epidemiology and clinical judgement. [6]
4	A seriously ill child	This is defined as having any of the following danger signs: lethargy or unconsciousness; convulsions; unable to drink or breastfeed; and repeated vomiting. Other clinical conditions such as body temperature ≥39°C and age-defined tachycardia and/or tachypnoea can be considered based on clinical judgement. [6]
5	Established on ART	A person living with HIV and: receiving ART for at least six months; no current illness, which does not include well-controlled chronic health conditions; good understanding of lifelong adherence: adequate adherence counselling provided; and evidence of treatment success: at least one suppressed viral load result within the past six months (if viral load is not available: CD4 count >200 cells/mm3 (CD4 count >350 cells/mm3 for children 3-5 years old) or weight gain, absence of symptoms and concurrent infections). [1]
6	Rapid ART initiation	This is defined as initiation of ART within seven days of HIV diagnosis. People with advanced HIV disease should be given priority for assessment and initiation. [1]
7	AHD package of care	A package of interventions including screening, treatment and/or prophylaxis for major opportunistic infections, rapid ART initiation and intensified adherence support interventions offered to everyone presenting with advanced HIV disease. [1]
8	Cryptococcal antigen assays (CrAg)	Rapid diagnostic cryptococcal antigen assays, preferably lateral flow assays, for use in cerebrospinal fluid (CSF), serum, plasma or whole blood. [1]
9	CSF CrAg	Rapid diagnostic cryptococcal antigen assays, preferably lateral flow assays, for use in cerebrospinal fluid. [1]

1 Introduction

1.1 Background

The "AHD Monitoring and Evaluation Toolkit" is an essential resource designed to assist ICAP/CQUIN member countries or any other national programs seeking to establish M&E systems for AHD countries and program implementers in monitoring the effective scaling up of Advanced HIV Disease (AHD) services. As the global health community continues to strive towards the elimination of HIV/AIDS, the need for an AHD monitoring and evaluation (M&E) framework has become increasingly critical and this toolkit addresses this need by providing a comprehensive guide that aligns with global and national priorities and guidelines, ensuring that AHD programs are both effective and efficient.

Advanced HIV Disease remains a significant challenge in many parts of the world, particularly in low- and middle-income countries. Despite the progress made in the fight against HIV/AIDS, a substantial number of people living with HIV (PLHIV) still progress to advanced stages of the disease. This progression often results in severe health complications and increased mortality rates. Therefore, the implementation and monitoring of effective AHD services is crucial in mitigating these outcomes and improving the quality of life for PLHIV.

1.2 Purpose

The primary purpose of this toolkit is to offer a structured approach to the monitoring and evaluation of AHD services. It provides detailed descriptions of various indicators, including impact, outcome, coverage, and process indicators, which are essential for high-level reporting and program improvement. By standardizing these indicators and methodologies, the toolkit aims to enhance the effectiveness and efficiency of AHD interventions. This, in turn, will contribute to better health outcomes for people with AHD.

Moreover, the toolkit outlines quality assessment standards and indicators to ensure that AHD services meet the highest standards of care. Quality assessment is a critical component of any healthcare program, as it ensures that services are delivered in a manner that is both effective and respectful of patients' rights and needs. By adhering to these standards, program implementers can ensure that their AHD services are not only effective but also equitable and person-centered.

This document is intended to serve as a guidance for countries or program implementers leading the scale up of AHD services. The recommended indicators are intended to be adapted to reflect national priorities, relevant aspects of national guidelines for AHD and M&E systems and will be more useful if implemented in tandem with a patient-level data collection and management system.

2 Overview of Contents

The "AHD Monitoring and Evaluation Toolkit" is organized into several key sections, each of which provides valuable information and guidance for program implementers. Below is a brief overview of the contents of the toolkit:

1. **Conceptual Framework**: This section outlines the theoretical basis for AHD monitoring and evaluation. It provides an overview of the key concepts and principles that underpin the toolkit, including the importance of a robust M&E framework in the context of AHD services.
2. **Indicators**: This section provides a summary, and detailed descriptions of various indicators used in the monitoring and evaluation of AHD services. These indicators are categorized into

four main types: impact, outcome, coverage, and process indicators. Each indicator is accompanied by a detailed description, including its definition, purpose, and how it should be measured.

3. **Service Quality Assessment Standards**: This section details the standards and indicators used to assess the quality of AHD services. It includes guidelines on how to conduct quality assessments and how to use the results to improve service delivery. The standards are designed to ensure that AHD services are delivered in a manner that is both effective and respectful of patients' rights and needs.

4. **Appendices**: This section includes additional resources and reference materials that can be used to support the implementation of AHD services. It provides links to relevant documents, tools, and guidelines that can help program implementers in their work.

3 Conceptual Framework

Monitoring and evaluation are critical components of any healthcare program, and AHD services are no exception. Effective M&E frameworks enable program implementers to track the progress of their interventions, identify areas for improvement, and make data-driven decisions. This, in turn, leads to better health outcomes for patients and more efficient use of resources.

In the context of AHD services, monitoring and evaluation are particularly important for several reasons. First, they enable program implementers to assess the effectiveness of their interventions in reducing the incidence and severity of advanced HIV disease. By tracking key indicators, such as the number of people receiving AHD services and the outcomes of these recipients of care and the services received, program implementers can determine whether their interventions are having the desired impact.

Second, monitoring and evaluation helps to ensure that AHD services are delivered in a manner that is both equitable and person-centered. By assessing the quality of care provided, program implementers can identify any gaps or disparities in service delivery and take steps to address them. This is particularly important in the context of HIV/AIDS, where stigma and discrimination can often result in unequal access to care.

Finally, monitoring and evaluation provides valuable data that can be used to inform policy and advocacy efforts. By demonstrating the impact of AHD services, program implementers can make a compelling case for continued investment in these services. This is crucial for ensuring the sustainability of AHD programs and for mobilizing the resources needed to scale up these services.

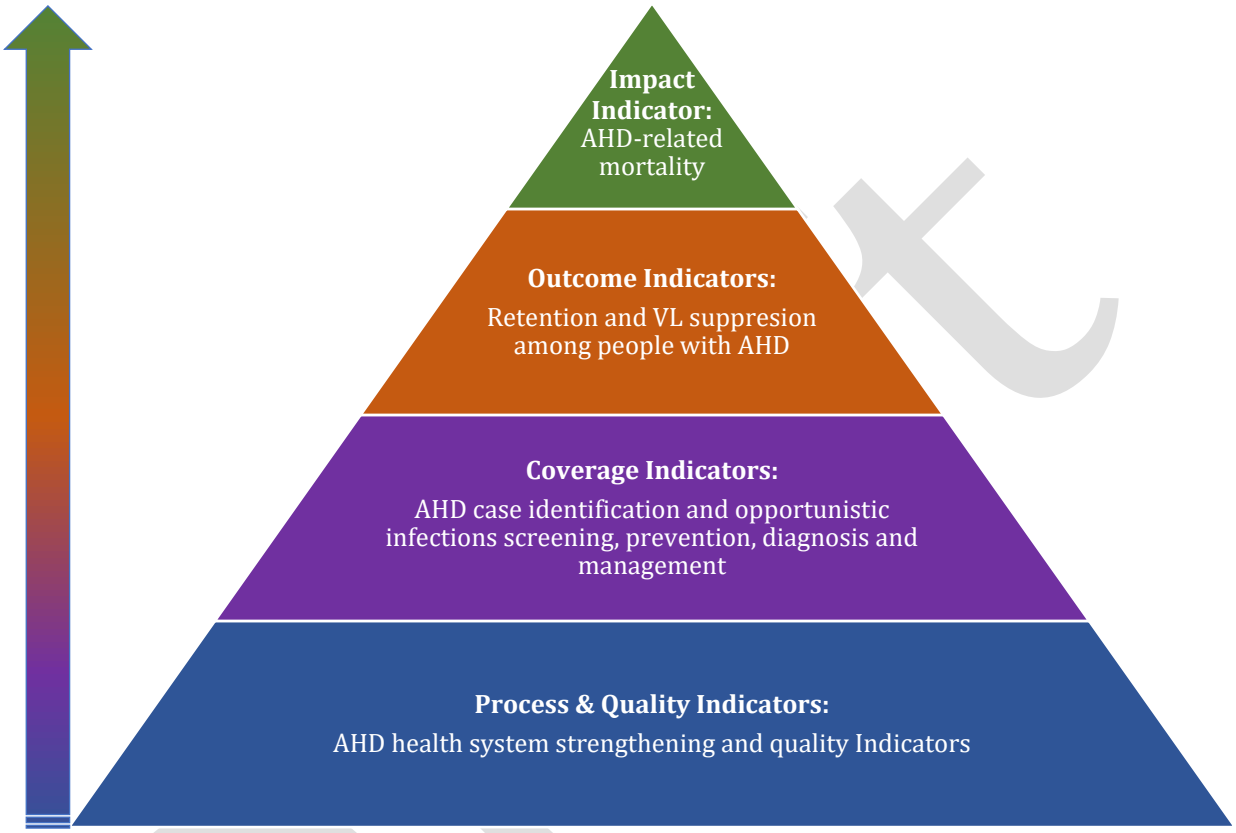
Figure 1 below summarized the AHD Monitoring and Evaluation Conceptual Framework from process to impact indicators. The outcome and impact indicators form the core metrics for high-level reporting. These indicators provide essential insights into the overall progress and effectiveness of AHD initiatives and are useful at both global and national level to track and drive targeted implementation of AHD service delivery.

However, the success of these high-level outcomes is closely tied to coverage and process indicators. These indicators vary depending on the current stage of AHD implementation, the specific priorities of each country, and other relevant factors.

Without the diligent tracking and management of coverage and process indicators, achieving the desired outcome and impact becomes unlikely. It is through the careful monitoring and adjustment

of these intermediate indicators that the ultimate success of AHD initiatives can be ensured. Therefore, a balanced focus on both sets of indicators is crucial for driving meaningful and sustainable improvements in the fight against advanced HIV disease.

Figure 1: AHD Monitoring and Evaluation Conceptual Framework: Going from Process to Impact



4 Indicators

4.1 Summary of AHD impact, outcome, coverage, and process indicators

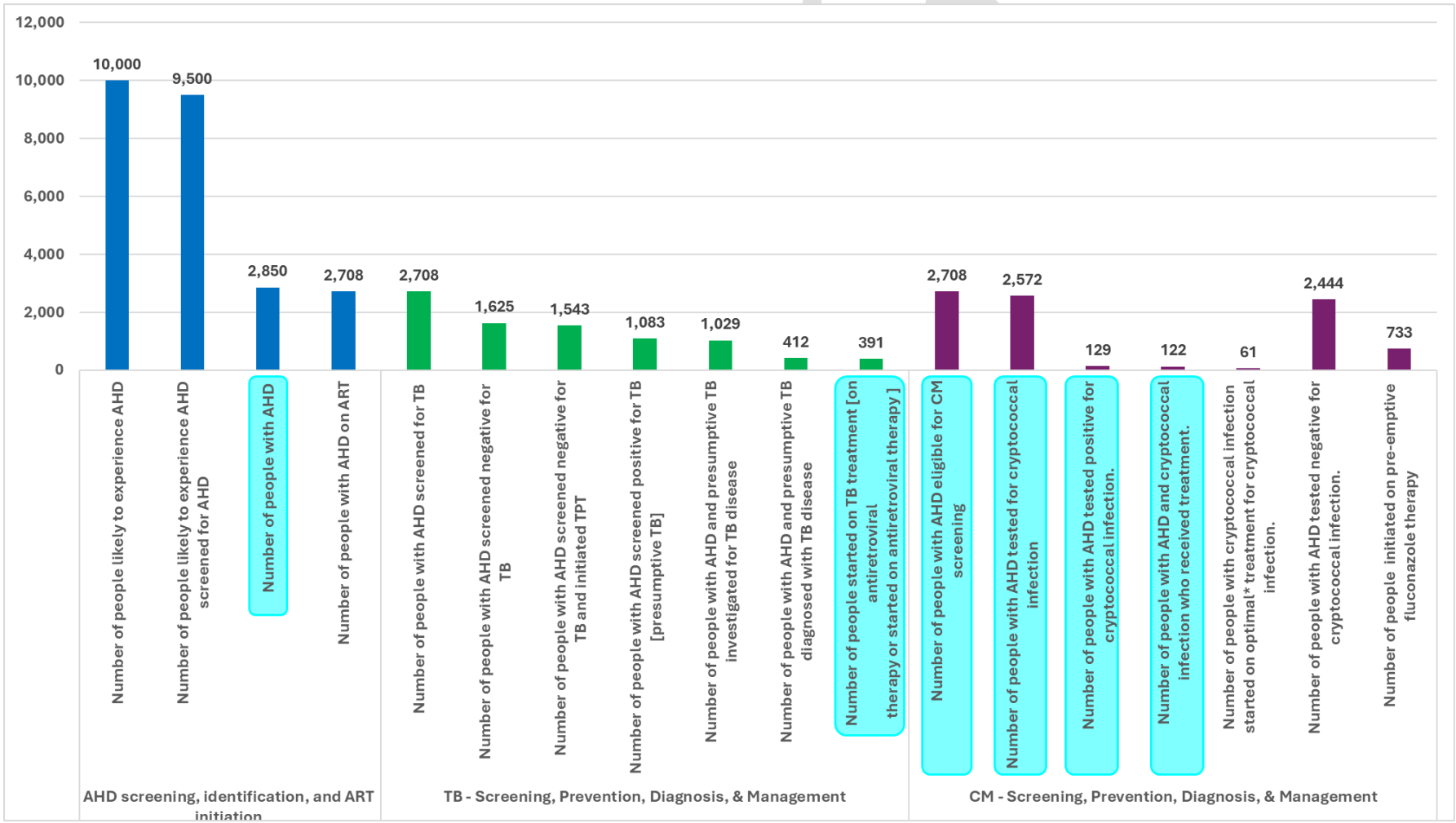
In the context of HIV programs, assessing the impact of Advanced HIV Disease (AHD) involves determining key AHD indicators designed to track mortality, retention, viral load suppression, and opportunistic infection management as impact, outcome, coverage and process indicators (summarized in Table 1 below) that play a crucial role in evaluating differentiated service delivery and person-centered services for AHD.

Table 1: Summary of AHD impact, outcome, coverage, and process indicators

Impact Indicators
AIDS Mortality: Total number of people who have died from AIDS-related causes per 100 000 population
Outcome Indicators
1. Proportion of PLHIV with AHD **retained** on treatment at 3, 6 & 12 months after enrolment into AHD care
2. Proportion of PLHIV with AHD and with **suppressed VL** at 3, 6 & 12 months after enrolment into AHD care
Coverage Indicators
AHD screening, identification, and ART initiation
1. Proportion of people likely to experience AHD **screened** for AHD during the reporting period
2. **AHD and Late Diagnosis:** Percentage and number of adults and children with CD4 cell count <200 cells/mm3 (or <15%) at initial diagnosis or initiation/reinitiation of antiretroviral therapy during the reporting period
3. Proportion of people identified with AHD during the reporting period **receiving ART**
OI screening, prevention, diagnosis, and management **[Indicators in section 3 below]**
1. TB - Screening, Prevention, Diagnosis, & Management 2. CM - Screening, Prevention, Diagnosis, & Management 3. Severe Bacteria Infections - Screening, Prevention, Diagnosis, & Management 4. Histoplasmosis - Screening, Diagnosis, & Management **5.** Other OI - Screening, Prevention, Diagnosis, & Management
Malnutrition **[Indicators in section 3 below]**

The figure below shows a combined AHD screening and OI screening, prevention, diagnosis and management cascade. This consists of 18 data variables that also incorporate the UNAIDS AHD indicators reported into the Global Aids Monitoring system.

Figure 2: Proposed AHD Cascade from a population of 10,000 people likely to experience AHD



4.2 Detailed Description of AHD Impact, Coverage and Outcome Indicators

No.	Indicator	Numerator	Denominator	Data Source	Data use	Reporting Frequency	Required Disaggregation
1.0 Impact Indicators							
1.1	AIDS Mortality: Total number of people who have died from AIDS-related causes per 100 000 population	Number of people dying from AIDS-related causes during the calendar year	Total population regardless of HIV status	Variety of measures - vital registration system adjusted for misreporting, as part of a facility- or population-based survey that may include verbal autopsy and through mathematical modelling using such tools as Spectrum.	National/ program/ facility M&E; Reporting at National Level or to the Funder	Annually to UNAIDS GAM	Age (<5, 5‑14 and 15+ years). Sex

No.	Indicator	Numerator	Denominator	Data Source	Data use	Reporting Frequency	Required Disaggregation
2.0 Outcome Indicators							
2.1	Proportion of PLHIV with AHD retained on treatment at **3 months** after enrolment into AHD care	Number of PLHIV with AHD identified within the previous reporting period retained in treatment at 3 months after enrolment into AHD care	Number of PLHIV with AHD identified within the previous reporting period	AHD register, ART cohort register, EMR	National/ program/ facility M&E; Reporting at National Level or to the Funder	Annually	Age Sex PLHIV likely to experience AHD
2.2	Proportion of PLHIV with AHD retained on treatment at **6 months** after enrolment into AHD care	Number of PLHIV with AHD identified within the previous reporting period retained in treatment at 6 months after enrolment into AHD care	Number of PLHIV with AHD identified within the previous reporting period	AHD register, ART cohort register, EMR	National/ program/ facility M&E; Reporting at National Level or to the Funder	Annually	Age Sex PLHIV likely to experience AHD

No.	Indicator	Numerator	Denominator	Data Source	Data use	Reporting Frequency	Required Disaggregation
2.3	Proportion of PLHIV with AHD retained on treatment at **12 months** after enrolment into AHD care	Number of PLHIV with AHD identified within the previous reporting period retained in treatment at 12 months after enrolment into AHD care	Number of PLHIV with AHD identified within the previous reporting period	AHD register, ART cohort register, EMR	National/ program/ facility M&E; Reporting at National Level or to the Funder	Annually	Age Sex PLHIV likely to experience AHD
2.4	Proportion of PLHIV with AHD and with suppressed VL at **3 months** after enrolment into AHD care	Number of PLHIV with AHD identified within the previous reporting period and with suppressed VL at 3 months after enrolment into AHD care	Number of PLHIV with AHD identified within the previous reporting period	AHD register, ART cohort register, EMR	National/ program/ facility M&E; Reporting at National Level or to the Funder	Annually	Age Sex PLHIV likely to experience AHD
2.5	Proportion of PLHIV with AHD and with suppressed VL at **6 months** after enrolment into AHD care	Number of PLHIV with AHD identified within the previous reporting period and with suppressed VL at 6 months after enrolment into AHD care	Number of PLHIV with AHD identified within the previous reporting period	AHD register, ART cohort register, EMR	National/ program/ facility M&E; Reporting at National Level or to the Funder	Annually	Age Sex PLHIV likely to experience AHD
2.6	Proportion of PLHIV with AHD and with suppressed VL at **12 months** after enrolment into AHD care	Number of PLHIV with AHD identified within the previous reporting period and with suppressed VL at 12 months after enrolment into AHD care	Number of PLHIV with AHD identified within the previous reporting period	AHD register, ART cohort register, EMR	National/ program/ facility M&E; Reporting at National Level or to the Funder	Annually	Age Sex PLHIV likely to experience AHD

No.	Indicator	Numerator	Denominator	Data Source	Data use	Reporting Frequency	Required Disaggregation
3.0 Coverage Indicators							
3.1 AHD screening							
3.11	Proportion of people likely to experience AHD screened for AHD during the reporting period	Number of people diagnosed with HIV for the first time or initiating/re-initiating antiretroviral therapy or people likely to have treatment failure or severely ill during the reporting period with: 1. Adults (aged ≥15 years): a CD4 cell count recorded within one month of initial diagnosis or initiation/re-initiation of ART; and, 2. Children aged 5–14 years: a CD4 cell count (or percentage) recorded within one month of initial diagnosis or initiation/re-initiation of ART; 3. Children 0–59 months: all living with HIV.	Number of people diagnosed with HIV for the first time or initiating/re-initiating antiretroviral therapy or people likely to have treatment failure or severely ill during the reporting period	EMR/Facility-based ART Registers	National/ program/facility programming and reporting at national level	Quarterly	Age Sex PLHIV likely to experience AHD

No.	Indicator	Numerator	Denominator	Data Source	Data use	Reporting Frequency	Required Disaggregation
3.2 AHD identification							
3.21	AHD and Late Diagnosis: Percentage and number of adults and children with CD4 cell count <200 cells/mm3 (or <15%) at initial diagnosis or initiation/reinitiation of antiretroviral therapy during the reporting period	At initial HIV diagnosis or at initiation/re-initiation of antiretroviral therapy, the number of: 1. Adults (aged ≥15 years) living with HIV with CD4 cell count <200 cells/mm3 recorded at that time; and, 2. Children aged 5–14 years living with HIV with CD4 cell count <200 cells/mm3 or CD4 <15% recorded at that time; and, 3. Children 0–59 months living with HIV.	Number of people diagnosed with HIV for the first time or initiating/re-initiating antiretroviral therapy during the reporting period with: 1. Adults (aged ≥15 years): a CD4 cell count recorded within one month of initial diagnosis or initiation/re-initiation of ART; and, 2. Children aged 5–14 years: a CD4 cell count (or percentage) recorded within one month of initial diagnosis or initiation/re-initiation of ART; 3. Children 0–59 months: all living with HIV.	Health services registries, case report forms or laboratory information systems. People with CD4 count results should be included only if the CD4 test was conducted **within 1 month** of the time of initial diagnosis, initiation of antiretroviral therapy or reinitiation of antiretroviral therapy.	National/ program/facility programming and reporting at national level and to UNAIDS GAM to mitigate poor outcomes due to AHD	Annually	Aged 0–14 years (disaggregated by ages 0–59 months and 5–14 years) for children, and aged ≥15 years by sex (men and women) for adults. First time diagnosis, versus initiation or reinitiation of antiretroviral therapy.
3.3 AHD linkage to ART							
3.31	Proportion of people identified with AHD during the reporting period who are currently receiving ART	Number of people identified with AHD during the reporting period who are currently receiving ART	Number of people identified to have AHD during the reporting period	EMR/Facility-based ART Registers	National/ program/facility programming and reporting at national level	Quarterly	Age Sex PLHIV likely to experience AHD

No.	Indicator	Numerator	Denominator	Data Source	Data use	Reporting Frequency	Required Disaggregation
3.4 Tuberculosis screening, prevention, diagnosis, and management Tuberculosis screening, prevention, diagnosis, and management							
3.41	Proportion of people with AHD screened for TB during the reporting period	Number of people with AHD screened for TB during the reporting period	Number of people identified to have AHD during the reporting period	EMR/Facility-based ART and TB Registers	HIV and TB programs to reduce the mortality due to HIV-associated TB	Quarterly	Age Sex PLHIV likely to experience AHD
3.42	Proportion of people with AHD who screened **negative for TB** during the reporting period	Number of people with AHD who screened negative for TB during the reporting period	Number of people with AHD screened for TB during the reporting period	EMR/Facility-based ART and TPT Registers	HIV and TB programs to reduce the risk of developing active TB	Quarterly	Age Sex PLHIV likely to experience AHD
3.43	Proportion of people with AHD who screened negative for TB and initiated TPT during the reporting period	Number of people with AHD who screened negative for TB and initiated TPT during the reporting period	Number of people with AHD who screened negative for TB during the reporting period	EMR/Facility-based ART and TPT Registers	HIV and TB programs to reduce the risk of developing active TB	Quarterly	Age Sex PLHIV likely to experience AHD
3.44	Proportion of people with AHD who completed TPT among those who initiated TPT during the **previous** reporting period	Number of people with AHD who completed TPT among those who initiated TPT during the **previous** reporting period	Number of people with AHD who initiated TPT during the **previous** reporting period	EMR/Facility-based ART and TPT Registers	HIV and TB programs to reduce the risk of developing active TB	Quarterly	Age Sex PLHIV likely to experience AHD
3.45	Percentage of people living with HIV currently on ART initiating tuberculosis (TB) preventive treatment and who completed a course of TB preventive treatment	Number of people on antiretroviral therapy who completed TB preventive treatment among those who initiated any course of TB preventive treatment during the previous year e.g. 2022 cohort for 2024 reporting	Number of people on antiretroviral therapy who initiated any course of TB preventive treatment during the previous year (insert same cohort year as numerator: e.g., 2022 for 2024 reporting)	*Numerator:* Programme records (for example, antiretroviral therapy registers or electronic medical records (EMRs)). *Denominator:* Programme records (for example, antiretroviral	HIV and TB programs to reduce the risk of developing active TB	Annually	Gender (female, male, transgender). Age (<5 years, 5–14 years, 15+ years). Type of TB preventive treatment regimen (if the country is able to

No.	Indicator	Numerator	Denominator	Data Source	Data use	Reporting Frequency	Required Disaggregation
				therapy registers or EMRs).			report on disaggregation).
3.46	Proportion of people with AHD who screened **positive for TB** during the reporting period	Number of people with AHD who screened positive for TB (presumptive TB) during the reporting period	Number of people with AHD screened for TB during the reporting period	EMR/Facility-based ART and TPT Registers	HIV and TB programs to reduce the mortality due to HIV-associated TB	Quarterly	Age Sex PLHIV likely to experience AHD
3.47	Proportion of people with AHD and presumptive TB investigated for TB disease during the reporting period	Number of people with AHD and presumptive TB investigated for TB disease during the reporting period	Number of people with AHD and presumptive TB during the reporting period	EMR/Facility-based ART and TB Registers	HIV and TB programs to reduce the mortality due to HIV-associated TB	Quarterly	Age Sex PLHIV likely to experience AHD Type of TB investigation [especially Xpert MTB/rif assay and uLAM tests]
3.48	Proportion of people with AHD and presumptive TB, diagnosed with TB disease during the reporting period	Number of people with AHD and presumptive TB, diagnosed with TB disease during the reporting period	Number of people with AHD and presumptive TB disease investigated for TB during the reporting period	EMR/Facility-based ART and TB Registers	Reducing the mortality due to HIV-associated TB	Quarterly	Age Sex PLHIV likely to experience AHD Type of TB investigation [especially Xpert MTB/rif assay and uLAM tests]
3.47	Co-management of tuberculosis and HIV treatment: Percentage of people living with HIV estimated to have incident tuberculosis (TB) that received	Number of people living with HIV with new or relapse TB started on TB treatment during the reporting period who	Estimated number of people living with HIV with incident TB cases	*For the numerator.:* Facility antiretroviral therapy registers and reports;	Reducing the mortality due to HIV-associated TB	Aggregated periodically, preferably monthly or quarterly, and reported annually.	Sex (male, female). Age (<15 and 15+ years).

No.	Indicator	Numerator	Denominator	Data Source	Data use	Reporting Frequency	Required Disaggregation
	treatment for both TB and HIV	were already on antiretroviral therapy or started on antiretroviral therapy during TB treatment within the reporting year		programme monitoring tools. *For the denominator:* Programme data and estimates of the number of people living with HIV with incident TB.			

No.	Indicator	Numerator	Denominator	Data Source	Data use	Reporting Frequency	Required Disaggregation
3.5 Cryptococcal Meningitis screening, prevention, diagnosis, and management							
3.51	Percentage of people living with HIV with a CD4 count below 200 cells/mm3 who were **screened** for cryptococcal infection.	Number of people living with HIV and CD4 count below 200 cells/mm3 who were tested for cryptococcal infection	Number of people living with HIV with CD4 count below 200 cells/mm3.	Based on data from laboratory information systems and from the records of people in treatment. Data can be compiled from health services registries, case report forms and laboratory information systems.	HIV program design to reduce mortality due to cryptococcal infection	Annually	None
3.52	Proportion of people with AHD tested for cryptococcal infection using a CrAg test on blood sample during the reporting period	Number of people with AHD tested for cryptococcal infection using a CrAg test on blood sample during the reporting period	Number of people with AHD eligible for screening for cryptococcal infection during the	EMR/Facility-based Registers	HIV program design to reduce mortality due to cryptococcal infection	Quarterly	Age Sex PLHIV at risk of AHD

No.	Indicator	Numerator	Denominator	Data Source	Data use	Reporting Frequency	Required Disaggregation
			reporting period				
3.53	Proportion of people with AHD tested for cryptococcal infection using a CrAg test on blood sample who tested positive during the reporting period the reporting period	Number of people with AHD tested for cryptococcal infection using a CrAg test on blood sample who tested positive during the reporting period	Number of people with AHD tested for cryptococcal infection using a CrAg test on blood sample during the reporting period	EMR/Facility-based Registers	HIV program design to reduce mortality due to cryptococcal infection	Quarterly	Age Sex PLHIV at risk of AHD
3.54	Proportion of people with AHD with a positive CrAg screen test on blood samples who receive CSF CrAg test/India ink* during the reporting period **CSF India ink test examination can be used where cryptococcal antigen assay is not available and/or rapid results are not available*	~~Number of people with positive CrAg and CM symptoms receiving lumbar puncture (LP) and CSF CrAg testing during the reporting period~~ Number of people with AHD with a positive CrAg screen test on blood samples who receive a CSF CrAg test/India ink* during the reporting period	Number of PLHIV with positive CrAg during the reporting period	EMR/Facility-based Registers	HIV program design to reduce mortality due to cryptococcal infection	Quarterly	Age Sex PLHIV at risk of AHD
3.55	Percentage of people living with HIV with a CD4 count below 200 cells/mm3 who were **diagnosed** with cryptococcal infection.	Number of people living with HIV and CD4 count below 200 cells/mm3 who tested **positive** for cryptococcal infection.	Number of people living with HIV and CD4 count below 200 cells/mm3 who were tested for	Based on data from laboratory information systems and from the records of people in treatment. Data can be compiled from	HIV program design to reduce mortality due to cryptococcal infection	Annually	None

No.	Indicator	Numerator	Denominator	Data Source	Data use	Reporting Frequency	Required Disaggregation
			cryptococcal infection.	health services registries, case report forms and laboratory information systems.			
3.56	Percentage of people living with HIV with a CD4 count below 200 cells/mm3 who were **treated** for cryptococcal infection.	Number of people living with HIV with CD4 count below 200 cells/mm3 with cryptococcal infection who received treatment.	Number of people living with HIV and CD4 count below 200 cells/mm3 who tested positive for cryptococcal infection.	Based on data from laboratory information systems and from the records of people in treatment. Data can be compiled from health services registries, case report forms and laboratory information systems.	HIV program design to reduce mortality due to cryptococcal infection	Annually	None
3.57	Proportion of people diagnosed with CM during the reporting period who were started on optimal* treatment for cryptococcal infection. *flucytosine-containing regimens are superior, and steps should be taken to ensure access to this drug.	Number of people with cryptococcal infection during the reporting period who received treatment who were started on optimal* treatment for cryptococcal infection.	Number of people living with HIV with CD4 count below 200 cells/mm3 with cryptococcal infection who received treatment.	EMR/Facility-based Registers	HIV program design to reduce mortality due to cryptococcal infection	Quarterly	Age Sex PLHIV likely to experience AHD Type of TB
3.58	Percentage of people living with HIV with a CD4 count below 200 cells/mm3 who were eligible for **pre-emptive fluconazole therapy**	Number of people living with HIV and CD4 count below 200 cells/mm3 who tested **negative** for cryptococcal infection.	Number of people living with HIV and CD4 count below 200 cells/mm3 who were tested for	EMR/Facility-based Registers	HIV program design to reduce mortality due to cryptococcal infection	Quarterly	Age Sex PLHIV likely to experience AHD Type of TB

No.	Indicator	Numerator	Denominator	Data Source	Data use	Reporting Frequency	Required Disaggregation
	* positive blood CrAg and a negative CSF CrAg **CSF India ink test examination can be used where cryptococcal antigen assay is not available and/or rapid results are not available*		cryptococcal infection.				
3.59	Proportion of people eligible for pre-emptive fluconazole therapy who were initiated on pre-emptive fluconazole therapy during the reporting period	Number of people eligible for pre-emptive fluconazole therapy who were initiated on pre-emptive fluconazole therapy during the reporting period	Number of people eligible for pre-emptive fluconazole therapy during the reporting period	EMR/Facility-based Registers	HIV program design to reduce mortality due to cryptococcal infection	Quarterly	Age Sex PLHIV likely to experience AHD Type of TB

For children under 5 years of age

No.	Indicator	Numerator	Denominator	Data Source	Data use	Reporting Frequency	Required Disaggregation
3.6 Malnutrition							
3.61	Proportion of children under 5 years living with HIV on ARVs during the reporting period.	Number of children under 5 years living with HIV on ARVs during the reporting period	All children under 5 years living with HIV during the reporting period	HIV and Nutritional registers	Averting morbidity and mortality associated with malnutrition and AHD among children under five	Quarterly	
3.62	Proportion of children under 5 years living with HIV who received nutritional assessment during the reporting period.	Number of children under 5 years living with HIV who received nutritional assessment during the reporting period	Number of children under 5 years living with HIV on ARVs during the reporting period	HIV and Nutritional registers	Averting morbidity and mortality associated with malnutrition and AHD among children under five	Quarterly	

No.	Indicator	Numerator	Denominator	Data Source	Data use	Reporting Frequency	Required Disaggregation
3.63	Proportion of children under 5 years living with HIV with SAM and MAM during the reporting period.	Number of children under 5 years living with HIV with SAM during the reporting period	Number of children under 5 years living with HIV on ARVs during the reporting period	HIV and Nutritional registers	Averting morbidity and mortality associated with malnutrition and AHD among children under five	Quarterly	1=SAM 2=MAM, 3=Overweight 4=Obese 5= Normal
3.65	Proportion of children under 5 years living with HIV with SAM and MAM who received nutritional assessment, counselling and support	Number of children under 5 years living with HIV who received nutritional assessment, counselling and support	Number of children under 5 years living with HIV on ARVs during the reporting period	HIV and Nutritional registers	Averting morbidity and mortality associated with malnutrition and AHD among children under five	Quarterly	Critical Nutrition Practices: 1=Nutritional status assessment, 2= Prompt treatment for OI's, 3=Therapeutic foods: Y=Yes, N=No
5.66	Proportion of children under 5 years living with HIV with a documented SAM and MAM Outcome at 3, 6 & 12 months in the previous reporting period	Number of children under 5 years living with HIV with a documented SAM and MAM Outcome at 3, 6 & 12 months in the previous reporting period	Number of children under 5 years living with HIV with SAM and MAM at 3, 6 & 12 months in the previous reporting period	HIV and Nutritional registers	Averting morbidity and mortality associated with malnutrition and AHD among children under five	Quarterly	1= Gaining weight, 2= Losing weight, 3= Static weight, 4= Cured, 5=Discharged, 6= Refused nutritional support

4.3 Program indicators

program-level uptake, coverage, and outcome indicators

AHD Hubs and Spokes	
1	Number of sites offering HIV services
AHD 2	Number of sites categorized as AHD hubs • Refer to The Global AHD Toolkit available online - this outlines the requirements for the services/interventions of an AHD hub
3	Number of sites categorized as AHD spokes • Refer to The Global AHD Toolkit available online - this outlines the requirements for the services/interventions of an AHD spoke
4	Ratio of AHD hubs to spokes
AHD Product Availability	
5	Any downtime for CD4 platforms
6	Any stock outs of CD4 reagents
7	Any stock outs of TB LAM
8	Any stock outs of CrAg LFA
9	Any stock outs of Fluconazole
10	Any stock outs of Flucytosine
11	Any stock outs of Amphotericin B
Trained Health Care Providers on AHD package of care	
12	Number of trained Health Care Providers

5 AHD Service Quality Assessment Standards and Indicators

These standards and indicators are designed to be adaptable to each country context (see the CQUIN AHD Quality toolkit available online as well as in Appendix x)

5.1 Summary of AHD Quality Standards

The AHD quality standards are organized as follows:

1. Clinical AHD standards
2. Training and mentorship AHD standards
3. Hub and spoke model AHD standards
4. Supply chain management system AHD standards
5. Advocacy, communication, and social mobilization AHD standards
6. AHD standards for monitoring and evaluation

5.2 Detailed Description of AHD Quality Standards

5.2.1 AHD Clinical Standards

Advanced HIV Disease clinical standards are defined as:

1. All people at risk of Advanced HIV Disease (newly diagnosed initiating ART, presenting with an illness requiring admission, children under five diagnosed with HIV, viremic, and returning to treatment) should be promptly* assessed for AHD using a CD4 test in addition to a comprehensive review of the clinical history and physical examination
2. All people with AHD should receive prompt* diagnostic testing for TB (TB-LAM and Xpert MTB/rif assay)
3. All people with AHD should be screened for TPT eligibility, and if eligible, should be offered TPT

4. All people with AHD and diagnosed with TB disease should receive immediate* TB treatment
5. All people with AHD should be promptly* screened for cryptococcal meningitis (CM) using serum CrAg
6. All PLHIV with a positive CrAg should receive prompt* diagnostic testing with CSF CrAg (except where an LP is contraindicated)
7. All people with AHD with a positive CrAg and a negative CSF CrAg should receive prompt* pre-emptive CM treatment as part of standard of care. This should be initiated within 24 hours
8. All people with AHD with a positive CrAg and a positive CSF CrAg should receive prompt* CM treatment as part of the standard of care. This should be initiated within 24 hours

*This refers to the nationally agreed upon timeline to initiate the service described

5.2.2 Training & Mentorship Standards:

1. All health facilities providing care to PLHIV with AHD should have a minimum of two healthcare workers formally trained (certified) and skilled (experienced) to provide AHD services and who routinely manage PLHIV with AHD
2. All providers of AHD services should receive routine mentorship support (regular physical, virtual, online courses on AHD) from district or county mentors on a monthly/quarterly basis
3. All facilities providing AHD services should have SOPs to guide AHD service delivery
4. All facilities providing AHD services should conduct regularly - weekly - scheduled clinical case review meetings (content should include morbidity and mortality review information)

5.2.3 Hub and Spoke Model Standards:

1. All HF providing ART should routinely screen all ROCs at substantial risk of HIV disease progression (newly diagnosed initiating ART, presenting with an illness requiring admission, children under five diagnosed with HIV, viremic, and returning to treatment) for AHD using a CD4 test
2. All HF should have systematic processes (such as referral SOPs and an updated national directory of AHD services) to aid in referral to AHD services that are not available on site
3. All HF providing AHD services should have systematic processes (such as clinical algorithms) to assess and identify ROC who develop medical conditions requiring management beyond the HF level of care (referral to secondary and tertiary HF)
4. All HF providing AHD services should have systematic processes to assess, identify and support ROC with AHD requiring additional care (such as adherence to treatment and psychosocial support) in the community (community service delivery)
5. All HF providing AHD services should promptly* refer identified complex cases to an appropriate treatment center (referral to secondary and tertiary HF)
6. All HF providing in-patient care to PLHIV with AHD should have comprehensive discharge / downward referral SOPs

5.2.4 Advocacy, Communication and Social Mobilization Standards:

1. All AHD service delivery demand creation activities should be developed and implemented in partnership with ROC.
2. All HF providing AHD services should have tailored ROC demand creation activities for AHD services provided in partnership with ROC (AHD Peer educators).
3. All community AHD awareness programs should be provided in partnership with ROC.
4. All community-led monitoring programs should include monitoring of AHD service delivery

5.2.5 Supply Chain Management Systems Standards:

1. All HF should have adequate stocks of the prerequisite AHD pharmaceutical commodities in line with the national hub and spoke commodity SOP (particularly TB and CM management and prophylactic commodities) to cover the course of OI treatment
2. All HF should have adequate stocks of the prerequisite AHD laboratory commodities in line with the national hub and spoke commodity SOP (CD4 testing as well as TB and CM diagnostic and monitoring commodities)
3. All AHD HF hubs should have functional laboratory equipment to support AHD services (CD4 test, TB LAM, Xpert MTB/rif assay, CrAg, Biochemistry)

5.2.6 Monitoring and Evaluation Standards: AHD Standards for Monitoring and Evaluation Standards:

1. All HF implementing AHD services should have appropriate national M&E tools and reporting structures (EMR systems will optimize monitoring of AHD services)
2. At a minimum, all HF providing AHD services should have data management and governance; data quality; data use and visualization standards.
3. The national AHD M&E system should allow for disaggregation by age and gender to allow for all populations at substantial risk of AHD including children to be tracked separately

References

1. World Health Organization. Consolidated guidelines on HIV prevention, testing, treatment, service delivery and monitoring: recommendations for a public health approach. Geneva, Switzerland: World Health Organization; 2021.
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