08

Core Indicators for National AIDS Programmes

Guidance and Specifications for Additional Recommended Indicators

April 2008

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Acknowledgements

Acronyms

AIDS	Acquired Immunodeficiency Syndrome
AIS	AIDS Indicator Survey
ANC	Antenatal Care
ART	Antiretroviral Therapy
ARV	Antiretroviral
CTX	Cotrimoxazole
DHS	Demographic and Health Survey
HIV	Human Immunodeficiency Virus
IDU	Injecting Drug User
L&D	Labour and Delivery
LMIS	Logistic Management Information Systems
M&E	Monitoring and Evaluation
MCH	Maternal and Child Health
MERG	Monitoring and Evaluation Reference Group
MICS	Multiple Indicator Cluster Survey
MSM	Men who have Sex with Men
N/A	Not Applicable
OPD	Outpatient Department
PCP	Pneumocystis Jiroveci Pneumonia
PEP	Post Exposure Prophylaxis
PLHIV	People Living with HIV
PMTCT	Prevention of Mother to Child Transmission
SAM	Service Availability Mapping
SPA	Service Provision Assessment
SW	Sex Worker
TB	Tuberculosis
TWG	Technical Working Group
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNGASS	United Nations General Assembly Special Session on HIV/AIDS
WHO	World Health Organization

Introduction

National-level HIV monitoring allows countries to track the HIV epidemic and the national programme response. When standardized indicators are used, progress can be assessed over time and cross–national comparisons can be conducted. Over the past 15 years, the global monitoring and evaluation (M&E) community has taken an active role in supporting the development of standardized indicators for national-level HIV monitoring. Guidelines for monitoring key programmatic areas have been published, along with guidelines for reporting to donors and international agencies. Together with increased funding for M&E and enhanced implementation efforts, these guidelines have considerably strengthened monitoring efforts in recent years.

Nevertheless, many countries are still struggling to establish routine data collection mechanisms. Some of the challenges they face include:
• selecting the most appropriate indicators from the wide array of HIV-related indicators that have been developed over the years;
• collecting indicator data with sufficient regularity;
• ensuring data quality;
• avoiding an exclusive focus on monitoring at the expense of a more comprehensive M&E approach.

Many countries aim to collect a large number of HIV-related indicators for their own management purposes and for reporting to different international agencies and donors whose reporting requirements vary. Often, this has resulted in heavy data collection and reporting burdens at the national level. This has led to a recognition that priority needs to be given to a subset of indicators that provide the most crucial information needed to guide the national HIV response and that allow a more concentrated effort on assuring the quality of the data collected.

In 2006, UNAIDS, under the auspices of the M&E Reference Group (MERG), established a multi-agency Indicator Harmonization Technical Working Group (TWG) and an Indicator Registry TWG with two goals:
(1) to develop a web-based Indicator Registry to facilitate access to information about existing HIV-related indicators; and
(2) to provide guidance on core indicators for national-level HIV monitoring.

Indicator Registry

During 2007, the Indicator Registry TWG developed a web-based inventory of standardized definitions and other essential indicator specifications for more than 400 existing HIV-related indicators. A public version of the Indicator Registry will be launched in 2008 to allow easy access to these indicator standards.

Indicator selection and harmonization

The Indicator Harmonization TWG agreed on a set of 40 core national indicators that provide minimum necessary information for national-level monitoring of the HIV epidemic and response: 25 UNGASS indicators required for monitoring the Declaration of Commitment on HIV/AIDS, and 15 additional recommended indicators. This set of core indicators helps to focus attention on key prevention, treatment and care components of the national HIV response as well as on key outcomes of national AIDS programmes. Indicators included in the set of 40 core national indicators had to have already been in regular use, or, at minimum, had to have been field-tested with respect to validity, reliability, and feasibility of data collection. Recommended disaggregations of indicator data are provided that are helpful for planning and programming purposes.

The core indicators cover many areas, but they do not capture all of the information that national AIDS programmes, individual projects, and donors may need. Nevertheless, they provide the essential information to gauge the overall response and are especially helpful for countries that:

- are selecting standardized national indicators for the first time;
- need to limit the number of national indicators in order to reduce their data collection burden and/or costs; and/or
- are revising their national indicators to meet global standards.

Global M&E Indicator Pyramid: Levels of Indicators
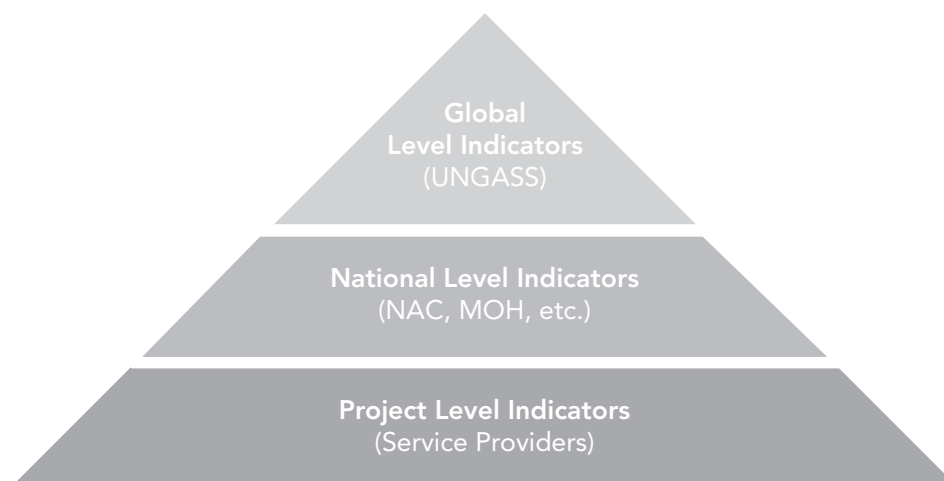
Data needs at the project, national, and global levels vary. Generally, at the project level more indicators are needed for programme management than at the national or global levels. Some indicators provide valuable information for use at all levels and data are aggregated from the service provider/project level to national, regional and global values. All 40 core indicators are addressing both national and global data needs, and many are also relevant at the project level.

Future directions

This list of 40 core indicators is intended to remain in place for a number of years to allow time for data collection efforts to be put in place and for assessing trends over time. In the future, however, new indicators may need to be added and others removed as the dynamics of the HIV epidemic changes and with that the response. Some areas for which additional indicators may be added include: human resource capacity; M&E system strengthening; community-based services for people living with HIV; male circumcision. The MERG TWG on Indicator Development and Revision will facilitate the development and field-testing of new or revised indicators in these areas through an evidence-informed, country-focused, and consensus-driven process. In considering revisions to the list of 40 core indicators, efforts will be made to carefully consider what data will actually be used, as well as how to minimize data collection burden and costs.

Purpose

The purpose of this document is to present the 40 core national indicators that provide minimum necessary information for national-level monitoring of the HIV epidemic and response, and to provide detailed specifications and guidance on the 15 indicators recommended in addition to the 25 UNGASS indicators.

This set of 40 core national indicators replaces the set of indicators published by UNAIDS and its partner agencies in *National AIDS Programmes. A Guide to Monitoring and Evaluation (UNAIDS, 2000)*.

Core National Indicators

Overview: UNGASS indicators and additional recommended indicators

The Table below lists all of the 40 indicators in the core national set: the 25 UNGASS indicators and the 15 additional recommended indicators. These are organized into three categories:
(1) National commitment and action;
(2) National knowledge and behaviour; and
(3) National impact.
The right-hand column indicates if the indicator is one of the 25 UNGASS indicators (with reference to the number as per the UNGASS Guidelines (UNAIDS, 2007)) or one of the 15 additional recommended indicators.

NATIONAL INDICATORS

I. NATIONAL COMMITMENT AND ACTION

NATIONAL COMMITMENT

1	**Domestic and international AIDS spending by categories and financing sources**	**UNGASS #1**
2	**National Composite Policy Index (NCPI)** [Progress in the development and implementation of national level HIV and AIDS policies and strategies. Areas covered: strategic plan; political support; prevention; treatment, care and support; human rights; stigma and discrimination, civil society involvement; gender, most-at-risk populations, monitoring & evaluation]	**UNGASS #2**

NATIONAL ACTION

3	**Percentage of donated blood units screened for HIV in a quality-assured manner**	**UNGASS #3**
4	Percentage of health facilities with post-exposure prophylaxis available [disaggregated by exposure (occupational, non-occupational) and sector (public, private)]	Additional #1
5	Percentage of health facilities that offer ART (i.e., prescribe and/or provide clinical follow-up) [disaggregated by sector (public, private)]	Additional #2
6	Percentage of health facilities dispensing ARV that experienced a stock-out of at least one required ARV in the last 12 months [disaggregated by sector (public, private)]	Additional #3
7	Percentage of facilities providing ART using CD4 monitoring in line with national guidelines or policies, either on site or through referral [disaggregated by sector (public, private)]	Additional #4
8	**Percentage of adults and children with advanced HIV infection receiving antiretroviral therapy [disaggregated by sex (female, male) and age (<15, 15+)]**	**UNGASS #4**
9	**Percentage of HIV-infected pregnant women who received antiretrovirals to reduce the risk of mother-to-child transmission**	**UNGASS #5**

	NATIONAL ACTION (Continued)	
10	**Percentage of estimated HIV-positive incident TB cases that received treatment for TB and HIV [disaggregated by sex (female, male)]**	**UNGASS #6**
11	**Percentage of women and men aged 15-49 who received an HIV test in the last 12 months and who know their results [disaggregated by sex (female, male) and age (15-19, 20-24, 25-49)]**	**UNGASS #7**
12	Percentage of sexually active young women and men aged 15-24 who received an HIV test in the last 12 months and who know their results [disaggregated by sex (female, male) and age (15-19, 20-24)]	Additional #5
13	**Percentage of most-at-risk populations (IDU, MSM, SW) who received an HIV test in the last 12 months and who know their results [disaggregated by sex (female, male), and age (<25, 25+)]**	**UNGASS #8**
14	Percentage of TB patients who had an HIV test result recorded in the TB register [disaggregated by sex (female, male), age (0-4, 5-14, 15 and above), and HIV status (positive, negative)]	Additional #6
15	Percentage of pregnant women who were tested for HIV and who know their results [disaggregated by service type (Antenatal Care, Labour & Delivery, Post-Partum)]	Additional #7
16	Percentage of infants born to HIV-infected women who received an HIV test within 12 months [disaggregated by type/timing of testing (virological testing within 2 months, virological testing between 2 and 12 months or antibody testing between 9 and 12 months)]	Additional #8
17	Percentage of infants born to HIV-infected women who are started on cotrimoxazole prophylaxis within two months of birth	Additional #9
18	**Percentage of most-at-risk populations (IDU, MSM, SW) reached with HIV-prevention programmes [disaggregated by most-at-risk population (IDU, MSM, SW), sex (female, male), and age (<25, 25+)]**	**UNGASS #9**
19	**Percentage of schools that provided life skills-based HIV education in the last academic year [disaggregated by level of education (primary education, secondary education)]**	**UNGASS #11**
20	**Current school attendance among orphans and non-orphans aged 10-14 [disaggregated by sex (female, male)]**	**UNGASS #12**
21	**Percentage of orphaned and vulnerable children aged 0-17 whose households received free basic external support in caring for the child**	**UNGASS #10**
22	Total number of male and female condoms available for distribution nation-wide during the last 12 months per person aged 15-19 [disaggregated by condom type (male, female)]	Additional #10

	II. NATIONAL KNOWLEDGE AND BEHAVIOUR	
23	**Percentage of young women and men aged 15–24 who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission [disaggregated by sex (female, male) and age (15-19, 20-24)]**	**UNGASS #13**
24	**Percentage of most-at-risk populations (IDU, MSM, SW) who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission [disaggregated by sex (female, male) and age (<25, 25+)]**	**UNGASS #14**
25	Percentage of young women and men aged 15-24 who report they could get condoms on their own [disaggregated by sex (female, male) and age (15-19, 20-24)]	Additional #11
26	Percentage of never married young women and men aged 15-24 who have never had sex [disaggregated by sex (female, male) and age (15-19, 20-24)]	Additional #12
27	**Percentage of young women and men aged 15-24 who have had sexual intercourse before the age of 15 [disaggregated by sex (female, male) and age (15-19, 20-24)]**	**UNGASS #15**
28	**Percentage of women and men aged 15-49 who have had sexual intercourse with more than one partner in the last 12 months [disaggregated by sex (female, male) and age (15-19, 20-24, 25-49)]**	**UNGASS #16**
29	**Percentage of women and men aged 15-49 who have had more than one sexual partner in the last 12 months reporting the use of a condom during their last sexual intercourse [disaggregated by sex (female, male) and age (15-19, 20-24, 25-49)]**	**UNGASS #17**
30	**Percentage of female and male sex workers reporting the use of a condom with their most recent client [disaggregated by sex (female, male) and age (<25, 25+)]**	**UNGASS #18**
31	Percentage of men aged 15-49 reporting sex with a sex worker in the last 12 months who used a condom during last paid sexual intercourse [disaggregated by age (15-19, 20-24, 25-49) and population group (migrant worker, military, truck drivers, other)]	Additional #13
32	**Percentage of men reporting the use of a condom the last time they had anal sex with a male partner [disaggregated by age (<25, 25+)]**	**UNGASS #19**
33	**Percentage of injecting drug users reporting the use of a condom the last time they had sexual intercourse [disaggregated by sex (female, male) and age (<25, 25+)]**	**UNGASS #20**
34	**Percentage of injecting drug users reporting the use of sterile injecting equipment the last time they injected [disaggregated by sex (female, male) and age (<25, 25+)]**	**UNGASS #21**
35	Percentage of women and men aged 15-49 expressing accepting attitudes towards people living with HIV [disaggregated by sex (female, male), age (15-19, 20-24, 25-49), and education level (none, primary, secondary or higher)]	Additional #14

	III. NATIONAL IMPACT	
36	Percentage of children under the age of 18 who are orphans [disaggregated by sex (female, male), age (<5, 5-9, 10-14, 15-17), and type of orphan (maternal, paternal, double)]	Additional #15
37	**Percentage of young people aged 15-24 who are HIV-infected [disaggregated by age (15-19, 20-24)]**	**UNGASS #22**
38	**Percentage of most-at-risk populations (IDU, MSM, SW) who are HIV-infected [disaggregated by sex (female, male) and age (<25, 25+)]**	**UNGASS #23**
39	**Percentage of infants born to HIV-infected mothers who are infected**	**UNGASS #25**
40	**Percentage of adults and children with HIV still alive and known to be on treatment 12 months after initiation of antiretroviral therapy [disaggregated by sex (female, male) and age (<15, 15+)]**	**UNGASS #24**

Use of UNGASS indicators and additional recommended indicators

At the national level, the core set of indicators can be used for several purposes: tracking trends, identifying problem areas, and advocating for and allocating resources. This set of indicators will also contribute to evaluations of the effectiveness of national HIV responses.

The purpose of the UNGASS indicators is to measure progress toward implementing the Declaration of Commitment on HIV/AIDS that was adopted by 189 UN Member States in 2001. This Declaration represented a renewed commitment to achieving the Millennium Development Goal of halting and beginning to reverse the HIV epidemic by 2015. UNAIDS strongly recommends that the UNGASS indicators are used as the basis for national HIV M&E systems. Under the terms of the Declaration of Commitment on HIV/AIDS, Member States committed to reporting on UNGASS indicators once every two years (2003, 2005, 2007), with the final report due in 2010 (UNAIDS, 2006; WHO, 2007).

The purpose of the additional recommended indicators is to provide key information about national HIV responses that is not captured by the 25 UNGASS indicators. There are no requirements for global reporting on the additional recommended indicators unless they are part of specific donor reporting requirements.

Where they fit the needs of a country, National AIDS Programmes are encouraged to use the set of core national indicators to ensure standardization of information over time and across countries.

International agencies and donors have endorsed these 40 core national indicators, and have committed to increasing support to countries to ensure the regular collection of high quality data. In addition, agencies have committed to move towards harmonizing their agency-specific reporting requirements with this core set of national-level indicators. Agencies requesting additional data will be expected to provide additional resources (human and/or financial) to support additional data collection efforts.

Specifications of additional recommended indicators

The remainder of this document provides the detailed specifications for each of the 15 additional recommended indicators listed in the Overview Table on pages 8–11.

Note: Detailed specifications on the 25 UNGASS indicators are provided in *Monitoring the Declaration of Commitment on HIV/AIDS. Guidelines on Construction of Core Indicators. 2008 Reporting* (UNAIDS, 2007).

Additional Recommended Indicator #1
Percentage of health facilities with post-exposure prophylaxis available [disaggregated by exposure (occupational, non-occupational) and sector (public, private)]

PURPOSE:	This indicator measures the availability of post-exposure prophylaxis (PEP) in health facilities.
	PEP reduces the probability of HIV infection after exposure to potentially HIV-infected blood or body fluids. For maximum effectiveness, PEP should be provided within hours after exposure. PEP may be provided following occupational exposure (for example, in healthcare facilities) or non-occupational exposure (such as after sexual assault).
	Within the health sector, PEP should be provided as part of a comprehensive standard precautions package that reduces staff and patient exposure to infectious hazards in health care settings. PEP for non-occupational exposure should be considered for sexual assault survivors, particularly in high HIV prevalence countries.
APPLICABILITY:	Countries with generalized epidemics.
DATA COLLECTION FREQUENCY:	Annual for programme records; every 2-3 years for facility survey/census.
MEASUREMENT METHODOLOGY:	Programme records; health facility survey/census.
MEASUREMENT TOOLS:	For health facility surveys or censuses, tools such as the Service Provision Assessment (SPA) or the Service Availability Mapping (SAM) can be used.
METHOD OF MEASUREMENT:	
Definition:	Percentage of health facilities with post-exposure prophylaxis (PEP) services available for those at risk of HIV infection through occupational and/or non-occupational exposure to HIV. Health facilities include public and private facilities, health centres and clinics (including TB centres), as well as health facilities that are run by faith-based or nongovernmental organizations.
Numerator:	Number of health facilities with PEP available for those who are at risk of HIV infection through occupational and/or non-occupational exposure to HIV.
Denominator:	Total number of health facilities.
Calculation:	

$$\frac{\textit{Number of health facilities with PEP available}}{\textit{Total number of health facilities}} \times 100$$

How to Measure it: The **numerator** is calculated by summing of the number of facilities reporting availability of PEP services. Information on the availability of specific services is usually kept at the national or sub-national level. National AIDS Programmes should have a record of all health facilities that provide PEP services. A health facility census or survey can also provide this information, along with more in-depth information on available services, provided the information is collected from a representative sample of health facilities in the country. One potential limitation to facility surveys or censuses is that they are usually only conducted once every few years. Countries should regularly update their programme records on the availability of PEP services in health facilities, and supplement these data with those obtained through a health facility survey or census every few years.

The **denominator** is calculated by summing the total number of health facilities included in the sample. Information for construction of the denominator may come from programme records, facility listings, and/or national strategy or planning documents.

Disaggregation: **Exposure:** occupational, non–occupational.
Sector: public, private.

INTERPRETATION:

This indicator provides valuable information about the availability of post–exposure prophylaxis (PEP) in health facilities, but it does not capture the type and quality of PEP services provided. The full range of PEP services includes first aid, counselling, HIV testing, provision of ARVs, and patient follow–up and support. Simple monitoring of PEP availability through programme records does not ensure that all PEP–related services are adequately provided to those who need them. Nevertheless, it is important to know what percentage of health facilities provide PEP services in order to plan for service expansion as needed.

Additional Recommended Indicator #2
Percentage of health facilities that offer ART (i.e., prescribe and/or provide clinical follow-up) [disaggregated by sector (public, private)]

PURPOSE:	This indicator measures the capacity of health facilities to provide antiretroviral therapy (ART).
	Antiretroviral therapy is a cornerstone of effective HIV treatment, and measuring the percentage of health facilities that offer ART provides valuable information about ART availability. One strategy to scale up ART services is to make ART available in more health facilities. This may be achieved by decentralizing ART services from tertiary facilities (e.g., hospitals) to primary or secondary-level health facilities.
APPLICABILITY:	All countries.
DATA COLLECTION FREQUENCY:	Annual for programme records; every 2-3 years for facility survey/census.
MEASUREMENT METHODOLOGY:	Programme records; health facility survey/census.
MEASUREMENT TOOLS:	For health facility surveys or censuses, tools such as the Service Provision Assessment (SPA) or the Service Availability Mapping (SAM) can be used.
METHOD OF MEASUREMENT:	
Definition:	Percentage of health facilities that offer ART (i.e., prescribe and/or provide clinical follow-up). Health facilities include public and private facilities, health centres and clinics (including TB centres), as well as health facilities that are run by faith-based or nongovernmental organizations.
Numerator:	Number of health facilities that offer ART (i.e., prescribe and/or provide clinical follow-up).
Denominator:	Total number of health facilities, excluding specialized facilities where ART services are/will never be relevant.
Calculation:	

$$\frac{\textit{Number of health facilities that offer ART}}{\textit{Total number of health facilities minus those where ART services are/will never be relevant}} \times 100$$

How to Measure it: The **numerator** is calculated by summing of the number of facilities reporting availability of ART services. Information on the availability of specific services is usually kept at the national or sub-national level. National AIDS Programmes should have a record of all health facilities offering ART services. A health facility census or survey can also provide this information, along with more in-depth information on available services, provided the information is collected from a representative sample of health facilities in the country. In a facility survey (e.g., Service Provision Assessment, Service Availability Mapping), the most knowledgeable person responsible for client services is interviewed using the AIDS Outpatient Department (OPD) module. Responses to a series of questions establish whether providers in that facility provide ART services directly (i.e., prescribe ART and/or provide clinical follow-up for ART patients) or refer patients to other health facilities for these services. In addition, facility records documenting the current status of service provision should be consulted. One potential limitation to facility surveys or censuses is that they are usually only conducted once every few years. Countries should regularly update their programme records on health facilities offering ART services, and supplement these data with those obtained through a health facility survey or census every few years.

The **denominator** is calculated by summing the total number of health facilities included in the sample. Information for construction of the denominator may come from programme records, facility listings, and/or national strategy or planning documents.

Disaggregation: **Sector:** public, private.

INTERPRETATION:

This indicator provides valuable information about the availability of ART services in health facilities, but it does not capture information about the quality of services provided. Antiretroviral therapy itself is complex, and it should be delivered as part of a package of care interventions, including the provision of cotrimoxazole prophylaxis, the management of opportunistic infections and comorbidities, nutritional support and palliative care. Simple monitoring of ART availability does not ensure that all ART-related services are adequately provided to those who need them. Nevertheless, it is important to know what percentage of health facilities provide ART services in order to plan for service expansion as needed to meet universal access targets.

Additional Recommended Indicator #3
Percentage of health facilities dispensing ARV that experienced a stock-out of at least one required ARV in the last 12 months [disaggregated by sector (public, private)]

PURPOSE:	This indicator measures a key aspect of antiretroviral (ARV) drug supply management: whether health facilities dispensing ARV drugs have run out of stock of at least one required ARV in the last 12 months.
	As countries scale-up ART services, it is important to ensure that ARVs are available to those who need them. ART is a long-term treatment strategy for people living with advanced HIV infection, and treatment interruptions may lead to HIV drug resistance. Efficient supply management is needed to ensure that required ARVs do not run out of stock.
APPLICABILITY:	All countries.
DATA COLLECTION FREQUENCY:	Annual for programme records; every 2–3 years for facility survey/census.
MEASUREMENT METHODOLOGY:	Programme records; Logistics Management Information System (LMIS); health facility survey.
MEASUREMENT TOOLS:	Health facility surveys such as the Service Provision Assessment (SPA) or the Service Availability Mapping (SAM) may be used, provided they include questions on ARV stock-outs.
METHOD OF MEASUREMENT:	
Definition:	Percentage of health facilities dispensing ARVs that experienced one or more stock-outs of at least one required ARV drug in the last 12 months. A stock-out is defined as the complete absence of a required ARV drug at a delivery point for at least one day. Health facilities include public and private facilities, health centres and clinics (including TB centres), as well as health facilities that are run by faith-based or nongovernmental organizations.
Numerator:	Number of health facilities dispensing ARVs that experienced one or more stock-outs of at least one required ARV drug in the last 12 months.
Denominator:	Total number of health facilities dispensing ARVs.
Calculation:	*Number of health facilities dispensing ARVs that experienced one or more stock-outs of at least one required ARV drug in the last 12 months*

$$\frac{\textit{Number of health facilities dispensing ARVs that experienced one or more stock-outs of at least one required ARV drug in the last 12 months}}{\textit{Total number of health facilities dispensing ARVs}} \times 100$$

How to Measure it: If there is one national logistics management information system (LMIS) with details on ARV availability at the health facility level, information should be extracted from this system to construct this indicator. Alternatively, the information may need to be collected through a special survey or site visits. If there are only a limited number of health facilities where ARVs are dispensed in the country, all health facilities dispensing ARVs should be included in the survey or site visits. If the number of health facilities dispensing ARVs is large, it may be necessary to select a representative sample from the total number of health facilities dispensing ARVs (the full list should be available at the national level). When sampling, it is important to ensure that the sample includes facilities at different levels (such as central, district, and peripheral levels). In countries where ARV drugs are dispensed at pharmacies or other non-health facility delivery points, stock-outs should also be monitored in these venues; feasibility will depend on the coverage of the Logistics Management Information System.

Disaggregation: **Sector:** public, private.

INTERPRETATION:

This indicator captures a crucial component of the ART programme: whether or not there is a continuous, uninterrupted supply of ARV drugs at the health facility level. This indicator does not, however, provide information on why stock-out problems occur; which ARV drug(s) are/were out of stock; or how long the stock-out lasted for a particular ARV drug. It also does not provide information on the quality of ARV drug storage, delivery, and distribution.

Simply monitoring stock-outs could be misleading because a facility may keep reserve stock, but may have a policy of not issuing the reserve stock. These facilities would not be counted as having experienced a stock-out using this indicator definition, though from a patient perspective, a required ARV drug would not be available for treatment. In settings where reserve stock is not issued during ARV stock-outs, it is preferable to collect information on a functional stock-out (i.e., the inability to access or make use of a required ARV drug).

Additional Recommended Indicator #4
Percentage of health facilities providing ART using CD4 monitoring in line with national guidelines or policies, either on site or through referral [disaggregated by sector (public, private)]

PURPOSE:	This indicator measures the percentage of health facilities providing ART using CD4 monitoring. Although the unavailability of CD4 monitoring should not be a barrier to providing ART, WHO recommends CD4 monitoring for better and more accurate clinical decision-making. This indicator may also be used as a proxy measure of the quality of ART services provided in a country.
	Current WHO guidelines recommend that patients with advanced or severe symptomatic HIV disease should start ART irrespective of CD4 cell count. Although the optimum time to start ART has not been firmly established, it is known to be before patients become unwell or present with HIV-associated opportunistic diseases. Immunologic monitoring (i.e., CD4 testing), where possible, is the best approach to guide the decision on when to initiate ART in asymptomatic individuals and to monitor ART responses in patients receiving ART.
	In many resource-limited settings where ART services are being scaled up, decisions to initiate ART are based upon clinical assessment. As ART services expand, health system infrastructure should be strengthened where possible to make CD4 testing more readily available. Making CD4 testing available allows asymptomatic but immunologically compromised individuals to start ART earlier and improves the quality of care of HIV patients through better treatment monitoring. Furthermore, CD4 testing is also useful to expand access to cotrimoxazole prophylaxis in HIV-infected patients as part of the pre-ART care package.
APPLICABILITY:	All countries.
DATA COLLECTION FREQUENCY:	Annual for programme records; every 2-3 years for facility survey/census.
MEASUREMENT METHODOLOGY:	Programme records, laboratory network records, health facility survey.
MEASUREMENT TOOLS:	Health facility surveys such as the Service Provision Assessment (SPA) or the Service Availability Mapping (SAM) may be used.
METHOD OF MEASUREMENT:	
Definition:	Percentage of health facilities providing ART using CD4 monitoring in line with national guidelines or policies, either on site or through referral, disaggregated by sector (public, private). Health facilities include public and private facilities, health centres and clinics (including TB centres), as well as health facilities that are run by faith-based or nongovernmental organizations.
Numerator:	Number of health facilities providing ART using CD4 monitoring in line with national guidelines or policies, either on site or through referral.
Denominator:	Total number of all health facilities providing ART.

Calculation:	*Number of health facilities providing ART using CD4 monitoring in line with national guidelines or policies, either on site or through referral*

$$\frac{\textit{Number of health facilities providing ART using CD4 monitoring in line with national guidelines or policies, either on site or through referral}}{\textit{Total number of health facilities providing ART}} \times 100$$

How to Measure it: National ART Programmes should have a record of all facilities that provide CD4 testing services, whether on site or through referral. This is a national list or inventory of sites with CD4 testing available, or of reference laboratory networks with a list of facilities that link with these laboratories to provide CD4 testing.

A health facility census or survey can also provide this information as well as more in-depth information on services available, provided the information is collected from a representative sample of health facilities in the country. In a facility survey (e.g., Service Provision Assessment, Service Availability Mapping), the most knowledgeable person responsible for client services is interviewed using the AIDS Outpatient Department (OPD) module. Responses to a series a questions establish whether the facility uses CD4 monitoring on site or through referral. In addition, facility records documenting the current status of service provision should be consulted. One potential limitation to facility surveys or censuses is that they are usually only conducted once every few years. Countries should regularly update their programme records on health facilities offering ART services, and supplement these data with those obtained through a health facility survey or census every few years.

Disaggregation: **Sector:** public, private.

INTERPRETATION:

This indicator measures the availability of CD4 monitoring in health facilities providing ART, and can provide a quick indication of improvement in earlier access to ART and the quality of ART services nationwide. It does not provide detailed information on the quality of ART services or improved treatment outcomes.

Additional Recommended Indicator #5
Percentage of sexually active young women and men aged 15-24 who received an HIV test in the last 12 months and who know their results [disaggregated by sex (female, male) and age (15-19, 20-24)]

PURPOSE:	This indicator measures progress in implementing HIV testing and counselling services among sexually active young people. In order to protect themselves against HIV and to avoid infecting others, sexually active young people should know their HIV status. This indicator provides a measure of the effectiveness of interventions that promote HIV counselling and testing among young people. This is important to know, because young people may feel that there are barriers to accessing services related to sensitive issues, such as sexual health.
APPLICABILITY:	All countries.
DATA COLLECTION FREQUENCY:	Preferred: every 2 years; Minimum: Every 4-5 years.
MEASUREMENT METHODOLOGY:	Population-based survey.
MEASUREMENT TOOLS:	Population-based survey tools, such as the AIDS Indicator Survey (AIS) or Demographic and Health Survey (DHS) may be used.
METHOD OF MEASUREMENT:	
Definition:	The percentage of sexually active young women and men aged 15–24 who had an HIV test in the last 12 months and know their results, disaggregated by sex (female, male) and age (15–19, 20–24).
Numerator:	The number of respondents aged 15–24 who had an HIV test in the last 12 months and who know their results.
Denominator:	The number of respondents aged 15–24 who have had sexual intercourse in the last 12 months.
Calculation:	$$\frac{\textit{The number of respondents aged 15-24 who had an HIV test in the last 12 months and who know their results}}{\textit{The number of respondents aged 15-24 who have had sexual intercourse in the last 12 months}} \times 100$$
How to Measure it:	In a population-based survey, respondents are first asked if they have had sexual intercourse in the last 12 months. Those replying affirmatively are then asked whether they were tested in the last 12 months, and, if yes, whether they know the results of their HIV test. Those replying affirmatively to these three questions are counted in the **numerator**. The validity of the data may be affected by reporting bias because some respondents may not want to admit to knowing their HIV status for fear of being pressed to disclose it. Conditions under which respondents are interviewed are likely to affect reporting bias. For example, respondents are more likely to be reticent if data are collected in the presence of other people than if they are collected in strict privacy.
Disaggregation:	**Age group:** 15–19 years, 20–24 years. **Sex:** female, male.

INTERPRETATION:

Factors that may influence whether or not a young person accesses HIV testing and counselling services include: the location of services; the availability and cost of transport to reach these services; perception of the confidentiality of the testing process and test results; and the perceived attitude of the staff towards young people. Changes in the indicator data over time could be associated with some or all of these factors. In itself, this indicator does not provide information to distinguish whether the number of people having an HIV test is limited by the availability of testing services or whether the testing services are underutilized and why. This is important information for programme design, and those making strategic programmatic decisions will need more data.

In areas where AIDS is highly stigmatized, respondents may be unwilling to admit to having taken an HIV test; this may be regarded as an admission that they themselves might have engaged in behaviours that could have placed them at risk of infection. On the other hand, in countries where getting tested for HIV has been heavily promoted as a responsible thing to do, some people may say they have been tested when in fact they have not. Despite these possible biases, this indicator gives an idea of the percentage of young people who are likely to know their HIV status.

In low-level and concentrated epidemics, this indicator may yield extremely low percentages if measured in the general population. In such settings, this indicator may be more helpful if applied to measure HIV testing and awareness of HIV status among specific sub-populations at higher risk of infection. Alternatively, the percentage of sexually active young people ever tested for HIV may be a more useful indicator.

The indicator is restricted to HIV tests performed in the last 12 months so that programme managers can assess changes over time.

Additional Recommended Indicator #6
Percentage of TB patients who had an HIV test result recorded in the TB register [disaggegrated by sex (female, male), age (0-4, 5-14, 15 and above), and HIV status (HIV positive, HIV negative)]

PURPOSE:	This indicator measures the coverage of HIV testing among tuberculosis (TB) patients.
	TB is the leading cause of morbidity and mortality among people living with HIV in many countries. In addition, high rates of HIV coinfection are found among TB patients in settings with high HIV prevalence. In these settings, ensuring that TB patients receive HIV testing and counselling services should be a high priority. Knowledge of HIV status enables HIV-positive TB patients to access the most appropriate HIV prevention, treatment, care and support services. Trends over time will demonstrate progress towards national and international targets.
APPLICABILITY:	Countries with generalized epidemics.
DATA COLLECTION FREQUENCY:	Annual.
MEASUREMENT METHODOLOGY:	Programme records.
MEASUREMENT TOOLS:	Routine recording and reporting forms and registers recommended by WHO (http://www.who.int/tb/dots/r_and_r_forms/en/index.html); Quarterly Report on TB Case Registration in Basic Management Unit.
METHOD OF MEASUREMENT:	
Definition:	The percentage of TB patients who had an HIV test result recorded in the TB register in a given time period, disaggregated by sex (female, male), age (0-4, 5-14, 15 and above), and HIV status (HIV positive, HIV negative).
Numerator:	Number of TB patients registered during a given time period who had an HIV test result recorded in the TB register.
Denominator:	Total number of TB patients registered during the same time period.
Calculation:	*Number of TB patients, registered during a given time period, who had an HIV test result recorded in the TB register* / *Total number of TB patients registered during the same time period* x 100
How to Measure it:	Data for this indicator can be collected using national programme records aggregated from facility registers, either the TB register or a separate HIV testing and counselling register. Where available, data should come from the national TB control programme surveillance system and should include data from TB services delivered in public and private health facilities and prisons, as well as from TB services delivered by faith-based and nongovernmental organizations. Disaggregating the data by age and sex will enable assessment of equity of access to HIV counselling and testing services. Data should also be disaggregated based on the result of the HIV test.

Disaggregation: **Age group:** 0–4, 5–14, 15 and above.
HIV status: HIV positive, HIV negative.
Sex: female, male.

INTERPRETATION:

This indicator is generated from the WHO standardized M&E system recommended for national TB programmes. These data will help national TB control programmes to project national requirements for HIV tests and related commodities, as well as national requirements for human resources training. Tracking this number from year to year will provide information on whether provider–initiated HIV testing and counselling is being targeted and provided appropriately to patients with TB, so that HIV–positive TB patients can access appropriate HIV services. A limitation of the indicator is that health care providers may treat TB without registering with the national TB control programme, which means that those individuals would not be counted in this indicator.

Additional Recommended Indicator #7
Percentage of pregnant women who were tested for HIV and who know their results [disaggregated by service type (Antenatal Care, Labour & Delivery, Postpartum)]

PURPOSE:	This indicator measures the percentage of pregnant women who were tested for HIV in the last 12 months and who received their HIV test results.
	Mother-to-child transmission (MTCT) of HIV infection can occur during pregnancy, labour and delivery or during breastfeeding. The risk of MTCT can be reduced by a range of interventions, including provision of antiretroviral prophylaxis given to women during pregnancy and labour and to the infant in the first weeks of life; obstetrical interventions, including elective caesarean delivery; and complete avoidance of breastfeeding.
	Receiving HIV testing and counselling services as early as possible during pregnancy enables HIV-positive pregnant women to benefit from HIV services and to access interventions for reducing HIV transmission to their infants.
APPLICABILITY:	All countries.
DATA COLLECTION FREQUENCY:	**Numerator:** ongoing; **Denominator:** Annual.
MEASUREMENT METHODOLOGY:	**Numerator:** Programme/facility records. **Denominator:** Population estimate.
MEASUREMENT TOOLS:	**Numerator:** ANC and L&D registers, HIV Testing & Counselling registers; HIV reporting forms. **Denominator:** Published estimates, e.g., estimates from the UN Population Division.
METHOD OF MEASUREMENT:	
Definition:	Percentage of pregnant women who were tested for HIV and who know their results, disaggregated by service type (Antenatal Care (ANC); Labour & Delivery (L&D); Postpartum).
Numerator:	The number of women attending antenatal care, labour & delivery, and postpartum services who were tested for HIV and who know their results, plus women with known HIV infection attending ANC for a new pregnancy in the last 12 months.
Denominator:	Estimated number of pregnant women in the last 12 months.
Calculation:	*[Pregnant women who received an HIV test and result during ANC] + [Pregnant women attending L&D with unknown HIV status who were tested for HIV in the L&D facility and received their result] + [Women with unknown HIV status attending postpartum services within 72 hours of delivery who were tested for HIV and received their result] + [Pregnant women with known HIV infection attending ANC for a new pregnancy]* $\times 100$
	Estimated number or pregnant women in the last 12 months

How to Measure it: The **numerator** is the sum of categories a–d:

a) pregnant women who received an HIV test and result during ANC;

b) pregnant women attending L&D with unknown HIV status who were tested for HIV in the L&D facility and received their result;

c) women with unknown HIV status attending postpartum services within 72 hours of delivery who were tested for HIV and received their result;

d) pregnant women with known HIV infection attending ANC for a new pregnancy.

Pregnant (and postpartum) women with unknown status are women who were not tested during ANC or L&D for this pregnancy or did not have documented proof of having been tested during ANC or L&D for this pregnancy.

Pregnant women with known HIV-infection are women who were tested and confirmed HIV-positive at any point prior to the current pregnancy, who are attending ANC for a new pregnancy. Pregnant women with known HIV infection attending ANC for a new pregnancy do not need to be re-tested but do need subsequent PMTCT services[1], and are counted in the numerator.

Data to construct the numerator should come from national programme records aggregated from facility registers in ANC, L&D, and postpartum services. Health facility registers should include data on known HIV infection among HIV-infected pregnant women accessing ANC services for a new pregnancy in order for them to receive subsequent PMTCT services. All service providers should be included: public, private, faith-based and NGO-led.

Not all categories are applicable or significant to all settings (e.g., women of unknown status tested within 72 hours postpartum). Countries may want to prioritize investment of resources for measuring the categories that are appropriate to their country context.

The **denominator** is generated through a population estimate of the number of pregnant women giving birth in the last 12 months, which can be obtained from the Central Statistics Office estimates of births or the UN Population Division estimates.

In countries with low-level and concentrated epidemics where policies to identify the HIV status of all pregnant women do not exist, the denominator should be adapted to the target population of pregnant women whose HIV status should be assessed.

Disaggregation: **Service Type:** antenatal care, labour & delivery, postpartum.

INTERPRETATION:

This indicator enables a country to monitor trends in HIV testing among pregnant women and women receiving postpartum services who may require ARV drugs to prevent mother-to-child transmission of HIV. This indicator provides a good measure of how effectively HIV testing and counselling services are being provided to pregnant women and women receiving postpartum services. However, it does not capture the points at which drop-outs occur during the testing and counselling process; the reasons why drop-outs occur; the number of women who received pre-test counselling; nor the quality of HIV testing or counselling services.

There is a risk for double counting women in the numerator since a pregnant woman can be tested more than once while receiving ANC, L&D, or postpartum services. This is particularly true where women are re-tested in different facilities, or where they come to the L&D without documentation of their HIV test result. While it may not be feasible to avoid double counting entirely, countries should take measures to minimize double counting such as through the use of patient-held records that document, among other services, that HIV testing was done.

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[1] Documentation of HIV infection (care and treatment card, maternal card from previous pregnancy, or other reliable form of written documentation of HIV-status) is generally required in most settings. Without proof of existing HIV infection, women are usually considered as having 'unknown' status and thus re-tested.

Additional Recommended Indicator #8
Percentage of infants born to HIV-infected women who received an HIV test within 12 months [disaggregated by type/timing of testing (virological testing within 2 months, virological testing between 2 and 12 months or antibody testing between 9 and 12 months)]

PURPOSE:	This indicator measures the extent to which infants born to HIV-infected women are tested for HIV within the first 12 months of life.
	Determining the HIV status of children exposed to HIV during pregnancy, labour or breastfeeding is an important part of follow-up services in programmes for the prevention of mother-to-child HIV transmission (PMTCT). Infants infected with HIV during pregnancy, delivery or early postpartum often die before they are recognized as having HIV infection. HIV testing and counselling should therefore be recommended for all HIV-exposed infants or infants born to HIV-positive women as a routine component of follow-up care. WHO recommends that national programmes establish the capacity to provide early HIV virological testing of infants at 6 weeks, or as soon as possible thereafter, to guide clinical decision-making at the earliest possible stage. Where virological testing is unavailable, antibody testing at 9-12 months is recommended[2].
APPLICABILITY:	All countries.
DATA COLLECTION FREQUENCY:	**Numerator:** ongoing; **Denominator:** Annual.
MEASUREMENT METHODOLOGY:	**Numerator:** Programme/facility records. **Denominator:** ANC surveillance, projection model, population estimates.
MEASUREMENT TOOLS:	**Numerator:** facility-based records, such as integrated Maternal and Child Health registers, HIV-exposed infant follow-up registers, or pre-ART registers. **Denominator:** ANC surveillance, Spectrum, published estimates, e.g., estimates from the UN Population Division.
METHOD OF MEASUREMENT:	
Definition:	Percentage of infants born to HIV-infected women who received an HIV test within 12 months, disaggregated by type/timing of testing (virological testing within 2 months, virological testing between 2 and 12 months or antibody testing between 9 and 12 months).
Numerator:	Number of infants in the last 12 months who received an HIV test within 12 months of birth, disaggregated by: 1) infants who received virological testing in the first 2 months; and 2) infants who were tested either virologically between 2 and 12 months, or by antibody testing between 9 and 12 months.
Denominator:	Estimated number of HIV-infected pregnant women giving birth in the last 12 months. This is a proxy measure for number of infants born to HIV-infected women.

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[2] Early detection of HIV infection in infants and children. Guidance note on the selection of technology for the early diagnosis of HIV in infants and children, WHO 2007.

Calculation:	*Number of infants in the last 12 months who received an HIV test within 12 months of birth*

$$\frac{\textit{Number of infants in the last 12 months who received an HIV test within 12 months of birth}}{\textit{Estimated number of HIV-infected pregnant women giving birth in the last 12 months}} \times 100$$

How to Measure it: Data for the **numerator** should be aggregated from the appropriate facility registers, which could include integrated Maternal and Child Health (MCH) registers, HIV-exposed infant follow-up registers, or pre-ART registers. The register used may vary depending on the country context. For example, where HIV-exposed infant follow-up takes place in the HIV care and treatment setting, countries may aggregate information either from a pre-ART register adapted for HIV-exposed infant follow-up or in a separate HIV-exposed infant register.

Where feasible, infants born to *known* HIV-infected mothers (who were identified as HIV-infected through a PMTCT programme) should be included in the numerator. The number of *infants* who were tested, and not the number of HIV tests performed, should be counted, since many infants may be tested multiple times.

All service providers should be included: public, private, faith-based and NGO-led.

The **denominator** is generated by estimating the number of HIV-infected women who were pregnant in the last 12 months. This is based on HIV surveillance data from antenatal clinics, and estimates can be generated by:
1. using a projection model, such as Spectrum; or
2. multiplying:

The total number of women who gave birth in the last 12 months $\times$ *The most recent national estimate of HIV prevalence in pregnant women*

The total number of women who gave birth in the last 12 months can be obtained from the Central Statistics Office estimates of births or the UN Population Division estimates. The most recent national estimate of HIV prevalence in pregnant women can be derived from HIV sentinel surveillance data collected in antenatal clinics.

Disaggregation: **Type/Timing of testing:** virological testing within 2 months, virological testing between 2 and 12 months or antibody testing between 9 and 12 months.

INTERPRETATION:

This indicator allows countries to monitor progress in reaching HIV-exposed infants with early infant testing as a critical tool for providing appropriate follow-up care and treatment. While ideally the indicator captures infants born to known HIV-infected women, it may not be feasible in some settings to exclude infants who were tested for HIV using virological testing or antibody testing through provider-initiated testing, such as in paediatric wards, malnutrition centres, and other settings where infants may be identified as exposed or infected.

This indicator does not capture the number of children with a definitive diagnosis (i.e., either confirmed or excluded of HIV infection), nor does it measure whether appropriate follow-up services were provided to the child based on the interpretation of test results. The indicator does not measure the quality of testing or the system in place for testing. A low value of the indicator could, however, signal potential bottlenecks in the system, including poor management of HIV test supplies in country, poor data collection, and/or mismanagement of testing samples.

Additional Recommended Indicator #9
Percentage of infants born to HIV-infected women who are started on cotrimoxazole prophylaxis within two months of birth

PURPOSE:
This indicator measures the provision and coverage of cotrimoxazole prophylaxis (CTX) for HIV-exposed infants in line with international guidelines.

Cotrimoxazole prophylaxis is a simple and cost-effective intervention to prevent pneumocystis jiroveci pneumonia (PCP) among HIV-exposed and infected infants. PCP is the leading cause of serious respiratory disease in young HIV-infected infants in resource-constrained countries, and often occurs before HIV infection can be diagnosed. Because of the difficulties in diagnosing HIV-infection in young infants, all infants born to HIV-infected women should receive CTX prophylaxis, starting at 4–6 weeks after birth and continuing until HIV infection has been excluded and the infant is no longer at risk of acquiring HIV through breastfeeding.

APPLICABILITY:
All countries.

DATA COLLECTION FREQUENCY:
Numerator: ongoing; **Denominator:** Annual.

MEASUREMENT METHODOLOGY:
Numerator: Programme/facility records. **Denominator:** ANC surveillance, projection model, population estimates.

MEASUREMENT TOOLS:
Numerator: facility-based records, such as integrated Maternal and Child Health registers, HIV-exposed infant follow-up registers, or pre-ART registers.
Denominator: ANC surveillance, Spectrum, published estimates, e.g., estimates from the UN Population Division.

METHOD OF MEASUREMENT:

Definition:
Percentage of infants born to HIV-infected women initiated on cotrimoxazole prophylaxis within two months of birth.

Numerator:
Number of infants born to HIV-infected women in the last 12 months started on cotrimoxazole prophylaxis within two months of birth.

Denominator:
Estimated number of HIV-infected pregnant women giving birth in the last 12 months.

Calculation:

$$\frac{\textit{Number of infants born to HIV-infected women in the last 12 months who are started}}{\textit{on cotrimoxazole prophylaxis within two months of birth}} \times 100$$

$$\frac{}{\textit{Estimated number of HIV-infected pregnant women giving birth in the last 12 months}}$$

How to Measure it:
Data for the **numerator** should be aggregated from the appropriate facility registers, which could include integrated Maternal and Child Health (MCH) registers, HIV-exposed infant follow-up registers, or pre-ART registers. The register used may vary depending on the country context. For example, where HIV-exposed infant follow-up takes place in the HIV care and treatment setting, countries may aggregate information either from a pre-ART register adapted for HIV-exposed infant follow-up or in a separate HIV-exposed infant register.

The **denominator** is generated by estimating the number of HIV-infected women who were pregnant in the last 12 months. This is based on HIV surveillance data from antenatal clinics, and estimates can be generated by:

1. using a projection model, such as Spectrum; or

2. multiplying:

$$\frac{\textit{The total number of women who gave}}{\textit{birth in the last 12 months}} \times \frac{\textit{The most recent national estimate of}}{\textit{HIV prevalence in pregnant women}}$$

The total number of women who gave birth in the last 12 months can be obtained from the Central Statistics Office estimates of births or the UN Population Division estimates. The most recent national estimate of HIV prevalence in pregnant women can be derived from HIV sentinel surveillance data collected in antenatal clinics.

Disaggregation: N/A.

INTERPRETATION:

This indicator allows countries to monitor progress in the early follow-up of exposed infants by measuring provision of cotrimoxazole in line with international guidelines. It can also be used as a proxy indicator for early follow-up visits of exposed infants within the recommended first 4-6 weeks of life. The indicator captures only those infants who return for HIV-exposed infant follow-up services within two months of birth. It does not measure actual coverage of cotrimoxazole prophylaxis for HIV-exposed infants as some infants may have been started on treatment after 2 months. A low value of the indicator could signal potential bottlenecks in the system, including poor management of CTX supplies in country, poor data collection, and inadequate distribution systems.

Additional Recommended Indicator #10
Total number of male and female condoms available for distribution nationwide during the last 12 months per person aged 15-49 [disaggregated by condom type (male, female)]

PURPOSE:

This indicator measures the number of condoms available for use by those in the most sexually active age group. Where active efforts are made to promote the availability of female condoms, this indicator should include both female and male condoms, although the indicator should be disaggregated by condom type.

The first challenge for national programmes promoting condom use is to ensure that there are enough condoms in the country to satisfy demand. This indicator can be used together with indicators of sexual behaviour to give a powerful picture of the adequacy of condom provision.

APPLICABILITY:

All countries.

DATA COLLECTION FREQUENCY:

Annual.

MEASUREMENT METHODOLOGY:

Key informant interviews, programme records or inventory logs.

MEASUREMENT TOOLS:

N/A.

METHOD OF MEASUREMENT:

Definition:

Total number of male and female condoms available for distribution nationwide during the last 12 months per person aged 15–49 years, disaggregated by condom type (male, female).

Numerator:

Number of male and female condoms available for distribution nationwide in the last 12 months.

Denominator:

Total population aged 15–49.

Calculation:

$$\frac{[\textit{Number of condoms in stock nationally at the start of the 12-month period + number of condoms imported during that period + number of condoms manufactured in-country during that same period] - number of condoms exported out of the country during the same 12-month period}}{\textit{Total population aged 15-49}} \times 100$$

How to Measure it:

The **numerator** is calculated using information derived from key informant interviews, programme records, and/or inventory logs. For key informant interviews, individuals with special knowledge of the national condom supply situation are interviewed to identify all possible sources of condom manufacture, import, distribution and storage in the country. Next, data on the number of condoms in stock, the number of condoms imported, the number of condoms manufactured in-country, and the number of condoms exported are collected from all groups involved in acquiring and distributing condoms (i.e., manufacturers and major commercial condom importers/distributors; condom storage facilities; government; parastatals; NGOs; major donors).

Calculation of the number of condoms imported may be complicated by the number of organizations involved. Many countries have deregulated condom imports in order to maximise the availability of condoms. This means that condoms may be imported by a wide variety of companies, NGOs, donors and government departments. Information about the number of condoms imported may not be collected in a centralized or systematic fashion.

Where possible, data should be presented by programme. Traditionally, there has been a distinction between condoms distributed through family planning programmes and those distributed to reduce sexually transmitted infections. Generally, condoms distributed by family planning programme are primarily intended for use during sex within stable monogamous unions that carries a low risk of HIV transmission, whereas condoms distributed through AIDS programmes are primarily intended for use during sex in situations that confer a relatively higher risk of HIV transmission.

Disaggregation: **Condom type:** female condoms, male condoms.

INTERPRETATION:

The number of condoms available at the central level helps assess the adequacy of overall condom availability. It is important to note, however, that "availability" is not the same as "accessibility." Whether or not condoms are accessible depends upon factors such as condom price and location of condom sales/distribution points. It is often the case that not all available condoms are distributed or reach the individuals who most need them. This indicator by itself does not provide a picture of how many "in-stock" condoms actually get distributed or used. Nevertheless, it provides a very low-cost source of information on condom availability that is helpful for programme planning and evaluation, particularly for national condom promotion programmes.

Additional Recommended Indicator #11
Percentage of young women and men aged 15-24 who report they could get condoms on their own [disaggregated by sex (female, male), age (15-19, 20-24)]

PURPOSE:	This indicator measures the percentage of young people who can name at least one formal source of condoms and say that they can get a condom from that source if they want one.
	Studies have demonstrated that adolescents who know of at least one source of condoms are much more likely than other adolescents to use them.
APPLICABILITY:	All countries.
DATA COLLECTION FREQUENCY:	Preferred: every 2 years; Minimum: Every 4-5 years.
MEASUREMENT METHODOLOGY:	Population–based survey.
MEASUREMENT TOOLS:	Population–based survey tools, such as the AIDS Indicator Survey (AIS) or Demographic and Health Survey (DHS) can be used.
METHOD OF MEASUREMENT:	
Definition:	Percentage of young women and men aged 15-24 who know a place where to get condoms and who report they could get condoms on their own if they wanted, disaggregated by sex (female, male), and age (15–19, 20–24).
Numerator:	Number of young women and men aged 15–24 who know a place where they can get condoms and who report they could get condoms on their own if they wanted.
Denominator:	The number of respondents aged 15–24.

Calculation:

$$\frac{\textit{Number of young women and men aged 15-24 who know a place where to get condoms and who report they could get condoms on their own if they wanted}}{\textit{The number of respondents aged 15-24}} \times 100$$

How to Measure it:	The **numerator** is measured by asking survey respondents to name at least one acceptable source where condoms are available. Subsequently, they are asked whether they can get a condom from that source if they want one. A definition of acceptable sources should be produced in each national setting. If respondents know of an acceptable source for condoms and respond that they can get a condom from that source if they want, then they are included in the numerator.
	The **denominator** includes all survey respondents aged 15–24.
Disaggregation:	**Age group:** 15-19 years; 20-24 years. **Sex:** female, male.

INTERPRETATION:

This indicator measures the reported self-efficacy of a young person to get a condom when he or she wants one. Various factors can prevent young people from accessing condoms, including the cost of condoms and the stigma associated with obtaining them. This indicator may highlight whether or not young people face barriers in accessing condoms despite their knowledge of where to get condoms.

Additional Recommended Indicator #12
Percentage of never married young women and men aged 15-24 who have never had sex [disaggregated by sex (female, male) and age (15-19, 20-24)]

PURPOSE:	This indicator measures the percentage of never married young people surveyed who report they have never had sex (i.e., the self-reported prevalence of virginity among young people).
	Abstinence and delayed sexual initiation can help young people protect themselves against sexually transmitted infections, including HIV.
	Looking at this prevalence within narrow age ranges (15–16, 17–18, 19–20, 21–22, and 23-24, or by age years) over time allows programme managers to assess if the age at first sex is changing.
APPLICABILITY:	All countries.
DATA COLLECTION FREQUENCY:	Preferred: every 2 years; Minimum: Every 4-5 years.
MEASUREMENT METHODOLOGY:	Population–based survey.
MEASUREMENT TOOLS:	Population–based survey tools, such as the AIDS Indicator Survey (AIS) or Demographic and Health Survey (DHS) can be used.
METHOD OF MEASUREMENT:	
Definition:	Percentage of never married young women and men aged 15-24 who have never had sex, disaggregated by sex (female, male) and age (15–19, 20-24).
Numerator:	Number of never married young women and men aged 15-24 who have never had sexual intercourse.
Denominator:	Number of never married young women and men aged 15-24 surveyed.
Calculation:	*Number of never married young women and men aged 15-24 who have never had sexual intercourse* $\times 100$
	Number of never married young women and men aged 15-24 surveyed
How to Measure it:	The **numerator** is measured by asking never married male and female survey respondents aged 15-24 if they have ever had sexual intercourse. If they answer no to this question, then they are counted in the numerator.
	The **denominator** includes all male and female survey respondents aged 15–24 who were never married, including those that are co–habiting.
Disaggregation:	**Age group:** 15–19 years; 20–24 years. **Sex:** female, male.

INTERPRETATION:

This indicator describes the extent to which young women and men have maintained their virginity and it provides a sense of when young people are initiating sexual activity. In some settings, the proportion of those aged 20-24 who are never married will be very low, at least among women, and it may not be appropriate to construct the indicator for this age group in these settings.

Additional Recommended Indicator #13
Percentage of men aged 15-49 reporting sex with a sex worker in the last 12 months who used a condom during last paid sexual intercourse [disaggregated by age (15-19, 20-24, 25-49), and population group (migrant workers, military, truck drivers, other)]

PURPOSE:	This indicator measures self-reported condom use among male clients of sex workers.
APPLICABILITY:	Countries with concentrated/low prevalence epidemics, including countries with concentrated sub-epidemics within a generalized epidemic context.
DATA COLLECTION FREQUENCY:	Preferred: every 2 years; Minimum: Every 4-5 years.
MEASUREMENT METHODOLOGY:	Population-based survey.
MEASUREMENT TOOLS:	Population-based survey tools, such as the AIDS Indicator Survey (AIS) or Demographic and Health Survey (DHS) can be used.

METHOD OF MEASUREMENT:

Definition:	Percentage of men aged 15-49 reporting sex with a sex worker in the last 12 months who used a condom during last paid sexual intercourse, disaggregated by age (15-19, 20-24, 25-49) and population group (migrant workers, military, truck drivers, other).
Numerator:	Number of men aged 15-49 surveyed who report they used a condom the last time they had sexual intercourse with a sex worker.
Denominator:	Number of men aged 15-49 surveyed who report that they had sexual intercourse with a sex worker (i.e., someone they paid in exchange for sex) in the last 12 months.

Calculation:

$$\frac{\textit{Number of men aged 15-49 who report they used a condom the last time they had sexual intercourse with a sex worker}}{\textit{Number of men aged 15-49 who report they had sexual intercourse with a sex worker in the last 12 months}} \; x\; 100$$

How to Measure it:	The **numerator** is calculated as the number of men aged 15-49 who report that they used a condom the last time they had sexual intercourse with a sex worker. These data may be obtained from a population-based survey or from special surveys targeting potential clients of sex workers.
	The **denominator** is calculated as the number of men who report that they paid someone in exchange for sex (i.e., had sexual intercourse with a sex worker) in the last 12 months. Those who reply yes are counted in the denominator.
Disaggregation:	**Age group:** 15-19 years; 20-24 years; 25-49 years. **Population group:** migrant workers, military, truck drivers, other.

INTERPRETATION:

For this indicator to be most useful, countries need to establish agreed upon definitions of what constitutes sex work (i.e., paying someone in exchange for sex). Once a country has established an agreed upon definition of sex work, it is unlikely to change significantly over time, and this indicator can then be used to track the success of programmes that promote condom use between sex workers and their clients.

This indicator provides a simple and robust measure of condom use during the last paid sexual intercourse with a sex worker, but it does not provide information about consistent condom use during paid sex. Programme managers may also want to consider survey data on whether clients of sex workers always use condoms, sometimes, or never during paid sex, since this provides essential information for the design of intervention strategies to increase condom use.

This indicator also does not provide detailed information about what type of sex worker a client had paid sex with in the last 12 months. In places where there are several distinct populations of sex workers (e.g., brothel-based, street-based, escort) with different perceived behavioural risks, data may need to be collected separately for each category of sex work in order to provide detailed information for prevention programming. For example, men may report high levels of condom use in brothels, but much lower levels with street-based sex workers.

Additional Recommended Indicator #14
Percentage of women and men aged 15-49 expressing accepting attitudes towards people living with HIV [disaggregated by sex (female, male), age (15-19, 20-24, 25-49), and education level (none, primary, secondary or higher)]

PURPOSE:	This indicator measures accepting attitudes toward people living with HIV among women and men aged 15-49.
	HIV-related stigma refers to unfavourable attitudes, beliefs, and policies directed toward people living with HIV and their family members, close associates and communities. HIV-related stigma can reduce the effectiveness of programmes and services designed for those living with HIV and those who are affected by the disease. For example, studies have shown that some families with orphans have chosen not to receive relief services in order to avoid the stigma attached to these benefits. Other studies found that some families cut themselves off from social support networks long before an AIDS death occurs in the family in order to avoid HIV-related stigma.
	HIV awareness programmes are designed to increase accepting attitudes toward people living with HIV or those perceived to be living with HIV. This indicator provides a measure of the effectiveness of HIV awareness programmes and can highlight whether more needs to be done to counter HIV-related stigma.
APPLICABILITY:	All countries.
DATA COLLECTION FREQUENCY:	Preferred: every 2 years; Minimum: Every 4-5 years.
MEASUREMENT METHODOLOGY:	Population-based survey.
MEASUREMENT TOOLS:	Population-based survey tools, such as the AIDS Indicator Survey (AIS) or Demographic and Health Survey (DHS) can be used.
METHOD OF MEASUREMENT:	
Definition:	Percentage of women and men aged 15–49 expressing accepting attitudes towards people living with HIV, disaggregated by sex (female, male), age (15–19, 20–24, 25–49), and education level (none, primary, secondary or higher).
Numerator:	Number of women and men aged 15-49 who report accepting attitudes towards people living with HIV.
Denominator:	All respondents aged 15-49 who have heard of HIV.
Calculation:	

$$\frac{\textit{Number of women and men aged 15-49 who report accepting attitudes towards people living with HIV}}{\textit{All respondents aged 15-49 who have heard of HIV}} \times 100$$

| How to Measure it: | The **numerator** is calculated by first asking survey respondents if they have ever heard of HIV. If they answer yes, then they are asked a series of questions about people with HIV, including: |

1. If a member of your family became sick with the HIV virus, would you be willing to care for him or her in your household?;
2. If you knew that a shopkeeper or food seller had the HIV virus, would you buy fresh vegetables from him/her?;
3. If a female teacher has the HIV virus but is not sick, should she be allowed to continue teaching in school?; and
4. If a member of your family became infected with the HIV virus, would you want it to remain a secret?

Only respondents who report an accepting or supportive attitude on all four of these questions is counted in the numerator. An accepting attitude for the respective questions is considered to be (1) yes; (2) yes; (3) yes; and (4) no.

The **denominator** consists of all respondents in the survey who have heard of HIV.

| Disaggregation: | **Age group:** 15–19 years; 20–24 years; 25–49 years.
Education: none, primary, secondary or higher.
Sex: female, male. |

INTERPRETATION:

This indicator measures the percentage of the population with accepting attitudes toward people living with HIV, and it provides a measure of HIV-related stigma. It is not, however, a perfect measure of HIV-related stigma. While a low value for the indicator suggests high levels of HIV-related stigma, a high value for the indicator could be interpreted in several ways: that there are low levels of HIV-related stigma, or that people know they should not discriminate and therefore report accepting attitudes. High scores may also reflect the respondent's limited personal experience with HIV.

Another limitation of this indicator is that there is frequently not a direct relationship between attitudes and behaviour. What people actually do in the face of HIV may well differ from what they say they would do. Some studies have found, for example, that people expressing very negative attitudes toward those living with HIV actually provide supportive care for an HIV-infected relative in their own home. On the other hand, some people who deny having negative attitudes towards people with HIV may actively discriminate against them in specific settings, such as in the provision of health care.

Additional Recommended Indicator #15
Percentage of children under the age of 18 who are orphans [disaggregated by sex (female, male), age (<5, 5-9, 10-14, 15-17), and type of orphan (maternal, paternal, double)]

PURPOSE:	This indicator measures levels of orphanhood in a country.
	Definitions of orphanhood differ between countries. In some countries, the legal definition includes all children under the age of 18 who have lost either or both parents. In other countries, it includes all children under the age of 15 who have lost their mother. This indicator provides an inclusive and standardized measure to allow for comparisons across countries.
	HIV is changing the face of adult mortality in many communities, killing men and women at exactly the ages when they are usually establishing families and bringing up children. Their deaths leave behind orphans who must be cared for, generally by other members of the community. The social and economic impact of rising orphanhood can be considerable, and countries need to track levels of orphanhood in order to plan for needed services.
APPLICABILITY:	Countries with generalized epidemics.
DATA COLLECTION FREQUENCY:	Preferred: every 2 years; Minimum: Every 4-5 years.
MEASUREMENT METHODOLOGY:	Population-based survey or national census.
MEASUREMENT TOOLS:	Population-based survey tools, such as the AIDS Indicator Survey (AIS) or Demographic and Health Survey (DHS), Multiple Indicator Cluster Surveys (MICS) can be used.
METHOD OF MEASUREMENT:	
Definition:	Percentage of children under the age of 18, whose mother or father or both parents have died, disaggregated by sex (female, male), age (<5, 5-9, 10-14, 15-17), type of orphan (maternal, paternal, double).
Numerator:	Number of children under the age of 18 whose mother or father or both parents have died, as listed by survey respondents.
Denominator:	All children under the age of 18, as listed by survey respondents.
Calculation:	*Number of children under the age of 18 whose mother or father or both parents have died, as listed by survey respondents*

$$\frac{\textit{Number of children under the age of 18 whose mother or father or both parents have died, as listed by survey respondents}}{\textit{All children under the age of 18, as listed by survey respondents}} \times 100$$

How to Measure it:	In a population-based survey or a national census, respondents are asked the ages of all children in the household and whether the mothers and fathers of those children are alive. Those children who are currently under the age of 18 and whose mother or father or both parents have died are counted in the **numerator.**
	The **denominator** consists of all children currently under the age of 18, as listed by respondents in the survey or census.
	If the number of children living outside households is substantial (i.e., more than 5 per cent of children under the age of 18), two supplemental surveys should be considered to estimate: 1) the number of orphans living on the streets, and 2) the number of orphans living in institutions.
Disaggregation:	**Age group:** <5 years; 5 – 9 years; 10 – 14 years; 15 − 17 years. **Sex:** female, male. **Type of orphan:** maternal, paternal, double.

INTERPRETATION:

Data on an increase in orphanhood can be a very powerful indication of the impact of an AIDS epidemic. Besides tracking the impact of AIDS deaths on communities, this indicator also has advocacy use.

One limitation of this measure is that it is not able to distinguish AIDS-related orphanhood from orphanhood due to other causes. Since young adult mortality was stable or falling in most countries for some years before the emergence of HIV, however, it is reasonable to assume that the bulk of any rise in orphanhood over baseline levels is attributable to HIV (assuming there is no other significant reason, such as armed conflict, for a high rate of young adult mortality).

Another limitation of this measure is that orphans may be undercounted. Orphans tend to be more mobile than other children, and this can make them difficult to identify when conducting surveys. Those most in need of care may be in child-headed households, and these households do not always qualify for inclusion in a household survey. Households often completely disintegrate following the death of a household head from AIDS, and children are frequently sent to live with relatives. Parental survival status may be unknown if the child has been separated from the parent for a long time. Because of this, the percentage of respondents indicating 'don't know' should also be tabulated.

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The purpose of this document is to present the 40 core national indicators that provide minimum necessary information for national-level monitoring of the HIV epidemic and response, and to provide detailed specifications and guidance on the 15 indicators recommended in addition to the 25 UNGASS indicators.

This set of 40 core national indicators replaces the set of indicators published by UNAIDS and its partner agencies in *National AIDS Programmes. A Guide to Monitoring and Evaluation (UNAIDS, 2000).*

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