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MONITORING AND EVALUATION TOOLKIT

HIV, Tuberculosis, Malaria and Health and Community Systems Strengthening

PART 2: HIV

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Contents

Acronyms

ART	antiretroviral therapy
DHS/ DHS+	Demographic and Health Survey/Demographic and Health Survey Plus
MERG	Monitoring and Evaluation Reference Group
MICS	Multiple Indicator Cluster Survey
NSP	needle and syringe program
OST	opioid substitution therapy
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
PMTCT	prevention of mother-to-child transmission of HIV
QoS	quality of services
SDA	service delivery area
STI	sexually transmitted infection
UNGASS	United Nations General Assembly Special Session on HIV/AIDS
UNAIDS	Joint United Nations Programme on HIV/AIDS
WHO	World Health Organization

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HIV

1. Introduction

The increasing scale and complexity of HIV, tuberculosis (TB) and malaria programs in recent years have intensified the need for data to inform decision-making and to demonstrate progress toward international goals and targets, such as the Millennium Development Goals. To meet these needs, countries must have strong monitoring and evaluation (M&E) systems to report accurate, timely and comparable data that can be used to strengthen programs and gain financial support.

This section of the M&E Toolkit presents an overview of global HIV goals and strategies (Section 2), considerations for monitoring and evaluating HIV programs (Section 3), selected HIV indicators that have been agreed upon in consultation with technical partners (Section 4), a description of relevant measurement tools for results reporting (Section 5), HIV program evaluation questions and considerations (Section 6) and links to additional resources (Section 7).

HIV services have expanded rapidly since the international commitments to the Millennium Development Goals in 2000, and the 2001 Declaration of Commitment on HIV/AIDS. In addition to the scale-up of life-saving interventions, notably antiretroviral therapy, those implementing HIV programs have access to a range of new technologies and approaches that can be integrated into existing programs. The 2011 Political Declaration on HIV/AIDS: Intensifying our Efforts to Eliminate HIV/AIDS and the 2011-2015 strategy of the Joint United Nations Programme on HIV/AIDS (UNAIDS)[1] and the World Health Organization (WHO)[2] will further guide countries by promoting universal access to HIV prevention, treatment, care and support. These new developments will also require updated guidance for program monitoring and evaluation. Section 2 provides further details on the global vision and strategies for fighting HIV and AIDS.

International partners, under the guidance of the UNAIDS HIV Monitoring and Evaluation Reference Group (MERG), have developed tools and guidance to strengthen the monitoring and evaluation of the epidemic. In February 2011, following a review of the globally available indicators and mapping these indicators to the UNAIDS strategy, the HIV MERG recommended 30 indicators for global reporting of progress in national HIV programs. After the United Nations High Level Meeting on AIDS in June 2011 the recommended indicator set from the review was mapped against the targets in the Political Declaration to form the basis of the updated global indicator guidelines. In addition, partners recommended tracking several indicators related to gender, care and support, stigma and discrimination and key populations at risk of HIV infection.

As part of reporting on global progress of the health sector responses towards universal access[3] to HIV prevention, treatment, care and support, WHO and partners, including UNICEF and UNAIDS, developed a guidance document[4] detailing globally recommended indicators.

HIV monitoring efforts are further supported by the UNAIDS HIV Indicator Registry,[5] launched in 2008 and updated in early 2011. This online database provides complete definitions of key indicators and specifically highlights indicators endorsed by multilateral agencies and donors in an effort to harmonize global reporting. The registry, which contains the indicators presented in this Toolkit, allows countries to:

- *access information on a broad range of HIV program indicators, including those beyond the scope of this Toolkit;*
- *select appropriate indicators for their country's epidemic and response;*
- *use standard tools for developing new indicators, when needed;*
- *export indicator definitions to PDF, Word or Excel for data collection.*

The registry is a multiagency effort by WHO, UNICEF, the Global Fund, the United States President's Emergency Plan for AIDS Relief (PEPFAR) and UNAIDS, guided by the UNAIDS MERG.

The subset of HIV program indicators included in Tables 2 and 3 on pages 49-58 of this Toolkit are designed to promote monitoring and reporting of interventions while minimizing additional demands on countries. However, countries are also encouraged to monitor other activities relevant to their programs using indicators that are not provided in this Toolkit (examples of which can be found in the UNAIDS HIV Indicator Registry). The indicator selection process was guided by six major principles:

- *building on existing national and global indicators, such as those from the UNAIDS global set, and linking these indicators to the objectives to be achieved;*
- *harmonizing with other international frameworks and strategies, such as the Millennium Development Goals; the WHO/UNAIDS Framework for Monitoring the Health Sector Response; and the frameworks of other major donors in HIV (notably PEPFAR);*

1 Joint United Nations Programme on HIV/AIDS (UNAIDS). Getting to zero: 2011-2015 strategy.. Geneva: UNAIDS; 2010. Available from: http://www.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2010/JC2034_UNAIDS_Strategy_en.pdf

2 World Health Organization (WHO). Draft WHO HIV/AIDS strategy 2011–2015. Geneva: WHO; 2010. Available from: http://apps.who.int/gb/ebwha/pdf_files/EB128/B128_10-en.pdf

3 WHO. Monitoring and reporting on the health sector's response towards universal access to HIV/AIDS treatment, prevention, care and support, 2009–2010 [Internet]. WHO framework for global monitoring and reporting [cited 2011 Sept 13]. Available from: http://www.who.int/hiv/universalaccess2010/hiv_me_framework_2009-10.pdf

4 WHO, UNICEF, UNAIDS. A guide on Indicators for monitoring and reporting on the health sector response to HIV/AIDS. Geneva: WHO; 2011. Available from: http://www.who.int/hiv/data/UA2011_indicator_guide_en.pdf

5 HIV Indicator Registry [Internet]. [cited 2011 Sept 5]. Available from: http://www.indicatorregistry.org/

- *minimizing the number of indicators to be collected;*
- *selecting indicators with clear data sources and methods of analysis, such as through routine health information systems, including data from communities; health facilities, behavioral surveillance or population-based surveys (such as Multiple Indicator Cluster Surveys (MICS) and Demographic and Health Surveys (DHS and DHS+));*
- *reconciling the M&E needs of the program or country and donors;*
- *covering a wide range of program areas and sectors engaged in the response to HIV.*

2. Global HIV vision and strategies

International efforts to expand HIV-related services and interventions are guided by several key global strategies (see Box 1). These strategies lay out the vision for the future HIV response, but each national response relies on the support and commitment of many in-country stakeholders, civil society and donors to adopt these strategies and accomplish these goals.

A strategic investment framework that is intended to support better management of national and international HIV/AIDS responses has recently been proposed.[6] Through community mobilization,

BOX 1.
Global HIV vision and strategies

Millennium Development Goals (MDGs): In 2000, world leaders adopted the United Nations Millennium Declaration, committing to time-bound targets across eight core areas in poverty reduction, health and the environment. MDG 6 calls for combating HIV/AIDS, malaria and other diseases, with specific targets for HIV:

- *Target 6a: Have halted by 2015 and begun to reverse the spread of HIV;*
- *Target 6b: Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it.*

The Global Fund is also committed to contributing to the achievement of MDGs 4 (reducing child mortality) and 5 (improving maternal health), with these targets:

- *Target 4a: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate;*
- *Target 5a: Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio;*
- *Target 5b: Achieve, by 2015, universal access to reproductive health.*

UNAIDS 2011 – 2015 strategy (Getting to zero):[7] This strategy outlines the global commitment to achieve universal access to HIV prevention, treatment, care and support and supports the achievement of MDG 6. The vision of the strategy for 2015 is:

- *zero new infections;*
- *zero AIDS-related deaths;*
- *zero AIDS-related discrimination.*

Targets in support of the vision for 2015 are listed in the UNAIDS strategy.

United Nations General Assembly High-Level Meeting: Held in June 2011, world leaders came together at the UN General Assembly High-level Meeting on HIV/ AIDS to review progress achieved in realizing the 2001 Declaration of Commitment on HIV/AIDS and the 2006 Political Declaration on HIV/AIDS, with a view to guiding and intensifying the global response. The Political Declaration on HIV/AIDS: Intensifying Our Efforts to Eliminate HIV and AIDS,[8] which was endorsed by global leaders, set new commitments and targets. Among others, member states agreed to the following by 2015:

- *reduce sexual transmission of HIV by 50 percent;*
- *reduce transmission of HIV among people who inject drugs by 50 percent;*
- *work toward eliminating mother-to-child transmission of HIV and substantially reducing AIDS-related maternal deaths;*
- *work toward reaching 15 million people living with HIV with antiretroviral treatment.*
- *work toward reducing TB deaths in people living with HIV by 50 percent.*

The Global Plan Towards the Elimination of New HIV Infections Among Children by 2015 and Keeping Their Mothers Alive:[9] The Global Plan was released in June 2011 to provide a roadmap for country-led efforts toward the elimination of mother-to-child transmission of HIV in support of the UNAIDS 2009 call for virtual elimination by 2015. While the plan covers all low- and middle-income countries, it particularly focuses on the 22 countries with the highest estimates of HIV-positive pregnant women. It defines the following targets:

- *reduce the number of new HIV infections among children by 90 percent;*
- *reduce the number of AIDS-related maternal deaths by 50 percent.*

6 Schwartländer B, Stover J, Hallett T, et al., on behalf of the Investment Framework Study Group. Towards an improved investment approach for an effective response to HIV/AIDS. Lancet 2011; published online June 3. DOI:10.1016/S0140-6736(11)60702-2.

7 UNAIDS. Getting to zero: 2011-2015. Geneva: UNAIDS; 2011. Available from: http://www.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2010/JC2034_UNAIDS_Strategy_en.pdf

8 United Nations General Assembly. Political declaration on HIV/AIDS: Intensifying our efforts to eliminate HIV/AIDS / Draft resolution submitted by the President of the General Assembly (8 June 2011). Available from: http://www.unaids.org/en/media/unaids/contentassets/documents/document/2011/06/20110608_UN-A-65-L.77_en.pdf

9 UNAIDS. Countdown to zero. Global plan towards the elimination of new HIV infections among children by 2015 and keeping their mothers alive: 2011-2015. Geneva: UNAIDS; 2011. Available from: http://www.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2011/20110609_JC2137_Global-Plan-Elimination-HIV-Children_en.pdf

synergies between program elements, and benefits of antiretroviral therapy for prevention of HIV transmission, major efficiency gains are anticipated. Implementation of the new investment framework would avert an estimated 12.2 million new HIV infections and 7.4 million deaths from AIDS between 2011 and 2020.

3. HIV-specific considerations for M&E

HIV programming has become increasingly comprehensive as a result of evolving epidemics, revised global and national strategies, new technologies and approaches, and three decades of implementation experience. Monitoring and evaluation are important processes for capturing and using data on the implementation and quality of these activities, as well as for determining overall progress toward international goals. These processes rely on strong data sources; systems for collecting, analyzing and reporting information; and the ability to apply this information to improve programs.

In addition to the capacity to accurately collect and use data, HIV program monitoring and evaluation should reflect several strategic considerations. The nature of the epidemic and prevalence level within a country will be an important guide for the type of information to be collected. Data on populations at a higher risk of HIV infection are necessary to determine whether the program is reaching key groups in need. There are unique challenges and barriers to both accessing these groups and collecting the data. Programs also need to consider equity in relation to economic status, gender, and geographic location and among populations vulnerable to infection.

In line with the international push toward eliminating new HIV infections among children (see Box 1), related program activities and their outcome and impact should be monitored. These interventions can be complex and difficult to track across both mother and baby, particularly where services are delivered at multiple delivery points.

There is increasing recognition of the synergies between health-related programs, particularly related to TB and HIV, maternal and child health (see Box 2 of Part 1 for more information) and nutrition. Recognizing and monitoring these linkages can expand the impact of investments beyond HIV-specific services.

An essential area of concern is the quality of services that are being delivered. A set of indicators has been developed for monitoring service quality in the context of HIV programs.

Further information on each of these areas is provided below. Sections 4 and 5 provide guidance on which indicators are useful for measuring these specific issues.

3.1 Tailoring programs and their M&E to the type of epidemic

Program monitoring, including indicator selection, will largely depend on the type of HIV epidemic, populations at risk and the focus of activities. For countries with generalized epidemics, the focus is on monitoring treatment, care and support for people living with HIV; prevention interventions; and HIV testing and counseling as a gateway to prevention, treatment and care of other related illnesses for the general population. For countries with low-level or concentrated epidemics among key populations (including sex workers, people who inject drugs and men who have sex with men), the focus should be on outreach and community-based preventive interventions within these populations as well as on strengthened referral systems to care and treatment services for HIV-infected people. These activities should be supported by strong monitoring systems that can report on the most important outputs, outcomes and impacts of the program. For example, in countries with generalized epidemics, it will be more appropriate to focus surveillance on the general population and to develop systems to track HIV prevention, treatment, care and support interventions among the general population. In countries with a generally low-level of HIV prevalence concentrated among key populations, these groups should be the focus for surveillance and reporting systems. In cases of a generalized epidemic with concentrated epidemics in subpopulation groups, equivalent surveillance systems for both general and key populations should be developed and functional. Where M&E systems to collect data on key populations do not exist, the establishment of such systems should be a programmatic priority.

3.1.1 Key populations

Key populations at higher risk, also referred to as most-at-risk populations, are communities of subpopulations that are key to the dynamics of a country's epidemic. They have HIV prevalence rates higher than those in the general population. Key populations comprise: male and female people who use drugs with non-sterile injecting equipment; men who have unprotected sex with other men; and adult women, men and transgender people involved in sex work. Monitoring of programs for key populations requires sensitivity to the hidden nature of these populations and to the ethical considerations associated with the types of services provided and the need for data confidentiality. Coverage (the proportion of key populations who are reached by the program or interventions) could be measured using program data or survey data (see section 4.3).[10,11] Reporting on coverage for key populations using program data requires the following conditions:

- ***Defined basic (minimum) package of services.*** HIV prevention, treatment, care and support programs for key populations must be comprehensive in scope, scale and intensity. They need to use the full range of

10 Operational guidelines for monitoring and evaluation of HIV prevention for people who inject drugs, UNAIDS, MERG (in press)

11 Operational guidelines for monitoring and evaluation of HIV prevention for sex workers, men who have sex with men and transgender people, UNAIDS, MERG (consultation version, August 2011). Available from; http://www.cpc.unc.edu/measure/publications/ms-11-49

policy and programmatic interventions known to be effective for the respective population group. Recently, UNAIDS proposed a strategic investment framework with six basic program activities specific to a country's epidemiological and social context including the one for the key populations (sex workers, men who have sex with men, people who inject drugs).[12] WHO, UNODC and UNAIDS have recommended a comprehensive package of services for HIV prevention, treatment and care for people who inject drugs (Box 2).[13] It is advised that monitoring needle and syringe programs, opioid substitution programs, testing and counseling and ARV therapy should be a minimum requirement. Some countries may not be able to provide all interventions from the comprehensive package. Also, not all interventions from the comprehensive package will be needed by every client. Thus, for monitoring purposes, a basic (minimum) package of interventions should be agreed upon and clearly defined at the national level. When data are collected and reported for the number of people from key populations reached with HIV prevention programs, these individuals should be counted only when they receive the full basic (minimum) package of services.

- ***System to avoid double counting.*** Key populations may access a particular service multiple times. Depending on the level of the program data monitoring, a system to avoid double counting needs to be in place to accurately assess the number of individuals being reached and the number of contacts with each individual. Programs that adopt the use of Unique Identifier Codes[14] will be able to track the number of individuals participating in the program.
- ***Population size estimates.*** Population size estimates can help improve program planning, budgeting and related funding requirements. Reliable and recent size estimates of thekey populations are necessary to measure program coverage.[15]

BOX 2.
HIV interventions for people who inject drugs

A comprehensive package of interventions for the prevention, treatment and care of HIV among people who inject drugs includes:

1. *Needle and syringe programs (NSPs)*
2. *Opioid substitution therapy (OST) and other drug-dependence treatment*
3. *HIV testing and counseling*
4. *Antiretroviral therapy (ART)*
5. *Prevention and treatment of sexually transmitted infections*
6. *Condom programs for people who inject drugs and their sexual partners*
7. *Targeted information, education and communication for people who inject drugs and their sexual partners*
8. *Vaccination, diagnosis and treatment of viral hepatitis*
9. *Prevention, diagnosis and treatment of tuberculosis*

TABLE 1.
Selecting indicators for monitoring programs targeted at key populations

Monitoring criteria	Presence of monitoring criteria	
	Yes	**No**
Defined basic (minimum) package of services	Report on basic (minimum) package provided *(Use indicator HIV-P5 from Table 2 on page 49)*	Report on single intervention provided *(Use indicator HIV-P4 from Table 2 on page 49)* *Systems strengthening action: Define the basic (minimum) package*
System to avoid double counting	Report number of people reached	Report on number of contacts reached or services provided *Systems strengthening action: Develop system to avoid double counting*
Population size estimate	Report on number and percentage of people reached	*Report on number of people reached* *Systems strengthening action: Obtain population size estimate*

12 Schwartländer B, Stover J, Hallett T, et al., on behalf of the Investment Framework Study Group. Towards an improved investment approach for an effective response to HIV/AIDS. Lancet 2011; published online June 3. DOI:10.1016/S0140-6736(11)60702-2.

13 WHO, UN Office on Drugs and Crime (UNODC) and UNAIDS. WHO, UNODC, UNAIDS technical guide for countries to set targets for universal access to HIV prevention, treatment and care for injecting drug users, 2009. Geneva: WHO; 2009. Available from: www.unodc.org/documents/hiv-aids/idu_target_setting_guide.pdf

14 Alliance for Open Society International. Unique Identifier Code. USAID-Funded Drug Demand Reduction Program in Uzbekistan, Tajikistan, and Ferghana Valley Region of Kyrgyzstan. Almaty, Kazakhstan: Alliance for Open Society International; 2007. Available from: http://www.aidsprojects.com/wp-content/themes/apmg-1.0.1/documents/UIC_Eng.pdf

15 UNAIDS and WHO. Estimating the size of populations at risk for HIV. Issues and methods. WHO/UNAIDS; Geneva: WHO; 2010. Available from: http://data.unaids.org/pub/Manual/2010/guidelines_popnestimationsize_en.pdf

Table 1 provides guidance on selecting indicators based on the presence or absence of these three criteria.

To achieve universal access to HIV prevention, treatment, care and support by 2015, WHO/UNAIDS recommends 60 percent coverage with the basic programs for sex workers, men who have sex with men and needle and syringe programs (NSP). For countries that have introduced opioid substitution programs (OST), 40 percent coverage by 2015 is desirable. In countries that have not introduced OST, 20 percent coverage by 2015 is recommended. These targets are considered the maximum plausible level of coverage. Countries that have reached these levels of coverage for NSP and OST have seen their HIV epidemics stabilize among people who inject drugs.[16]

3.1.2 Gender

Gender roles and relations powerfully influence the course and impact of the HIV epidemic. Gender-related factors shape the extent to which men, women, boys and girls are infected with and affected by HIV, as well as the kinds of responses that are feasible in different communities and societies. National responses to address gender equality within HIV/AIDS programs will vary according to the underlying epidemiological and sociocultural context. It has therefore become increasingly important to effectively track progress in addressing gender equality in the context of HIV/AIDS.

Gender-sensitive M&E requires a mix of input, output, outcome and impact indicators that reveal the extent to which an activity has addressed the different needs of women and men. Progress towards gender equality can be measured through two basic approaches. The first relies on reporting on selected standard indicators disaggregated by sex and/or age. The second uses indicators that measure specific activities that target women or men, such as gender-based violence or male involvement in preventing mother-to-child transmission (as indicated by male partner testing during antenatal care visits).

Some key indicators for monitoring gender-specific activities are shown in Tables 2 and 3 on pages 49-58. Recommended categories for disaggregating data to monitor progress toward gender or other dimensions of equity are shown in parentheses.

A compendium of gender indicators already used in HIV programs is currently being compiled under the leadership of UN Women, the United Nations Entity for Gender Equality and Empowerment of Women.[17] The final list will be published on the Global Fund Monitoring and Evaluation website.

Gender is an important dimension of equity, yet there are others. Other facets of equity in HIV programs may be monitored through indicators disaggregated by relevant characteristics, such as age, ethnicity or residence in urban/rural areas. The choice for disaggregation needs to be context-specific and should be guided by an equity assessment. The Global Fund approach to equity in general is described in Section 6.3 in Part 1 of the Toolkit.

3.2 Scale-up for elimination of new pediatric HIV infections

The Global Fund supports efforts to eliminate new pediatric HIV infections and encourages countries to develop the strong information systems required to accurately monitor these programs. The global commitment to the elimination of new pediatric infections by 2015 and to keeping women and children alive has set ambitious targets for each of the four prongs of prevention of mother-to-child transmission (PMTCT) of HIV.[18]

Because some of these targets require intervention through various service delivery points in the health system, prevention of mother-to-child transmission activities require information systems capable of following both the mother and child. Unique identifier codes for mother and baby pairs can be used to track cohorts through the system and determine whether they have accessed the services they need. Links between and integration of services are necessary to maintain people within the system, which increases the importance of data sharing and coordination. The ability of maternal and child health services to follow up on exposed infants is a critical part of the service delivery chain.

National targets are set within national plans, and wherever possible, countries should use national M&E systems for data collection. In addition to data for patient and program management, these systems should capture country-level impact information to measure progress toward the global goal of elimination.[19] Countries should review the ability of their systems to capture these data points and generate a plan to address identified gaps and weaknesses.

16 Schwartlander B, Stover J, Hallet T, et al., on behalf of the Investment Framework Study Group. Towards an improved investment approach for an effective response to HIV/AIDS, Lancet, 2011, published online June 3. DOI:10.1016/S0140-6736(11)60702-2. Supplementary web appendix. Available from: http://moneyforaids.org/pdfs/SupplementaryappendixIFM.pdf

17 UN Women: United Nations Entity for Gender Equality and Empowerment of Women [Internet]. Available from: http://www.unwomen.org/

18 The four prongs of PMTCT include the following:

- Prong 1: Prevention of HIV among women of reproductive age within services related to reproductive health such as antenatal care, postpartum and postnatal care and other health and HIV service delivery points, including working with community structures.
- Prong 2: Providing appropriate counseling and support, and contraceptives, to women living with HIV to meet their unmet needs for family planning and spacing of births, and to optimize health outcomes for these women and their children.
- Prong 3: For pregnant women living with HIV, ensure HIV testing and counseling and access to the antiretroviral drugs needed to prevent HIV infection from being passed on to their babies during pregnancy, delivery and breastfeeding.
- Prong 4: HIV care, treatment and support for women, children living with HIV and their families.

These are outlined in: UNAIDS. Countdown to Zero: Global Plan Towards the Elimination of New HIV infections among Children by 2015 and Keeping their Mothers Alive. 2011. Available from: http://www.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2011/20110609_JC2137_Global-Plan-Elimination-HIV-Children_en.pdf

19 For more information, please see Guidance on Measuring the Impact of National PMTCT Programmes. Available from: http://www.who.int/hiv/pub/me/en/index.html

3.3 TB/HIV collaborative activities

HIV infection can increase vulnerability to TB, which is an important factor to address through collaboration between HIV and TB programs. Because people are being supported through two disease-specific control programs, the monitoring and evaluation of TB/HIV activities require close coordination. Information on program and patient management must flow between the programs and the services and organizations involved to ensure that people receive quality and timely services.

Effective M&E for TB/HIV collaborative activities, including joint supervision, facilitates the crosschecking and reconciliation of data between the two programs at local and country levels. Both TB and HIV control programs should report the number of people in care being treated for both TB and HIV. If both programs cross-refer and count all cases, the two sets of data should match, because they reflect the treatment of the same patients. At the district level and below, and as part of supervisory activities, data reconciliation using the HIV care and TB registers will reveal any problems with patient referrals between programs. Any patient with both HIV and TB should appear in both registers. The HIV care registration number should be noted in the TB register, and vice versa.

With the scale-up and the improved monitoring of collaborative TB/HIV activities, there is a growing need to evaluate the impact of these collaborative activities, and to identify the most effective interventions for future expansion. Both programs should collect standardized data. Where possible, data collection and reporting should be integrated into a single existing national M&E system.

In this Toolkit, indicators are drawn from the internationally agreed and harmonized indicator set for M&E of TB/HIV activities published by WHO in 2009.[20]

3.4 Maternal and Child Health

There are numerous opportunities to leverage resources for HIV to improve maternal and child health outcomes. These can be achieved through the prevention of mother-to-child transmission, pediatric care and treatment for HIV, circumcision for male infants, programs to support orphans and vulnerable children, comprehensive sexual and reproductive health services for HIV-positive women and expanded nutritional and psychosocial support services for both mothers and children.

The Global Fund encourages countries to report on grant-supported interventions that contribute to maternal and child health goals (see Part 1). Monitoring these activities requires integration and coordination to effectively track patients through HIV, antenatal care, postnatal care and child health sites.

Many of the indicators for measuring Global Fund contributions to maternal, neonatal and child health are already in use. These indicators can be disaggregated by age and/or sex to demonstrate responsiveness to equity concerns, including addressing maternal and child health needs. Indicators that are useful for tracking maternal and child health-related interventions are presented in Tables 2 and 3 on pages 49-58.

3.5 Nutrition in HIV

Poverty, and food insecurity in particular, have been shown to constitute significant barriers to treatment uptake and adherence.[21] Food assistance and nutritional support services are therefore an integral part of treatment, care and support programs and are thus linked to universal access goals and the health-related Millennium Development Goals. UNAIDS works with the World Food Programme in recognition of the importance of food and nutrition to the health of people living with HIV.

HIV programs need to incorporate well-designed food and nutrition activities for people living with HIV that complement other related interventions in the health sector and community.

A robust M&E system that includes standardized food and nutrition indicators and operational research are essential tools to assess the extent to which interventions address potential problems identified during program design. Indicators for nutrition and HIV are summarized in the global harmonized set (forthcoming).[22] A selection of indicators relevant for performance-based funding is included in Tables 2 and 3 on pages 49-58.

3.6 Quality of services in HIV programs

Monitoring and evaluation of HIV programs must also investigate the quality of services provided. Measures have been incorporated in the Global Fund performance-based funding model to build capacity in establishing and using routine mechanisms as an integral part of program implementation, with the aim of ensuring service quality (see Section 6.2, Part 1 of this Toolkit). The Global Fund, in collaboration with partners such as the World Health Organization, UNAIDS and USAID, has developed a small set of minimum criteria for key service delivery areas in HIV (i.e. HIV testing and counseling, HIV treatment and care, TB/HIV, PMTCT and harm reduction among people who inject drugs). These minimum criteria can be supported by various indicators and data sources to create a more comprehensive understanding of the situation at the country and facility level. One example of standardized data collection is the

20 World Health Organization (WHO). A guide to monitoring and evaluation for collaborative TB/HIV activities. Geneva: WHO; 2009. [cited 2011 June 5]. Available from: http://whqlibdoc.who.int/publications/2009/9789241598194_eng.pdf

21 National AIDS Council (Ethiopia). ART scale-up in Ethiopia: Successes and challenges. Ethiopia HIV/AIDS Prevention and Control Office; 2009.

22 Indicators from the global harmonized set for nutrition and HIV are included in the UNAIDS Indicator Registry. The indicators can also be found at http://www.indicatorregistry.org/.

Rapid Service Quality Assessment (RSQA) questionnaire, which is designed to capture on an annual basis important contextual information about quality (see Section 6.2, Part 1). Other indicators and data points will vary by country, depending on what data are currently collected, particularly at the facility level. Tables 2 and 3 on pages 49-58 include standard indicators that support these minimum criteria and that are recommended for inclusion in Global Fund Performance Frameworks. Taken together, the various data points (assessed, for example, through RSQA and indicators) provide a sound basis for assessing quality of services during various stages of program implementation.

Annex 1 provides an overview of the minimum criteria for selected service delivery areas in HIV programs. It lists the supporting standard indicators recommended in the UNAIDS Global AIDS Progress indicator set or by major donors such as PEPFAR. The expansion of this framework to services in HIV prevention as well as services provided by the community is envisaged in the near future. Countries are encouraged to develop and implement mechanisms that are appropriate to their specific situation.

In addition to the recommended quality of services indicators in table 2 on page 49 and the examples provided in Annex 1, indicators for the measurement of quality of services provided to key populations (including needle and syringe and opioid substitution programs) will be published in the revised *WHO/UNODC/UNAIDS Technical Guide for countries to set targets for universal access to HIV prevention, treatment and care for IDUs* (forthcoming publication).

4. Monitoring indicators

Monitoring and evaluation requires indicators that are relevant, appropriate and measurable. A set of standard indicators for measuring the output (or program activities), coverage, outcome and impact of HIV programs is presented in Tables 2 and 3 on pages 49-58. They provide measurement tools and the recommended frequency of reporting to facilitate planning and the selection of indicators according to available financial and human resources. Many country-level implementation programs could use the indicators included in these tables. However, they are not applicable to all programs. In these cases, program implementers should identify appropriate performance measures, which directly address program goals, objectives and targets. Users should refer to the indicator descriptions and specific guidance documents (see the subsection on guidelines and essential resources) and the UNAIDS HIV Indicator Registry (available at: www.indicatorregistry.org) for a more complete listing of all core and additional indicators in this area. Each indicator in the table includes a reference to the UNAIDS HIV Indicator Registry number, where additional information can be found.

BOX 3.
Monitoring coverage

Measuring the proportion of a particular population served by a program (i.e. the coverage) is critical for performance monitoring in any program, including in programs for prevention of HIV transmission among key populations.[23] Coverage indicators are an important way to demonstrate a program's progress in serving its target population, where they are not measured through impact and outcome indicators.

There are two possible approaches to measuring population coverage of a specific program, by use of program data or survey data. Both approaches have their strengths and weaknesses:

- **Program data.** Calculating coverage using program data requires:
  - *a clear definition of the service or package of services provided*
  - *a system in place to avoid double counting of clients/people*
  - *a population size estimate for the denominator*

If these preconditions are not fulfilled it will not be possible to measure coverage. Hence, in cases where population size estimates do not exist, the Toolkit encourages reporting only the numerators of indicators.

- **Survey data.** Coverage can be estimated from a representative survey of a target population that includes questions on the use of the services/programs. For example, the United Nations General Assembly Special Session on HIV/AIDS (UNGASS) defines indicators for measuring the coverage of key populations with HIV prevention programs and HIV testing and counseling. In this case, coverage is calculated from a sample of the population included in the study. However, there is a risk of associated bias with the results because the surveyed respondents are often the actual users of the programs. Thus, the survey data often estimate higher coverage than program data. At the same time survey-based indicators are impractical to use for routine program management.

The Global Fund recommends the use of both approaches in combination. The use of data from routine reporting is encouraged when reporting the short-term results (output/program indicators) achieved in programs supported by the Global Fund. At the Periodic Review (see Section 7.2 of Part 1), program data and survey data on coverage should be crosschecked with other data sources to support conclusions about programs' progress toward their goals.

23 UNAIDS MERG. Operational guidelines for monitoring and evaluation of HIV prevention for people who inject drugs [forthcoming].

4.1 Monitoring output indicators

Some of the indicators for routine reporting can be collected through monthly health statistics and the annual program review, but others such as coverage indicators may be best collected through surveys (see Box 3 on page 47). Survey-based indicators, however, are impractical for use in routine program management and for performance-based funding because they are only collected periodically (depending on the survey, data are usually collected every two to five years). Where relevant, countries are encouraged to collect information using routine reporting systems. Thus, it is important to strengthen routine reporting systems and, at the same time, ensure frequent reporting on the results achieved in programs supported by the Global Fund. These data can, where necessary, subsequently be used to complement and validate the findings from periodic surveys.

Table 2 provides guidance on the choice of indicators that are suitable for routine reporting on progress toward targets. These indicators largely focus on the number of people reached with services. The table also includes indicators for services provided by civil society or community-based organizations. Indicators to measure activities to strengthen health and community systems (including monitoring and evaluation systems strengthening) are listed in Part 5 of the toolkit. They should be included in performance framework as relevant to the HIV program.

TABLE 2.
Selected routine program output indicators for HIV

	Service delivery area	Indicators	Global AIDS Response Progress Reporting Indicators[a]	UNAIDS Indicator Registry number	Frequency of reporting	Measurement tools	Relevance for cross-cutting areas[b]				Global Fund Top Ten[c]
							Equity dimension (recommended disaggregation categories)	Maternal, neonatal and child health	Quality of services	Community-based services	
Prevention	Behavior change communication	Number of individuals from the targeted audience reached through community outreach with at least one HIV information, education, communication or behavior change communication (**HIV-P1**)		#759	Periodically	Program reports				X	
		Number and percentage of young people aged 10–24 years reached by life skills–based HIV education in schools (**HIV-P2**)[d]		#361	Periodically or annually	Program reports	Gender (age and sex)				
	Key populations	Number of syringes distributed per person who injects drugs per year by NSP (**HIV-P3**)	X (2.1)	#851	Annually	Program reports	Key population (age and sex)		X	X	
		Number of people from key populations at risk reached with individual and/or smaller group-level HIV preventive interventions that are based on evidence and/or meet the minimum standards required[e] (**HIV-P4**) *[Indicator should be used when the basic package of services is not defined; refer to Table 1 in the HIV section (PEPFAR indicator)]*		#536	Periodically	Program reports	Key population (key population and age)				
		Number and percentage of key populations reached with HIV prevention programs[f] (**HIV-P5**) *[Indicator should be used when the basic package of services is defined; refer to Table 1 in the HIV section. The package of services should be defined in the comments field of the performance framework.]*		#760	Periodically	Program reports	Key population (key population and age)			X	X
		Number of injecting drug users (IDUs) on opioid substitution therapy (**HIV-P6**) *[PEPFAR indicator]*		#529	Periodically	Program reports	Key population (key population and age)				X

a This column indicates whether indicators have been extracted from the set of Global AIDS Response Progress Reporting Indicators, which are the HIV MERG recommended 25 indicators for global reporting. This set is the result of a review of the globally available indicators included in the former UNGASS set.

b These columns refer to selected cross-cutting areas in comprehensive HIV programs: Equity/gender; maternal, neonatal and child health; quality of services; and services provided by the community, which are described in the main text of the HIV section. The indicators that are suitable for monitoring one of these specific areas are marked with 'X'. It should be noted that the selection presented here is not comprehensive and countries are encouraged to use relevant indicators from their national M&E plans that would better represent program activities that are supported by the grant. Under the column labeled "equity" the different dimensions of equity (e.g., gender, key populations) are indicated; in parentheses the recommended disaggregation of data, as relevant to the program, is listed.

c In the column on 'Global Fund Top Ten Indicator' the indicators that are recommended as part of the set of Top Ten indicators (i.e., the core programmatic indicators) are identified (see Part one of the Toolkit).

d This indicator can also be measured by a biennial school- based survey. In this case, data are reported every two years and can be used to validate routine program data.

e, f This indicator should be calculated and reported separately for each of the key populations most relevant to the country-specific situation and epidemics (such as people who inject drugs, men who have sex with men, sex workers, transgender people, prisoners, young people out of school and others.

TABLE 2.
Selected routine program output indicators for HIV

	Service delivery area	Indicators	Global AIDS Response Progress Reporting Indicators[a]	UNAIDS Indicator Registry number	Frequency of reporting	Measurement tools	Relevance for cross-cutting areas[b]				Global Fund Top Ten[c]
							Equity dimension (recommended disaggregation categories)	Maternal, neonatal and child health	Quality of services	Community-based services	
Prevention	HIV testing and counseling	Number of people tested and counseled for HIV and who received results[g] (**HIV-P7**) *[Indicator should be reported separately for each target groups]*		#537	Periodically or annually	Program reports	Gender, key population (age, sex, key population and geographical location)		X		X
		Number and percentage of pregnant women attending ANC whose male partner was tested for HIV (**HIV-P8**) *[This indicator can also be measured under the PMTCT SDA]*		#879	Periodically or annually	Program reports	Gender (age and geographical location)				
	Male circumcision	Number of males circumcised as part of the minimum package of male circumcision for HIV prevention services (**HIV-P9**) *[PEPFAR indicator]*		#530	Periodically	Program reports	Gender (age and geographical location)				
	Prevention of mother-to-child transmission	Number and percentage of pregnant women who know their HIV status results (**HIV-P10**) *[PEPFAR indicator; recommended disaggregation by known positives at entry and number of new positives identified]*		#524	Periodically or annually	Program reports	Gender (age and geographical location)	X	X		
		Percentage of HIV infected women using a modern family planning method (**HIV-P11**) *[Disaggregation by method used]*		#880	Periodically	Program reports	Gender (age and geographical location)	X			
		Percentage of HIV-infected pregnant women assessed for eligibility for antiretroviral therapy (CD4 count or clinical staging) (**HIV-P12**)		#881	Periodically or annually	Program reports	Gender (age and geographical location)	X			

g This indicator refers to the number of HIV testing and counseling sessions provided during a specific period of time, unless specified otherwise. This indicator should also be calculated and reported separately for each population group.

TABLE 2.
Selected routine program output indicators for HIV

	Service delivery area	Indicators	Global AIDS Response Progress Reporting Indicators[a]	UNAIDS Indicator Registry number	Frequency of reporting	Measurement tools	Relevance for cross-cutting areas[b]				Global Fund Top Ten[c]
							Equity dimension (recommended disaggregation categories)	Maternal, neonatal and child health	Quality of services	Community-based services	
Prevention	Prevention of mother-to-child transmission	Percentage of HIV-positive pregnant women who received antiretrovirals to reduce the risk of mother-to-child transmission[h] (**HIV-P13**) *[Disaggregation annually, by regimen used (WHO Option A or B)]*	X (3.1)	#856	Periodically or annually	Program reports	Gender (age and geographical location)	X	X		X (and periodic review)
		Number and percentage of infants born to HIV-infected women (HIV-exposed infants) who are breastfeeding provided with antiretrovirals (either mother or infant) to reduce the risk of HIV transmission during the breastfeeding period (**HIV-P14**)		#882	Periodically	Program reports		X			
		Number and percentage of infants born to HIV-infected women who receive a virological test for HIV within 2 months of birth (**HIV-P15**)	X (3.2)	#857	Periodically or annually	Program reports		X	X		
		Number and percentage of HIV-exposed infants who are exclusively breastfeeding at DPT3 visit[i] (**HIV-P16**)		#883	Periodically or annually	Program reports		X			
		Number and percentage of infants born to HIV-infected women starting on co-trimoxazole prophylaxis within 2 months of birth (**HIV-P17**)		#469	Periodically or annually	Program reports		X			
	Post-exposure prophylaxis	Number of persons provided with post exposure prophylaxis (**HIV-P18**) *[PEPFAR indicator; recommended disaggregation by exposure type (occupational, rape/assault victims, or other non-occupational)]*		#531	Periodically or annually	Program reports	Gender (age and sex)				

h For the purpose of performance-based funding, the only women who should be counted are those who received a complete prophylactic regimen according to national guidelines. The type of ARV regimen used should be reported annually.

i This indicator can also be measured by a population- based survey. In this case, data are collected every three to five years. Results can be used to validate routine program data.

TABLE 2.
Selected routine program output indicators for HIV

	Service delivery area	Indicators	Global AIDS Response Progress Reporting Indicators[a]	UNAIDS Indicator Registry number	Frequency of reporting	Measurement tools	Relevance for cross-cutting areas[b]				Global Fund Top Ten[c]
							Equity dimension (recommended disaggregation categories)	Maternal, neonatal and child health	Quality of services	Community-based services	
Prevention	Blood safety and universal precautions	Percentage of donated blood units screened for HIV in a quality-assured manner (**HIV-P19**)		#648	Periodically or annually	FRAME tool					
Prevention	Facility-based diagnosis and treatment of sexually transmitted infections[j]	Number and percentage of antenatal care attendees tested for syphilis at first antenatal care visit (**HIV-P20**)		#884	Periodically or annually	Program reports		X			
Treatment	Antiretroviral therapy and monitoring	Number and percentage of eligible adults and children currently receiving antiretroviral therapy (**HIV-T1**)	X (4.1)	#649	Periodically	Program reports or antiretroviral therapy registers	Gender (age, sex and geographical location)	X			X (and periodic review)
		Percentage of health facilities dispensing antiretroviral therapy that have experienced a stock-out of at least one required antiretroviral drug in the last 12 months (**HIV-T2**)		#463	Annually	Health facility survey or census					
		Number and percentage of people starting antiretroviral therapy who picked up all prescribed antiretroviral drugs on time (**HIV-T3**)		#763	Annually	Program reports					

j The diagnosis and treatment of STIs among key population groups at risk is captured under the respective SDA (Key populations). It should be reported as individual HIV preventive interventions under indicator HIV –P4, or as part of the basic package of services under indicator HIV-P5.

TABLE 2.
Selected routine program output indicators for HIV

	Service delivery area	Indicators	Global AIDS Response Progress Reporting Indicators[a]	UNAIDS Indicator Registry number	Frequency of reporting	Measurement tools	Relevance for cross-cutting areas[b]				Global Fund Top Ten[c]
							Equity dimension (recommended disaggregation categories)	Maternal, neonatal and child health	Quality of services	Community-based services	
Care and support	Prophylaxis for opportunistic infections	Number and percentage of adults and children enrolled in HIV care and eligible for co-trimoxazole prophylaxis (according to national guidelines) currently receiving co-trimoxazole prophylaxis (**HIV-CS1**) *[PEPFAR Indicator]*		#764	Periodically	Program reports		X			
	Care and support for chronically ill people	Number and percentage of undernourished people living with HIV who received therapeutic or supplementary food at any point during the reporting period (**HIV-CS2**)[l]		#885	Periodically	Program reports	Gender (age, sex and geographical location)				
		Number of adults and children living with HIV who receive care and support services outside facilities (**HIV-CS3**)[k,l] *[A related indicator is included in the next generation of indicators developed by PEPFAR.]*[m]		#765	Periodically or annually	Program reports	Gender (age, sex and geographical location)	X		X	
		Sub-indicator: Number and percentage of HIV affected households that receive food security services (**HIV-CS4**)[k,l]		#886	Periodically	Program reports					
	Orphans and vulnerable children	Number and percentage of orphaned and vulnerable children aged 0–17 years whose households received free basic external support in caring for the child according to national guidelines (**HIV-CS-5**)[k,l]		TBD	Periodically	Program reports	Gender (sex and geographical location)	X		X	X

k Due to the similarities of activities under Care and Support indicators CS3, CS4 and CS5, efforts should be made to avoid overlap of activities and services and related double counting of the people that are reached under each of these activities. The service package should be clearly defined in the indicator definition.

l This indicator can also be collected using surveys. The routine data will then be complemented by the survey data.

m In countries with programs supported by the United States President's Emergency Plan for AIDS Relief (PEPFAR), programs may want to include an indicator on the provision of care ("Number and percentage of adults and children receiving a minimum of one clinical care service during the reporting period"). This captures information on services provided in the facility as well.

TABLE 2.
Selected routine program output indicators for HIV

	Service delivery area	Indicators	Global AIDS Response Progress Reporting Indicators[a]	UNAIDS Indicator Registry number	Frequency of reporting	Measurement tools	Relevance for cross-cutting areas[b]				Global Fund Top Ten[c]
							Equity dimension (recommended disaggregation categories)	Maternal, neonatal and child health	Quality of services	Community-based services	
Collaborative activities	TB/HIV	Number and percentage of adults and children enrolled in HIV care who had TB status assessed and recorded during their last visit during the reporting period among all adults and children enrolled in HIV care and seen for care in the reporting period (**TB/HIV-1**)		#768	Periodically or annually	Program reports and antiretroviral therapy registers		X	X		
		Number and percentage of adults and children enrolled in HIV care who started TB treatment, expressed as a proportion of adults and children in HIV care during the reporting period (**TB/HIV-2**)		#769	Periodically or annually	Program reports and antiretroviral therapy registers		X			X
		Number and percentage of TB patients registered during the reporting period who had an HIV test result recorded in the TB register among the total number of TB patients registered during the reporting period (**TB/HIV-3**)		#466	Periodically or annually	Program reports and TB registers		X			
		Number and percentage of adults and children newly enrolled in HIV care who start treatment for latent TB infection (isoniazid preventive therapy) among the total number of adults and children newly enrolled in HIV care over the reporting period (**TB/HIV-4**)		#770	Periodically or annually	Program reports and antiretroviral therapy registers		X			

4.2 Monitoring impact, outcome and coverage indicators

Measuring impact and outcome is necessary to determine whether there has been progress toward achieving the overall program (or proposal) goals. As these goals are typically related to reducing the burden of the diseases in a country, impact and outcome assessment should be conducted at the level of the national disease program. Coverage indicators are an important way to demonstrate a program's progress in serving its target population, where they are not measured through impact and outcome indicators. Under the new Global Fund grant architecture, the impact, outcome and coverage assessment at the Periodic Review is an essential element of performance-based funding (see Section 7.2 in Part 1 of the Toolkit).

Table 3 on page 56 lists the indicators of impact, outcome and coverage that are used to measure programs' overall progress toward their goals. When selecting these indicators, countries should have baseline data available and systems in place to collect the data regularly. This requires investing in data collection and analysis over the program term.

TABLE 3.
Selected HIV impact, outcome and coverage indicators

	Indicators	Global AIDS Response Progress Reporting Indicators[a]	UNAIDS Indicator Registry number	Frequency of data collection	Measurement	Relevance for cross-cutting areas[b]			
						Equity Dimension (recommended disaggregation categories)	Maternal, neonatal and child health	Quality of Services	Global Fund periodic review[c]
Impact indicators	AIDS-related mortality (**HIV-I1**)		#887	Annually	Verbal autopsy (surveys), complete or sample vital registration systems	Gender (age and sex)			X
	Percentage of young women and men aged 15–24 years who are HIV infected (**HIV-I2**)	X (1.6)	#844	Annually	HIV sentinel surveillance and population-based survey	Gender (age and sex)	X		X
	Percentage of sex workers who are HIV-infected (**HIV-I3**)	X (1.10)	#847	Annually	Second-generation surveillance	Gender (age and sex)			X
	Percentage of men who have sex with men who are HIV-infected (**HIV-I4**)	X (1.14)	#850	Annually	Second-generation surveillance	Gender (age and sex)			X
	Percentage of people who inject drugs who are HIV-infected (**HIV-I5**)	X (2.5)	#855	Annually	Second-generation surveillance	Gender (age and sex)			X
	Percentage of adults and children with HIV known to be on treatment 12 months after initiation of antiretroviral therapy (**HIV-I6**)	X (4.2)	#860	Annually	Program monitoring	Gender (age and sex)	X	X	X
	Estimated percentage of child infections from HIV-infected women delivering in the past 12 months - estimated mother-to-child transmission (**HIV-I7**)	X (3.3)	#858	Annually	Program monitoring Modeled at UNAIDS Secretariat, based on program coverage		X		X
	Percentage of all registered TB patients who had documented HIV status recorded who are HIV-positive (**HIV-I8**)		#773	Annually	Surveillance				X

a This column indicates whether indicators have been extracted from the set of Global AIDS Response Progress Reporting Indicators, which are the 25 HIV MERG-recommended indicators for global reporting. This set is the result of a review of the globally available indicators included in the former UNGASS set.

b These columns refer to selected crosscutting areas in comprehensive HIV programs: Equity/gender; maternal and neonatal and child health; quality of services; and services provided by the community, which are described in the main text of the HIV section. The indicators that are suitable for monitoring one of these specific areas are marked with X. It should be noted that the selection presented here is not comprehensive and countries are encouraged to use relevant indicators from their national M&E plans that would better represent program activities that are supported by the grant.

c In the column "Global Fund Periodic Review," the indicators that are recommended for monitoring of progress at Periodic Review (see Part 1 of the Toolkit) are listed.

TABLE 3.
Selected HIV impact, outcome and coverage indicators

	Indicators	Global AIDS Response Progress Reporting Indicators[a]	UNAIDS Indicator Registry number	Frequency of data collection	Measurement	Relevance for cross-cutting areas[b]			
						Equity Dimension (recommended disaggregation categories)	Maternal, neonatal and child health	Quality of Services	Global Fund periodic review[c]
Outcome indicators[d]	Percentage of young women and men aged 15–24 years who have had sexual intercourse before the age of 15 years (**HIV-O1**)	X (1.2)	#660	Every 3–5 years	Population-based survey	Gender (age and sex)			
	Percentage of women and men aged 15–49 years who have had sexual intercourse with more than one partner in the last 12 months (**HIV-O2**)	X (1.3)	#661	Every 3–5 years	Population-based survey	Gender (age and sex)			X
	Percentage of women and men aged 15–49 years who have had more than one sexual partner in the past 12 months reporting the use of a condom during their last sexual intercourse (**HIV-O3**)	X (1.4)	#842	Every 3–5 years	Population-based survey	Gender (age and sex)			X
	Percentage of male and female sex workers reporting the use of a condom during penetrative sex with their most recent client (**HIV-O4**)	X (1.8)	#663	Every 2 years	Behavioral survey	Gender, key populations (age, sex and key populations)			X
	Percentage of men reporting the use of a condom the last time they had anal sex with a male partner (**HIV-O5**)	X (1.12)	#664	Every 2 years	Behavioral survey	Key populations (age)			X
	Percentage of people who inject drugs who reported the use of a condom the last time they had sexual intercourse (**HIV-O6**)	X (2.2)	#852	Every 2 years	Behavioral survey	Gender, key populations (age, sex and key populations)			X
	Percentage of people who inject drugs who reported using sterile injecting equipment the last time they injected (**HIV-O7**)	X (2.3)	#853	Every 2 years	Behavioral survey	Gender, key populations (age, sex and key populations)			X
	Percentage of current school attendance among orphans and non-orphans (**HIV-O8**)	X (7.3)	#864	Every 3–5 years	Population-based survey	Gender (age and sex)			
	Percentage of women and men aged 15–49 years expressing accepting attitudes towards people living with HIV (**HIV-O9**)		#474	Every 3–5 years	Population-based survey	Gender (age and sex)			
	Percentage of ever-married or partnered women aged 15-49 who experienced physical or sexual violence from a male intimate partner in the past 12 months (**HIV-O10**)	X (7.2)	#863	Every 3–5 years	Population-based survey	Gender (age)			
	Percentage of currently married women who usually make a decision about own health care either by themselves or jointly with their husbands (**HIV-O11**)		#888	Every 5 years	Population-based survey	Gender (age)			

d HIV sexual behavior indicators should be analyzed together to assess overall behavior change because important interactions can occur. Outcomes can be collected every two to five years, with a population-based survey (such as Demographic and Health Surveys and Multiple Indicator Cluster Surveys) every five years and an HIV indicator survey (behavioral surveillance) in between.

TABLE 3.
Selected HIV impact, outcome and coverage indicators

	Indicators	Global AIDS Response Progress Reporting Indicators[a]	UNAIDS Indicator Registry number	Frequency of data collection	Measurement	Relevance for cross-cutting areas[b]			
						Equity Dimension (recommended disaggregation categories)	Maternal, neonatal and child health	Quality of Services	Global Fund periodic review[c]
Coverage indicators	Percentage of young women and men aged 15–24 years who both correctly identify ways of preventing the sexual transmission of HIV and who reject the major misconceptions about HIV transmission (**HIV-C-P1**)	X (1.1)	#658	Every 2–5 years	Population-based survey	Gender (age and sex)			
	Percentage of sex workers reached with HIV prevention programs (**HIV-C-P2**)	X (1.7)	#845	Every 2 years	Behavioral survey	Key population (age and sex)			X
	Percentage of men who have sex with men reached with HIV prevention programs (**HIV-C-P3**)	X (1.11)	#848	Every 2 years	Behavioral survey	Key population (age)			X
	Percentage of women and men aged 15–49 years who received an HIV test in the last 12 months and who know their test results (**HIV-C-P4**)	X (1.5)	#843	Every 2–5 years	Population-based survey	Gender (age, sex and geographical location)		X	
	Percentage of sex workers that received an HIV test in the last 12 months and who know the results (**HIV-C-P5**)	X (1.9)	#846	Every 2 years	Behavioral survey	Gender, key populations (age and sex)		X	
	Percentage of men who have sex with men that received an HIV test in the last 12 months and who know the results (**HIV-C-P6**)	X (1.13)	#849	Every 2 years	Behavioral survey	Gender, key populations (age and sex)		X	
	Percentage of people who inject drugs that received an HIV test in the last 12 months and who know the results (**HIV-C-P7**)	X (2.4)	#854	Every 2 years	Behavioral survey	Gender, key populations (age and sex)		X	
	Proportion of the poorest households who received external economic support in the last 3 months (**HIV-C-CS**)[e] *[Recommended disaggregation for support targeted at orphans and vulnerable children]*	X (7.4)	#865	Every 2–5 years	Population-based survey				
	Percentage of estimated HIV-positive incident TB cases that received treatment for both TB and HIV (**C-TB/HIV**)	X (5.1)	#651	Periodically or annually	Program reports and antiretroviral therapy registers		X		X

e This indicator can also be collected from programs on a periodic basis to track the interventions under orphans and vulnerable children and the number of people receiving economic support. The routine data will then be complemented by the survey data.

5. Comparing methods for data collection

The tools necessary for monitoring and evaluating HIV program activities reflect the strengths and limitations of the data collected. Data are generally collected through several mechanisms using specific tools, including surveillance, representative surveys, and health systems records.

Table 4 summarizes some of the measurement tools available to support the reporting of results. It shows the indicator area, methods for collection, limitations to collecting or interpreting data and recommendations for overcoming limitations. Wherever possible, such existing sources of data should be leveraged and used in reporting.

TABLE 4.
Comparison of methods for data collection in HIV programs

Area	Methods for collection	Limitations	Recommendations	Example of indicator
HIV prevalence levels	HIV sentinel site surveillance; General population-based surveys that collect specimens for HIV testing; HIV prevalence modeling using surveys of particular most-at-risk populations (Workbook Method).[24]	Difficult to accurately measure or estimate the risk population size; Sample biases in both sentinel site surveillance and surveys.	Focus on the trend over time with emphasis on comparability of data and consistency of methods; Use WHO/UNAIDS guidelines for conducting HIV sentinel serosurveys and for measuring the national HIV prevalence in population-based surveys.	Percentage of young women and men aged 15–24 years who are HIV-infected.
Impact related to survival on antiretroviral therapy	Patient records from facilities (aggregated).	Records do not usually include mobile populations; Cohort analyses can be complex.	Set up and support a standardized patient monitoring and reporting system according to WHO recommendations.	Adults and children with HIV known to be on treatment 12 months after initiation of antiretroviral therapy.
Knowledge and behavior among the general population	Population-based surveys (behavioral surveillance surveys, knowledge, attitudes and practice surveys, Demographic and Health Surveys and Multiple Indicator Cluster Surveys).	Self-reporting biases; Household surveys tend to under-sample the key population; Conducted only every few years.	Review timing of Demographic and Health Surveys and Multiple Indicator Cluster Surveys scheduled in a country in line with need for availability of survey results/report.	Percentage of women and men aged 15-49 years who have had more than one sexual partner in the past 12 months reporting the use of a condom during their last sexual intercourse.
Knowledge and behavior among the key population	Special surveys of the key population groups in a country (behavioral surveillance surveys); Innovative sampling approaches, such as respondent-driven sampling, time-location sampling.	The representativeness of the sample is unknown; Response biases.	Plan for surveys targeting key populations, especially in concentrated epidemics; See the M&E guide on key populations.[25]	Percentage of men reporting the use of a condom the last time they had anal sex with a male partner.

24 UNAIDS. Estimation and projection package 2009 [Internet]. [cited 2011 Sept. 5]. Available from: http://www.unaids.org/en/dataanalysis/tools/epp2009/

25 UNAIDS et al. A framework for monitoring and evaluating HIV prevention programs for most-at-risk populations. Report No. UNAIDS/08.23E / JC1519E Geneva: UNAIDS; 2008. Available from: http://data.unaids.org/pub/Manual/2008/jc1519_framework_for_me_en.pdf

TABLE 4.
Comparison of methods for data collection in HIV programs

Area	Methods for collection	Limitations	Recommendations	Example of indicator
Number of people reached by services	Routine health information system; Client records and registers; Records of nongovernmental organizations;	Capturing service provision outside the public sector may be difficult; Aggregation within facilities may not be straightforward for interventions that span several months and where multiple data sources may exist (e.g., drug dispensing ledgers at pharmacies and registers); Aggregation across facilities may lead to over- or underreporting when the same patient attends multiple service delivery points and the aggregation mechanism is not clear.	Try to standardize data collection for various services so that information can be collated easily; Use client registers or a system to maintain records; Carefully plan for and provide clear directions on aggregation methods within and across facilities for program monitoring.	Number of people who received testing and counseling services for HIV and received their test results.
Coverage of people with services	Survey data; Program data.	Coverage might be overestimated due to biased sampled population (service users included in the sample); For program data, clients/ patients particularly from key populations who may frequently use the same services may be double counted; Difficult to estimate the size of the population at risk (denominator).	Use both survey and program data where possible. Calculate coverage using program data and compare it with coverage from survey data ; Create system to avoid double counting clients/ patients and carry out population size estimates.	Number and percentage of key populations reached with HIV prevention programs.
TB/HIV services	Client records and registers.	Current TB- and HIV-related registers may not capture this information because they are not linked between services.	Registers may need to be modified to capture this information. If necessary, modify registers according to WHO recommendations.	Number and percentage of adults and children enrolled in HIV care who started TB treatment, expressed as a proportion of adults and children in HIV care during the reporting period.
Crosscutting services (clients/ patients receive services from different providers/ programs)	Client records, registers and special studies.	Existing registers and reporting forms may not capture all of this information because they are not linked between services.	Current practices and data collection forms should be reviewed to see how this information could be captured; Referral links may need to be systemized and strengthened; Introduce client or patient numbers/unique identifier codes.	Number/percentage of people with a positive HIV test result enrolled in pre-ART care services.

TABLE 4.
Comparison of methods for data collection in HIV programs

Area	Methods for collection	Limitations	Recommendations	Example of indicator
Information on community-level programs and activities	Record-keeping forms; Special surveys.	Capturing service provision outside the public sector may be difficult; Where multiple organizations are operating, different record-keeping systems may be in place.	Set up a system to keep track of various providers of services within a district or country; Partners working in communities may want to coordinate some basic data elements to be collected so that information can be collated and reported.	Number of individuals from the targeted audience reached through community outreach with at least one HIV information, education, communication or behavior change communication.
Indicators related to key populations	Special surveys (behavioral surveillance surveys) and (sero) surveillance; Program data from nongovernmental organizations.	Difficult to accurately measure the size of key populations; For program data, clients/patients particularly from key populations who may frequently use the same services may be double counted; Need to be careful with analysis of trends over time.	Consult recommendations in international guides on M&E of populations most at risk; Align reporting requirements among those working with specific populations and Global Fund reporting needs.	Number and percentage of key populations reached with HIV prevention programs.

6. Program evaluations

Program evaluations on a regular basis are essential for understanding the effectiveness, efficiency, relevance and impact of the overall response to the HIV/AIDS epidemic and its components. Planning and implementation of program evaluations should be part of a country's response to its HIV epidemic and included in the periodic national strategic plan and national M&E plan. Program evaluations should be fully incorporated into the national strategic planning process. The process should involve national HIV programs, key partners in country, such as UNAIDS, WHO, PEPFAR, the World Bank and others, including representatives from the communities and civil society. Results of program evaluations should be used to inform the national strategic planning and implementation process.

Budgets for the evaluation of programs supported by the Global Fund should be included in the program grants, and the evaluation time frame should coincide with national program evaluations and the Periodic Review.

6.1 Process steps for program evaluations

Ideally, program evaluations are planned at the beginning of an HIV grant, but they can be undertaken at any stage of program implementation. The design of program evaluations should coincide with national strategic planning.[26] As part of development of the national M&E plan, design of an integrated and comprehensive program evaluation plan should be consultative, participatory and inclusive to ensure relevance and methodological and scientific soundness. Planning program evaluations involves five key steps:

Step 1. Specify the key evaluation questions and scope. Evaluation can cover many different aspects and levels of program implementation. It is important to identify evaluation questions and the scope of the evaluation in the planning phases of a program so that the appropriate activities can be integrated into the implementation strategy, budget and workplan. Developing clear, focused evaluation questions helps the process stay on track. It is critical to conceptualize and identify evaluation questions based on the program's goal(s), objectives and overall framework. It is not productive to evaluate a program on issues outside the scope of its goal(s) and objectives.

Step 2. Examine the existing data and past evaluations. After evaluation questions are specified, the next key step is to assess the data availability and quality. Data sources may vary widely. They can include routine reports, for example on the number of HIV cases; serologic and behavioral surveillance and surveys; special population-based surveys; operational research; and previous program reviews and evaluations (see Table 4). In addition to program data from the national program, data from partners and donors as well as academic institutions could be considered. A quality framework needs to be developed to check data quality, especially data consistency, comparability and integrity.

26 WHO. Planning guide for the health sector response to HIV [forthcoming]

Step 3. Determine an appropriate evaluation design, measures and tools. The objective of the evaluation should be defined based on the evaluation questions, and will guide the formulation of an appropriate design, including the selection of measures of variables, data needs and the methods of and tools for collecting data. An operational plan should be developed that outlines the evaluation questions, design, data collection methods and analysis plan, as well as the overall timeline for the comprehensive plan.

Step 4. Conduct the evaluation. The evaluation should be jointly conducted within the framework of the national HIV program. The actual evaluation will be implemented by consultants or partners. Existing and additional data collection and analysis should be documented in the presentation of the results.

Step 5. Disseminate and use evaluation findings. Based on the comprehensive analysis, a report summarizing major findings should be generated. Key information derived from the major findings should be packaged in a clear, concise format appropriate for communicating with policymakers, program staff, target populations, academic institutions and other users.

6.2 Potential topics for program evaluations

Each country or program may choose the specific topics of evaluations based on the strategy, type of epidemic, key activity areas, and resource availability. For programs supported by the Global Fund, topics may be selected based on the goal(s), objectives and major service delivery areas defined in the grant proposal(s), as well as the previous achievements that are reflected in the current program implementation status.

Generic questions asked in program evaluations could include:

Formative/process: Did the interventions reach the targeted audiences (clients)? For example:

- *Did the preventive interventions (for example condom distribution or needle exchange) targeting key populations (for example, men who have sex with men, sex workers or people who inject drugs) reach the desired groups?*
- *Were HIV care and treatment centers established and functional in areas accessible to people living with HIV?*
- *Did planned HIV care and treatment activities reach the people living with HIV who need those services?*

Outcome: Did target audiences (clients) change their behavior (seeking services, risk behaviors, etc.)? For example:

- *If the designed preventive interventions (for example, condom distribution, needle exchange) among key populations (for example men who have sex with men, sex workers or people who inject drugs) reached the targeted groups, did condom use or needle sharing among the populations increase or decrease?*
- *Did people receiving ART adhere to the regimen prescribed?*
- *Is the coverage of preventive or treatment interventions equal across urban and rural areas?*

Impact: Did the health impact (prevalence, incidence and mortality) change and/or were systems (health or community) strengthened over time? For example:

- *If the designed preventive intervention (for example, condom distribution, needle exchange) reached the targeted groups and led to behavioral change (for example higher condom use or reduced needle sharing), has the HIV incidence declined among these groups?*
- *Has the community system been strengthened, enabling high-quality services in communities where targeted groups are concentrated?*
- *Did the mortality rate decrease because more people living with HIV were receiving ART?*
- *Did the number of HIV infections among infants decrease as a result of the scale-up of program activities to prevent the transmission of HIV from mother to child (in line with the goal to eliminate new HIV infections among children)?*

7. Resources

7.1 General resources

Many different resources can inform HIV program monitoring and evaluation efforts, including technical support, software products, financial tracking tools and online publications. WHO can provide a wide range of assistance, including the latest publications related to M&E in the health sector.[27] In addition to guidelines and general resources in the area, the WHO website provides the latest information on the universal access initiative.[28]

For TB/HIV, the Stop TB Partnership (http://www.stoptb.org) working groups provide a focus for coordinated action and support to the M&E of country-level activities related to:

- *DOTS expansion, including subgroups focusing on laboratories and the public-private mix;*
- *co-infection with TB and HIV;*
- *multidrug-resistant TB and extensively drug-resistant TB.*

Since the creation of the UNAIDS Secretariat, several resource groups have been established to improve coordination among M&E actors and to improve M&E methods. These include:

27 WHO. HIV/AIDS [Internet]. Geneva: WHO; 2011. Available from: http://www.who.int/hiv/en

28 WHO. HIV/AIDS. Universal access to HIV/AIDS prevention, treatment and care [Internet]. Geneva: WHO; 2011. Available from: http://www.who.int/hiv/topics/universalaccess/en/index.html

- *the UNAIDS Monitoring and Evaluation Reference Group (MERG), composed of UNAIDS Cosponsors and Secretariat M&E focal points, bilateral agencies, research institutes and individual experts;*
- *the UNAIDS Estimates, Modeling and Projections Reference Group and UNAIDS/WHO Working Group on Surveillance and Estimates for HIV Transmission and Mortality.*

At the country level, the UNAIDS Secretariat, with support from the country M&E advisers and partners, has been encouraging national authorities to set up a national-level M&E reference or support group to provide advice on national M&E strategies and on the development of a national M&E plan. National groups can also assist in mobilizing resources for M&E and optimizing the use of data.

7.2 Technical support

Several mechanisms have been established to respond to the increasing need for technical support to implement HIV programs. The information below provides an overview of the major technical support mechanisms.

UNAIDS M&E advisers

UNAIDS M&E advisers in about 60 countries and 7 regional offices are essential partners for both governments and civil society. In addition to coordinating and supporting Global AIDS response progress reporting reporting, these advisers facilitate efforts to strengthen national M&E systems, with a focus on building national capacity to design M&E strategies, collect and analyze data and use data for decision-making.

The UNAIDS Technical Support Facilities[29]

In 2005, UNAIDS established "Technical Support Facilities" — small management teams hosted by existing regional institutions — to facilitate country partner access to technical support. Since Technical Support Facilities started operating they provided technical support to over 70 countries in Eastern Africa, Southern Africa, West and Central Africa, Southeast Asia and the Pacific and South Asia. facilities provide experienced, quality-assured consultants to design programs and solve problems in strategic planning; Global Fund proposal development and grant implementation; institutional development; resource mobilization and tracking; monitoring and evaluation; and management. The facilities also provide guidance in thematic areas, such as gender, injecting drug use, sex work and migration.

The United States Government

The United States government supports Global Fund grant implementation in country by providing technical assistance through a wide variety of mechanisms. The U.S. government responds to demand-driven requests for technical assistance through bilateral mechanisms such as PEPFAR and President's Malaria Initiative. The U.S. government also funds technical assistance by contributing support to Roll Back Malaria, the Stop TB Partnership, the Green Light Committee, UNAIDS Technical Support Facilities and the Grant Management Solutions project to provide Country Coordinating Mechanisms and Principal Recipients with urgent short-term technical assistance, including M&E. Country Coordinating Mechanisms and Principal Recipients can submit requests for U.S. support through the Grant Management Solutions project in a number of technical areas: strengthening of Country Coordinating Mechanisms, Principal Recipient management, procurement and supply management and M&E. Specifically for M&E, Grant Management Solutions can support trainings in use of the M&E Systems Strengthening Tool, developing M&E action plans and supporting M&E reporting systems.

TB/HIV

In general, the same support mechanisms used for the TB program are in place for TB/HIV coordinated programs. Specifically, information can be found at the following websites:

- *International Union Against Tuberculosis and Lung Disease: http://www.theunion.org/*
- *KNCV Tuberculosis Foundation: http://www.kncvtbc.nl/Site/Professional.aspx?*
- *TB working groups of the Stop TB Partnership: http://www.stoptb.org/wg/*

7.3 Software products

UNAIDS is a source for several tools to monitor programs to help countries optimize the implementation of their national strategic plans.

AIDSinfo[30]

AIDSinfo is a data visualization and dissemination tool to facilitate the use of AIDS-related data nationally and globally. AIDSinfo is populated with multisectoral HIV data from a range of sources including WHO, UNICEF, UNAIDS and Measure DHS. The data provided by UNAIDS include spending on HIV activities; epidemiological estimates; information on policies, strategies and laws; and other country-reported data from government and civil society. This data is useful to programmatic analysis and reviews, and provides basis for depper analysis and comparisons between countries and programmatic areas.

The tool's visualization capabilities allow rapid production of charts, maps and tables for presentations and analysis.

29 UNAIDS. Technical support facilities [Internet]. [cited 2011 Sept. 5]. Available from: http://www.unaids.org/en/media/unaids/contentassets/documents/programmes/programmeeffectivenessandcountrysupportdepartment/TSF_en.pdf

30 UNAIDS. AIDS info [Internet][cited 2011 Sept 5]. Available from: http://aidsinfo.unaids.org

HIV Indicator Registry (www.indicatorregistry.org)

The HIV Indicator Registry was launched in 2008 and updated in early 2011. This online database provides complete definitions of key indicators and specifically highlights indicators endorsed by multilateral agencies and donors in an effort to harmonize global reporting. The registry, which contains the indicators presented in this Toolkit, allows countries to:

- *access information on a broad range of HIV program indicators, including those beyond the scope of this Toolkit;*
- *select appropriate indicators for their country's epidemic and response;*
- *use standard tools for developing new indicators when needed;*
- *export indicator definitions to PDF, Word, Excel for data collection.*

The registry is a multiagency effort by WHO, UNICEF, the Global Fund, the United States President's Emergency Plan for AIDS Relief (PEPFAR) and UNAIDS, guided by the UNAIDS MERG.

Country Response Information System (CRIS3)

The UNAIDS Country Response Information System version 3.0 (CRIS3),[31] is a data entry and management tool that is suitable for use at the national, subnational or program level. The basic system contains several recommended indicators. CRIS users have the option of adding their own indicators or of downloading indicators into their CRIS system from the HIV Indicator Registry. The latest version of CRIS (CRIS3) includes but is not limited to the following key features:

- *allows national M&E reporting system to be set up;*
- *enables monitoring progress towards targets, such as Universal Access, or those set in programs supported by the Global Fund;*
- *enhanced program monitoring, and linking indicators with projects;*
- *entry of data and monitoring plans at subnational levels;*
- *standard data exchange format - used with the Indicator Registry and Global Database.*

Other important software products are accessible through the UNAIDS web-site, including the following:[32]

- *the Estimation and Projection Package (EPP-UNAIDS),which is used to estimate and project adult HIV prevalence from surveillance data;*
- *the Workbook Method (UNAIDS), a spreadsheet used to estimate and project adult HIV prevalence from surveillance data in countries that lack HIV prevalence data from consistent sites over time;*
- *SPECTRUM: a package of policy models (DemProj,FamPlan, AIM, RAPID, Ben-Cost, NewGen, PMTCT, ProTrain and SupplyPlan). The 2009 version includes methods for calculating the uncertainty around estimates and new assumptions on survival among people living with HIV;*
- *National AIDS Spending Assessment (NASA) methodology, which is used for tracking AIDS spending at country level, across different stakeholders and donors.*

7.4 Guidelines and essential resources

In addition to the resources listed earlier in this section, several publications and links to guidance materials are useful for monitoring and evaluating HIV programs:

General Information on M&E of HIV programs

Monitoring and evaluation guidance and tools, UNAIDS (2008-2010). Available from: http://www.unaids.org/en/dataanalysis/tools/monitoringandevaluationguidanceandtools (this is a clearinghouse of information that includes a wide range of relevant tools).

Guide for monitoring and evaluating national HIV testing and counselling programmes, Field-test version. Geneva: WHO; 2011. Available from: http://whqlibdoc.who.int/publications/2011/9789241501347_eng.pdf.

Monitoring and reporting on the health sector's response towards universal access to HIV/AIDS treatment, prevention, care and support, 2009–2010. WHO framework for global monitoring and reporting. Geneva: WHO; 2010. Available from: http://www.who.int/hiv/universalaccess2010/hiv_me_framework_2009-10.pdf.

National AIDS programmes: a guide to monitoring and evaluation. Geneva: UNAIDS; 2004. Available from: http://www.who.int/hiv/pub/me/en/me_prev_intro.pdf.

Three interlinked patient monitoring systems for HIV care/ART, MCH/PMTCT and TB/HIV: standardized minimum data set and illustrative tools. Geneva: WHO; 2009. Available from: http://www.who.int/hiv/pub/imai/pmg_form_booklet_090907.pdf.

Prevention of mother-to-child transmission of HIV (PMTCT)

Monitoring and evaluation guidance towards the elimination of mother-to-child transmission are categorized in three areas below, all of which are available at the following link: http://www.who.int/hiv/pub/me/en/index.html

- *Global Monitoring Framework and Strategy for the Elimination of New Child HIV Infections by 2015:* Outlines the global targets for the elimination of mother-to-child transmission of HIV and related

31 Country Response Information System: Data for progam improvement [Internet]. [cited 2011 Aug 28]. Available from: http://www.cris3.org/

32 Estimation and Projection Package 2009 [Internet]. UNAIDS [cited 2011 Sept 5]. Available from: http://www.unaids.org/en/dataanalysis/tools/epp2009/

recommended indicators to report progress towards the Global Plan,[33] including progress for the 22 focus countries. This document can be used by policymakers and other stakeholders who need a quick overview of monitoring of the elimination of mother-to-child transmission initiative.

- *Monitoring and Evaluating the Prevention of Mother-to-Child Transmission of HIV:* A guide for national programs which is a detailed guide providing a list of harmonized indicator descriptions recommended for national PMTCT program monitoring, with details and examples of national and sub-national monitoring, data use, considerations when setting up registers and reporting forms and recommendations for revising or implementing a functional PMTCT M&E system. This document can be used by PMTCT and M&E officers who need to set up a PMTCT M&E system and require details of the indicators and operational issues.
- *Guidance on Measuring the Impact of National PMTCT Programmes:* includes a short guide summarizing several key approaches to measure PMTCT impact. For each approach, there is a separate generic protocol that can be adapted at the country level. The short guide can be used by any stakeholders who need a quick overview of the different ways PMTCT impact can be assessed (including budgeting requirements). The individual generic protocols can be used by the team responsible for planning and implementing periodic PMTCT impact evaluations.

Key populations

A framework for monitoring and evaluating HIV prevention programmes for most-at-risk populations. Geneva: UNAIDS; 2008. Available from: http://www.unaids.org/en/media/unaids/contentassets/documents/document/2010/17_Framework_ME_Prevention_Prog_MARP_E.pdf.

Guidelines on surveillance among populations most at risk for HIV, UNAIDS/WHO Working Group on Global HIV/AIDS and STI Surveillance, 2011. Geneva: WHO, 2011. Available from: http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2011/20110518_Surveillance_among_most_at_risk.pdf.

WHO, UNODC, UNAIDS Technical Guide for countries to set targets for universal access to HIV prevention, treatment and care for injecting drug users, 2009. Geneva: WHO, 2009. Available from: http://www.who.int/hiv/pub/idu/targetsetting/en/index.html.

Estimating the size of populations at risk for HIV. Issues and methods. Geneva: WHO/UNAIDS; 2010. Available from: http://data.unaids.org/pub/Manual/2010/guidelines_popnestimationsize_en.pdf.

Estimating prevalence: indirect methods for estimating the size of the drug problem. Vienna: United Nations Office on Drugs and Crime; 2003. Available from: http://www.unodc.org/documents/GAP/GAP%20Toolkit%20Module%202%20Final%20ENGLISH%2002-60052.pdf.

Unique Identifier Code. USAID-Funded Drug Demand Reduction Program in Uzbekistan, Tajikistan, and Ferghana Valley Region of Kyrgyzstan. Alliance for Open Society International; 2007. Available from: www.aidsprojects.com/wp-content/themes/apmg-1.0.1/documents/UIC_Eng.pdf

Second generation surveillance for HIV: the next decade. Geneva: WHO/UNAIDS; 2000 Available from: http://www.who.int/hiv/pub/surveillance/en/cds_edc_2000_5.pdf.

Behavioral surveillance surveys (BSS): guidelines for repeated behavioral surveys in populations at risk for HIV. Arlington, VA: Family Health International; 2000 Available from: http://www.fhi.org/en/HIVAIDS/pub/guide/bssguidelines.htm

Operational guidelines for monitoring and evaluation of HIV prevention for people who inject drugs, UNAIDS, MERG, 2011 (in press)

Operational guidelines for monitoring and evaluation of HIV prevention for sex workers, men who have sex with men and transgender people, UNAIDS, MERG 2011 (consultation version). Available from: http://www.cpc.unc.edu/measure/publications/ms-11-49

Consensus Statement of the Reference Group to the United Nations on HIV and Injecting Drug Use, 2010. Available from: http://www.unodc.org/documents/hiv-aids/publications/2010_UN_IDU_Ref_Group_Statement.pdf

Global data on HIV and injection drug use. Reference group to the United Nations on HIV and IDU, 2010, Available at: http://www.mrc.ac.za/adarg/additional.htm

TB/HIV

Guide to monitoring and evaluation for collaborative TB/HIV activities. Geneva: WHO; 2009. Available from: http://www.who.int/hiv/pub/tb/monitoring/en/index.html.

Revised TB recording and reporting forms and registers – version 2006. Geneva: WHO; 2006. Available from: http://whqlibdoc.who.int/hq/2006/WHO_HTM_TB_2006.373_eng.pdf.

Publications and websites on crosscutting issues in HIV programs

Transforming the national AIDS response: mainstreaming gender equality and women's human rights into the "three ones." New York: United Nations Development Fund for Women, 2008 Available from: http://www.unifem.org/gender_issues/resources.php?WebSectionID=2.

33 UNAIDS. Global plan towards the elimination of new HIV infections among children by 2015 and keeping their mothers alive. Geneva: UNAIDS; 2011. Available from: http://www.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2011/20110609_JC2137_Global-Plan-Elimination-HIV-Children_en.pdf

Gender, women and HIV [website]. Geneva: WHO; 2011. Available from: http://www.who.int/gender/hiv_aids/en.

Gender-based violence [website]. Geneva: WHO; 2008. Available from: http://www.who.int/topics/gender_based_violence/en/.

Integrating gender into HIV/AIDS programme in the health sector: tool to improve responsiveness to women's needs. Geneva: WHO; 2008. Available from: http://www.who.int/gender/documents/gender_hiv_guidelines_en.pdf.

Web portal gender and HIV/AIDS [website]. New York: United Nations Development Fund for Women; 2011. Available from: http://www.genderandaids.org.

The gender dimensions of the HIV/AIDS epidemic [website]. New York: United Nations Population Fund; 2011. Available from: http://www.unfpa.org/gender/aids.htm.

The Global Coalition on Women and AIDS [website]. Geneva: Global Coalition on Women and AIDS, UNAIDS; 2011. Available from: http://www.womenandaids.net/Home.aspx.

Monitoring Equity in Access to AIDS Treatment Programmes. A review of concepts, models, methods and indicators. Geneva: WHO; 2010. Available from: http://whqlibdoc.who.int/publications/2010/9789241564120_eng.pdf.

Linkages between sexual and reproductive health (SRH) and HIV [website]. Geneva: World Health Organization; 2011. Available from: http://www.who.int/reproductive-health/hiv/index.html.

Taking stock of maternal, newborn, and child survival: 2000–2010 decade report annex. Geneva: WHO; 2010. Available from: http://www.countdown2015mnch.org/documents/2010report/CountdownAnnexes.pdf.

A Tool for Surveillance, Monitoring, and Evaluation of Congenital Syphilis Elimination Efforts within Existing Systems. Geneva: WHO. In development.

Target setting

WHO, UNODC, UNAIDS Technical Guide for countries to set targets for universal access to HIV prevention, treatment and care for injecting drug users, 2009. Geneva, WHO; 2009. Available from: http://www.who.int/hiv/pub/idu/targetsetting/en/index.html.

Donoghoe M et al. Setting targets for universal access to HIV prevention, treatment and care for injecting drug users (IDUs): towards consensus and improved guidance. International Journal of Drug Policy, 2008, 19:5–14.

Setting national targets for moving towards universal access by 2010: operational guidance. Geneva: UNAIDS; 2006. Available from: http://data.unaids.org/pub/Guidelines/2006/20061006_report_universal_access_targets_guidelines_en.pdf.

Scaling up towards universal access: considerations for countries to set their own national targets for HIV prevention, treatment, and care. Geneva: UNAIDS; 2006. Available from: http://data.unaids.org/pub/Report/2006/Considerations_for_target_setting_April2006.pdf.

A framework for monitoring and evaluating HIV prevention programs for most-at-risk populations. Geneva: UNAIDS; 2007. Available from: http://www.unaids.org/en/PolicyAndPractice/Prevention/HIVprevKeyPopulations.

Estimating prevalence: indirect methods for estimating the size of the drug problem. Vienna: United Nations Office on Drugs and Crime; 2003. Available from: http://www.unodc.org/documents/GAP/GAP%20Toolkit%20Module%202%20Final%20ENGLISH%2002-60052.pdf.

UNAIDS/WHO Working Group on HIV/AIDS/STI Surveillance. Estimating the size of populations at risk for HIV: issues and methods. Geneva: UNAIDS; 2003. Available from: http://www.who.int/hiv/pub/surveillance/pub336e/en/index.html.

Estimating the size of populations at risk for HIV. Issues and Methods. Geneva: WHO/UNAIDS; 2010. Available from: http://data.unaids.org/pub/Manual/2010/guidelines_popnestimationsize_en.pdf.

ANNEX 1.
Indicator Map by Service Delivery Area and Minimum Criteria for Quality of Services

Minimum Criteria	Indicators for assessing criteria	Harmonized indicators that support the minimum criteria[1]				Other indicator sources[2]	Comments
		Global AIDS Response Progress Reporting Indicators[3]	PEPFAR[4]	WHO/ UNICEF/ UNAIDS[5]	Global Fund M&E Toolkit[6]		
SDA: HIV TESTING & COUNSELING							
Clients must know their HIV status after testing	Percentage of women and men aged 15–49 who received an HIV test in the last 12 months and who know their results	Indicator #1.5	Indicators #P11.2.N and #P11.1.D	Indicator #A3	Indicator #HIV PC-P4		
	Partially addressed by: Percentage of sexually active young women and men aged 15–24 years who received an HIV test in the last 12 months and know their results					Indicator #5 in the 2008 Guidance and Specifications for Additional Recommended Indicators[7]	
Clients testing HIV positive should be enrolled in HIV care	Number and percent of people testing HIV positive and Number and percent of people testing positive who subsequently enroll in HIV care					Linkage between HIV testing and HIV care could be assessed using the two data points listed in the column "Indicators for assessing criteria" in this row[8]	No globally harmonized measure exists.

1 These columns list the supporting standard indicators that are recommended in the UNAIDS globally harmonized indicator set, the WHO/UNICEF/UNAIDS indicator guides and/or by major donors, such as PEPFAR and the Global Fund.

2 These are indicators that are not part of the globally harmonized indicator set but that could, for example, be used to support assessment of the minimum criteria for quality of services.

3 This column indicates whether indicators have been extracted from the set of Global AIDS Progress Indicator set, which are the HIV MERG recommended 25 indicators for global reporting. This set is the result of a review of the globally available indicators included in the former UNGASS set.

4 The U.S. President's Plan for Emergency AIDS Relief: Next Generation Indicators Guide [Internet]. PEPFAR: 2009. Available from: http://www.pepfar.gov/documents/organization/81097.pdf

5 WHO, UNICEF, UNAIDS. A guide on Indicators for Monitoring and Reporting on the Health Sector Response to HIV/AIDS. Geneva: WHO; 2011. Available from: http://www.who.int/hiv/data/UA2011_indicator_guide_en.pdf

6 The Global Fund Monitoring and Evaluation Toolkit, 4th edition, 2011.

7 UNAIDS. Core Indicators for National AIDS Programmes. Guidance and specifications for additional recommended indicators. Geneva: UNAIDS; 2008. UNAIDS/08.26E. Available from: http://www.unaids.org/en/media/unaids/contentassets/documents/document/2010/JC1768-Additional_indicators_v2_en.pdf.

8 University Research Company (URC) – as part of its work with the USAID Health Care Improvement Project – uses these two indicators to assess this criterion.

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Minimum Criteria	Indicators for assessing criteria	Harmonized indicators that support the minimum criteria[1]				Other indicator sources[2]	Comments
		Global AIDS Response Progress Reporting Indicators[3]	PEPFAR[4]	WHO/ UNICEF/ UNAIDS[5]	Global Fund M&E Toolkit[6]		
SDA: HIV CARE & TREATMENT							
HIV-infected adults and children should be assessed for ART eligibility through either clinical staging or CD4 testing	Number and percentage of HIV-infected adults and children assessed for ART eligibility through either clinical staging or CD4 testing			Variation of Indicator #I7: 'Number and percentage of HIV-infected pregnant women assessed for ART eligibility through either clinical staging or CD4 testing'	Variation of Indicator HIV-P12: 'Number and percentage of HIV-infected pregnant women assessed for ART eligibility through either clinical staging or CD4 testing'		No globally harmonized measure currently exists.
HIV-infected adults and children must be enrolled in HIV care	Number and percentage of eligible adults and children with HIV infection receiving antiretroviral therapy	Indicator #4.1	Indicator #T1.2.D	Indicator #G2a	Indicator # HIV-T1		
Adults and children currently enrolled in ART should adhere to their treatment regimens	(i) Number and percentage of people starting antiretroviral therapy who picked up all prescribed antiretroviral drugs on time (number and percentage) (ii) Number and percentage of adults and children who keep scheduled appointments				Indicator #HIV-T3	(i) WHO Early Warning Indicators on Drug Resistance[9] (ii) University Research Company (URC) as part of its work with the USAID Health Care Improvement Project[10]	No globally harmonized measure currently exists.

9 HIV drug resistance early warning indicators. Geneva: WHO; 2010. Available from: http://www.who.int/hiv/topics/drugresistance/hiv_dr_early_warning_indicators.pdf

10 Shakir F and Gaudreault S. 2011. How to Implement a Gaps Analysis Framework to Guide Quality Improvement in ART Programs. Instructional Manual. Published by the USAID Health Care Improvement Project. Bethesda, MD: University Research Co., LLC (URC). Available from: http://www.hciproject.org/node/2190.

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Indicator Map by Service Delivery Area and Minimum Criteria for Quality of Services

Minimum Criteria	Indicators for assessing criteria	Harmonized indicators that support the minimum criteria[1]				Other indicator sources[2]	Comments
		Global AIDS Response Progress Reporting Indicators[3]	PEPFAR[4]	WHO/ UNICEF/ UNAIDS[5]	Global Fund M&E Toolkit[6]		
SDA: HIV CARE & TREATMENT (continued)							
Adults and children currently enrolled in ART should be retained in treatment (retention rate)	Percentage of adults and children with HIV known to be on treatment 12 months after initiation of antiretroviral therapy	Indicator#4.2	Indicator #T1.3.D	Indicator #G3	Indicator #HIV-I3		If comprehensive cohort patient registries are available then it is encouraged for countries to track retention on treatment at 24, 36, and 48 months and yearly thereafter. This is a proxy indicator for the criterion. No globally harmonized measure currently exists.
	Number and percent of patients in HIV treatment programs who have a stable or improving clinical outcome using at least one of the three wellness criteria: • *Viral load* • *CD4* • *Clinical indicators (stable or increasing weight; not advancing from one clinical stage to another; and having good functional status (able to work or continue regular activities of daily life)*					URC as part of its work with the USAID Health Care Improvement Project uses the data points listed in the column "Indicators for assessing criteria" in this row.	This is a proxy indicator for the criterion. No globally harmonized measure currently exists.

ANNEX 1.
Indicator Map by Service Delivery Area and Minimum Criteria for Quality of Services

Minimum Criteria	Indicators for assessing criteria	Harmonized indicators that support the minimum criteria[1]				Other indicator sources[2]	Comments
		Global AIDS Response Progress Reporting Indicators[3]	PEPFAR[4]	WHO/ UNICEF/ UNAIDS[5]	Global Fund M&E Toolkit[6]		
Prevention of Mother-to-Child Transmission of HIV (PMTCT)							
Pregnant women must be tested for HIV and know their results	Percentage of pregnant women who were tested for HIV and who know their results		Variation of Indicators #P1.1.D and #P1.1.N.	Variation of Indicator #I5: Percentage of pregnant women who were tested for HIV and received their results – during pregnancy, during labour and delivery, and during the post-partum period (<72 hours), including those with previously known HIV status.	Variation of Indicator #HIV-P10 ("Pregnant women who know their HIV status result")	Indicator #7 in the 2008 Guidance and Specifications for Additional Recommended Indicators[11] Also collected through PMTCT M&E Core Indicator #3 ("Pregnant women who know their HIV status result")[12]	The harmonized indicator captures pregnant women with known HIV status, with pregnant women tested and received results as a subset. Therefore, the indicator is a proxy measure for the criterion.
HIV-positive pregnant women must receive an efficacious regimen of antiretrovirals to reduce the risk of mother-to-child transmission	Percentage of HIV-positive pregnant women who received antiretrovirals (antiretroviral prophylaxis, or antiretroviral therapy if eligible) to reduce the risk of mother-to-child transmission	Indicator #3.2	Indicators #P1.2.N and #P1.2.D.	Indicator #I8	Indicator #HIV-P13[13]	PMTCT M&E Core Indicator #5[14]	Assessment of provision of an efficacious regimen of ARVs for PMTCT can be done based on reporting of disaggregated data on ARV regimen provided to HIV infected pregnant women.

11 UNAIDS. Core Indicators for National AIDS Programmes. Guidance and specifications for additional recommended indicators. Geneva: UNAIDS; 2008. UNAIDS/08.26E. Available from: http://www.unaids.org/en/media/unaids/contentassets/documents/document/2010/JC1768-Additional_indicators_v2_en.pdf.

12 Monitoring and Evaluating the Prevention of Mother-to-Child Transmission of HIV: A guide for national programmes. Geneva: WHO; in progress. Available from: http://www.who.int/hiv/pub/me/en/index.html

13 This indicator is part of the recommended quality of services indicators of the Global Fund. Assessment of the criteria (i.e., provision of efficacious regimen of ARVs for PMTCT) will be done based on the annual reporting of disaggregated data on ARV regimen provided to HIV infected pregnant women.

14 WHO, UNICEF, UNAIDS. Monitoring and Evaluating the Prevention of Mother-to-Child Transmission of HIV. A guide for national programmes. Geneva: WHO; 2011. Available from: http://www.who.int/hiv/pub/me/en/index.html

ANNEX 1.
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Prevention of Mother-to-Child Transmission of HIV (PMTCT) (continued)							
Eligible HIV-infected pregnant women should receive ART for their own health	Antiretroviral therapy for HIV-infected pregnant women eligible for treatment	Variation of Indicator #4.1			Variation of Indicator #HIV-T1 ("Eligible adults and children currently receiving antiretroviral therapy")		This criterion was addressed by category 'd' of the numerator of the former UNGASS indicator #5. The revised Global AIDS Progress indicator eliminated this 'category d' from the numerator. Hence the revised indicator may no longer be suitable for data collection against this criterion. Hence no globally harmonized measure exists.
Infants born to HIV-infected women should receive follow-up care, including HIV testing, cotrimoxazole prophylaxis and, if necessary, antiretroviral therapy	**HIV testing** Percentage of infants born to HIV-infected women who receive a virological test for HIV within 2 months of birth	Indicator #3.1	Indicator #C4.1.D	Indicator #I11	Indicator #HIV-P15	Variation: Indicator #8 in the 2008 Guidance and Specifications for Additional Recommended Indicators PMTCT Core indicator #9	
	Cotrimoxazole prophylaxis Percentage of infants born to HIV-infected women starting on cotrimoxazole prophylaxis within 2 months of birth		Indicators #C4.2.D and #C4.2.N.	Indicator #I10	Indicator #HIV-P17	Indicator #9 in the 2008 Guidance and Specifications for Additional Recommended Indicators PMTCT Core indicator #8	No globally harmonized measure exists.
	ART (as eligible)						No harmonized or other known measure currently exists. Criterion could however be assessed through Global AIDS Progress Indicator #4.1., if data are disaggregated by age (i.e., <1 years of age).

ANNEX 1.
Indicator Map by Service Delivery Area and Minimum Criteria for Quality of Services

Minimum Criteria	Indicators for assessing criteria	Harmonized indicators that support the minimum criteria[1]				Other indicator sources[2]	Comments
		Global AIDS Response Progress Reporting Indicators[3]	PEPFAR[4]	WHO/ UNICEF/ UNAIDS[5]	Global Fund M&E Toolkit[6]		
TB/HIV							
HIV-infected adults and children must be screened for TB	Number and percentage of adults and children enrolled in HIV care who had TB status assessed and recorded during their last visit during the reporting period among all adults and children enrolled in HIV care and seen for care in the reporting period		Indicator #C2.4.D.	Indicator #E4	Indicator #TB/HIV-1		No globally harmonized measure exists.
HIV-infected adults and children with TB must receive treatment for TB and HIV	Percentage of estimated HIV-positive incident TB cases that received treatment for TB and HIV	Indicator #5.1	Indicator #C3.2.N. and also a part of PEPFAR Indicator # C2.5.D	Indicator #E2.	Indicator #C-TB/HIV		
	Number and percentage of adults and children newly enrolled in HIV care who start treatment for latent TB infection (isoniazid preventive therapy) among the total number of adults and children newly enrolled in HIV care over the reporting period		Indicator #C2.6.D	Indicator #E3	Indicator #TB/HIV-4		No globally harmonized measure exists.
	Number and percentage of adults and children enrolled in HIV care who started TB treatment, expressed as a proportion of adults and children in HIV care during the reporting period				Indicator #TB/HIV-2		No globally harmonized measure exists.

ANNEX 1.
Indicator Map by Service Delivery Area and Minimum Criteria for Quality of Services

Minimum Criteria	Indicators for assessing criteria	Harmonized indicators that support the minimum criteria[1]				Other indicator sources[2]	Comments
		Global AIDS Response Progress Reporting Indicators[3]	PEPFAR[4]	WHO/ UNICEF/ UNAIDS[5]	Global Fund M&E Toolkit[6]		
HARM REDUCTION							
Injecting drug users should use sterile injecting equipment	Percentage of injecting drug users who reported using sterile injecting equipment the last time they injected	Indicator #2.3	Indicator #P9.6.N.	Indicator #C5a.	Indicator #HIV-O8	Indicator #4.1.12 and #4.7.8 in the WHO, UNODC, UNAIDS Technical Guide	Proxy quality indicator measuring increase in percentage of IDUs reporting the use of sterile injecting equipment.
Sufficient quantities of syringes must be provided to injecting drug users	Number of syringes distributed per person who injects drugs per year	Indicator #2.1		Variation: 'Number of syringes/needles distributed by needle and syringe programes (NSP)' Indicator #C4	Indicator #HIV-P3	Indicator #4.1.7 in the WHO, UNODC, UNAIDS Technical Guide[15]	Proxy quality indicator measuring coverage ranges with syringes/ needles.
Patients in opioid substitution therapy should receive the optimal maintenance dose	Percentage of patients in opioid substitution therapy (OST) receiving recommended maintenance dose > 60 mg of methadone or 12mg of buprenorphine					Indicator #4.2a.9 in the WHO, UNODC, UNAIDS Technical Guide The recommended doses for OST maintenance therapy are defined in the "Guidelines for psychosocially-assisted pharmacological treatment of opioid dependence"[16]	No globally harmonized measure exists.
Patients in opioid substitution therapy should remain in treatment for an optimal period	Percentage of individuals currently on OST who have been on OST continuously for 6 months in the past 12 months					Indicator #4.2a.10 in the WHO, UNODC, UNAIDS Technical Guide	No globally harmonized measure exists.

15 WHO, UNODC, UNAIDS technical guide for countries to set targets for universal access to HIV prevention, treatment and care for injecting drug users (2009)

16 World Health Organization (WHO). Guidelines for psychosocially-assisted pharmacological treatment of opioid dependence. Geneva: WHO; 2009. Available from: http://www.who.int/substance_abuse/publications/opioid_dependence_guidelines.pdf

8. Description of HIV indicators

HIV indicator
Behavior change communication

Number of individuals from the targeted audience reached through community outreach with at least one HIV information, education, communication or behavior change communication (HIV-P1)

Rationale
This indicator measures the number of individuals who attended community outreach activities focused on creating awareness on how to prevent HIV. Community outreach is defined as any effort to affect change that might include peer education, classroom, small group and/or one-on-one information, education, communication or behavior change communication. Some programs have clear messages designed to reach a specific audience. For the purposes of this indicator count, community outreach does not include large-scale public gatherings.

Numerator: Number of individuals reached with HIV information, education, communication or behavior change communication

Denominator: Not applicable

Measurement
The data on this indicator can be collected through program monitoring reports of implementing partners. These records are compiled and aggregated to obtain an overall measure of the reach of prevention programs. Implementers at the community level need to devise reliable tracking mechanisms that capture accurate data to avoid double counting. The designated national body for data aggregation is responsible, to the extent possible, for adjusting for overlap between multiple programs serving the same individuals in a target area. An individual may be counted in separate program areas, such as youth out of school, who may be served (and therefore counted) separately by a youth program, program targeting married men, antiretroviral therapy program, etc. Measured quarterly.

Data source: Program records

Frequency: Periodically and annually

Resources
UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/759.

HIV indicator

Behavior change communication

Number and percentage of young people aged 10–24 years reached by life skills–based HIV education in schools (HIV-P2)

Rationale

This indicator is intended to measure the level of coverage of life skills–based HIV education and communication in a school setting, as an important and effective method of teaching behavior to young people that helps them deal with the challenges and demands of everyday life. When adapted specifically for HIV education in schools, a life skills–based approach helps young people to understand and assess the individual, social and environmental factors that raise and lower the risk of HIV transmission. When properly implemented, it can positively affect behavior, including delaying sexual debut and reducing the number of sexual partners. Life skills include decision-making and problem-solving skills, creative and critical thinking, self-awareness, communication, negotiation and interpersonal relations.

Numerator: Number of young people reached through any effort to affect change, including peer education, class room, small group, and/or one-on-one information, education and communication or behavior change communication to promote change in behavior in a school setting

Denominator: Number of young people attending targeted schools

Measurement

The data can be collected through program monitoring reports of implementing partners. These records are compiled and aggregated to obtain an overall measure of the number of young people reached by HIV education based on a life skills–based approach in schools. When an indicator is based on program data, an attempt to address the issue of double counting during the reference period should be made

Data source: Program records

Frequency: Periodically and annually

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/361.

HIV indicator
Key populations

Number of syringes distributed per person who injects drugs per year by NSP (HIV-P3)

Rationale

Injecting drug use is the main route of transmission for approximately 10% of HIV infections globally and 30% of infections outside of sub Saharan Africa. Preventing HIV transmission through injecting drug use is one of the key challenges to reducing the burden of HIV.

Needle and syringe programmes (NSPs) are one of nine interventions in the WHO UNODC and UNAIDS comprehensive package for the prevention, treatment and care of HIV among IDUs.

Needle and syringe programmes have the greatest impact on HIV prevention for people who inject drugs and there is a wealth of scientific evidence supporting its efficacy in preventing the spread of HIV see http://www.who.int/hiv/topics/idu/needles/en/index.html.

Numerator: Number of syringes distributed in past 12 months by NSPs

Denominator: Number of people who inject drugs in the country

Measurement

Programme data used to count the number of syringes distributed (numerator) Size estimation of the number of IDUs in the country (denominator) For further information:

http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2011/2011_Estimating_Populations_en.pdf (the WHO/UNAIDS working group on global HIV/AIDS and STI surveillance 2010 guidelines on estimating the size of populations most at risk to HIV.)

WHO/UNAIDS Working Group on Global HIV/AIDS and STI Surveillance (2011). Guidelines on surveillance among populations most at risk for HIV. See http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2011/20110518_Surveillance_among_most_at_risk.pdf

Data source: Program records

Frequency: Periodically and annually

Strengths and weaknesses: Some difficulties regarding how to count needles and syringes are reported. Some commonly used syringes are 1 or 2ml needle and syringe units while others are syringes to which additional needles need to be fitted. In most cases only data on the number of syringes distributed via NSPs but not pharmacy sales will be available.

Estimating the size of IDU populations at country level is not without its challenges. Many different definitions of people who inject drugs exist in the literature and there are ranges of estimates. The reference group to the United Nations on HIV and injecting drug use undertakes reviews of the available literature to produce estimates of the number of people who inject drugs and these can be used in the absence of size estimates.

Countries can monitor this indicator against the following coverage levels :

- Low: <100 syringes per IDU per year
- Medium: >100–<200 syringes per IDU per year
- High: >200 syringes per IDU per year

These levels are based upon studies in developed country settings investigating the levels of syringe distribution and impact on HIV transmission. Note that the levels required for the prevention of hepatitis C are likely to be much higher than those presented here.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/851

A full description of this indicator can be found in the WHO/UNODC/UNAIDS (2009) Technical Guide for Countries to set Targets for Universal Access to HIV Prevention, Treatment and Care for Injecting Drug Users at: http://www.who.int/hiv/pub/idu/targetsetting/en/index.html

For further information, please consult the following references:

WHO (2004). Effectiveness of sterile needle and syringe programming in reducing HIV/AIDS among IDUs: http://www.who.int/hiv/pub/idu/e4a-needle/en/index.html

WHO (2004). Effectiveness of sterile needle and syringe programming in reducing HIV/AIDS among IDUs. http://www.who.int/hiv/pub/idu/e4a-needle/en/index.html

UNODC. Global Assessment Programme on drug abuse. Estimating prevalence: indirect methods for estimating the size of the drug problem. Vienna, UNODC, 2003.41

Hickman M et al. Estimating the prevalence of problematic drug use: a review of methods and their application. UN Bulletin on Narcotics, 2002, 54:15–32.42

http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2011/2011_Estimating_Populations_en.pdf (the WHO/UNAIDS working group on global HIV/AIDS and STI surveillance 2010 guidelines on estimating the size of populations most at risk to HIV.)

WHO/UNAIDS Working Group on Global HIV/AIDS and STI Surveillance (2011). Guidelines on surveillance among populations most at risk for HIV. See http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2011/20110518_Surveillance_among_most_at_risk.pdf

HIV indicator
Key populations at risk

Number and percent of key populations at risk* reached with individual and/or smaller group level HIV preventive interventions that are based on evidence and/or meet the minimum standards required (HIV-P4)

Rationale

Individual and small-group level prevention interventions have been shown to be effective in reducing HIV transmission risk behaviors. Delivering these interventions with fidelity to the appropriate populations is an important component of combination HIV prevention strategies. It is important to know how many people complete an intervention in order to monitor how well programs are reaching the intended target population with HIV prevention programming. This information can be used to plan and make decisions on how well a certain target population is being reached with individual and/or small group level interventions. The countries can use the information to improve upon the quality of the program as well as scale-up successful models.

Applicability: Countries with concentrated or low-level epidemics. Countries with generalized epidemics may also have a concentrated sub-epidemic among one or more key populations. If so, they should calculate and report this indicator for those population groups.

This indicator should be used if the basic package of services is not defined.

Numerator: Number of key populations at risk reached with individual and/or small group level preventive HIV interventions that are based on evidence and/or meet the minimum standards required.

Denominator: Total estimated number of people from key populations at risk.

Disaggregation: Per key population group at risk.

Measurement

Explanation of Numerator: The numerator can be generated by counting the number of individuals from defined key population at risk who are reached with single HIV prevention intervention. Type of the single intervention provided need to be specified.

This indicator only counts single interventions that are components of comprehensive program or package. For more information on the comprehensive package of the interventions recommended for key populations at risk please refer to the resource documents.

Data source: Program records

Frequency: Periodically and annually

Strengths and weaknesses: This indicator provides information on the total number and percent of unduplicated individuals that received individual-level and/or small-group level interventions. These interventions are based on evidence and/or meet the required minimum standards. The indicator will help the country teams to determine reach (if no denominator) and coverage (if denominator is also collected) to help country programs understand the extent and reach of evidence-based programs for further expansion. However, this indicator does not provide information if the same individuals received other interventions from comprehensive program or package.

Resources

Note: This indicator is based on the PEPFAR indicator "Number MARPs reached with individual and/or smaller group level HIV preventive interventions that are based on evidence and/or meet the minimum standards required". The indicator formulation and definition have been modified in line with the Global Fund monitoring criteria recommended for the programs targeted at key populations at risk.

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/536.

http://www.indicatorregistry.org/sites/default/files/2009-07-06%20PEPFAR%20Indicator%20Reference%20Guidance%20V1.doc

* Key populations, also known as most-at-risk populations (MARPs), are communities of subpopulations that are key to the dynamics of a country's epidemic. These have HIV-prevalence rates that are higher than those in the general population. Key populations include: people who inject drugs, sex workers, men who have sex with men and transgender people. Other vulnerable populations that can be considered to be at risk are prisoners, young people out of school, mobile populations, military and uniformed services, etc.

WHO, UNODC, UNAIDS Technical Guide for countries to set targets for universal access to HIV prevention, treatment and care for injecting drug users, 2009. Geneva: WHO, 2009. Available from: http://www.who.int/hiv/pub/idu/targetsetting/en/index.html

Prevention and treatment of HIV and other sexually transmitted infections among men who have sex with men and transgender people: Recommendations for a public health approach, WHO, 2011. Available from: http://whqlibdoc.who.int/publications/2011/9789241501750_eng.pdf

Toolkit for monitoring and evaluation of interventions for sex workers, 2009, WHO/SEARO and WHO/WPRO . Available from: http://www.who.int/hiv/pub/sti/monitor_sex_work/en/index.html

HIV indicator
Key populations at risk

Number and percentage of key populations at risk* reached with HIV prevention programs (HIV-P5)

Rationale

Key populations at risk are often difficult to reach with HIV prevention programmes. However, preventing the spread of HIV among these populations and among the general population requires that they access these services. This indicator aims to monitor coverage of prevention HIV programs through program data. It should be calculated and reported separately for each population group that is considered at risk depending on the country context.

Applicability: Countries with concentrated or low-level epidemics. Countries with generalized epidemics may also have a concentrated sub-epidemic among one or more key populations. If so, they should calculate and report this indicator for those population groups.

This indicator should be used if the basic (minimum) package of services is defined.

Numerator: Number of key populations at risk who have received a basic (minimum) package of HIV prevention service.

Denominator: Estimated number of the targeted key population at risk.

Measurement:

The data should be collected through program monitoring reports of implementing partners on a regular basis. These records are compiled and aggregated to obtain an overall measure of the number of people reached by a prevention program. Implementers at the community level need to devise reliable systems and tracking mechanisms that capture accurate data. When reporting on coverage the following should be considered:

1. Defined basic (minimum) package of HIV prevention service. This is the minimum number of services that an individual should receive to be counted as "reached" and by no means diminishes the importance of other relevant services provided at service delivery points. The basic (minimum) package of services needs to be defined on national and/or service delivery level. For example, the basic (minimum) package of services for key populations could include: behaviour change communication (promoting safer behaviour and educational materials); provision of consumables (condoms; lubricants, needles and syringes as needed); counselling from a social worker or other relevant specialist; and referral to another specialist or service, as appropriate and based on individual client needs.

2. System to avoid double counting. There is a need to ensure that number of individual "clients served" at the same service or across services are counted as opposed to number of "client visits". This can be ensured through implementation of Unique Identification Codes (UIC) and use of databases for data aggregation and reporting.

3. Population size estimates. Reporting on actual coverage (percentage) of key populations at risk will depend on availability of reliable and up-to-date population size estimates. In case size estimates are not available and/or reliable, only the numerator should be reported for this indicator.

Data source: Program records

Frequency: Periodically and annually

Strengths and weaknesses: This indicator provides information on the total number and percent of unduplicated individuals that received a basic (minimum) package of HIV prevention services. While each of the single interventions is useful in HIV prevention, it is important to recognize that when delivered as a package will have the greatest beneficial impact. The indicator will help to determine reach (if no denominator) and coverage (if denominator is also collected) to help country programs understand the extent and reach of evidence-based programs for further expansion.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/760.

WHO, UNODC, UNAIDS Technical Guide for countries to set targets for universal access to HIV prevention, treatment and care for injecting drug users, 2009. Geneva: WHO, 2009. Available from: http://www.who.int/hiv/pub/idu/targetsetting/en/index.html.

Prevention and treatment of HIV and other sexually transmitted infections among men who have sex with men and transgender people: Recommendations for a public health approach, WHO, 2011. Available from: http://whqlibdoc.who.int/publications/2011/9789241501750_eng.pdf

* Key populations, also known as most-at-risk populations (MARPs), are communities of subpopulations that are key to the dynamics of a country's epidemic. These have HIV-prevalence rates that are higher than those in the general population. Key populations include: people who inject drugs, sex workers, men who have sex with men and transgender people. Other vulnerable populations that can be considered to be at risk are prisoners, young people out of school, mobile populations, military and uniformed services, etc.

Toolkit for monitoring and evaluation of interventions for sex workers, 2009, WHO/SEARO and WHO/WPRO. Available from: http://www.who.int/hiv/pub/sti/monitor_sex_work/en/index.html

Program monitoring and evaluation: a practical manual for organizations coordinating and implementing prevention projects among injecting drug users, commercial sex workers, men who have sex with men, prisoners and care and support projects for people living with HIV/AIDS. Kiev, International AIDS Alliance in Ukraine, 2008.

Operational Guidelines for Monitoring and Evaluation of HIV Programmes for people who inject drugs, UNAIDS MERG, 2011 (in print)

Operational Guidelines for Monitoring and Evaluation of HIV Programmes for Sex Workers, Men who have Sex with Men, and Transgender People, UNAIDS MERG, 2011 (consultation version)

Operational Guidelines for Monitoring and Evaluation of HIV Programmes for Sex Workers, Men who have Sex with Men, and Transgender People, UNAIDS MERG, 2011 (consultation version)

HIV indicator
Key populations

Number of injecting drug users (IDUs) on opioid substitution therapy (HIV-P6)

Rationale

Medication-assisted treatment programs have been demonstrated to be an effective HIV prevention strategy. Substance abuse treatment reduces the frequency of drug use which in turn reduces HIV risk behaviors (Metzger, 1993, Gowing, 2008, and IOM, 2006). It also improves adherence to disease treatment regimens (Gowing, 2008 and IOM, 2006). Treatment modalities include non-pharmacological and pharmacological approaches; often, a combination of the two is used (National Institute on Drug Abuse, 1999b). An extensive body of evidence shows that medication assisted therapy (MAT) reduces the frequency of heroin injection and improves substance abuse treatment retention (Gowing, et al, 2008). Methadone maintenance therapy (MMT) is associated with reduced HIV risk behaviors including reduced frequency of injecting and sharing of injection equipment, reductions in the number of sex partners, and exchanges of sex for drugs or money (Gowing, et al, 2008).

Medication assisted therapy program should be an access point for IDUs and the program should refer and link to ARV treatment programs, PMTCT for female IDUs and a range of other prevention services.

It is important to know how many people are reached in order to monitor how well programs are reaching IDUs with medication-assisted treatment.

This information can be used to plan and make decisions on how well an IDU audience is being reached with medication-assisted treatment. If a small percentage of the intended audience is being reached, then it would be recommended that activities are adjusted to improve reach. If a large percentage of the intended audience is being reached, then headquarter staff would want to take these lessons learned and disseminate them to other countries. The country can use the information to improve upon the quality of the program as well as scale-up successful models.

Numerator: Number of injecting drug users (IDUs) on opioid substitution therapy

Denominator: Total number of IDUs*

Measurement:

The numerator is generated by counting the total number of individuals who have been on treatment for at least 3 months since initiation of opioid substitution therapy or medication-assisted treatment (e.g. using methadone or buprenorphine to treat drug dependency in order to reduce frequency of injections and potentially reduce other behavioral risk factors) at any point in time within the reporting period. The numerator should equal the number of adults who initiated and remain on opioid substitution therapy or medication-assisted treatment for at least 3 months prior to the end of the reporting period. Adults who initiated or transferred in during the reporting period should be counted only if they have been on treatment for at least 3 months after initiation prior to the end of the reporting period. Count all individuals who complete at least 3 months of treatment even if they drop-out, die, or are otherwise lost to follow-up. Do not count individuals who initiate treatment too late in the reporting period to be able to reach a minimum of 3 months. These individuals will be counted in the next reporting period assuming they complete at least 3 months of treatment. For example: If an adult initiates his/her treatment in the last few months of reporting period, however, s/he does not complete at least 3 months in treatment before the end of the reporting period, then count this individual in the next reporting period.

Explanation of Denominator (recommended at partner level): Catchment area: Geographic region from which persons come to receive HIV prevention services, or from which persons are being recruited into HIV prevention services. The size and population of this area can vary, depending on organization or agency and the services provided. IDU estimates for subdistricts/districts/regions can be used if available. The percent coverage can be determined if both the numerator and denominator are included. Country teams can encourage their partners to consider ways to estimate denominators, using similar methods used in estimating targets.

Data source: Program records

Frequency: Periodically and annually

Strengths and weaknesses: This indicator provides information on the total number of IDUs that received medication-assisted therapy. These interventions are based on evidence. The information collected will allow the country and the PEPFAR to assess any changes in risk behaviors as a result of the implemented interventions. The information will also help the country to understand the efficacy and effectiveness of evidence-based interventions and help in further expansion of similar interventions.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/529.

* Recommended at partner level only

HIV indicator
HIV testing and counseling

Number of people tested and counseled for HIV and who received their test results (HIV-P7)

Rationale

This indicator is intended to monitor trends in the uptake of HIV T&C services over time within a country, regardless of the type of T&C service delivery method.

The recommended levels of disaggregation are intended to monitor access to and uptake of HIV T&C by specific populations that are most affected by the epidemic. Data could also be useful for projecting programmatic needs such as test kits and other staffing resources, although individuals are counted.

Numerator: Number of individuals who received T&C services for HIV and received their test results during the past 12 months

Denominator: Not applicable

Measurement

Data for the numerator should be generated by counting the total number of individuals who received HIV T&C from any service delivery point. Service delivery points could include fixed health care facilities such as, hospitals, public and private clinics, VCT, antenatal care (ANC), labor and delivery (L&D), PMTCT, or TB sites; standalone sites such as free standing sites not associated with medical institutions; and, mobile testing such as, HIV testing and counseling (T&C) services offered in a specific location for a limited period of time, e.g. outreach, door-to-door services and workplace testing events. All individuals receiving T&C should be counted in this indicator regardless of where the service is provided. These individuals will include TB patients, pregnant women, men receiving circumcision, and infants. To adequately collect data for this indicator, a minimum provision of the following services is required: counseling, testing, return and receipt of test results.

Disaggregation: by sex: (male, female), by age (<15, 15+), by test result (positive, negative), by type of counseling (individual, couples*), by key population (sex workers, people who inject drugs, men who have sex with men).

* Couples counseling describe those sessions where two or more people in a relationship come together for HIV T&C services. If a couple comes for services together, they should be counseled together and receive their test results together, where possible. When this happens data should be collected for each individual and it should be indicated on the form that this was a couple session as opposed to an individual session.

Data source: Program records, HMIS

Frequency: Periodically and annually

Strengths and weaknesses: This indicator is intended to monitor individuals and the trends in the uptake of testing and counseling over time. However, in some cases, data for this indicator might include repeat testers. If data on persons who retest are not available, this indicator will give information on the number of times HTC services were delivered, rather than the number of individuals who received HTC services. Repeat testing is common practice among most HIV T&C programs and it is important to recognize this and interpret the aggregated data with caution.

Over time, the number of people who are expected to be tested and counseled within a country will vary depending on numerous factors such as, the numbers of people with previously confirmed positive status, or the number of people who may be at perceived risk of HIV infection, and hence this indicator should be interpreted accordingly.

In addition, the type and focus of a T&C program for each respective country has an impact on its interpretation. For example, a program that targets high-risk groups or areas of highest prevalence, may have smaller numbers tested, and yet higher yield in HIV infection identification than a program providing general T&C services.

Given that this indicator is intended to count individuals and not tests, data produced through this indicator would need further interpretation for use in commodities planning.

Finally, this indicator does not provide information on whether those who were tested were adequately referred to and are receiving follow up services to benefit from knowing their HIV status.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/537.

Indicator #P.11.1.D Office of US Global AIDS Coordinator. The President's Emergency Plan for AIDS Relief: Next Generation Indicators Reference Guide. July 2009. Available from: http://www.indicatorregistry.org/sites/default/files/2009-07-06%20PEPFAR%20Indicator%20Reference%20Guidance%20V1.doc

HIV indicator
HIV testing and counseling

Percentage of pregnant women attending antenatal care (ANC) whose male partner was tested for HIV (HIV-P8)

Rationale

Male involvement is a critical element in providing family-focused services to HIV-infected pregnant mothers, their infants and family members. It is also important in the prevention of HIV infection and can help couples who are seronegative to remain seronegative. Partner testing is the first step in involving the male partner, regardless of the couple's HIV status.

Numerator: Number of pregnant women attending antenatal care whose male partner was tested in the past 12 months*

Denominator: Number of pregnant women attending antenatal care

Measurement

The numerator can be calculated from national program records compiled from facility registers. Male partners can be tested with the woman at the first antenatal care visit or at a follow-up visit or tested alone on a separate visit, such as a day reserved for male partner testing. Data can be aggregated from antenatal care or testing and counseling register, depending on the context. All public, private and nongovernmental organization-run health facilities that provide antenatal care services should be included. If feasible, programs may consider collecting data on whether or not the male and female partner disclosed their HIV status to each other in the presence of a clinic staff member.

This indicator allows countries to monitor efforts at increasing testing of male partners of pregnant women attending ANC services. It does not measure whether the male partner received his result or any follow-up services.

Male partners of non-ANC clients (e.g. prenuptial testing and counseling), who are tested are not captured in this indicator, thus the total number of male partners who do get tested may be underestimated.

The indicator does not take into account ANC clients that have more than one partner or that partners may change over time. It also does not include partners that received HIV testing at non-ANC settings and which are not linked to ANC (e.g. general VCT or provider initiated testing). Not all sites may be collecting data on male partner testing or routinely aggregating and reporting the data. Measuring this indicator may require additional investment and resources to revise data collection tools and summary reporting forms.

Data source: Routine monitoring system

Frequency: Periodically and annually

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/879.

A Guide on Indicators for Monitoring and Reporting on the Health Sector Response to HIV/AIDS. WHO, UNICEF, UNAIDS. Available from: http://www.who.int/hiv/data/UA2011_indicator_guide_en.pdf

* When reporting on the numerator only for periodic reporting, "in the past 12 months" can be substituted with a specific period of time as relevant to the reporting period.

HIV indicator
Male circumcision

Number of males circumcised as part of the minimum package of male circumcision for HIV prevention services (HIV-P9)

Rationale

Three randomized controlled clinical trials in sub-Saharan Africa demonstrated a 60% reduction in risk of female-to-male HIV transmission among men randomized to receive circumcision (compared to uncircumcised controls). This evidence is supported by long-standing ecologic and observational data. Elective surgical male circumcision (MC) confers a partially protective effect against HIV acquisition for HIV-negative men at risk for acquiring HIV from HIV-positive female sexual partners, and may be particularly beneficial in populations where HIV prevalence is high and male circumcision prevalence is low. For maximal population impact, uptake of male circumcision should be as high and as rapid as safely possible and aligned with national policy. The total number of males circumcised indicates either change in the supply of or demand for MC services. Additionally, disaggregated information may be useful to evaluate whether prioritized services have been successful, set targets have been achieved, and modeling inputs should be adjusted.

Numerator: Number of males circumcised as part of the minimum package of MC for HIV prevention services per national standards and in accordance with the WHO/UNAIDS/Jhpiego Manual for Male Circumcision Under Local Anesthesia

Denominator: Not applicable

Measurement

The numerator can be generated by summing the clients documented as having received MC within the reporting period in MC Registries or clients' medical records maintained by programs.

Explanation: While services must be provided within the context of the minimum MC package, only males who have received a circumcision surgery in accordance with the WHO/UNAIDS/Jhpiego Manual for Male Circumcision Under Local Anesthesia and per national standards by funded programs/sites in the reporting period meet the definition for the numerator.

Other services within the MC minimum package (i.e. Testing, Behavioral Change, counseling, or training of health professionals) should not be counted here, but may be captured under separate but appropriate indicators found in this document. Programs should focus on compiling data for the numerator from MC Registers or client medical records maintained by funded programs/sites. A program site is a fixed or mobile facility that is able to provide all components of the minimum package of MC for HIV prevention services. The MC minimum package of services must include elective surgical male circumcision using local anesthesia provided after education and consent and delivered in the context of comprehensive HIV prevention messages/services that include: on-site pre-operative HIV counseling and testing (offer of); active exclusion of symptomatic STIs and syndromic treatment when indicated; post-operative wound care and abstinence instructions; age-appropriate counseling on risk reduction, reducing number and concurrency of sexual partners, and delaying/abstaining from sex; and provision and promotion of correct and consistent use of male and/or female condoms. It is anticipated that some programs may establish formal referral relationships with voluntary counseling and testing (VCT) services to provide the HIV testing components of the MC minimum package of services. In these cases, a repeat HIV test 'on-site' may not be necessary, if the MC program and VCT service have agreed upon what constitutes 'certifiable results.'

Though it is not possible to mandate a specific length of time before the MC surgery that an HIV test must have been done, it is suggested that the HIV test be done within the prior 3 months. Clients who present without a 'certifiable result' and wishing to defer HIV testing are not able to self-report their result. Such clients should be counted in the 'unknown/refused HIV test' recommended disaggregation category. Clients circumcised in a fixed/permanent location, such as a hospital or clinic, should be counted in the 'fixed/permanent location' recommended disaggregation category. Those circumcised in a school, tent, mobile facility, or in any location intended for use as another purpose but temporarily established for MC, should be counted in the 'temporary (including mobile) location' recommended disaggregation category. Disaggregation: by age (<1; 1-14; 15+), HIV test results (HIV positive by test(s) on site; HIV negative by test(s) on site; HIV indeterminate result by test(s) on site; Unknown/refused HIV test).

Data source: Programmatic reports

Frequency: Periodically and annually

Strengths and weaknesses: Programs are required to report on the actual number of males circumcised in accordance with the WHO/UNAIDS/Jhpiego Manual for Male Circumcision Under Local Anesthesia so that the overall uptake and delivery of the PEPFAR-funded MC minimum services package in the country can be monitored, outcomes evaluated, and impact of MC on HIV incidence at a population level can be modeled. Comparing current and previous values may indicate newly implemented service delivery or changes in supply or demand volume. When the number of male circumcisions is disaggregated by age and HIV status, it will be possible to adjust inputs used in models to determine impact of male circumcision programs on HIV incidence. Disaggregation by age may be particularly helpful is determining whether age-specific communication strategies are working to create demand. Disaggregation by service delivery location/setting may allow for evaluation of resource allocations.

Resources

Indicator #P5.1.D. Office of US Global AIDS Coordinator. The President's Emergency Plan for AIDS Relief: Next Generation Indicators Reference Guide. July 2009. Available from: http://www.indicatorregistry.org/sites/default/files/2009-07-06%20PEPFAR%20Indicator%20Reference%20Guidance%20V1.doc

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/530.

HIV indicator
Prevention of mother-to-child transmission

Number and percentage of pregnant women who know their HIV status results (HIV-P10)

Rationale

This indicator assesses efforts to identify the HIV serological status of pregnant women in the previous 12 months. Identification of a pregnant woman's HIV serological status provides an entry point for other services for PMTCT and to tailor prevention, care and treatment to her needs.

This can be used in generalized epidemics, and also applies in countries with policies to identify the HIV status of all pregnant women. Countries with low-level or concentrated epidemics that do not have policies to identify the HIV status of all pregnant women should adapt the denominator on the basis of the target population of pregnant women whose HIV status is to be assessed, according to their national policy or strategy.

Numerator: Number of pregnant women of known HIV status

Denominator: Estimated number of pregnant women in the past 12 months*

Measurement

This is compiled from the number of women of unknown HIV serological status attending antenatal care, labour and delivery and postpartum services, who have been tested for HIV and know their results and women with known HIV infection attending antenatal care for a new pregnancy in the past 12 months.

The numerator is the sum of categories a–d below:

(a) pregnant women who have an HIV test and receive their result during antenatal care;

(b) pregnant women of unknown HIV serological status attending labour and delivery who were tested and received results;

(c) women of unknown HIV serological status attending postpartum services within 72 hours of delivery who were tested and received results; and

(d) pregnant women with known HIV infection attending antenatal care for a new pregnancy.

Pregnant (and postpartum) women of unknown serological status:

women who were not tested during antenatal care or at labour and delivery for this pregnancy or do not have documented proof of having been tested during this pregnancy.

(a)-(c) include all women who were tested and received results, irrespective of the HIV test result.

(d) includes women with previously known HIV positive status.

Pregnant women with known HIV infection: women who were tested and confirmed to be HIV-positive at any time before the current pregnancy, who are attending antenatal care for a new pregnancy.

These women do not need to be retested if there is documented proof of their positive status1, in line with national guidelines on testing pregnant women. These women do, however, need services for PMTCT and are counted in the numerator.

Disaggregation into:

(a) women with known (positive) HIV infection at antenatal care,

(b) women newly identified as HIV positive and

(c) women testing HIV negative.

The numerator is calculated from national programme records aggregated from facility registers for antenatal care, labour and delivery and postpartum care. In countries with high rates of facility attendance for labour and delivery, data can be collected from labour and delivery registers only, as the results of HIV testing will be available for most pregnant women from this one source. Health facility registers should record known HIV infection in pregnant women coming to antenatal care clinics for a new pregnancy, so that they receive services for PMTCT.

All public, private and nongovernmental organization-run health facilities that are providing testing and counseling for pregnant women should be included.

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* For periodic reporting, only the numerator will be included.

The denominator is derived from a population estimate of the number of pregnant women giving birth in the past 12 months. This can be obtained from estimates of births from the central statistics office or from the United Nations Population Division or pregnancy registration systems with complete data.

Data source: programmatic reports, population-based surveys (eg. DHS, MICS, AIDS Indicator survey)

Frequency: Periodically and annually, 3 to 5 years for surveys

Strengths and weaknesses: This indicator makes it possible to monitor trends in HIV testing among women attending antenatal care. This indicator does not capture individual components of the testing process such as the number of women counseled, but not tested; or women who were tested and counseled, but did not receive their results. It is a measure neither of the quality of testing or counselling nor of the number of women who receive counselling before or after testing.

There is a risk for double-counting with this indicator, as a pregnant woman can be tested more than once during antenatal care, labour and delivery or postpartum care, particularly when women are retested in different facilities, when they come to antenatal care or labour and delivery services without documentation of their previous results or when they are re-tested after a previous negative test result during the pregnancy. While double-counting cannot be avoided entirely, countries should set up a data collection and reporting system to minimize it.

Not all categories will be applicable to or significant for all settings, e.g. women of unknown status tested within 72 hours postpartum. Countries may wish to revise their methods and allocate time and other resources for measuring the categories appropriate to their context.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/524.

Monitoring and Evaluating the Prevention of Mother-to-Child Transmission of HIV: A guide for national programmes. Towards the Elimination of Mother-to-Child Transmission, 2011. Available at: http://www.who.int/hiv/pub/me/en/index.html.

HIV indicator
Prevention of mother-to-child transmission

Percentage of HIV infected women using a modern family planning method (HIV-P11)

Rationale

This indicator is a subset of contraceptive prevalence rate, but focuses specifically on HIV-infected women to measure progress in Prong 2 ("prevent unwanted pregnancies among women living with HIV") of the four prongs of PMTCT. Contraceptive prevalence rate serves as a proxy measure of access to reproductive health services that are essential for meeting many of the Millennium Development Goals, especially those related to child mortality, maternal health, HIV/AIDS, and gender equality.

All women, irrespective of HIV status, need services that can help them make informed reproductive decisions and provide them with contraceptive options, if and when they are desired. By enabling women living with HIV to prevent or delay pregnancy, access to these services could avert HIV infection in infants, reduce unintended exposure to maternal mortality risk and improve child survival.

Preventing unintended pregnancies in women living with HIV is a critical step towards reducing mother-to-child transmission and is a core component of the international standards for a comprehensive approach to PMTCT.

Numerator: Number of HIV infected women aged 15-49 reporting the use of any method of modern family planning

Denominator: Total number of HIV infected women aged 15-49

Measurement

Routine reporting registers can be used to indicate if HIV-infected women report the use of a modern family planning method. This question can also be included in population-based surveys, such as an AIDS Indicator Survey, or adaptations to Fertility and Family Surveys (FFS), Reproductive Health Surveys (RHS) and other surveys based on similar methodologies. The time frame used to assess contraceptive prevalence can also vary. In most surveys there is no definition of what is meant by "currently using" a method of contraception.

In some surveys, the lack of probing questions, asked to ensure that the respondent understands the meaning of the different contraceptive methods, can result in an underestimation of contraceptive prevalence, in particular for non-traditional methods. Sampling variability can also be an issue, especially when contraceptive prevalence is measured for a specific subgroup (according to method, age-group, level of educational attainment, place of residence, etc.) or when analyzing trends over time.

Regional and global estimates of contraceptive prevalence rates are based on weighted averages, using the total number of women of reproductive age (15-49) who are married or in union. These estimates are presented only if available data cover at least 50% of total number of women of reproductive age (15-49) who are married or in union in the regional or global groupings.

Data source: programmatic reports, population-based survey

Frequency: Periodically and annually, three to five years (population-based survey)

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/880.

Contraceptive prevalence. Indicator and measurement registry. WHO: Geneva. Available at: http://apps.who.int/gho/indicatorregistry/App_Main/view_indicator.aspx?iid=5.

Taking stock of maternal, newborn, and child survival: 2000–2010 decade report annex. Geneva: WHO; 2010. Available from: http://www.countdown2015mnch.org/documents/2010report/CountdownAnnexes.pdf.

Unmet need for family planning. Indicator and measurement registry. WHO: Geneva. Available at: http://apps.who.int/gho/indicatorregistry/App_Main/view_indicator.aspx?iid=6

Monitoring and Evaluating the Prevention of Mother-to-Child Transmission of HIV: A guide for national programmes. Towards the Elimination of Mother-to-Child Transmission, 2011. Available at: http://www.who.int/hiv/pub/me/en/index.html.

HIV indicator
Prevention of mother-to-child transmission

Percentage of HIV-infected pregnant women assessed for eligibility for antiretroviral therapy (CD4 count or clinical staging) (HIV-P12)

Rationale

Coverage of eligibility assessment for antiretroviral therapy among HIV-infected pregnant women, either clinically by WHO clinical staging criteria or immunologically by CD4 testing. Assessments can be made on site or by referral* (CD4 cell count or clinical staging).

HIV-infected pregnant women who meet the clinical and (when available) immunological criteria for antiretroviral therapy should receive it. Antiretroviral therapy preserves maternal health and reduces the risk for mother-to-child transmission. Services for the prevention of mother-to-child transmission of HIV should undertake such assessments. Women who are not yet eligible for antiretroviral therapy should receive antiretroviral drug prophylaxis for PMTCT according to the national guidelines and recommendations.

It is recommended that countries disaggregate by eligibility status for additional information on national trends in the percentage of pregnant women who are eligible for antiretroviral therapy. When HIV-infected pregnant women are referred to another health facility or another service unit within the same health facility, health providers should document the referrals and services received by these women in the antenatal care register and on the maternal health card for better patient tracking and monitoring.CD4 testing for HIV-infected pregnant women should be prioritized as many women who are eligible for ART will not have advanced HIV disease based on clinical staging.

Applicable in all types of epidemics.

Numerator: Number of HIV-infected pregnant women attending services for PMTCT in the past 12 months assessed for eligibility for antiretroviral therapy by either clinical staging or CD4 testing, on site or by referral.

Denominator: Estimated number of HIV-infected pregnant women in the past 12 months

Measurement

'On site' means that the service is offered in a health facility structure or compound. For instance, HIV clinical staging may be available in the antenatal care unit, while blood draw for CD4 testing is available at the HIV care and treatment unit in the same health facility. Both these services are considered to be on site.

Referral can be made on site or off site and is defined as sending a patient to a different service unit, health provider or health facility. Often, patients return to the original health facility, service unit or provider, where the services received at the referral site are fed back to the original site, and the patient continues with follow-up care. Referral facilities should document the services provided and patient outcomes. This indicator should be disaggregated by type of assessment (clinical staging or CD4 testing). Women who were assessed by CD4 testing and clinical staging should be counted only once as having been assessed by CD4 testing.

Assessment can be conducted in antenatal care clinics and HIV care and treatment units, on site or by referral. Data should be aggregated from the appropriate register, with consideration of which registers capture the data, where the assessment actually took place, possible double-counting or under-counting and the need for accurate data for the national level.

All public, private and nongovernmental organization-run health facilities that assess eligibility of HIV-infected pregnant women for antiretroviral therapy, either on site or by referral, should be included.

Two methods can be used to calculate the denominator:

(a) a projection model such as that provided by Spectrum software: use the output "number of pregnant woman needing prevention of mother-to-child transmission of HIV"; or

(b) multiply the number of women who gave birth in the past 12 months (which can be obtained from estimates of the central statistics office or the United Nations Population Division or pregnancy registration systems with complete data) by the most recent national estimate of HIV prevalence in pregnant women** (which can be derived from HIV sentinel surveillance in antenatal care clinics), if Spectrum projections are unavailable.

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* CD4 testing can be conducted by taking the blood sample and doing the CD4 test on site, by taking the blood sample on site and sending it for testing at another facility or by referring the HIV-infected pregnant woman to another facility or laboratory for both the blood sampling and the CD4 test.

** National estimates of HIV-infected pregnant women should be derived by adjusting surveillance data from sentinel sites at antenatal clinics and other sources, taking into consideration characteristics such as age distribution and rural and urban patterns of HIV prevalence.

Data source: Programmatic records

Frequency: Periodically and annually

Strengths and weaknesses: The strength of this indicator is that it allows countries to monitor the extent to which HIV-infected pregnant women are receiving highest quality medical care that is critical for accessing antiretroviral therapy for their own health.

It does not capture whether HIV-infected pregnant women who were eligible for antiretroviral therapy actually received it. Although each category is mutually exclusive, there is a risk of double-counting when HIV-infected pregnant women have been assessed both clinically and immunologically or assessed in different units or in a different facility. Countries should ensure that systems are in place to minimize the risk for double-counting.*** This indicator does not capture women who have been identified as HIV-infected at labour and delivery and subsequently assessed for their eligibility for antiretroviral therapy.

The value of this indicator could be underestimated when women are referred to another facility and their data are not aggregated.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/881.

Monitoring and Evaluating the Prevention of Mother-to-Child Transmission of HIV: A guide for national programmes. Towards the Elimination of Mother-to-Child Transmission, 2011. Available at: http://www.who.int/hiv/pub/me/en/index.html.

*** Ideally, data for eligibility assessment for antiretroviral therapy, whether provided on or off site, should be recorded in and aggregated from antenatal care registers or other registers of HIV-positive women; i.e. data should be transferred back and recorded in the antenatal care register even if the service is provided at another location. This may, however, lead to under-reporting if the data are not transferred adequately or women do not return to antenatal care facilities for subsequent visits. When data from antenatal care registers provides only an incomplete picture, consider the following protocol. When referrals are made on site within the same health facility, such as from antenatal care to the HIV care and treatment unit, providers in each facility should select one source from which data are to be aggregated (e.g. the antenatal care register or the pre-ART/ART register or lab-based CD4 test registers). When women are referred to another health facility (off site), the data should be aggregated from antenatal care or pre-therapy/antiretroviral therapy registers at the referral facility. Patient registers in HIV care and treatment and laboratories should reflect the pregnancy status of patients who are assessed for eligibility for antiretroviral therapy to facilitate aggregation of the data.

HIV indicator
Prevention of mother-to-child transmission

Percentage of HIV-infected pregnant women who received antiretrovirals to reduce the risk of mother-to-child transmission (HIV-P13)

Rationale

It measures progress in preventing mother-to-child transmission of HIV through the provision of antiretroviral drugs. This is one of the four main methods for the prevention of mother-to-child transmission, along with primary prevention of HIV for women of childbearing age, prevention of unintended pregnancies among women living with HIV, and appropriate treatment, care and support for mothers living with HIV.

This indicator allows countries to monitor the coverage with antiretroviral medicines of HIV-positive pregnant women to reduce the risk for transmission of HIV to infants. When disaggregated, this indicator can show increased access to more effective antiretroviral drug regimens for prevention of mother-to-child transmission of HIV in countries that are scaling up newer regimen categories. As the indicator measures antiretroviral drugs dispensed and not those consumed, it is not possible to determine adherence to the regimen in most cases. The postpartum regimen ('tail') to avoid transmission during breastfeeding and to reduce the mother's resistance to nevirapine are not captured by this indicator, even though they are recommended by WHO as standards of care for prevention of mother-to-child transmission of HIV. Because the tail is not included, the regimens below are not labelled with the standard names of Option A and B as described in WHO guidelines.

The risk for mother-to-child transmission can be reduced significantly by the complementary approaches of providing antiretroviral drugs (as treatment or as prophylaxis) to the mother and antiretroviral prophylaxis to the infant and using safe delivery practices and safer infant feeding.

The data will be used to track progress toward global and national goals towards elimination of mother-to-child transmission; to inform policy and strategic planning; for advocacy; and leveraging resources for accelerated scale up.

Numerator: Number of HIV-infected pregnant women who received antiretroviral drugs during the past 12 months to reduce mother-to-child transmission.*

Denominator: Estimated number of HIV-positive pregnant women within the past 12 months.

Measurement

a) antiretroviral therapy for HIV-positive pregnant women eligible for treatment

Triple antiretroviral regimen used primarily to improve mother's health and also to fully suppress viral replication fully before and during delivery and postpartum. It is given as a lifelong mother's therapy with the additional benefit of reducing mother-to-child transmission during pregnancy and postpartum periods.

- AZT + 3TC + NVP or
- AZT + 3TC + EFV or
- TDF + 3TC (or FTC) + NVP or
- TDF + 3TC (or FTC) + EFV

b) maternal triple ARV prophylaxis;

Triple antiretroviral regimen used to prevent vertical HIV transmission, It is given from 14 weeks of pregnancy until cessation of breastfeeding,

- Triple ARV (from 14 wks until cessation of breastfeeding**
- AZT + 3TC + LPV-r
- AZT + 3TC + ABC
- AZT + 3TC + EFV
- TDF + 3TC (or FTC) + EFV

c) maternal AZT; AZT used as antiretroviral prophylaxis. It is given from 14 weeks of pregnancy.

- Antepartum AZT (from 14 weeks of pregnancy)
- sd-NVP at onset of labour***
- AZT + 3TC during labour & delivery***
- AZT + 3TC for 7 days postpartum***

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* When reporting on the numerator only for periodic reporting, "in the past 12 months" can be substituted with a specific period of time as relevant to the reporting period.

** stop ARV 1 week after complete exposure to breast milk

*** sd-NVP and AZT-3TC can be omitted if mother receives > 4 wks AZT antepartum

d) single-dose nevirapine only(not recommended but should be recorded until phased out); A single dose of nevirapine administered during labour, as antiretroviral prophylaxis,

• Single-dose nevirapine

The number of women receiving a specific antiretroviral drug regimen should be counted.

The numerator is calculated from national programme records aggregated from facility registers.

Antiretroviral drugs can be given to HIV-infected women at various sites (antenatal care, labour and delivery and HIV care and treatment) during pregnancy, at labour or shortly after delivery.

Two methods can be used to estimate the denominator:

(a) a projection model, such as that provided by Spectrum software; use the output "number of pregnant woman needing prevention of mother-to-child transmission of HIV"; or

(b) multiply the number of women who gave birth in the past 12 months (which can be obtained from estimates of the central statistics office or the United Nations Population Division or pregnancy registration systems with complete data) by the most recent national estimate of HIV prevalence in pregnant women (which can be derived from HIV sentinel surveillance in antenatal care clinics and appropriate adjustments related to coverage of ANC surveys.) if Spectrum projections are unavailable.

To ensure comparability the Spectrum output will be used for the denominator when global analyses are done.

Method of measurement:

For the numerator: national programme records aggregated from programme monitoring tools, such as patient registers and summary reporting forms. For the denominator: estimation models such as Spectrum, or antenatal clinic surveillance surveys in combination with demographic data and appropriate adjustments related to coverage of ANC surveys. Programme monitoring and HIV surveillance. The prevention of mother-to-child transmission is a rapidly evolving programmatic area. Methods for monitoring coverage of this service are therefore also evolving. To access the most current information available please consult the following websites:

http://www.who.int/hiv/pub/mtct/antiretroviral2010/en/index.html

http://www.who.int/hiv/pub/me/en/index.html

Strengths and weaknesses

This indicator allows countries to monitor the coverage with antiretroviral medicines of HIV-positive pregnant women to reduce the risk for transmission of HIV to infants. When disaggregated, this indicator can show increased access to more effective antiretroviral drug regimens for prevention of mother-to-child transmission of HIV in countries that are scaling up newer regimen categories. As the indicator measures antiretroviral drugs dispensed and not those consumed, it is not possible to determine adherence to the regimen in most cases. This indicator does not capture the use of appropriate postpartum regimens (¨tail¨) for the mother (to reduce transmission and viral resistance) and for the infant (to reduce peripartum transmission) which should accompany antiretroviral drug regimens to reduce peripartum mother-to-child transmission.

Countries are encouraged to track and report the actual (or estimated if actual data are unavailable) percentage distribution of the various regimens, so that the impact of antiretroviral drugs on mother-to-child transmission can be modelled on the basis of the efficacy of the regimens. When countries do not have a system for collecting and reporting data on the provision and coverage of different antiretroviral drug regimens for the prevention of mother-to-child transmission of HIV, they should establish such a system. Countries that have mechanisms for providing HIV-positive pregnant women with antiretroviral drugs at community level should have a system for collecting related data.

Data source: Program records

Frequency: Periodically and annually

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/856.

Indicator #P1.2.D. Office of US Global AIDS Coordinator. The President's Emergency Plan for AIDS Relief: Next Generation Indicators Reference Guide. July 2009. Available from: http://www.indicatorregistry.org/sites/default/files/2009-07-06%20PEPFAR%20Indicator%20Reference%20Guidance%20V1.doc

Monitoring and Evaluating the Prevention of Mother-to-Child Transmission of HIV: A guide for national programmes. Towards the Elimination of Mother-to-Child Transmission, 2011. Available at: http://www.who.int/hiv/pub/me/en/index.html.

HIV indicator
Prevention of mother-to-child transmission

Number and percentage of infants born to HIV-infected women (HIV-exposed infants) who are breastfeeding provided with antiretrovirals (either mother or infant) to reduce the risk of HIV transmission during the breastfeeding period (HIV-P14)

Rationale

This indicator measures progress in the prevention of mother-to-child transmission in breastfeeding populations by the provision of antiretroviral drugs to reduce the risk of HIV transmission during the breastfeeding period. The overall risk of PMTCT can be significantly reduced by providing antiretroviral drugs (as lifelong therapy or as prophylaxis) to the mother and by complementary practices related to safe delivery and appropriate infant feeding. In breastfeeding populations, antiretrovirals interventions to mothers or infants can specifically reduce the risk of transmission through breastfeeding.

Numerator: Number of infants born to HIV-infected women who, during the past 12 months, are breastfeeding and protected by an antiretroviral intervention to reduce mother-to-child transmission through breastfeeding, namely either maternal or infant antiretroviral drugs.*

Denominator: Estimated number of infants born to HIV-infected women (HIV-exposed infants) who are breastfeeding during the past 12 months

Measurement

The numerator is calculated from national programme records aggregated from facility registers.

Antiretroviral drug interventions to reduce HIV transmission through breastfeeding can be initiated shortly after delivery at facilities for labour and delivery if infants are born at facilities, at outpatient postnatal care or child clinics for infants born at home and brought to the facility, or at HIV care and treatment or other sites, depending on the country.

The data for the numerator should be collected at the infant's 6 week visit (2-3 months) and distinguished from ARV interventions given to prevent peripartum transmission. Data on whether maternal or infant antiretrovirals to reduce post-natal transmission were provided should be recorded for breastfeeding infants. HIV-infected pregnant women who are eligible for antiretroviral therapy and are receiving a treatment regimen and whose infants therefore benefit from the prophylactic effect of ART in reducing the risk of transmission through breastfeeding are also included in this indicator.

Three methods for calculating the denominator can be considered:

Counting at the time of labour and delivery: In settings where a high proportion of women give birth in health facilities, countries can estimate the denominator from only the labour and delivery register, by recording and counting the number of HIV exposed-infants whose initial feeding practice was breastfeeding, as a proxy for the denominator.

Counting at postnatal or child health sites: In settings where a high proportion of women and children attend post-natal and child health sites, countries can count and aggregate the number of HIV-exposed infants who are breastfeeding recorded at postnatal or child health clinics if the exposure status of the child is likely to be known (e.g. from postnatal registers or stand-alone or integrated HIV-exposed infant registers).

Combining data from labour and delivery and post-natal/child health sites : In some settings, data for the numerator will need to be compiled from the labour and delivery and postnatal and child health sites, to estimate the total number of HIV-exposed infants who are breastfeeding. However, countries should establish data collection and reporting systems to minimize double-counting.

All public, private and nongovernmental organization-run health facilities that provide antiretroviral drugs to HIV-exposed infants for PMTCT should be included.

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* Options depend on the antiretroviral regimen received by the mother during antenatal care and labour and delivery. Based on latest international guidance (http://www.who.int/hiv/pub/mtct/rapid_advice_mtct.pdf),
typical options include:

Maternal Regimen	Corresponding Infant Regimen
1. ART	AZT for 6 weeks OR NVP for 6 weeks
2. AZT	a) Breastfeeding population: Daily NVP from birth until cessation of breastfeeding; or b) Non-breastfeeding population: AZT for 6 weeks OR NVP for 6 weeks
3. Triple ARV Prophylaxis	a) Breastfeeding population: Daily NVP from birth to 6 weeks; or b) Non-breastfeeding population: AZT for 6 weeks OR NVP for 6 weeks

When reporting on the numerator only for periodic reporting, "in the past 12 months" can be substituted with a specific period of time as relevant to the reporting period.

Countries that have mechanisms for giving antiretroviral drugs to HIV positive breastfeeding women or HIV-exposed infants during the postnatal period at community level should establish a system to collect and report the relevant data.

Countries should periodically review data to assess whether ARV prophylaxis for the recommended full duration (until cessation of breastfeeding) was taken.

Data source: Program records

Frequency: Periodically and annually

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/882.

Monitoring and Evaluating the Prevention of Mother-to-Child Transmission of HIV: A guide for national programmes. Towards the Elimination of Mother-to-Child Transmission, 2011. Available at: http://www.who.int/hiv/pub/me/en/index.html.

HIV indicator
Prevention of mother-to-child transmission

Number and percentage of infants born to HIV-infected women who receive a virological test for HIV within 2 months of birth (HIV-P15)

Rationale

It measures progress in the extent to which infants born to HIV-positive women are tested within the first 2 months of life to determine their HIV status and eligibility for ART, disaggregated by test results.

Infants infected with HIV during pregnancy, delivery or early postpartum often die before they are recognized as having HIV infection. WHO recommends national programmes to establish the capacity to provide early virological testing of infants for HIV at 6 weeks, or as soon as possible thereafter to guide clinical decision-making at the earliest possible stage. HIV disease progression is rapid in children; they need to be put on treatment as early as possible because without early treatment almost 50% of children would be dead by the second year.

Numerator: Number of infants who received an HIV test within 2 months of birth, during the reporting period. Infants tested should only be counted once.

To be collected from databases held at EID testing laboratories. The numerator should represent the number of infants who received virologic testing within 2 months of birth; it should not represent the number of samples tested at the laboratory. Data should be aggregated from the laboratory data bases. Where possible, double counting should be minimized when aggregating data to produce national-level data. It is expected that the number of infants receiving more than one virologic test in thefirst 2 months of life will be low. Efforts should be made to include all public, private and NGO-run health facilities that are providing HIV testing for HIV-exposed infants.

If information is available about the test results (positive, negative, indeterminate, and rejected for testing by the laboratory) can also be reported. When reporting this information only the most recent test result for an infant tested in the first 2 months of life should be included.

Denominator: Number of HIV-positive pregnant women giving birth in the last 12 months.

This is a proxy measure for number of infants born to HIV-positive women.

Two methods can be used to estimate the denominator:

a) Using a projection model such as the one provided by Spectrum software use the output "the number of pregnant woman needing PMTCT" as a proxy, or;

b) Multiplying the total number of women who gave birth in the last 12 months, (which can be obtained from central statistics office estimates of births or the UN Population Division estimates) by the most recent national estimate of HIV prevalence in pregnant women (which can be derived from HIV sentinel surveillance in ANC clinic and appropriate adjustments related to coverage of ANC surveys), if Spectrum projections are unavailable.

To ensure comparability the Spectrum output will be used for the denominator when global analyses are done.

Measurement

Early Infant Diagnosis (EID) testing laboratories for the numerator, and Spectrum estimates, central statistical offices, and/or sentinel surveillance for the denominator.

Data source: HIV sero-sentinel surveillance, estimate

Frequency: Periodically and annually

Strengths and weaknesses: This indicator allows countries to monitor progress in providing early HIV virologic testing to HIV-exposed infants aged 2 months or less, critical for appropriate follow-up care and treatment. By limiting the age to two months of life or less, the chance of repeat tests for the same infant which can lead to double counting is also eliminated. Viewing changes in this indicator over time can provide actionable indications related to PMTCT ARV coverage, and the relationship between PMTCT coverage and EID-coverage. The only three fields needed for this indicator: date of sample collection, age at collection (actual or calculated based upon date of birth), and results are systematically entered into central EID testing databases at testing laboratories. Due to the small number of testing laboratories, and the electronic format of testing databases, this indicator does not have a heavy collection burden. Data quality at the laboratories is generally high, resulting in a robust indicator. The indicator does not capture the number of children with a definitive diagnosis (i.e. of HIV infection), or measure whether appropriate follow-up services were provided to the child based on

interpretation of test results. It also does not measure the quality of testing nor the system in place for testing. A low value of the indicator could, however, signal systemic weaknesses, including poor country-level management of supplies of HIV virologic test kits, poor data collection and mismanagement of testing samples. Disaggregation by test results cannot be used as a proxy for overall MTCT transmission rates. If either the EID coverage of national need or the EID testing coverage in the first two months of life is very low, low positivity rates among infants tested will not necessarily mean program success, as many other infants who are likely positive are not represented in this sample.

While early virological testing is a critical intervention for identifying infected infants, it is also important for countries to strengthen the quality of HIV-exposed infant follow-up and to train health providers to recognize signs and symptoms of early HIV infection among exposed infants, particularly where access to virological testing is limited. Inappropriate management of supplies can negatively affect the value of the indicator and significantly reduce access to HIV testing for infants born to HIV-positive women. Countries should ensure that appropriate systems and tools, particularly tools for LMIS, are in place to procure, distribute and manage supplies at facility, district and central level.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/857

Monitoring and Evaluating the Prevention of Mother-to-Child Transmission of HIV: A guide for national programmes. Towards the Elimination of Mother-to-Child Transmission, 2011. Available at: http://www.who.int/hiv/pub/me/en/index.html.

WHO, UNICEF, UNAIDS,Towards universal access: scaling up priority HIV/AIDS interventions in the health sector. Progress report, September 2010 http://www.who.int/hiv/pub/2009progressreport/en/index.html

PEPFAR, NEXT GENERATION INDICATORS REFERENCE GUIDE, 2009

WHO/UNICEF. MONITORING AND EVALUATING THE PREVENTION OF MOTHER-TO-CHILD TRANSMISSION OF HIV

HIV indicator
Prevention of mother-to-child transmission

Number and percentage of HIV-exposed infants who are exclusively breastfeeding at DPT3 visit* (HIV-P16)

THIS INDICATOR IS CURRENTLY BEING FIELD TESTED AND USERS ARE ENCOURAGED TO SEE UPDATES IN THE UNAIDS INDICATOR REGISTRY.

Rationale

Feeding of HIV-exposed infants, derived from 24-h recall, measured at the time of the third dose of diphtheria, pertussis and tetanus vaccine (DPT3), which is often around 3 months of age or at the closest visit after 3 months.

HIV can be transmitted during breastfeeding even in settings where 100% of HIV-infected pregnant women receive either lifelong antiretroviral therapy or antiretroviral medicines as prophylaxis for the prevention of mother-to-child transmission of HIV. Mixed feeding before 6 months of age increases the risk for HIV transmission when compared with exclusive breastfeeding. WHO therefore recommends that when mothers known to be HIV-infected breastfeed, they should be given ARVs to reduce the risk of transmission and also exclusively breastfeeding for the first 6 months, introduce complementary feeds from 6 months and continue breastfeeding until 12 months of age. Coverage with the third dose of diphtheria, pertussis and tetanus vaccine close to the recommended age of 14 weeks is relatively high in most countries. It is proposed to collect data at this time because most infants are seen then and it is mid-way between birth and the time at which exclusive breastfeeding would stop, making it comparable to the way that exclusive breastfeeding is usually reported for the general population in demographic and health surveys.

Infant feeding practices can also be stratified using "percentage of HIV-exposed infants who are receiving replacement feeding at DPT3 visit" and the "percentage of HIV-exposed infants who are receiving mixed feeding at DPT3 visit".

Definition of the indicator

Numerator: Number of HIV-exposed infants who were exclusively breastfeeding at or around the DPT3 visit

Denominator: Infants will be aged around 3 months or more. The denominator is the same for all three indicators: the number of HIV-exposed infants whose feeding practice has been assessed at a DPT3 visit.

Measurement

The numerators are calculated from national programme records aggregated from facility registers.

Ideally, data from appropriate sites and registers such as a stand-alone or integrated HIV-exposed infant registers should be aggregated, depending on where the services are and where data are recorded.

At each visit, the health-care provider should enquire about infant-feeding practices during the previous 24 hours, by asking: "What did you give your infant to eat or drink yesterday during the day and during the night?"

After each response, the health provider should ask: "Anything else?" The response will be recorded as exclusive breastfeeding, replacement feeding or mixed feeding. While this information is collected and recorded on the child health card at every visit, providers should record it in the register only once, during the third visit for diphtheria, pertussis and tetanus vaccination. This record will be used for compilation and reporting to national level. In settings where HIV-exposed infants are seen in HIV care and treatment facilities, data should be collected at a visit when the infant is around 3 months The denominator is calculated from the total number of exposed infants whose feeding was assessed. Exposed infants who did not attend facilities are not included in the denominator. All public, private and nongovernmental organization-run health facilities that provide HIV-exposed infant follow-up services should be included.

In countries where follow-up care for HIV-exposed infants has been integrated into community outreach services, a system for collecting data at community level should be established for this indicator.

Countries may wish to consider collecting this information at other times, for example at both 6 weeks and 6 months. They may also wish to calculate the indicators with different denominators, such as the estimated number of HIV-exposed infants who should have received follow-up care.

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* The infant feeding practices measured with this indicator are defined as follows:
Exclusive breastfeeding: An infant receives only breast milk and no other liquids or solids, not even water, with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines, for up to 6 months. Breast milk is defined as including milk from a wet nurse and a mother's expressed milk.
Replacement feeding (no breast milk at all): Feeding an infant who is not receiving any breast milk a diet that provides all the necessary nutrients until the child is fully fed on family foods. During the first 6 months, the food should be a suitable breast-milk substitute, which is usually a commercial infant formula, as homemodified animal milk is no longer recommended for feeding infants during the entire first 6 months of life, except as an emergency measure.
Mixed feeding (=partial breastfeeding): Feeding both breast milk and other foods or liquids to infants for 0–6 months.

Data source: programmatic reports, population-based survey (including Multiple Indicator Cluster Surveys, Demographic and Health Surveys, other national surveys)

Frequency: Annual or more frequently (possibly continuous recording), depending on a country's monitoring needs/capabilities

Strengths and weaknesses: The indicators measure progress in safer infant-feeding practices by HIV-infected women. They can also be used to indicate the quality of counselling on infant feeding (low rates of mixed feeding are likely to indicate adequate counselling and support) and to model the effect of the intervention in a country (see core indicator 10). The indicators give no information about the quality of the replacement feeding given or the effect of the feeding practices on child survival. The information can be compared with that from population surveys (e.g. demographic and health surveys) to monitor infant-feeding practices in the general population.

The indicators may not reflect the actual distribution of feeding practices for HIV-exposed infants at national level, as they do not include HIV-exposed infants who have died, infants whose exposure status is unknown or HIV-exposed infants whose mothers did not attend a facility with their infant for the third dose of diphtheria, pertussis and tetanus vaccine or for another reason at or around 3 months.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/883.

Taking stock of maternal, newborn, and child survival: 2000–2010 decade report annex. Geneva: WHO; 2010. Available from: http://www.countdown2015mnch.org/documents/2010report/CountdownAnnexes.pdf.

WHO Guidelines on HIV and infant feeding 2010. Geneva: WHO; 2010. Available from: http://whqlibdoc.who.int/publications/2010/9789241599535_eng.pdf

Measure Evaluation PRH, Family Planning and Reproductive Health Indicators Database. Available from: http://www.cpc.unc.edu/measure/prh/rh_indicators/specific/bf/proportion-of-infants-0965-months-of-age-who-are

Monitoring and Evaluating the Prevention of Mother-to-Child Transmission of HIV: A guide for national programmes. Towards the Elimination of Mother-to-Child Transmission, 2011. Available at: http://www.who.int/hiv/pub/me/en/index.html.

HIV indicator
Prevention of mother-to-child transmission

Number and percentage of infants born to HIV-infected women starting on co-trimoxazole prophylaxis within 2 months of birth (HIV-P17)

Rationale

This indicator measures the provision and coverage of co-trimoxazole prophylaxis for HIV-exposed infants in line with international guidelines. Co-trimoxazole prophylaxis is a simple, cost-effective intervention to prevent Pneumocystis carinii pneumonia in HIV-infected infants. This infection is the leading cause of serious respiratory disease in these infants in resource-constrained countries and often occurs before HIV infection can be diagnosed.

Owing to resource and logistical constraints in diagnosing HIV infection in young infants, all infants born to HIV-infected women should receive cotrimoxazole prophylaxis, starting 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.

Countries may also wish to document the provision of co-trimoxazole for HIV-exposed infants older than 2 months in order to monitor the overall progress of the programme, to identify challenges in early initiation of cotrimoxazole and to monitor consumption of drug stocks from the point of view of procurement. Inappropriate management of supplies can negatively affect the value of the indicator and significantly reduce the access of HIV-exposed infants to cotrimoxazole. Countries should ensure that they have appropriate systems and tools, particularly for logistics management and information systems, in order to procure, distribute and manage supplies adequately at facility, district and central levels.

This is relevant for use in all epidemic types.

Numerator: Number of infants born to HIV-infected women started on co-trimoxazole prophylaxis within 2 months of birth in the past 12 months*

Denominator: Estimated number of HIV-infected pregnant women who gave birth in the past 12 months

This is a proxy measure for the number of infants born to HIV-infected women.

Measurement

The numerator is calculated from national programme records aggregated from facility registers. Data should be aggregated from the appropriate facility registers, such as a stand-alone or integrated HIV-exposed infant register. The register used may depend on where services are offered. For example, where HIV-exposed infants are followed by health workers in HIV care and treatment facilities, countries could aggregate information from a register based at that site. All public, private and nongovernmental organization-run health facilities that provide co-trimoxazole prophylaxis for HIV-exposed infants should be included.

Two methods can be used to estimate the denominator:

(a) a projection model such as that provided by Spectrum software; use the output "number of pregnant woman needing prevention of mother-to-child transmission of HIV" as a proxy; or

(b) multiply the total number of women who gave birth in the past 12 months (which can be obtained from central statistics offices or the United Nations Population Division or pregnancy registration systems with complete data) by the most recent national estimate of HIV prevalence in pregnant women** (which can be derived from HIV sentinel surveillance in antenatal care clinic), if Spectrum projections are unavailable.

If there are data on the number of live births, they should be adjusted to derive a better proxy.

Data source: Programmatic records

Frequency: Periodically and annually

Strengths and weaknesses: This indicator allows countries to monitor progress in the early follow-up of exposed infants by measuring provision of co-trimoxazole in line with international guidelines. It can also be used as a proxy indicator of followup visits of exposed infants within the recommended first 4–6 weeks of life. This indicator does not capture adherence to co-trimoxazole prophylaxis. The indicator captures only those infants who return for follow-up health care within 2 months of birth. It does not measure the actual coverage with co-trimoxazole prophylaxis for HIV-exposed infants, as some infants may have initiated co-trimoxazole prophylaxis after 2 months. Low values for this indicator could reflect bottlenecks in the system, including poor management of co-trimoxazole supplies in the country, poor data collection or inadequate distribution systems.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/469.

Monitoring and Evaluating the Prevention of Mother-to-Child Transmission of HIV: A guide for national programmes. Towards the Elimination of Mother-to-Child Transmission, 2011. Available at: http://www.who.int/hiv/pub/me/en/index.html.

* When reporting on the numerator only for periodic reporting, "in the past 12 months" can be substituted with a specific period of time as relevant to the reporting period.

** National estimates of HIV-infected pregnant women should be derived by adjusting surveillance data from sentinel sites at antenatal clinics and other sources, taking into consideration characteristics such as age distribution and rural and urban patterns of HIV prevalence.

HIV indicator
Post-exposure prophylaxis

Number of persons provided with post-exposure prophylaxis (PEP) (HIV-P18)

Rationale

A key consensus at the 2005 Joint International Labor Organization/World Health Organization Technical Meeting for the Development of Policy and Guidelines regarding occupational and non-occupational HIV-PEP was that HIV-PEP must be part of comprehensive HIV prevention, occupational health, and post-rape care service policies (UNAIDS).

PEPFAR considers availability of PEP to be a cross-cutting issue that addresses concerns in multiple program areas. The data that will be collected through this indicator provides information to answer questions around prevention, program quality, human resources for health, gender, and overall health system strengthening.

PEPFAR HQ will use this data to report to Congress, other U.S., and international stakeholders, to monitor coverage of PEP services and to track progress of PEP scale-up over time.

Numerator: Number of persons provided with post-exposure prophylaxis (PEP) for risk of HIV infection through occupational and/or non-occupational exposure to HIV.

Denominator: Not applicable

Measurement

The indicator can be generated by counting the number of individuals receiving PEP for occupational and non-occupational purposes. Individuals should be counted only one (1) time, not incidence. This indicator should not include infants who receive neonatal prophylaxis.

Countries should regularly update their program 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.

PEP services for occupational exposure include: PEP services include a comprehensive package of services for occupationally exposed health care workers and patients. Individuals should be counted only if they have received PEP drugs (in accordance with international or national protocols).

PEP services for non-occupational exposure include: PEP service delivery for sexual violence or other non-occupational includes PEP services as part of a larger, comprehensive package of services for sexual violence victims. Individuals should be counted only if they have received PEP drugs (in accordance with international or national protocols).

This indicator does not intend to capture the type and quality of PEP services provided. PEP services may include first aid, counseling, testing, provision of ARVs, medical care, trauma counseling, linkages with police, and other follow-up and support. Simple monitoring of PEP availability through program records does not ensure that all PEP-related services are adequately provided to those who need them.

It is anticipated that access to PEP for sexual violence victims will be low initially. This number will remain low in countries where HIV prevalence is relatively low and incidence of sexual violence is low. However, in those countries where sexual violence and HIV are prevalent, percentages are expected to increase.

Data source: Program records

Frequency: Periodically and annually*

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/531.

Indicator #P6.1.D. Office of US Global AIDS Coordinator. The President's Emergency Plan for AIDS Relief: Next Generation Indicators Reference Guide. July 2009. Available from: http://www.indicatorregistry.org/sites/default/files/2009-07-06%20PEPFAR%20Indicator%20Reference%20Guidance%20V1.doc

Occupational and Non-occupational Post-exposure Prophylaxis for HIV Infection (HIV-PEP), Joint ILO/WHO Technical Meeting for the Development of Policy and Guidelines: Summary Report (2005)

http://www.unaids.org/en/KnowledgeCentre/Resources/PolicyGuidance/Techpolicies/HIV_post_Technical_policies.asp

Post-exposure prophylaxis to prevent HIV infection. Joint WHO/ILO guidelines on post-exposure prophylaxis (PEP) to prevent HIV infection

http://www.who.int/hiv/pub/guidelines/PEP/en/index.html

Refer to the PEPFAR Palliative Care Indicator TWG with further inquiries

* Where required for PEPFAR reporting, data should be aggregated in time for PEPFAR reporting cycles. In addition, data should be aggregated periodically, i.e. quarterly, for the purposes of program management and review.

HIV indicator
Blood safety and universal precautions

Percentage of donated blood units screened for HIV in a quality-assured manner (HIV-P19)

Rationale

Blood safety programs aim to ensure that all blood units are screened for transfusion-transmissible infections, including HIV, and that only the units that do not react on screening tests are released for clinical use. In many countries, blood units are not screened for all the major transfusion-transmissible infections. Even when screening does occur, inaccurate test results often compromise the safety of blood due to the poor quality or incorrect storage of test kits. Further, inadequate staff training or a lack of standard operating procedures may result in laboratory errors. This could lead to blood units being classified as safe even when they are infectious, posing a serious risk of transmission of HIV through unsafe blood. Universal (100 percent) screening of donated blood for HIV and other transfusion-transmissible infections cannot be achieved without mechanisms to ensure quality and continuity in screening. In some countries, interruptions to supplies of test kits and reagents, or emergency situations, can result in the use of blood for transfusion without screening for transfusion-transmissible infections. The development of systems that provide reliable and regular supplies of low-cost, high-quality test kits and reagents and effective stock management is therefore essential to ensure universal quality screening of blood units.

Thus, screening all donated blood units for HIV in a quality-assured manner is crucial. Two key components of quality assurance in screening are:

- the use of documented and standardized procedures (standard operating procedures) for the screening of every blood unit; and
- participation of the laboratories in an external quality assessment scheme for HIV screening in which external assessment of the laboratory's performance is conducted using samples of known, but undisclosed, content to assess its quality system and assist in improving standards of performance.

Applicability: all countries

Numerator: Number of donated blood units screened for HIV in blood centers or blood screening laboratories that have both: (1) followed documented standard operating procedures and (2) participated in an external quality assurance scheme

Denominator: Total number of blood units donated

In this context, donation refers to any blood collected for the purposes of medical use. This includes all possible types of providers of blood, regardless of whether they receive remuneration or not. Examples of different categories of blood donors include:

- voluntary non-remunerated blood donor: an altruistic donor who gives blood freely and voluntarily without receiving money or any other form of payment;
- family or replacement blood donor: a donor who gives blood when it is required by a member of the patient's family or community, which may involve a hidden paid donation system in which the patient's family pays the donor;
- paid donor: a donor who gives blood for money or other form of payment; and
- autologous donor: a patient who donates his or her blood to be stored and reinfused, if needed, during surgery

Measurement

The information relates to data from the previous 12 months (January–December). This information should be available from the national blood transfusion service or the national blood program manager in the health ministry. The following information is required to measure this indicator.

1. How many total blood units were donated in the country?

For each blood center and blood screening laboratory that screens donated blood for HIV:

2. How many units of blood were donated in each blood center or blood-screening laboratory?

3. How many donated units were screened in the blood center or blood-screening laboratory?

4. Does the blood center or blood-screening laboratory follow documented standard operating procedures for HIV screening?

5. Does the blood center or blood-screening laboratory participate in an external quality assessment scheme for HIV screening?

From this information, the indicator can be calculated. For examples of calculation and more details on interpretation of the indicator, see Monitoring the Declaration of Commitment on HIV/AIDS: guidelines on the construction of core indicators. 2008 reporting.

Data source: Framework for Assessment, Monitoring and Evaluation of blood transfusion services (FRAME) Tool

Frequency: Annually

Strengths and weaknesses: If the blood screening laboratory follows documented and standardized procedures for the screening of blood, this implies a certain level of uniformity, reliability and consistency of performance by staff trained to use the standard operating procedures. If a blood screening laboratory participates in an External Quality Assurance Scheme, this implies that the quality of HIV screening performed is being assessed at regular intervals. It is important to view the percentage of screened blood units in relation to these two basic components of quality as both are required to ensure the quality of procedures.

Countries provide data to the WHO Global Database on Blood Safety on this indicator annually. Locally, these data can be obtained by contacting the National Blood Transfusion Service, the National Blood Programme and/or the National AIDS Programme.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/648.

UNAIDS. United Nations General Assembly Special Session: Guidelines on Construction of Core Indicators. 2007.

Office of US Global AIDS Coordinator. The President's Emergency Plan for AIDS Relief: Next Generation Indicators Reference Guide. July 2009

UNAIDS. Monitoring the Declaration of Commitment on HIV/AIDS: Guidelines on Construction of Core Indicators, 2010 Reporting. 2009.

HIV indicator

Facility-based diagnosis and treatment of sexually transmitted infections

Number and percentage of antenatal care attendees tested for syphilis at first antenatal care visit (HIV-P20)

Rationale

Evidence indicates that sexually transmitted infections, including syphilis, are associated with a higher risk of HIV infection. Syphilis testing and treatment can effectively prevent adverse pregnancy outcomes caused by maternal syphilis exposure, and is the core intervention in congenital syphilis control. Congenital syphilis can be prevented if all pregnant women are tested and treated sufficiently early in pregnancy, before poor outcomes in the fetus occur. Syphilis testing is part of the recommended basic antenatal services package, thus testing of antenatal care attendees for syphilis is also a marker of the quality of provision of essential antenatal care services.

Numerator: Number of first visit antenatal care attendees in a year tested for syphilis

Denominator: Number of first visit antenatal care attendees in a year

Measurement

Analysis of only first antenatal care visits is helpful in understanding quality of antenatal care syphilis testing programs since syphilis treatment must occur sufficiently early to avoid early fetal loss and stillbirth. Countries unable to distinguish first visit from subsequent visits can still report data on this indicator, but should clearly indicate this difference when reporting the data.

Disaggregation by age allows identification of differences in testing coverage for different sub-populations. Although difficult to do on a routine basis, disaggregation by trimester of pregnancy allows determination of what proportion of women are getting tested early enough in pregnancy to prevent poor pregnancy outcomes.

Data source: Ideally data should be obtained from routine national program records. If this is not feasible, sentinel surveillance, seroprevalence surveys, or other special studies may be used.

Frequency: Periodically or annually (routine reporting), three to five years (population-based survey)

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/884.

Tool for surveillance monitoring and evaluation of congenital syphilis elimination efforts within existing systems, Initiative for the Global Elimination of Congenital Syphilis. Geneva: WHO. In development.

Indicator also described in WHO Global STI Strategy, WHO ECS Strategy, and WHO HIV Universal Access guidance documentation.

HIV indicator
Antiretroviral therapy and monitoring

Number and percentage of eligible adults and children currently receiving antiretroviral therapy (HIV-T1)

Rationale

To assess progress towards providing antiretroviral combination therapy to all people with advanced HIV infection.

As the HIV pandemic matures, increasing numbers of people are reaching advanced stages of HIV infection. Antiretroviral therapy has been shown to reduce mortality amongst those infected and efforts are being made to make it more affordable within low- and middle-income countries. Antiretroviral combination therapy should always be provided in conjunction with broader care and support services including counselling for family caregivers.

Numerator: Number of adults and children with advanced HIV infection who are currently receiving antiretroviral combination therapy in accordance with the nationally approved treatment protocol (or WHO/UNAIDS standards) at the end of the reporting period

Denominator: Estimated number of adults and children with advanced HIV infection

Measurement

The numerator can be generated by counting the number of adults and children who received antiretroviral combination therapy at the end of the reporting period. The numerator should equal the number of adults and children with advanced HIV infection who ever started antiretroviral treatment minus those patients who are not currently on treatment prior to the end of the reporting period. Patients not currently on treatment at the end of the reporting period, in other words, those who are excluded from the numerator, are patients who died, stopped treatment or are lost to follow-up.

Some patients pick up several months of antiretroviral drugs at one visit, which could include antiretroviral drugs received for the last months of the reporting period, but not be recorded as visits for the last months in the patient register. Efforts should be made to account for these patients, as they need to be included in the numerator.

Antiretroviral therapy taken only for the purpose of prevention of mother-to-child transmission and post-exposure prophylaxis are not included in this indicator. HIV-infected pregnant women who are eligible for antiretroviral therapy and on antiretroviral therapy for their own treatment are included in this indicator.

The number of adults and children with advanced HIV infection who are currently receiving antiretroviral combination therapy can be obtained through data collected from facility-based antiretroviral therapy registers or drug supply management systems. These are then tallied and transferred to cross-sectional monthly or quarterly reports which can then be aggregated for national totals.

Patients receiving antiretroviral therapy in the private sector and public sector should be included in the numerator where data are available.

Explanation of denominator:

The denominator is generated by estimating the number of people with advanced HIV infection requiring (in need of/ eligible for) antiretroviral therapy. This estimation must take into consideration a variety of factors including, but not limited to, the current numbers of people with HIV, the current number of patients on antiretroviral therapy, and the natural history of HIV from infection to enrolment on antiretroviral therapy.

Denominator estimates are most often based on the latest data available from sentinel surveillance used with a HIV modelling programme such as Spectrum. For further information on estimates of HIV need and the use of Spectrum please refer to the UNAIDS/WHO Reference Group on Estimates, Modelling and Projections methodology.

Need or eligibility for antiretroviral therapy should follow the WHO definitions for the diagnosis of advanced HIV (including AIDS) for adults and children.

Programme monitoring and HIV surveillance For the numerator: facility-based antiretroviral therapy registers or drug supply management systems. For the denominator: HIV prevalence estimation models such as Spectrum. Where possible, for children the indicator should be further disaggregated by the ages <1, 1-4, 5-14 years.

Frequency: Periodically or annually

Data source: Program records, HMIS

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/649

Office of US Global AIDS Coordinator. The President's Emergency Plan for AIDS Relief: Next Generation Indicators Reference Guide. July 2009. http://www.indicatorregistry.org/sites/default/files/2009-07-06%20PEPFAR%20Indicator%20Reference%20Guidance%20V1.doc. Indicator #T1.2.N

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http://www.indicatorregistry.org/sites/default/files/WHO.%20National%20AIDS%20Programmes.%20A%20guide%20to%20monitoring%20and%20eva.pdf

WHO. National AIDS Programmes. A guide to indicators for monitoring and evaluating national antiretroviral programmes, 2005. Core Indicator 7, pg 24.

http://www.indicatorregistry.org/sites/default/files/WHO.%20National%20AIDS%20Programmes.%20A%20guide%20to%20indicators%20for%20mon.pdf

HIV indicator

Antiretroviral therapy and monitoring

Percentage of health facilities dispensing ARV that experienced a stock-out of at least one required ARV in the last 12 months (HIV-T2)

Rationale

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.

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

Measurement

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.

Data source: Health facility surveys, program records

Frequency: Annually

Strengths and weaknesses: 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).

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/463

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UNAIDS. Core Indicators for National AIDS Programmes Guidance and Specifications for Additional Recommended Indicators, 2008. http://www.indicatorregistry.org/sites/default/files/Additional%20Recommended%20Indicators.pdf.

Additional Recommended Indicator 3, pg 16

HIV indicator

Antiretroviral therapy and monitoring

Number and percentage of people starting antiretroviral therapy who picked up all prescribed antiretroviral drugs on time (HIV-T3)

Rationale

Developing simple, affordable ways of monitoring people after they initiate antiretroviral therapy has become a major public health priority. Since the central paradigm of antiretroviral therapy is suppression of viral replication and since the costs of second-line regimens are higher than those of first-line regimens, monitoring efforts should largely focus on preserving the antiretroviral effectiveness of first-line combinations. Failure to identify people who are at high risk of future antiretroviral failure or who are currently on partly suppressive regimens may result in resistance to antiretroviral drugs, which has been associated with more rapid disease progression and death. Evaluating whether people have periods during which they have no antiretroviral drugs available through the extent to which they pick up antiretroviral drugs on time has been shown to be highly associated with antiretroviral failure and is one potentially useful and low-cost method of identifying people at high risk for failure in resource-limited settings. In addition, if more than 10 percent of people are picking up their antiretroviral drugs after their previously dispensed antiretroviral drugs run out, this may indicate that an underlying programmatic problem that affects the quality of services provided (such as the cost of drugs or clinic appointments, transport, clinic hours or a combination of issues) should be addressed.

Applicability: all countries

Suggested target: ≥90 percent

Numerator: Number of people who have picked up all their prescribed antiretroviral drugs on time for two consecutive drug pick-ups after a selected month

Denominator: Number of people who picked up antiretroviral drugs during a selected month

Measurement

On-time drug pick-up is defined as picking up antiretroviral drugs at each of the monitored pick-ups before the antiretroviral drugs previously dispensed would have been finished if taken according to schedule. Expected or scheduled pick-up dates should not be used to calculate this indicator. People who die or transfer out before the first drug pick-up after the selected month should be excluded from the numerator and the denominator. People who die or transfer out between the first and second drug pickups after the selected month should be classified according to whether their first drug pick-up was on time.

Identifying the people who picked up antiretroviral drugs during the selected month is easy at sites with electronic or manual antiretroviral drug pick-up, pharmacy registers or dispensing records that include personal identifiers arranged sequentially by date. Data abstractors should record the following information for each patient who picked up antiretroviral drugs in the selected month:

- a patient identifier;
- the last antiretroviral drug pick-up date during the selected month (baseline pick-up);
- the two consecutive antiretroviral drug pick-up dates after the selected month (pick-up 1 and pick-up 2);
- the list of antiretroviral drugs, including number of days, or pill number, number of pills in a dose and frequency of doses to be taken that were dispensed (or in hand on leaving the pharmacy) at the baseline pick-up and pick-up 1;
- the date of transfer out after baseline pick-up if two antiretroviral drug pick-ups were not recorded after the baseline pick-up;
- the date of death after baseline pick-up if two antiretroviral drug pick-ups were not recorded after the baseline pick-up; and
- the date antiretroviral therapy stopped after the baseline pick-up (that is, a recorded decision by the person receiving antiretroviral therapy or physician that no more antiretroviral drugs should be dispensed) if two antiretroviral drug pick-ups were not recorded after the baseline pick-up.

For more details on data collection and data analysis of the indicator, see HIV drug resistance early warning indicators. Countries can also collect the following indicator: percentage of people initiating antiretroviral therapy at the site during a selected time period who picked up all prescribed antiretroviral drugs on time during their first 12 months of antiretroviral therapy (cohort). For more details, see HIV drug resistance early warning indicators.

Data source: Pharmacy records; program or medical records

Frequency: Annually (using the same baseline month every year)

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/763.

HIV drug resistance early warning indicators. Geneva, World Health Organization, 2008 (http://www.who.int/hiv/topics/drugresistance/en/index.html).

HIV indicator

Care and support for chronically ill people

Number and percentage of adults and children enrolled in HIV care and eligible for co-trimoxazole prophylaxis (according to national guidelines) currently receiving co-trimoxazole prophylaxis (HIV-CS1)

Rationale

Co-trimoxazole prophylaxis is a simple and cost-effective intervention that reduces the risk of

opportunistic infections and mortality among children and adults living with HIV. WHO recommends administration of co-trimoxazole for the following groups: adults living with HIV, including pregnant women, children living with HIV and infants exposed to HIV. The WHO guidelines offer countries a choice of whether to provide co-trimoxazole broadly or according to disease stage.

Numerator: Number of adults and children living with HIV enrolled in HIV care and receiving co-trimoxazole prophylaxis

Denominator: A. Number of adults and children living with HIV enrolled in HIV care who are eligible for co-trimoxazole prophylaxis based on national guidelines. B. Estimated number of people living with HIV in the country

Measurement

Numerator: Individuals should be considered to be "receiving" co-trimoxazole prophylaxis if co- trimoxazole has been prescribed and obtained by the patient (provided by a program or procured by the patient). Include "active" patients: ones seen at the clinic at least once in the past year. Do not include HIV-exposed infants who have not yet been confirmed as HIV positive and are therefore not enrolled in HIV care. The indicator is not meant to account for short-term lapses in adherence or short-term stock- outs. If individuals are served by more than one program that might provide co-trimoxazole prophylaxis, the figure should be adjusted as needed so that the numerator represents only unique individuals receiving co-trimoxazole within the reporting period. Countries should focus on compiling data for the numerator from patient registers at facilities. Where patient level data are not available, countries may develop program or facility-level estimates of coverage with co-trimoxazole and apply these estimates to the total number of individuals receiving care and support services through those programs or facilities. People living with HIV receiving co-trimoxazole in both the private sector and the public sector should be included in the numerator where data for both are available. Denominator: (A) Number of people living with HIV eligible for co-trimoxazole according to national guidelines. This denominator will be derived through estimations based on country guidelines for co- trimoxazole (where guidelines exist). The proportion derived from using this denominator will provide data on the coverage of co-trimoxazole among people living with HIV eligible to receive co-trimoxazole. (B) Estimated number of people living with HIV in the country. The denominator is an estimation of the number of people living with HIV produced through the SPECTRUM model, which is based on surveillance data from facilities and calibrated as new population-based survey data become available. The proportion derived from using this denominator will provide country coverage data of co- trimoxazole among people living with HIV. Disaggregation: By sex and age. Age represents an individual's age at the end of the reporting period or when last seen at the facility.

Data source: Program records

Frequency: Periodically, Annually

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/764.

HIV indicator
Care and support for chronically ill people

Provision of therapeutic or supplementary food to undernourished people living with HIV (PLHIV) (HIV-CS2)

Definition and Rationale

The number and proportion of undernourished people living with HIV (PLHIV) who received therapeutic or supplementary food at any point during the reporting period.

PLHIV are individuals who have tested positive for HIV. For the purpose of this indicator, the definition includes adults (including pregnant or lactating women), adolescents, children, and infants. The definition includes both those on ART and those not on ART.

Undernourished is defined for the purpose of this indicator to mean those who have been nutritionally assessed using anthropometric measurement and found to be undernourished using the cutoffs presented in the "Method of measurement" below. Additional resources are available which describe anthropometric assessment methods. Only PLHIV meeting specific anthropometric criteria for undernourishment are included in this indicator.

Therapeutic foods are defined as foods designed for the management of severe acute malnutrition and include therapeutic fortified milks, such as F75 and F100, and ready-to-use therapeutic foods (RUTFs) such as Plumpy'Nut, an energy-dense, fortified peanut-based paste and other locally produced RUTFs nutritionally equivalent to F100 therapeutic milk. *Supplementary foods*, used to manage mild and moderate malnutrition, are primarily fortified, blended foods (e.g. corn-soya blend). Staple food commodities provided for general household use do not meet the definition of therapeutic and supplementary food because the indicator refers to specialized food products provided for consumption by undernourished individuals to manage undernutrition.

The purpose of this indicator is to assess progress towards providing therapeutic and supplementary food to clinically undernourished PLHIV who receive therapeutic or supplementary food. Provision of therapeutic and supplementary food to undernourished PLHIV is a key component of care and support and treatment for PLHIV. Undernutrition significantly increases mortality risk for HIV-infected individuals, both those on treatment and those not on treatment (van der Sande et al. 2004; Paton et al. 2006). Therapeutic and supplementary foods are essential and proven interventions to manage and treat undernutrition, recommended and supported by WHO, UNICEF, WFP and other global authorities, as well as by PEPFAR. Programs in several countries provide food support to clinically undernourished clients, including therapeutic food products for severely undernourished PLHIV and supplementary food products for moderately and mildly undernourished PLHIV. The indicator enables the scale and coverage of these services to be tracked, and monitors the extent to which these services are reaching those who need them. Provision of therapeutic and supplementary food is generally accompanied by other nutrition services such as nutrition assessment and nutrition counseling, and measuring coverage of therapeutic and supplementary food is a strong indicator of the extent to which the larger package of nutrition care services is reaching PLHIV.

The structure of the indicator is very similar to existing UNGASS indicators that monitor coverage of services, such as ART for adults and children with advanced HIV infection, ART to prevent mother-to-child transmission, and treatment for TB and HIV among co-infected individuals.

Measurement

The source of data for this indicator is program and site records that document whether clients have received therapeutic or supplementary food. Each time a client is nutritionally assessed using anthropometric measurement, the measurement is recorded on the client record and/or clinic register indicating whether the client is undernourished or not. Each time therapeutic or supplementary food is provided to a client, this is also recorded in the clinic register or program records.

To tabulate the *number* of clinically undernourished PLHIV receiving therapeutic or supplementary food, program staff review individual client records, clinic registers or program records to tally the number of clinically undernourished clients who received nutrition therapeutic or supplementary feeding at any point during the reporting period.

When the *proportion* of individuals receiving therapeutic or supplementary feeding is being measured, the numerator is the number of clinically undernourished PLHIV who received therapeutic or supplementary feeding at any point during the reporting period. The denominator is the number of PLHIV who were nutritionally assessed and found to be clinically undernourished. Since the measurement unit is PLHIV, every clinically undernourished PLHIV who was nutritionally assessed and found to be clinically undernourished at any point during the reporting period is counted once in the denominator (and once in the numerator if they received therapeutic or supplementary feeding at least once during the reporting period), irrespective of whether they received services once or several times during the reporting period. The duration of the reporting period is likely to be annual at the national level.

National protocols should be used as the criteria for undernutrition for this indicator. Most countries have adopted the criteria and cutoffs established and published by the WHO[1] (WHO 1999; WHO 2007; WHO 2010), which are summarized in the table

1 Exceptions: WHO has not established MUAC cutoffs to classify adult nutritional status, and the cutoff of 220 mm is based on common practice, though different programs may use different cutoffs. MUAC < 125 mm for children < 5 years of age is not a published cutoff by WHO but is very commonly used in many countries.

below. A few countries have slightly modified the cutoff values. In all countries accepted national protocols should be used to identify the undernourished, based on the following criteria:[2,3,4]

Non-pregnant adults > 18 years of age	BMI < 18.5 kg/m^2
Pregnant women and women with infants < 6 months of age[5]	MUAC <220 mm
Children < 5 years of age[6]	W/H < -2z scores or MUAC < 125 mm
Children 5-9 years of age	BMI-for-age < -2z scores
Children 10-14 years of age	BMI-for-age < - 2z scores
Children 15-17 years of age	BMI-for-age < - 2z scores

Disaggregation: Disaggregation for this indicator is recommended for the following categories:

ART vs. no ART
Sex
Pregnancy status
Postpartum status
Age • < 24 months • 24-59 months • 5- < 15 years • > 15 years

Interpretation: To address undernutrition and strengthen care and support for PLHIV, a number of countries have introduced therapeutic and supplementary food provision in their HIV programs. Results from the indicator provide information about the extent to which therapeutic and supplementary food support is reaching eligible PLHIV and where gaps may exist. Because this is a commodity-based intervention, data from other sources such as stock data can be used to triangulate data collected at the point of service delivery.

When the *proportion* of undernourished PLHIV receiving food support is measured, the indicator result will be affected by how many and which clients are anthropometrically assessed. If there are changes in the population receiving anthropometric assessments (e.g. introduction of nutrition assessment services in new geographic areas where therapeutic and supplementary food products are not yet provided) the denominator may change significantly without any commensurate change in the numerator. Interpretation of changes in this indicator needs to consider these factors so changes in the indicator may reflect a combination of program impacts and the influx (or exit) of populations to (or from) the indicator's measurement universe. This consideration applies to many other indicators as well.

Data source: The measures associated with this indicator require collection of the number of individuals who were found to be undernourished using anthropometric assessment and the number of these clients who received therapeutic or supplementary food. Each time a PLHIV is nutritionally assessed and found to be undernourished, clinic or program staff record this information on individual, clinic or program records. And each time the client is provided with therapeutic or supplementary food, clinic or program staff record this information. Tools needed for nutrition assessment may include weight scales, MUAC measurement tapes, stadiometers / height measuring devices, and recumbent length devices, among others. Maintenance of records about nutritional status and food provision is required.

Since the indicator includes ART and pre-ART clients, PMTCT clients, and pediatric HIV clients, in some settings information will be drawn from multiple record systems, such as routine health information systems and reporting systems for large-scale food distribution programs, especially those that target PLHIV. This may require aggregation at the district or national level.

Resources required: As an output indicator, the resources required to collect this data for this indicator are tools that document the provision of therapeutic or supplementary foods either in a patient record or within programs. Additional tools such as registers, tally sheets and reporting forms to facilitate the extraction from patient records and aggregation at the site or program level will also be required.

Frequency: Data should be collected continuously at the facility or program level by documenting on program records each time a client is assessed to be undernourished and each time a client receives therapeutic or supplementary feeding. Data should be aggregated periodically, and would be reviewed and reported annually at national and global levels. It could be reviewed and reported more frequently at the program level as needed.

Uses: By measuring the coverage achieved for food support to clinically undernourished PLHIV, the indicator can be used at the

2 WHO (World Health Organization). 1999. Management of Severe Malnutrition: A Manual for Physicians and Other Senior Health Workers. Geneva, Switzerland. World Health Organization.

3 WHO (World Health Organization). 1995. Physical Status: The Use and Interpretation of Anthropometry. Geneva, Switzerland.: World Health Organization.

4 WHO (World Health Organization). 1981. The Treatment and Management of Severe Protein-Energy Malnutrition. Geneva, Switzerland. World Health Organization.

5 WHO has not yet established MUAC cutoffs to classify adult nutritional status. The cutoff of 220 mm is based on common practice, although different program may use different cutoffs.

6 MUAC <125 mm for children <5 years of age is not a cutoff published by WHO but is commonly used in many countries.

global level to gauge the extent to which nutrition support services are reaching the PLHIV who require them as part of care and support and treatment globally and in specific countries. At the national and program levels, the indicator can also be used to monitor and track progress in the implementation of nutrition components of comprehensive HIV care and support. This information can support national governments and programs to identify strengths and gaps, plan interventions, and determine allocation of resources for food and nutrition as needed. At the facility level as well, information from the indicator can inform service providers and managers about coverage within the facility, and measurement of the indicator can serve as an incentive and reminder to assess the nutritional status of clients and provide therapeutic and supplementary foods to those who are undernourished.

Strengths and weaknesses

Strengths: The indicator directly measures the number and proportion of undernourished PLHIV receiving therapeutic or supplementary food, which is a critical care and support service for undernourished clients. Provision of therapeutic and supplementary food is widely seen as the most powerful and impactful nutrition intervention provided to undernourished individuals. Furthermore, because most programs providing such food also provide other complementary nutrition services, this indicator can be interpreted as indicating the extent to which the fuller package of nutrition services is provided. By measuring both the number and the proportion, the indicator provides information about the overall scale of these services as well as information about coverage among clients needing such food support. The indicator is quite straightforward to measure, especially since most facilities and programs measuring nutritional status already record the result of this measurement, and most programs providing therapeutic and supplementary foods maintain records of the food provision.

Weaknesses: There are limitations to comparing results for this indicator across countries. Different countries and programs may use different types of food products, may provide the food for different durations, and possibly even apply different entry and exit criteria for food eligibility. Also, the indicator provides information about coverage, but not about the impact of the food support, quality of the foods, duration of food support, or adherence and drop-out rates.

As described in the Interpretation section above, changes in the proportion measure of the indicator may be caused by changes in the number or population of clients being assessed in addition to changes in the number receiving therapeutic or supplementary food support. For this reason, it is recommended to collect the indicator as both a number and a proportion.

Resources

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HIV indicator

Care and support for chronically ill people

Number of adults and children living with HIV who receive care and support services outside facilities (HIV-CS3)

Rationale

Adults and children living with HIV should receive a comprehensive package of services (see below) to improve the quality of life, extend life and delay the need for antiretroviral therapy. Care and support programs can cover external support, including counseling, health care, help with household work, companionship, financial support, legal services and access to shelter or other social services. The goal should be to provide services in different domains and to provide these services using a holistic approach, from the time of HIV diagnosis. Many of these services are provided outside the formal health care system and take place at the household level and some at the community level. This indicator tracks information on the level of coverage and care and support provided outside facilities (at the household and community levels) to people living with HIV.

Numerator: Number of adults and children living with HIV who received at least one service from the essential package (regardless of the number of service provision episodes) outside a health facility during the reporting period

Denominator: Not applicable

Measurement

To ensure quality care, all people living with HIV should receive health care support for their illness regardless of whether that support takes place within a facility or outside of a facility. There may be country-specific approaches to grouping services into the major care and support categories. However, to be counted in this numerator, a person living with HIV must receive at least one service from the essential package of services, and that service must take place outside a health facility. For the purposes of reporting on this indicator, "outside a facility" may refer to community gatherings, mobile units or home-based care settings. Services provided in primary, secondary or tertiary health facilities or hospitals should not be counted here. An essential package of services for people living with HIV is recommended to include: -health care and home-based care, such as counseling on and monitoring of adherence to antiretroviral therapy; pain management; and referral of people suspected of having TB; -spiritual and psychosocial support, such as participation in self-help groups and peer counseling related to hopes, fears, meaning, guilt, etc.; mental health; succession planning; and preparing for and coping with the process of dying; -socioeconomic support, such as nutritional support; social and health insurance; social patronage; and financial support; -legal and human rights, such as legal aid; protection against violence and discrimination; stigma; and child protection services; and - integrated disease prevention services with care, such as HIV risk reduction messaging and counseling. Disaggregation: sex, age, service provider and location depending on the country-specific needs Data can be obtained from all HIV care and support service providers in the country or region. These might include: -individual nongovernmental organizations; -individual private organizations; and -individual public (government) organizations, such as social services within the relevant ministries. Frequency: Quarterly Data are aggregated at the central level on a regular basis. A single body (usually the national M&E unit) should be responsible for data aggregation, analysis and dissemination. Double counting (such as people receiving services from different providers) needs to be avoided.

Data source: Program records

Frequency: Periodically and annually

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/765

HIV indicator

Care and support for chronically ill people

Number and percentage of HIV-affected households that receive food security services (HIV-CS4)

Definition and Rationale

The number and percentage of HIV-affected households that receive food security services.

HIV-affected households are defined as households with people living with HIV (PLHIV), households with HIV-affected orphans and vulnerable children (OVC), and households in which a member has died from AIDS-related causes.

Data for this indicator are drawn from food security programs that may not have information about HIV status of their participants. To support programs in using this indicator, the following criteria can be used to identify HIV-affected households:

- A household with a member who is living with HIV, as identified by the individual, by clinical records, or by a community council, PLHIV group, or other local body.
- A household in which a member was referred to the food security program from a known HIV care and treatment site, orphans and vulnerable children (OVC) program, PLHIV support network or other known HIV service.
- A household in which a household member has died from AIDS-related causes, as determined by the program based on information from members of the household or by a local body.
- A household that has HIV-affected OVC, which for the purpose of this indicator are defined as children aged 0-17 years who meet at least one of the following criteria:
  - have lost one or both parents from AIDS (UNAIDS definition of orphan); or
  - have a parent living with HIV; or
  - are HIV-positive.

Food security services include interventions designed to address food access, such as food or cash transfers, agriculture production strengthening activities, income generation activities, livelihood strengthening activities, financial services, and asset provision and protection.

The purpose of this indicator is to determine whether HIV-affected households are benefiting from participation in programs that address the food security needs of vulnerable populations.

HIV can cause or worsen food insecurity by reducing income, depleting assets or savings, reducing availability of household labor, diverting human and financial resources to health care, severing intergenerational transfer of skills and knowledge, and constraining community coping mechanisms. Food insecurity may also worsen the impact that HIV has on individuals and households, for example when food needs limit the resources available to spend on health care or reduce the availability of household members to care for sick individuals, or negatively affect adherence and treatment.

Measurement

The indicator is measured using records from programs providing food security services. When the number of households receiving food security services is being measured, the value of the indicator is the number of HIV-affected households covered by the services during the reporting period. When the percentage of households receiving services is being measured, the numerator is the number of HIV-affected households receiving food security services at any point during the reporting period. The denominator is the total number of HIV-affected households identified during the same period. The duration of the reporting period is determined by the facility or program reporting on the indicator.

Disaggregation: Because this indicator is measured at the household level, disaggregation at the individual level is not possible. Programs may decide to disaggregate the indicator based on categories that are relevant to their target groups and services, e.g. by geographic region or by type of food security services received. Where programs target clients through a referral process (for example, referrals from HIV care and treatment clinics), the indicator may be disaggregated by the referral source.

Interpretation: The indicator is interpreted to measure coverage of food security services among HIV-affected households. The indicator does not inform about the quality or impact of the food security services, only whether services are reaching clients. The indicator does not measure how many households are vulnerable to food insecurity, so it is not possible to determine coverage of households in need of food security services. When used in conjunction with a comprehensive assessment of household food insecurity using a measure such as the Household Hunger Scale, it may be possible to calculate coverage of food insecure, HIV-affected households.

Data sources: Most food security programs maintain records of services provided to clients and information on households receiving services. To the extent possible, these records can be used to identify which households meet criteria for the above definition of HIV-affected households. Additional information may need to be collected about whether households are HIV-affected. Additional inputs into the denominator may come from household surveys to identify HIV-affected households using the definition above. Collecting data for this indicator through national surveys would only be possible if the surveys identify which households are HIV-affected and which are not.

Resources required: Since most food security programs already collect data about coverage of their services, very few resources are needed to collect information about the number of households served. For programs that do not already collect information about HIV status, collecting information about whether households are HIV-affected will require some additional resources, especially given the potential sensitivity of this information. When the indicator is calculated as a percentage of HIV-affected households, measuring the total number of such households will likely require time, either through review of existing data or – if necessary and possible – through collection of additional data.

Frequency: Data on the number of HIV-affected households receiving services are recorded when clients receiving services are registered. Compilation of the data and reporting of the indicator can occur as frequently as needed. Generally, more frequent compilation is desirable so as to maintain up-to-date and accurate records, while bi-annual or annual reporting should be sufficient.

Uses: The indicator can be used at the global level to track the extent to which food security services are reaching HIV-affected households, and to identify countries or regions where gaps may exist. Similarly, at the national level, governments or donors can use this indicator to track coverage and identify gaps that require greater efforts or additional resources. At the program level the indicator provides information to managers about the extent of coverage being achieved with food security services among HIV-affected households.

Strengths and weaknesses

Strengths: A strength of the indicator is that most programs already collect data on their service coverage so in many contexts additional data may not need to be collected. A second strength is that the indicator is easily understood by all stakeholders and can be immediately interpreted.

Weaknesses: Since program records are used for the data, there may be inaccuracies in the reported indicator values if the quality of data is poor. In particular, it may be difficult to collect accurate information about whether households are HIV-affected. Similarly, in many settings it may be difficult to collect accurate information about the total number of HIV-affected households in order to calculate the denominator when the indicator is measured as a percentage. Also, and as mentioned above, the indicator does not provide information about the quality of food security services received. Different countries or programs may define HIV-affected households differently, which could pose challenges for cross-country or cross-program comparisons. To the extent this occurs, the indicator may be better suited as a program-level indicator than an indicator aggregated at the global level. A final weakness is that the indicator does not measure how many households are vulnerable to food insecurity, so it is not possible to determine coverage of households in need of food security services.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/886.

HIV indicator
Orphans and vulnerable children

Number and percentage of orphaned and vulnerable children aged 0–17 years whose households received free basic external support in caring for the child according to national guidelines (HIV-CS5)

Rationale

As the number of orphaned and vulnerable children continues to grow, adequate support to families and communities needs to be assured. In practice, care and support for orphaned children comes from families and communities. As a foundation for this support, it is important that households be connected to additional support from external sources. External support is defined as help free of charge coming from a source other than friends, family or neighbours unless they are working for a community-based group or organization. Ideally, this support should be designed along the national guidelines for OVC support where these exist.

Applicability: countries with high prevalence of HIV infection

Numerator: Number of orphaned and vulnerable children aged 0–17 years who live in households that received at least one of the four types of support for each child (for survey, answered "yes" to at least one of questions 1, 2, 3 and 4)

Denominator: Total number of orphaned and vulnerable children aged 0–17 (only applicable in survey methods).

For the purposes of this indicator, an orphan is defined as a child younger than 18 years who has lost both parents. A child made vulnerable by HIV is younger than 18 years and fulfills any of the following:

- has lost one or both parents;
- has a chronically ill parent (regardless of whether the parent lives in the same household as the child);
- lives in a household where, in the last 12 months, at least one adult died and was sick for three of the four months before he or she died;
- lives in a household where at least one adult was seriously ill for at least three of the past 12 months;
- lives with a guardian who is 65 years or older; or
- lives with guardian(s) who are physically impaired.
- lives with a guardian who is 65 years or older; or
- lives with guardian(s) who are physically impaired

Measurement

The data should be collected through program monitoring reports of implementing partners on a routine basis. These records are compiled and aggregated to obtain an overall measure of the reach of the care and support for orphans and vulnerable children. Implementers at the community level need to devise reliable tracking mechanisms that capture accurate data to avoid double counting. There is a need to ensure that clients served (as opposed to client visits) for the same service or across services are counted. Since the routine monitoring is self-reported by implementing entities, compliance with national guidelines will only be measured periodically through supervision, assessments and the survey methods proposed.

Population-based surveys as described below (Demographic and Health Survey, AIDS Indicator Survey, Multiple Indicator Cluster Survey or other representative surveys) are complementary validation methods for this indicator and need to be implemented every 2-5 years for a measurement of coverage. The OVC national program or such entity therefore needs to plan accordingly and allocate resources for this exercise.

Clear information flow mechanisms and tools (devised by national-level partners or bodies) are needed that capture this kind of community data into national-level databases. Different types of services will all be taken into account in estimating overall service coverage.

For the survey method, after all orphaned and vulnerable children aged 0–17 years in the household have been identified; the household heads are asked the following four questions about the types and frequency of support received and the primary source of the help for each orphan and vulnerable child. Each question is to be asked for each child.

1. Has this household received medical support, including medical care and/or medical care supplies, within the last three months?

2. Has this household received school-related assistance, including school fees, within the last three months? (This question is to be asked only for children aged 5–17 years.)

3. Has this household received emotional or psychological support, including counseling from a trained counselor and/or emotional or spiritual support or companionship within the last three months?

4. Has this household received other social support, including socioeconomic support (such as clothing, extra food, financial support or shelter) and/or instrumental support (such as help with household work, training for caregivers, child care or legal services) within the last three months?

Data source: program monitoring reports; population-based surveys (Demographic Health Survey, AIDS Indicator Survey, Multiple Indicator Cluster Survey or other representative surveys)

Frequency: quarterly (for routine reporting); every 2–5 years (for survey-based measurement)

Resources

Children and HIV/AIDS: technical and policy documents [website]. New York, United Nations Children's Fund, 2008 (http://www.unicef.org/aids/index_documents.html).

HIV indicator
TB/HIV

Number and percentage of adults and children enrolled in HIV care who had TB status assessed and recorded during their last visit among all adults and children enrolled in HIV care in the reporting period (TB/HIV-1)

Rationale

This indicator assesses activity intended to reduce the impact of TB among people living with HIV.

It demonstrates the level of implementation of the recommendation that people living with HIV be screened for TB at diagnosis and at all follow-up visits.

Applicability: all countries

Numerator: Number of adults and children enrolled in HIV care who had their TB status assessed and recorded during their last visit during the reporting period

Denominator: Total number of adults and children enrolled in HIV care* in the reporting period

Measurement

Data should be recorded routinely at every visit on the person's HIV care or antiretroviral therapy card and transferred onto the pre–antiretroviral therapy and antiretroviral therapy registers at all facilities providing routine HIV care. These data should be analyzed quarterly and reported on the quarterly cross-sectional reports to the national level. TB and HIV programs should collaborate to ensure that agreed criteria for identifying a person suspected of having TB and that the methods of TB screening used are consistent with TB control program protocols.

A suggested method of conducting the screening would be to ask clients living with HIV whether they are currently receiving TB treatment. If not, they are then asked about the key symptoms of TB disease (such as cough lasting more than two weeks, persistent fever, night sweats, unexplained weight loss and lymphadenopathy). A simple checklist could be used, and any positive response would indicate that the individual may be suspected of having TB. If, on questioning, they are defined as suspected of having TB (in accordance with national protocols), treatment for latent TB infection should not be given and they should be investigated for TB (or referred to a TB service for investigation) and treated appropriately. Those found not to have TB should be offered six months of isoniazid preventive therapy.

Data source: HIV care and antiretroviral therapy patient cards with data transferred to the pre–antiretroviral therapy and antiretroviral therapy registers and then quarterly reporting formats

Frequency: data should be collected continuously and reported as part of the quarterly cross-sectional reports and analyzed quarterly or at least annually; these data could be cross-checked using card sorts during annual patient monitoring reviews

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/768.

A guide to monitoring and evaluation for collaborative TB/HIV activities: http://whqlibdoc.who.int/publications/2009/9789241598194_eng.pdf

WHO policy on collaborative TB/HIV activities: Guidelines for national programmes and other stakeholders: http://whqlibdoc.who.int/publications/2012/9789241503006_eng.pdf

Patient monitoring guidelines for HIV care and antiretroviral therapy (ART). Geneva, World Health Organization, 2006 (http://www.who.int/3by5/capacity/ptmonguidelinesfinalv1.PDF).

* HIV care includes HIV treatment: that is, enrollment in both pre–antiretroviral therapy and antiretroviral therapy registers.

HIV indicator
TB/HIV

Number and percentage of adults and children enrolled in HIV care who started TB treatment, expressed as a proportion of adults and children in HIV care during the reporting period (TB/HIV-2)

Rationale
TB is the major coinfection of people living with HIV. This indicator assesses trends in the detection and treatment of TB among people living with HIV who are registered in HIV care. It may also be used in drug supply planning, as the treatment of people with HIV for TB may require temporary antiretroviral drug substitution.

Applicability: all countries

Numerator: Number of adults and children enrolled in HIV care who started TB treatment during the reporting period

Denominator: Number of adults and children enrolled in HIV care* during the reporting period

Measurement
The data for the numerator come from the "TB treatment" column of the pre–antiretroviral therapy and antiretroviral therapy registers. Among those newly enrolled in HIV care during the reporting period, those receiving TB treatment at time of enrollment and those starting TB treatment during the reporting period should both be included in the numerator. The data needed for this indicator are more difficult to collect if TB diagnosis and treatment are not carried out on the same site as HIV testing or treatment and care. This situation will require establishing reliable two-way communication between the TB service and the HIV treatment and care services. The denominator data are obtained by adding those retained on treatment at the beginning of the reporting period to those newly enrolled in the program during the reporting period.

The data for this indicator should be reported disaggregated by antiretroviral therapy and pre–antiretroviral therapy registers.

The numerator data from the antiretroviral therapy register are used as the basis of the indicator on the co-management of TB and HIV treatment: the number of adults and children on the antiretroviral therapy registers starting TB treatment during the last year as a proportion of the estimated HIV-positive TB cases at the country level.

WHO provides this estimate for this UNGASS indicator on an annual basis in the global TB control report.

Data source: pre–antiretroviral therapy and antiretroviral therapy registers; the data are collated on the cross-sectional quarterly reporting formats

Frequency: data would be collected continuously and reported quarterly to the national level and annually to WHO

Resources
UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/769.

A guide to monitoring and evaluation for collaborative TB/HIV activities: http://whqlibdoc.who.int/publications/2009/9789241598194_eng.pdf

Guidelines for national programmes and other stakeholders: http://whqlibdoc.who.int/publications/2012/9789241503006_eng.pdf

Patient monitoring guidelines for HIV care and antiretroviral therapy (ART). Geneva, World Health Organization, 2006 (http://www.who.int/3by5/capacity/ptmonguidelinesfinalv1.PDF).

Monitoring the Declaration of Commitment on HIV/AIDS: guidelines on the construction of core indicators. 2008 reporting. Geneva, UNAIDS, 2007 (http://data.unaids.org/pub/Manual/2007/20070411_ungass_core_indicators_manual_en.pdf).

WHO publications on tuberculosis [website]. Geneva, World Health Organization, 2006 (http://www.who.int/tb/publications/en)

* HIV care includes HIV treatment: that is, enrollment in both pre–antiretroviral therapy and antiretroviral therapy registers.

HIV indicator
TB/HIV

Number and percentage of TB patients who had an HIV test result recorded in the TB register (Number and percentage of TB patients with known HIV status) (TB/HIV-3)

Rationale

This indicator measures the HIV status among TB patients. TB is the leading cause of morbidity and mortality among people living with HIV in many countries. In addition, TB patients have high rates of HIV co-infection 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.

Definition of the indicator

Numerator: Number and percentage of TB patients registered during the reporting period who had an HIV test result recorded in the TB register

Denominator: Total number of TB patients registered during the same time period

Measurement

The numerator should include all TB patients who were previously known to be HIV-positive (documented evidence of enrollment in HIV care) or their negative HIV result from previous testing was acceptable to the clinician (such as performed in the past three to six months in a reliable laboratory).

Ideally, all TB patients with unknown HIV status should be offered an HIV test, preferably within the context of the TB service provider, allowing the HIV test to be recorded in the patient record and the TB register. Patient confidentiality must be maintained. Where HIV counseling and testing is carried out in a different part of the same facility or even at a distant site, a referral system needs to be established so that the TB program records when a TB patient is referred for an HIV test and receives the result. TB patients should preferably be tested at the start of TB treatment so that they can benefit from appropriate care throughout TB treatment. However, a recording and reporting system should be able to capture these late tests; otherwise the total number of TB patients knowing their HIV status will be underreported.

This indicator measures the combined services' ability to ensure that TB patients know their HIV status under program conditions. If a high proportion of TB patients know their status, then this provides a sufficiently robust estimate of the true HIV prevalence among TB patients for surveillance purposes. It also forms the basis for more in-depth prevention efforts (such as condoms and partner testing) and access to care and treatment.

Data sources: both the numerator and denominator are obtained from facility TB registers and quarterly case-finding reports.

In addition, countries may wish to record this as part of quarterly TB treatment outcome analysis to include the data of those who are tested for HIV later during TB treatment.

Frequency: data are recorded continuously and reported and analyzed quarterly at the time TB case-finding is reported.

Additional reporting at the end of TB treatment enables HIV testing to take place and the results to be recorded at any time during TB treatment.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/466.

A guide to monitoring and evaluation for collaborative TB/HIV activities: http://whqlibdoc.who.int/publications/2009/9789241598194_eng.pdf

WHO policy on collaborative TB/HIV activities: Guidelines for national programmes and other stakeholders: http://whqlibdoc.who.int/publications/2012/9789241503006_eng.pdf

Expert Group on TB Recording and Reporting Forms and Registers. Revised TB recording and reporting forms and registers–version 2006. Geneva, World Health Organization, 2006 (http://www.who.int/tb/dots/r_and_r_forms/en).

HIV indicator
TB/HIV

Number and percentage of adults and children newly enrolled in HIV care who start treatment for latent TB infection (isoniazid preventive therapy) among the total number of adults and children newly enrolled in HIV care during the reporting period (TB/HIV-4)

Rationale
To ensure that eligible people living with HIV are given treatment for latent TB infection and thus to reduce the incidence of TB among people living with HIV.

Applicability: all countries

Numerator: Total number of adults and children newly enrolled in HIV care who start (given at least one dose) isoniazid preventive therapy during the reporting period

Denominator: Total number of adults and children newly enrolled in HIV care during the reporting period

Measurement
The data needed for this indicator are collected from pre–antiretroviral therapy and antiretroviral therapy registers at the HIV care service sites, depending on where TB preventive therapy is to be administered. People living with HIV should have their TB status assessed. Those found not to have evidence of active TB will be offered TB preventive therapy according to nationally determined guidelines. All those accepting TB preventive therapy and receiving at least the first dose of treatment should be recorded. This information is being recorded through an extra column in the HIV care register and on the patient treatment card. Accurately predicting drug requirements for supply management requires collecting more detailed information: a pharmacy-based TB preventive therapy (isoniazid) register should record client attendance to collect further drug supplies (usually monthly). From this register, facilities would be able to report the number of new cases, continuing cases and completed cases on a quarterly basis. If such information is collected routinely, the indicator of choice would be the number of HIV-positive clients completing treatment of latent TB infection as a proportion of the total number of HIV-positive clients started on such treatment. Pilot testing sites show that 10–50 percent of clients who test HIV-positive can be expected to start TB preventive therapy; some will not meet the eligibility criteria, some will decline to participate and some will drop out during the screening process. The proportion likely to start TB preventive therapy depends on the screening algorithm used (for example, using tuberculin skin test as a screening tool reduces the number that are eligible) and on the type of facility at which HIV diagnosis is made. Among hospital or clinical referrals, a greater proportion would be expected to be sick and thus ineligible for treatment of latent TB infection. Higher proportions would be expected from sites linked to preventing mother-to-child transmission of HIV or stand-alone voluntary counseling and testing centers. Most programs would aim to exceed 60 percent starting isoniazid preventive therapy depending on the types of HIV testing and counseling facilities available.

Data source: pre–antiretroviral therapy registers. The data are collated on the cross-sectional quarterly reporting formats and reported to the national level. Ideally, all new clients should be registered by HIV care (pre–antiretroviral therapy) registers. In the situations in which new clients are enrolled directly onto antiretroviral therapy registers, these need to be included.

Frequency: collected continuously and reported and analyzed quarterly

Resources
UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/770.

A guide to monitoring and evaluation for collaborative TB/HIV activities: http://whqlibdoc.who.int/publications/2009/9789241598194_eng.pdf

WHO policy on collaborative TB/HIV activities: Guidelines for national programmes and other stakeholders: http://whqlibdoc.who.int/publications/2012/9789241503006_eng.pdf

HIV indicator

Coverage indicator - Prevention

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 (HIV-C-P1)

Rationale

It measures progress towards universal knowledge of the essential facts about HIV transmission.

HIV epidemics are perpetuated through primarily sexual transmission of infection to successive generations of young people. Sound knowledge about HIV is an essential pre-requisite—albeit, often an insufficient condition—for adoption of behaviors that reduce the risk of HIV transmission.

Numerator: Number of respondents aged 15–24 years who gave the correct answer to all five questions. 1. Can the risk of HIV transmission be reduced by having sex with only one uninfected partner who has no other partners? 2. Can a person reduce the risk of getting HIV by using a condom every time they have sex? 3. Can a healthy-looking person have HIV? 4. Can a person get HIV from mosquito bites? 5. Can a person get HIV by sharing food with someone who is infected?

Denominator: Number of all respondents aged 15–24

Measurement

This indicator is constructed from responses to the following set of prompted questions. 1. Can the risk of HIV transmission be reduced by having sex with only one uninfected partner who has no other partners? 2. Can a person reduce the risk of getting HIV by using a condom every time they have sex? 3. Can a healthy-looking person have HIV? 4. Can a person get HIV from mosquito bites? 5. Can a person get HIV by sharing food with someone who is infected?

The first three questions should not be altered. Questions 4 and 5 ask about local misconceptions and may be replaced by the most common misconceptions in your country. Examples include: "Can a person get HIV by hugging or shaking hands with a person who is infected?" and "Can a person get HIV through supernatural means?" Those who have never heard of HIV and AIDS should be excluded from the numerator but included in the denominator. An answer of "don't know" should be recorded as an incorrect answer. Scores for each of the individual questions (based on the same denominator) are required as well as the score for the composite indicator. For further information on DHS/AIS methodology and survey instruments, visit www.measuredhs.com.

Data source: Population-based survey (AIDS Indicator Survey (AIS), Demographic and Health Survey (DHS), Multiple Indicator Cluster Survey (MICS))

Frequency: Every three to five years

Strengths and weaknesses: The belief that a healthy-looking person cannot be infected with HIV is a common misconception that can result in unprotected sexual intercourse with infected partners. Rejecting major misconceptions about modes of HIV transmission is as important as correct knowledge of true modes of transmission. For example, belief that HIV is transmitted through mosquito bites can weaken motivation to adopt safer sexual behavior, while belief that HIV can be transmitted through sharing food reinforces the stigma faced by people living with AIDS.

This indicator is particularly useful in countries where knowledge about HIV and AIDS is poor because it permits easy measurement of incremental improvements over time. However, it is also important in other countries as it can be used to ensure that pre-existing high levels of knowledge are maintained.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/658.

HIV indicator

Coverage indicator – Prevention

Percentage of sex workers reached with HIV prevention programs (HIV-C-P2)

Rationale

It measures progress in implementing basic elements of HIV prevention programmes for sex workers.

Sex workers are often difficult to reach with HIV prevention programmes. However, in order to prevent the spread of HIV and AIDS among sex workers as well as into the general population, it is important that they access these services.

Note: Countries with generalized epidemics may also have a concentrated sub-epidemic among one or more most-at-risk populations. If so, they should calculate and report this indicator for those populations.

Numerator: Number sex workers who replied "yes" to both questions:

1. Do you know where you can go if you wish to receive an HIV test?
2. In the last twelve months, have you been given condoms?

Denominator: Total number of sex workers surveyed

Measurement

Behavioural surveillance or other special surveys. Respondents are asked the following questions: 1. Do you know where you can go if you wish to receive an HIV test? 2. In the last twelve months, have you been given condoms? (e.g. through an outreach service, drop-in centre or sexual health clinic) Scores for each of the individual questions—based on the same denominator—are required in addition to the score for the composite indicator. Whenever possible, data for sex workers should be collected through civil society organizations that have worked closely with this population in the field. Access to survey respondents as well as the data collected from them must remain confidential. This indicator only covers two basic elements of prevention programmes for sex workers. It is recognised that the indicator does not measure the frequency with which members of these populations access services, nor the quality of these services. These limitations suggest that the indicator may overestimate the coverage of HIV prevention services or sex workers. While continued monitoring of this indicator is recommended in order to determine trends in coverage of minimum services, additional measures are required in order to accurately determine whether adequate HIV prevention services are being provided for these populations. For further information, please consult the following references:

- WHO/UNODC/UNAIDS (2009). Technical Guide for Countries to set Targets for Universal Access to HIV Prevention, Treatment and Care for Injecting Drug Users. Geneva: WHO.
- UNAIDS (2007). A Framework for Monitoring and Evaluating HIV Prevention Programmes for Most-At-Risk Populations. Geneva: UNAIDS.
- UNAIDS (2007). Practical Guidelines for Intensifying HIV Prevention: Towards Universal Access. Geneva: UNAIDS.

Disaggregation: < (less than) 25 years, > (greater than) 25 years

Data source: Survey (behavioral surveillance survey)

Frequency: Biennial

Strengths and weaknesses: Accessing and/or surveying sex worker populations can be challenging. Consequently, data obtained may not be based on a representative sample of the national, sex worker population being surveyed. If there are concerns that the data are not based on a representative sample, these concerns should be reflected in the interpretation of the survey data. Where different sources of data exist, the best available estimate should be used. Information on the sample size, the quality and reliability of the data, and any related issues should be included in the report submitted with this indicator.

The inclusion of these indicators for reporting purposes should not be interpreted to mean that these services alone are sufficient for HIV prevention programmes for the populations. The set of key interventions described above should be part of a comprehensive HIV prevention programme, which also includes elements such as provision of HIV prevention messages, (e.g. through outreach programmes and peer education), treatment of sexually transmitted diseases, and others. For further information on the elements of comprehensive HIV prevention programmes for sex workers please see the Practical Guidelines for Intensifying HIV Prevention: Towards Universal Access.

This indicator asks about services accessed in the past 12 months. If you have data available on another time period, such as the last 3 or 6 months or the last 30 days, please include this additional data in the comments section of the reporting tool.

To maximize the utility of these data, it is recommended that the same sample used for the calculation of this indicator be used for the calculation of the other indicators related to these populations.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/845.

HIV indicator
Coverage indicator – Prevention

Percentage of men who have sex with men reached with HIV prevention programs (HIV-C-P3)

Rationale

It measures progress in implementing basic elements of HIV prevention programmes for MSM.

Men who have sex with men (MSM) are often difficult to reach with HIV prevention programmes. However, in order to prevent the spread of HIV and AIDS among MSM as well as into the general population, it is important that they access these services.

Note: Countries with generalized epidemics may also have a concentrated sub-epidemic among one or more most-at-risk populations. If so, they should calculate and report this indicator for those populations.

Numerator: Number MSM who replied "yes" to both questions:

1. Do you know where you can go if you wish to receive an HIV test?
2. In the last twelve months, have you been given condoms? (e.g. through an outreach service, drop-in centre or sexual health clinic)

Denominator: Total number of MSM surveyed

Measurement

Behavioural surveillance or other special surveys. Respondents are asked the following questions: 1. Do you know where you can go if you wish to receive an HIV test? 2. In the last twelve months, have you been given condoms? (e.g. through an outreach service, drop-in centre or sexual health clinic) Scores for each of the individual questions—based on the same denominator—are required in addition to the score for the composite indicator. Whenever possible, data for MSM should be collected through civil society organizations that have worked closely with this population in the field. Access to survey respondents as well as the data collected from them must remain confidential. This indicator only covers two basic elements of prevention programmes for MSM. It is recognised that the indicator does not measure the frequency with which members of these populations access services, nor the quality of these services. These limitations suggest that the indicator may overestimate the coverage of HIV prevention services for MSM. While continued monitoring of this indicator is recommended in order to determine trends in coverage of minimum services, additional measures are required in order to accurately determine whether adequate HIV prevention services are being provided for these populations. For further information, please consult the following references:

- UNAIDS (2007). A Framework for Monitoring and Evaluating HIV Prevention Programmes for Most-At-Risk Populations. Geneva: UNAIDS.
- UNAIDS (2007). Practical Guidelines for Intensifying HIV Prevention: Towards Universal Access. Geneva:UNAIDS

Disaggregation: < (less than) 25 years, > (greater than) 25 years

Data source: Survey (behavioral surveillance survey)

Frequency: Biennial

Strengths and weaknesses: Accessing and/or surveying MSM populations can be challenging. Consequently, data obtained may not be based on a representative sample of the national MSM population being surveyed. If there are concerns that the data are not based on a representative sample, these concerns should be reflected in the interpretation of the survey data. Where different sources of data exist, the best available estimate should be used. Information on the sample size, the quality and reliability of the data, and any related issues should be included in the report submitted with this indicator.

The inclusion of these indicators for reporting purposes should not be interpreted to mean that these services alone are sufficient for HIV prevention programmes for the population. The set of key interventions described above should be part of a comprehensive HIV prevention programme, which also includes elements such as provision of HIV prevention messages, (e.g. through outreach programmes and peer education), treatment of sexually transmitted diseases, and others. For further information on the elements of comprehensive HIV prevention programmes for key populations at higher risk please see the Practical Guidelines for Intensifying HIV Prevention: Towards Universal Access.

This indicator asks about services accessed in the past 12 months. If you have data available on another time period, such as the last 3 or 6 months or the last 30 days, please include this additional data in the comments section of the reporting tool.

To maximize the utility of these data, it is recommended that the same sample used for the calculation of this indicator be used for the calculation of the other indicators related to these populations.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/848.

HIV indicator

Coverage indicator – Prevention

Percentage of women and men aged 15-49 years who received an HIV test in the last 12 months and who know their results (HIV-C-P4)

Rationale

It measures progress in implementing HIV testing and counselling.

In order to protect themselves and to prevent infecting others, it is important for individuals to know their HIV status. Knowledge of one's status is also a critical factor in the decision to seek treatment.

Numerator: Number of respondents aged 15-49 who have been tested for HIV during the last 12 months and who know their results.

Denominator: Number of all respondents aged 15-49.

The denominator includes respondents who have never heard of HIV or AIDS.

Measurement

Population-based surveys (Demographic and Health Survey, AIDS Indicator Survey, Multiple Indicator Cluster Survey or other representative survey). Respondents are asked: 1. I don't want to know the results, but have you been tested for HIV in the last 12 months? If yes: 2. I don't want to know the results, but did you get the results of that test? For further information on DHS/AIS methodology and survey instruments, visit www.measuredhs.com.

Data source: Population-based survey (AIDS Indicator Survey (AIS), Demographic and Health Survey (DHS), Multiple Indicator Cluster Survey (MICS))

Frequency: Every 3-5 years

Strengths and weaknesses: The introductory statement "I don't want to know the results, but…" allows for better reporting and reduces the risk of underreporting of HIV testing among people who do not wish to disclose their serostatus.

Knowledge of HIV test results in the past 12 months does not guarantee that a respondent knows their current HIV status. A respondent may have contracted HIV in the time since their last HIV test.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/843.

CS 1, pg 19. WHO. National AIDS Programmes. A guide to monitoring and evaluating HIV/AIDS care and support, 2004. http://www.indicatorregistry.org/sites/default/files/WHO.%20National%20AIDS%20Programmes.%20A%20guide%20to%20monitoring%20and%20eva_0.pdf

P11.2.N. Office of US Global AIDS Coordinator. The President's Emergency Plan for AIDS Relief: Next Generation Indicators Reference Guide. July 2009. http://www.indicatorregistry.org/sites/default/files/2009-07-06%20PEPFAR%20Indicator%20Reference%20Guidance%20V1-2_1.doc

HIV indicator

Coverage indicator – Prevention

Percentage of sex workers that received an HIV test in the last 12 months and who know their results (HIV-C-P5)

Rationale

It measures progress in implementing HIV testing and counselling among sex workers

In order to protect themselves and to prevent infecting others, it is important for sex workers to know their HIV status. Knowledge of one's status is also a critical factor in the decision to seek treatment. Note: Countries with generalized epidemics may also have a concentrated sub-epidemic among one or more most-at-risk populations. If so, they should calculate and report this indicator for those populations.

Numerator: Number of sex workers who have been tested for HIV during the last 12 months and who know their results.

Denominator: Number of sex workers included in the sample.

Measurement

Behavioural surveillance or other special surveys. Respondents are asked the following questions: 1. Have you been tested for HIV in the last 12 months? If yes: 2. I don't want to know the results, but did you receive the results of that test? Whenever possible, data for sex workers should be collected through civil society organizations that have worked closely with this population in the field. Access to survey respondents as well as the data collected from them must remain confidential. For further information, please consult the following references: o UNAIDS (2007). A Framework for Monitoring and Evaluating HIV Prevention Programmes for Most-At-Risk Populations. Geneva: UNAIDS. o UNAIDS (2007). Practical Guidelines for Intensifying HIV Prevention: Towards Universal Access. Geneva: UNAIDS.

Data source: Survey (Behavioural Surveillance Survey (BSS))

Frequency: Biennial

Strengths and weaknesses: Accessing and/or surveying sex workers can be challenging. Consequently, data obtained may not be based on a representative sample of the national, sex workers being surveyed. If there are concerns that the data are not based on a representative sample, these concerns should be reflected in the interpretation of the survey data. Where different sources of data exist, the best available estimate should be used. Information on the sample size, the quality and reliability of the data, and any related issues should be included in the report submitted with this indicator.

Tracking sex workers over time to measure progress may be difficult due to mobility and the hard-to-reach nature of these populations with many groups being hidden populations. Thus, information about the nature of the sample should be reported in the narrative to facilitate interpretation and analysis over time.

To maximize the utility of these data, it is recommended that the same sample used for the calculation of this indicator be used for the calculation of the other indicators related to these populations.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/846.

HIV indicator

Coverage indicator – Prevention

Percentage of men who have sex with men that received an HIV test in the last 12 months and who know their results (HIV-C-P6)

Rationale

It measures progress in implementing HIV testing and counselling among men who have sex with men.

In order to protect themselves and to prevent infecting others, it is important for men who have sex with men to know their HIV status. Knowledge of one's status is also a critical factor in the decision to seek treatment.

Note: Countries with generalized epidemics may also have a concentrated sub-epidemic among one or more key population at higher risk. If so, they should calculate and report this indicator for those populations.

Numerator: Number of men who have sex with men who have been tested for HIV during the last 12 months and who know their results.

Denominator: Number of men who have sex with men included in the sample.

Measurement

Behavioural surveillance or other special surveys. Respondents are asked the following questions: 3. Have you been tested for HIV in the last 12 months? If yes: 4. I don't want to know the results, but did you receive the results of that test? Whenever possible, data for men who have sex with men should be collected through civil society organizations that have worked closely with this population in the field. Access to survey respondents as well as the data collected from them must remain confidential. For further information, please consult the following references: o UNAIDS (2007). A Framework for Monitoring and Evaluating HIV Prevention Programmes for Most-At-Risk Populations. Geneva: UNAIDS. o UNAIDS (2007). Practical Guidelines for Intensifying HIV Prevention: Towards Universal Access. Geneva: UNAIDS.

Data source: Survey (Behavioural Surveillance Survey (BSS))

Frequency: Biennial

Strengths and weaknesses: Accessing and/or surveying men who have sex with men can be challenging. Consequently, data obtained may not be based on a representative sample of the national, men who have sex with men being surveyed. If there are concerns that the data are not based on a representative sample, these concerns should be reflected in the interpretation of the survey data. Where different sources of data exist, the best available estimate should be used. Information on the sample size, the quality and reliability of the data, and any related issues should be included in the report submitted with this indicator.

Tracking men who have sex with men over time to measure progress may be difficult due to mobility and the hard-to-reach nature of these populations with many groups being hidden populations. Thus, information about the nature of the sample should be reported in the narrative to facilitate interpretation and analysis over time.

To maximize the utility of these data, it is recommended that the same sample used for the calculation of this indicator be used for the calculation of the other indicators related to these populations.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/849.

HIV indicator

Coverage indicator – Prevention

Percentage of people who inject drugs that received an HIV test in the last 12 months and who know their results (HIV-C-P7)

Rationale

It measures progress in implementing HIV testing and counselling among people who inject drug.

In order to protect themselves and to prevent infecting others, it is important people who inject drugs to know their HIV status. Knowledge of one's status is also a critical factor in the decision to seek treatment. Note: Countries with generalized epidemics may also have a concentrated sub-epidemic among one or more key populations at higher-risk. If so, they should calculate and report this indicator for those populations.

Numerator: Number of people who inject drugs respondents who have been tested for HIV during the last 12 months and who know their results

Denominator: Number of people who inject drugs included in the sample

Measurement

Behavioural surveillance or other special surveys. Respondents are asked the following questions: 1. Have you been tested for HIV in the last 12 months? If yes: 2. I don't want to know the results, but did you receive the results of that test? Whenever possible, data for people who inject drugs should be collected through civil society organizations that have worked closely with this population in the field. Access to survey respondents as well as the data collected from them must remain confidential.

For further information, please consult the following references:

- WHO/UNAIDS Working Group on Global HIV/AIDS and STI Surveillance (2011). Guidelines on surveillance among populations most at risk for HIV. See http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2011/2011_Estimating_Populations_en.pdf
- Guidelines for using HIV testing technologies in surveillance: selection, evaluation and implementation (2010). See: http://www.who.int/hiv/pub/surveillance/hiv_testing_technologies_surveillance_.pdf
- WHO/UNODC/UNAIDS (2009). Technical Guide for Countries to set Targets for Universal Access to HIV Prevention, Treatment and Care for Injecting Drug Users. Geneva: WHO.
- UNAIDS (2007). A Framework for Monitoring and Evaluating HIV Prevention Programmes for Most-At-Risk Populations. Geneva: UNAIDS.
- UNAIDS (2007). Practical Guidelines for Intensifying HIV Prevention: Towards Universal Access. Geneva: UNAIDS.

Data source: Survey (Behavioural Surveillance Survey (BSS))

Frequency: Biennial

Strengths and weaknesses: Accessing and/or surveying people who inject drugs can be challenging. Consequently, data obtained may not be based on a representative sample of the national, people who inject drugs being surveyed. If there are concerns that the data are not based on a representative sample, these concerns should be reflected in the interpretation of the survey data. Where different sources of data exist, the best available estimate should be used. Information on the sample size, the quality and reliability of the data, and any related issues should be included in the report submitted with this indicator.

Tracking people who inject drugs over time to measure progress may be difficult due to mobility and the hard-to-reach nature of these populations with many groups being hidden populations. Thus, information about the nature of the sample should be reported in the narrative to facilitate interpretation and analysis over time.

To maximize the utility of these data, it is recommended that the same sample used for the calculation of this indicator be used for the calculation of the other indicators related to these populations.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/854.

HIV indicator

Coverage indicator – Care and support

Proportion of the poorest households who received external economic support in the last 3 months (HIV-C-CS)

Rationale

It measures progress in providing external economic support to poorest households affected by HIV and AIDS.

Economic support (with a focus on social assistance and livelihoods assistance) to poor and HIV-affected households remains a high priority in many comprehensive care and support programs. This indicator reflects the growing international commitment to HIV-sensitive social protection. It recognizes that the household should be the primary unit of analysis since many of the care and support services are directed to the household level. However, household data should be disaggregated to track whether or not households have orphans or an HIV-positive person. Tracking coverage of households with orphans and within the poorest quintile remains a developmental priority.

Numerator: Number of the poorest households that received any form of external economic support in the last 3 months.

External economic support is defined as free economic help (Cash grants, assistance for school fees, material support for education, income generation support in cash or kind, food assistance provided at the household level, or material or financial support for shelter) that comes from a source other than friends, family or neighbours unless they are working for a community-based group or organization. This source is most likely to be the national government or a civil society organization.

Denominator: Total number of poorest households.

Poorest households are defined as a household in the bottom wealth quintile. Countries should use the exact indicator definition and method of measurement for standardized progress monitoring and reporting at national and global levels. This will allow monitoring of changes over time and comparisons across different countries. However, countries can add or exclude other categories locally (for example, other wealth quintiles) depending on the country needs with respect to national program planning and implementation.

Measurement

Population-based surveys such as Demographic and Health Survey, AIDS Indicator Survey, Multiple Indicator Cluster Survey or other nationally representative survey. An assessment of the household's wealth (through an assessment of asset ownership) is completed at the data analysis stage using the wealth quintile to identify the poorest 20% of households. However, since it is not possible to identify the poorest households at the time of data collection, questions on economic support should be asked to all households. Only those who fall in the lowest wealth quintile will be included in the indicator. As part of a household survey, a household roster should be used to list all members of the household together with their ages, and identify all households with children less than 18 years of age, and with orphans, in the last year before the survey. Questions are then asked for each such household about the types of economic support received in the last 3 months, and the primary source of the help. The household heads or respondents are asked the following questions about the type of external economic support they have received in the last 3 months. Has your household received any of the following forms of external economic support in the last 3 months: a) Cash transfer (e.g., pensions, disability grant, child grant, to be adapted according to country context) b) Assistance for school fees c) Material support for education (e.g., uniforms, school books etc.) d) Income generation support in cash or kind e.g. agricultural inputs e) Food assistance provided at the household or external institution (e.g., at school) f) Material or financial support for shelter g) Other form of economic support (specify) An assessment of the household's wealth (through an assessment of asset ownership) is completed at the data analysis stage using the wealth quintile at which point it will possible to assess the extent to which the poorest households are receiving external support. It is recommended that the indicator is disaggregated by type of external economic support in order to track the different types of economic support provided – particularly to be able to distinguish between access to free social assistance such as cash transfers (often targeted at poor labour-constrained households) and livelihoods support which is often targeted at poor households which are less labour-constrained. It is also recommended that the indicator is disaggregated by whether or not households have orphans as orphaning remains a major determinant of vulnerability, particularly in relation to access to services. Where possible, data should also be disaggregated by rural versus urban residence. For countries which opt to add data collection on households in other wealth quintiles in addition to those in the bottom quintile, the indicator can also be compared with other wealth quintiles to track whether external economic support is reaching the bottom quintile compared to wealthier quintiles.

Data source: Population-based survey (AIDS Indicator Survey (AIS), Demographic and Health Survey (DHS), Multiple Indicator Cluster Survey (MICS))

Frequency: Every 3-5 years

Strengths and weaknesses: This indicator reflects new evidence of the need for a greater focus on wealth dimensions of vulnerability and the fact that that targeting on the basis of extreme poverty in high prevalence contexts ensures good coverage of poor households affected by HIV and AIDS. Proxy indicators of AIDS affectedness (such as "chronic illness') have often been poorly associated with HIV, have weak associations with adverse developmental outcomes, and have proven difficult to define in household questionnaires.

This indicator demonstrates changing levels of economic support for the poorest households. In high prevalence contexts, in particular, the majority are likely to be HIV affected. The indicator also demonstrates changes in the composition of external support (e.g. cash, food, livelihoods) received by poor households.

The indicator does not measure directly economic support to HIV infected and affected households, which is difficult to establish during a survey, but implicitly suggests that households living in the bottom wealth quintile in high prevalence contexts are more likely to be negatively impacted by HIV and AIDS and in need of economic assistance. In order to keep measurement as simple as possible, the indicator does not attempt to identify the different sources of support to households but this should be partly captured in National AIDS Spending Assessments (NASA).

The collection of data through population-based surveys, particularly DHS and MICS, means that the indicator does not capture the status of people living outside of households such as street children, children in institutions and internally displaced populations. Separate surveys are needed to track coverage for such vulnerable populations.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/865.

http://www.unicef.org/aids/index_documents.html

HIV indicator

Coverage indicator - TB/HIV

Percentage of estimated HIV-positive incident TB cases that received treatment for both TB and HIV (C-TB/HIV)

Rationale

TB is one of the most common causes of morbidity and mortality among people living with HIV, even those receiving antiretroviral therapy. Intensified TB case-finding and access to quality diagnosis and treatment of TB in accordance with international and national guidelines is essential for improving the quality and quantity of life for people living with HIV. A measure of the percentage of HIV-positive TB cases that access appropriate treatment for their TB and HIV is important.

Applicability: all countries

Numerator: Number of adults with advanced HIV infection who are currently receiving antiretroviral therapy in accordance with the nationally approved treatment protocol (or WHO/UNAIDS standards) and who started TB treatment (in accordance with national TB program guidelines) within the reporting year

Denominator: Estimated number of incident TB cases among people living with HIV

WHO calculates country-specific annual estimates of the number of incident TB cases in people living with HIV: http://www.who.int/tb/country/en

Measurement

Program data and estimates of incident TB cases among people living with HIV. Disaggregation by sex (male, female). For more details on interpretation of the indicator, see Monitoring the Declaration of Commitment on HIV/AIDS: guidelines on the construction of core indicators. 2008 reporting.

Data source: facility antiretroviral therapy registers and reports; program monitoring tools and estimates

Frequency: the data should be collected continuously and reported and analyzed quarterly or at least annually; data will be reported to the national level as part of the annual patient monitoring review

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/651.

Monitoring the Declaration of Commitment on HIV/AIDS: guidelines on the construction of core indicators. 2008 reporting. Geneva, UNAIDS, 2007 (http://data.unaids.org/pub/Report/2007/jc1318_core_indicators_manual_en.pdf).

Global tuberculosis control: surveillance, planning, financing. WHO report 2008. Geneva, World Health Organization, 2008 (http://www.who.int/tb/publications/global_report/en).

HIV indicator
Outcome indicator

Percentage of young women and men aged 15-24 years who have had sexual intercourse before the age of 15 years (HIV-O1)

Rationale

It measures progress in increasing the age at which young women and men aged 15–24 first have sex. A major goal in many countries is to delay the age at which young people first have sex and discourage premarital sexual activity because it reduces their potential exposure to HIV. There is also evidence to suggest that first having sex at a later age reduces susceptibility to infection per act of sex, at least for women.

Numerator: Number of respondents (aged 15–24 years) who report the age at which they first had sexual intercourse as under 15 years.

Denominator: Number of all respondents aged 15–24 years

Measurement

Respondents are asked whether or not they have ever had sexual intercourse and, if yes, they are asked: How old were you when you first had sexual intercourse for the first time? For further information on DHS/AIS methodology and survey instruments, visit www.measuredhs.com.

Data source: population-based survey (AIDS Indicator Survey (AIS), Demographic and Health Survey (DHS), Multiple Indicator Cluster Survey (MICS))

Frequency: Every 3-5 years

Strengths and weaknesses: Countries where very few young people have sex before the age of 15 might opt to use an alternative indicator: percentage of young women and men aged 20–24 who report their age at sexual initiation as under 18 years. The advantage of using the reported age at which young people first had sexual intercourse (as opposed to the median age) is that the calculation is simple and allows easy comparison over time. The denominator is easily defined because all members of the survey sample contribute to this measure.

It is difficult to monitor change in this indicator over a short period because only individuals entering the group, i.e. those aged under 15 at the beginning of the period for which the trends are to be assessed, can influence the numerator. If the indicator is assessed every two to three years, it may be better to focus on changes in the levels for the 15–17 age group. If it is assessed every five years, the possibility exists of looking at the 15–19 age group.

In countries where HIV-prevention programmes encourage virginity or delaying of first sex, young people's responses to survey questions on this issue may be biased, including a deliberate misreporting of age at which they first had sex.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/660.

UNAIDS. United Nations General Assembly Special Session (UNGASS) on HIV/AIDS. Monitoring the Declaration of Commitment on HIV/AIDS. Guidelines on construction of core indicators, 2005. http://www.indicatorregistry.org/sites/default/files/UNAIDS.%20United%20Nations%20General%20Assembly%20Special%20Session%20(UNG.pdf

Core Indicator 6, pg 19. UNAIDS. Scaling up towards universal access: Considerations for countries to set their own national targets for HIV prevention, treatment and care. 2006. http://www.indicatorregistry.org/sites/default/files/UNAIDS.%20Scaling%20up%20towards%20universal%20access%20Considerations%20f.doc

UNICEF Children and AIDS Fact Sheets. http://www.indicatorregistry.org/sites/default/files/UNICEF%20Children%20and%20AIDS%20Fact%20Sheets_Burkina%20Faso.pdf

Behavioural Indicator, Core 1, pg 50. WHO. National AIDS Programmes. A guide to indicators for monitoring and evaluating national HIV/AIDS prevention programmes for young people, 2004. http://www.indicatorregistry.org/sites/default/files/WHO_HIV%20Prevention%20Young%20People.pdf

Indicator 15, page 56. UNAIDS. United Nations General Assembly Special Session: Guidelines on Construction of Core Indicators. 2007. http://www.indicatorregistry.org/sites/default/files/Core%20indicators%20manual%202007%20En%20HQPrint%20FINAL.pdf

P8.10.N Office of US Global AIDS Coordinator. The President's Emergency Plan for AIDS Relief: Next Generation Indicators Reference Guide. July 2009. http://www.indicatorregistry.org/sites/default/files/2009-07-06%20PEPFAR%20Indicator%20Reference%20Guidance%20V1.doc

Indicator 15, page 56. UNAIDS. Monitoring the Declaration of Commitment on HIV/AIDS: Guidelines on Construction of Core Indicators, 2010 Reporting. 2009. http://www.indicatorregistry.org/sites/default/files/UNGASS%202009.pdf

HIV indicator

Outcome indicator

Percentage of women and men aged 15-49 years who have had sexual intercourse with more than one partner in the last 12 months (HIV-O2)

Rationale

It measures progress in reducing the percentage of people who have higher-risk sex.

The spread of HIV largely depends upon unprotected sex among people with a high number of partnerships. Individuals who have multiple partners have a higher risk of HIV transmission than individuals who do not link into a wider sexual network.

Numerator: Number of respondents aged 15–49 who have had sexual intercourse with more than one partner in the last 12 months

Denominator: Number of all respondents aged 15–49

Measurement

Respondents' sexual histories are obtained. Analysis of sexual history is used to determine whether the respondent has had more than one partner in the preceding 12 month period. For further information on DHS/AIS methodology and survey instruments, visit www.measuredhs.com

Data source: Population-based survey (AIDS Indicator Survey (AIS), Demographic and Health Survey (DHS), Multiple Indicator Cluster Survey (MICS)

Frequency: Every 3-5 years

Strengths and weaknesses: This indicator gives a picture of levels of higher-risk sex. If people have only one sexual partner, the change will be captured by changes in this indicator. However, if people simply decrease the number of sexual partners they have, the indicator will not reflect a change, even though potentially this may have a significant impact on the epidemic spread of HIV and may be counted a programme success. Additional indicators may need to be selected to capture the reduction in multiple sexual partners in general.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/661.

Indicator 16, page 57. UNAIDS. United Nations General Assembly Special Session: Guidelines on Construction of Core Indicators. 2007. http://www.indicatorregistry.org/sites/default/files/Core%20indicators%20manual%202007%20En%20HQPrint%20FINAL.pdf

P8.11.N. Office of US Global AIDS Coordinator. The President's Emergency Plan for AIDS Relief: Next Generation Indicators Reference Guide. July 2009. http://www.indicatorregistry.org/sites/default/files/2009-07-06%20PEPFAR%20Indicator%20Reference%20Guidance%20V1.doc

Indicator 16, page 57. UNAIDS. Monitoring the Declaration of Commitment on HIV/AIDS: Guidelines on Construction of Core Indicators, 2010 Reporting. 2009. http://www.indicatorregistry.org/sites/default/files/UNGASS%202009.pdf

HIV indicator
Outcome indicator

Percentage of women and men aged 15-49 years who have had more than one partner in the past 12 months who used a condom during their last sexual intercourse (HIV –O3)

Rationale

It measures progress towards preventing exposure to HIV through unprotected among people with multiple sexual partners.

Condom use is an important measure of protection against HIV, especially among people with multiple sexual partners.

Numerator: Number of respondents (aged 15–49) who reported having had more than one sexual partner in the last 12 months who also reported that a condom was used the last time they had sex

Denominator: Number of respondents (15–49) who reported having had more than one sexual partner in the last 12 months

Measurement

Respondents' sexual histories are obtained. Analysis of sexual history is used to determine whether the respondent has had more than one partner in the preceding 12 month period, and if so whether a condom was used the last time the respondent had sexual intercourse. For further information on DHS/AIS methodology and survey instruments, visit www.measuredhs.com

Data source: Population-based survey (AIDS Indicator Survey (AIS), Demographic and Health Survey (DHS), Multiple Indicator Cluster Survey (MICS) or other representative survey

Frequency: Every 3-5 years

Strengths and weaknesses: This indicator shows the extent to which condoms are used by people who are likely to have higher-risk sex (i.e. change partners regularly). However, the broader significance of any given indicator value will depend upon the extent to which people engage in such relationships. Thus, levels and trends should be interpreted carefully using the data obtained on the percentages of people that have had more than one sexual partner within the last year.

The maximum protective effect of condoms is achieved when their use is consistent rather than occasional. The current indicator does not provide the level of consistent condom use. However, the alternative method of asking whether condoms were always/sometimes/never used in sexual encounters with nonregular partners in a specified period is subject to recall bias. Furthermore, the trend in condom use during the most recent sex act will generally reflect the trend in consistent condom use.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/842.

Indicator 17, page 58. UNAIDS. United Nations General Assembly Special Session: Guidelines on Construction of Core Indicators. 2007. http://www.indicatorregistry.org/sites/default/files/Core%20indicators%20manual%202007%20En%20HQPrint%20FINAL.pdf

P8.12.N. Office of US Global AIDS Coordinator. The President's Emergency Plan for AIDS Relief: Next Generation Indicators Reference Guide. July 2009. http://www.indicatorregistry.org/sites/default/files/2009-07-06%20PEPFAR%20Indicator%20Reference%20Guidance%20V1.doc

Indicator 17, page 58. UNAIDS. Monitoring the Declaration of Commitment on HIV/AIDS: Guidelines on Construction of Core Indicators, 2010 Reporting. 2009. http://www.indicatorregistry.org/sites/default/files/UNGASS%202009.pdf

HIV indicator
Outcome indicator

Percentage of male and female sex workers reporting the use of a condom during penetrative sex with their most recent client (HIV – O4)

Rationale

It measures progress in preventing exposure to HIV among sex workers through unprotected sex with clients.

Various factors increase the risk of exposure to HIV among sex workers, including multiple, non-regular

partners and more frequent sexual intercourse. However, sex workers can substantially reduce the risk of HIV transmission, both from clients and to clients, through consistent and correct condom use.

Note: Countries with generalized epidemics may also have a concentrated subepidemic among sex workers. If so, it would be valuable for them to calculate and report on this indicator for this population.

Numerator: Number of respondents who reported that a condom was used with their last client

Denominator: Number of respondents who reported having commercial sex in the last 12 months

Measurement

Respondents are asked the following question: Did you use a condom with your most recent client? Whenever possible, data for sex workers should be collected through civil society organizations that have worked closely with this population in the field. Access to survey respondents as well as the data collected from them must remain confidential. For further information, please consult the following references: o UNAIDS (2007). A Framework for Monitoring and Evaluating HIV Prevention Programmes for Most-At-Risk Populations. Geneva: UNAIDS. o UNAIDS (2007). Practical Guidelines for Intensifying HIV Prevention: Towards Universal Access. Geneva:UNAIDS.

Data source: Survey (Behavioral Surveillance Survey (BSS))

Frequency:

Strengths and weaknesses: Condoms are most effective when their use is consistent, rather than occasional. The current indicator will provide an overestimate of the level of consistent condom use. However, the alternative method of asking whether condoms are always/sometimes/never used in sexual encounters with clients in a specified period is subject to recall bias. Furthermore, the trend in condom use in the most recent sexual act will generally reflect the trend in consistent condom use.

This indicator asks about commercial sex in the past twelve months. If you have data available on another time period, such as the last 3 or 6 months, please include this additional data in the comments section of the reporting tool.

Surveying sex workers can be challenging. Consequently, data obtained may not be based on a representative sample of the national, most-at-risk population being surveyed. If there are concerns that the data are not based on a representative sample, these concerns should be reflected in the interpretation of the survey data. Where different sources of data exist, the best available estimate should be used. Information on the sample size, the quality and reliability of the data, and any related issues should be included in the report submitted with this indicator.

To maximize the utility of these data, it is recommended that the same sample used for the calculation of this indicator be used for the calculation of the other indicators related to these populations.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/663.

Sexual Behaviour Indicator 5, pg 85. UNAIDS. National AIDS Programmes. A guide to monitoring and evaluation, 2000. http://www.indicatorregistry.org/sites/default/files/UNAIDS.%20National%20AIDS%20Programmes.%20A%20guide%20to%20monitoring%20and%20.pdf

Concentrated / Low Prevalence Epidemic: Indicator 6, page 64. UNAIDS. United Nations General Assembly Special Session (UNGASS) on HIV/AIDS. Monitoring the Declaration of Commitment on HIV/AIDS. Guidelines on construction of core indicators, 2005 http://www.indicatorregistry.org/sites/default/files/UNAIDS.%20United%20Nations%20General%20Assembly%20Special%20Session%20(UNG.pdf

UNICEF Children and AIDS Fact Sheets. http://www.indicatorregistry.org/sites/default/files/UNICEF%20Children%20and%20AIDS%20Fact%20Sheets_Burkina%20Faso.pdf

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P.9.2.N. Office of US Global AIDS Coordinator. The President's Emergency Plan for AIDS Relief: Next Generation Indicators Reference Guide. July 2009. http://www.indicatorregistry.org/sites/default/files/2009-07-06%20PEPFAR%20Indicator%20Reference%20Guidance%20V1.doc

Indicator 18, page 59. UNAIDS. Monitoring the Declaration of Commitment on HIV/AIDS: Guidelines on Construction of Core Indicators, 2010 Reporting. 2009. http://www.indicatorregistry.org/sites/default/files/UNGASS%202009.pdf

HIV indicator
Outcome indicator

Percentage of men reporting the use of a condom the last time they had anal sex with a male partner (HIV-O5)

Rationale

It measures progress in preventing exposure to HIV among men who have unprotected anal sex with a male partner.

Condoms can substantially reduce the risk of the sexual transmission of HIV. Consequently, consistent and correct condom use is important for men who have sex with men because of the high risk of HIV transmission during unprotected anal sex. In addition, men who have anal sex with other men may also have female partners, who could become infected as well. Condom use with their most recent male partner is considered a reliable indicator of longer-term behaviour.

Note: countries with generalized epidemics may also have a concentrated subepidemic among men who have sex with men. If so, it would be valuable for them to calculate and report on this indicator for this population.

Numerator: Number of respondents who reported that a condom was used the last time they had anal sex

This includes both regular and non-regular partners, and both paid and unpaid sex. As with all indicators this indicator only provides a limited piece of information. For a comprehensive assessment of patterns of risk associated with male to male sex further information is needed, including information on the types and numbers of partners and whether the individual is the receptive or insertive partner.

Denominator: Number of respondents who reported having had anal sex with a male partner in the last six months

Measurement

In a behavioural survey of a sample of men who have sex with men, respondents are asked about sexual partnerships in the preceding six months, about anal sex within those partnerships and about condom use when they last had anal sex. Whenever possible, data for men who have sex with men should be collected through civil society organizations that have worked closely with this population in the field. Access to survey respondents as well as the data collected from them must remain confidential.

Data source: Survey (Behavioral Surveillance Survey (BSS))

Frequency: Biennial

Strengths and weaknesses: For men who have sex with men, condom use at last anal sex with any partner gives a good indication of overall levels and trends of protected and unprotected sex in this population. This indicator does not give any idea of risk behaviour in sex with women among men who have sex with both women and men.

In countries where men in the subpopulation surveyed are likely to have partners of both sexes, condom use with female as well as male partners should be investigated. In these cases, data on condom use should always be presented separately for female and male partners.

This indicator asks about male-to-male sex in the past six months. If you have data available on another time period, such as the last 3 or 12 months, please include this additional data in the comments section of the reporting tool.

Surveying men who have sex with men can be challenging. Consequently, data obtained may not be based on a representative sample of the national, most-at-risk population being surveyed. If there are concerns that the data are not based on a representative sample, these concerns should be reflected in the interpretation of the survey data. Where different sources of data exist, the best available estimate should be used. Information on the sample size, the quality and reliability of the data, and any related issues should be included in the report submitted with this indicator.

To maximize the utility of these data, it is recommended that the same sample used for the calculation of this indicator be used for the calculation of the other indicators related to these populations.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/664.

Sexual Behaviour Indicator 7, pg 88. UNAIDS. National AIDS Programmes. A guide to monitoring and evaluation, 2000. http://www.indicatorregistry.org/sites/default/files/UNAIDS.%20National%20AIDS%20Programmes.%20A%20guide%20to%20monitoring%20and%20.pdf

Concentrated / Low Prevalence: Indicator 7, page 65. UNAIDS. United Nations General Assembly Special Session (UNGASS) on HIV/AIDS. Monitoring the Declaration of Commitment on HIV/AIDS. Guidelines on construction of core indicators, 2005. http://www.indicatorregistry.org/sites/default/files/UNAIDS.%20United%20Nations%20General%20Assembly%20Special%20Session%20(UNG.pdf

UNICEF Children and AIDS Fact Sheets. http://www.indicatorregistry.org/sites/default/files/UNICEF%20Children%20and%20AIDS%20Fact%20Sheets_Burkina%20Faso.pdf

Indicator 19, page 61. UNAIDS. United Nations General Assembly Special Session: Guidelines on Construction of Core Indicators. 2007. http://www.indicatorregistry.org/sites/default/files/Core%20indicators%20manual%202007%20En%20HQPrint%20FINAL.pdf

P9.4.N. Office of US Global AIDS Coordinator. The President's Emergency Plan for AIDS Relief: Next Generation Indicators Reference Guide. July 2009. http://www.indicatorregistry.org/sites/default/files/2009-07-06%20PEPFAR%20Indicator%20Reference%20Guidance%20V1.doc

Indicator 19, page 61. UNAIDS. Monitoring the Declaration of Commitment on HIV/AIDS: Guidelines on Construction of Core Indicators, 2010 Reporting. 2009. http://www.indicatorregistry.org/sites/default/files/UNGASS%202009.pdf

HIV indicator
Outcome indicator

Percentage of people who inject drugs who reported the use of a condom the last time they had sexual intercourse (HIV – O6)

Rationale

It measures progress in preventing sexual transmission of HIV among people who inject drugs.

Safer injecting and sexual practices among people who inject drugs are essential, even in countries where other modes of HIV transmission predominate, because: (i) the risk of HIV transmission from contaminated injecting equipment is extremely high; and (ii) people who inject drugs can spread HIV (e.g. through sexual transmission) to the wider population.

Note: Countries with generalized epidemics may also have a concentrated sub-epidemic among people who inject drugs. If so, it would be valuable for them to calculate and report on this indicator for this population.

Numerator: Number of respondents who reported that a condom was used the last time they had sex.

This includes both regular and non-regular partners, and both paid and unpaid sex. As with all indicators this indicator only provides a limited piece of information. For a comprehensive assessment of patterns of risk associated with sex and injecting drug use further information is needed, including information on the types and numbers of partners.

Denominator: Number of respondents who report having injected drugs and having had sexual intercourse in the last month.

Measurement

Special surveys including the Family Health International Behavioural Surveillance Survey for people who inject drugs. Respondents are asked the following sequence of questions: 1. Have you injected drugs at any time in the last month? 2. If yes: Have you had sexual intercourse in the last month? 3. If yes in answer to both 1 and 2: Did you use a condom when you last had sexual intercourse? Whenever possible, data for people who inject drugs should be collected through civil society organizations that have worked closely with this population in the field. Access to survey respondents as well as the data collected from them must remain confidential. For further information, please consult the following references: o WHO/UNODC/UNAIDS (2009). Technical Guide for Countries to set Targets for Universal Access to HIV Prevention, Treatment and Care for Injecting Drug Users. Geneva: WHO. o UNAIDS (2007). A Framework for Monitoring and Evaluating HIV Prevention Programmes for Most-At- Risk Populations. Geneva: UNAIDS. o UNAIDS (2007). Practical Guidelines for Intensifying HIV Prevention: Towards Universal Access. Geneva: UNAIDS.

Data source: Survey (Behavioral Surveillance Survey (BSS))

Frequency: Biennial

Strengths and weaknesses: Surveying people who inject drugs can be challenging. Consequently, data obtained may not be based on a representative sample of the national people who inject drugs being surveyed. If there are concerns that the data are not based on a representative sample, these concerns should be reflected in the interpretation of the survey data. Where different sources of data exist, the best available estimate should be used. Information on the sample size, the quality and reliability of the data, and any related issues should be included in the report submitted with this indicator.

The extent of injecting drug use-associated HIV transmission within a country depends on four factors: (i) the size, stage and pattern of dissemination of the national AIDS epidemic; (ii) the extent of injecting drug use; (iii) the degree to which people who inject drugs use contaminated injecting equipment; and (iv) the patterns of sexual mixing and condom use among people who inject drugs and between people who inject drugs and the wider population. This indicator provides partial information on the fourth factor.

To maximize the utility of these data, it is recommended that the same sample used for the calculation of this indicator be used for the calculation of the other indicators related to these populations.

Resources:

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/852.

HIV indicator
Outcome indicator

Percentage of people who inject drugs reporting the use of sterile injecting equipment the last time they injected (HIV-O7)

Rationale

It measures progress in preventing injecting drug use-associated HIV transmission

Safer injecting and sexual practices among people who inject drugs are essential, even in countries where other modes of HIV transmission predominate, because: (i) the risk of HIV transmission from contaminated injecting equipment is extremely high; and (ii) people who inject drugs can spread HIV (e.g., through sexual transmission) to the wider population.

Note: Countries with generalized epidemics may also have a concentrated sub-epidemic among people who inject drugs. If so, it would be valuable for them to calculate and report on this indicator for this population.

Numerator: Number of respondents who report using sterile injecting equipment the last time they injected drugs.

Denominator: Number of respondents who report injecting drugs in the last month.

Measurement

Special surveys including the Family Health International Behaviour Surveillance Survey for people who inject drugs. Respondents are asked the following questions: 1. Have you injected drugs at any time in the last month? 2. If yes: The last time you injected drugs, did you use a sterile needle and syringe ? This question may need to be modified in certain local contexts. In certain drug injecting cultures, for example, needles and syringes may be exposed to HIV without being shared between users (e.g. through shared drug solutions). The questions used must ascertain that the needle and syringe used were actually sterile. Whenever possible, data for people who inject drugs should be collected through civil society organizations that have worked closely with this population in the field. Access to survey respondents as well as the data collected from them must remain confidential. For further information, please consult the following references: o WHO/ UNODC/UNAIDS (2009). Technical Guide for Countries to set Targets for Universal Access to HIV Prevention, Treatment and Care for Injecting Drug Users. Geneva: WHO. o UNAIDS (2007). A Framework for Monitoring and Evaluating HIV Prevention Programmes for Most-At- Risk Populations. Geneva: UNAIDS. o UNAIDS (2007). Practical Guidelines for Intensifying HIV Prevention: Towards Universal Access. Geneva:UNAIDS

Data source: Survey (Behavioral Surveillance Survey (BSS))

Frequency: Biennial

Strengths and weaknesses: Surveying people who inject drugs can be challenging. Consequently, data obtained may not be based on a representative sample of the national injecting drug user population being surveyed. If there are concerns that the data are not based on a representative sample, these concerns should be reflected in the interpretation of the survey data. Where different sources of data exist, the best available estimate should be used. Information on the sample size, the quality and reliability of the data, and any related issues should be included in the report submitted with this indicator.

The extent of injecting drug use-associated HIV transmission within a country depends on four factors: (i) the size, stage and pattern of dissemination of the national AIDS epidemic; (ii) the extent of injecting drug use; (iii) the degree to which people who inject drugs use contaminated injecting equipment; and (iv) the patterns of sexual mixing and condom use among people who inject drugs and between people who inject drugs and the wider population. This indicator provides information on the third factor.

To maximize the utility of these data, it is recommended that the same sample used for the calculation of this indicator be used for the calculation of the other indicators related to these populations.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/853.

HIV indicator
Outcome indicator

Current school attendance among orphans and non-orphans (HIV- O8)

Rationale

It measures progress towards preventing relative disadvantage in school attendance among orphans versus non-orphans.

The indicator is split up in two parts so comparisons can be made between orphans and non orphans:

Part A: current school attendance rate of orphans aged 10-14 primary school age, secondary school age

Part B: current school attendance rate of children aged 10–14 primary school age, secondary school age both of whose parents are alive and who live with at least one parent

AIDS deaths in adults occur just at the time in their lives when they are forming families and bringing up children. Orphanhood is frequently accompanied by prejudice and increased poverty, factors that can jeopardize children's chances of completing school education and may lead to the adoption of survival strategies that increase vulnerability to HIV. It is important therefore to monitor the extent to which AIDS support programmes succeed in securing the educational opportunities of orphaned children.

Numerator: Part A: Number of children who have lost both parents and who attend school aged 10-14, primary school age, secondary school age

Part B: Number of children both of whose parents are alive, who are living with at least one parent and who attend school aged 10-14, primary school age, secondary school age

Explanation of Numerator

The definition of primary school age and secondary school age should be consistent with the UNESCO definition and as currently used for calculating other education-specific indicators such as net primary school enrolment/attendance rate and net secondary school enrolment/attendance rate for each country. The primary school age and secondary school age populations may vary slightly from country to country. Therefore this indicator uses the terms 'primary school age' and 'secondary school age' as currently applied in standard international measurements including in major survey programmes such as DHS or MICS to allow each country to apply its own national age ranges for primary and secondary school. The important point is to compare current school attendance of orphans and non-orphans across primary school and secondary school rather than by specific ages.

Denominator: Part A: Number of children who have lost both parents

Part B: Number of children both of whose parents are alive who are living with at least one parent

Measurement

Population-based survey (Demographic and Health Survey, AIDS Indicator Survey, Multiple Indicator Cluster Survey or other representative survey) For every child aged 10-14, of primary school age, and secondary school age, living in a household, a household member is asked: 1. Is this child's natural mother still alive? If yes, does she live in the household? 2. Is this child's natural father still alive? If yes, does he live in the household? 3. Did this child attend school at any time during the school year?

Data source: Population-based surveys (AIDS Indicator Survey (AIS), Demographic and Health Survey (DHS), Multiple Indicator Cluster Survey (MICS))

Frequency: Every 3-5 years

Strengths and weaknesses: The definitions of orphan/non-orphan used here—i.e., child aged 10–14 years as of the last birthday both of whose parents have died/are still alive—are chosen so that the maximum effect of disadvantage resulting from orphanhood can be identified and tracked over time. The age-range 10–14 years is used because younger orphans are more likely to have lost their parents recently so any detrimental effect on their education will have had little time to materialize. However, orphaned children are typically older than non-orphaned children (because the parents of younger children have often been HIV-infected for less time) and older children are more likely to have left school.

Typically, the data used to measure this indicator are taken from household-based surveys. Children not recorded in such surveys—e.g., those living in institutions or on the street—generally, are more disadvantaged and are more likely to be orphans. Thus, the indicator will tend to understate the relative disadvantage in educational attendance experienced by orphaned children.

This indicator does not distinguish children who lost their parents due to AIDS from those whose parents died of other causes. In countries with smaller epidemics or in the early stages of epidemics, most orphans will have lost their parents due to non-HIV-related causes. Any differences in the treatment of orphans according to the known or suspected cause of death of their parents could influence trends in the indicator. However, to date there is little evidence that such differences in treatment are common.

The indicator provides no information on actual numbers of orphaned children. The restrictions to double orphans and to 10–14 year-olds mean that estimates may be based on small numbers in countries with small or nascent epidemics.

For further information, please consult the following website: http://www.unicef.org/aids/index_documents.html

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/864.

Impact Indicator 5, pg 139. UNAIDS. National AIDS Programmes. A guide to monitoring and evaluation, 2000. http://www.indicatorregistry.org/sites/default/files/UNAIDS.%20National%20AIDS%20Programmes.%20A%20guide%20to%20monitoring%20and%20-3_0.pdf

UNICEF Children and AIDS Fact Sheets. http://www.indicatorregistry.org/sites/default/files/UNICEF%20Children%20and%20AIDS%20Fact%20Sheets_Burkina%20Faso-1.pdf

Core Indicator 6, pg 39. UNICEF. Guide to monitoring and evaluation of the national response for children orphaned and made vulnerable by HIV/AIDS, 2005. http://www.indicatorregistry.org/sites/default/files/UNICEF%20Guide%20to%20monitoring%20and%20evaluation%20of%20the%20national%20response%20for%20children%20orphaned%20and%20made%20vulnerable%20by%20HIVAIDS-2.pdf

HIV indicator
Outcome indicator

Percentage of women and men aged 15-49 years expressing accepting attitudes toward people living with HIV (HIV –O9)

Rationale

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.

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.

Measurement

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: 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?; If you knew that a shopkeeper or food seller had the HIV virus, would you buy fresh vegetables from him/her?; If a female teacher has the HIV virus but is not sick, should she be allowed to continue teaching in school?; and 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 are counted in the numerator. An accepting attitude for all four 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.

Data source: Population-based survey (AIDS Indicator Survey (AIS), Demographic and Health Survey (DHS))

Frequency: Every 3-5 years

Strengths and weaknesses: This indicator measures the percentage of the population with accepting attitudes towards 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.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/474.

P8.22.N. Office of US Global AIDS Coordinator. The President's Emergency Plan for AIDS Relief: Next Generation Indicators Reference Guide. July 2009. http://www.indicatorregistry.org/sites/default/files/2009-07-06%20PEPFAR%20Indicator%20Reference%20Guidance%20V1.doc

Additional Recommended Indicator 14, pg 38. UNAIDS. Core Indicators for National AIDS Programmes Guidance and Specifications for Additional Recommended Indicators, 2008. http://www.indicatorregistry.org/sites/default/files/Additional%20Recommended%20Indicators_11.pdf

HIV indicator
Outcome indicator

Proportion of ever-married or partnered women aged 15-49 who experienced physical or sexual violence from a male intimate partner in the past 12 months (HIV-O10)

Rationale

It measures progress in reducing prevalence of intimate partner violence against women (as an outcome itself and as a proxy for gender inequality).

An intimate partner is defined as a cohabiting partner, whether or not they had been married at the time. The violence could have occurred after they had separated.

Globally, and particularly in sub-Saharan Africa, the observed high rates of HIV infection in women have brought into sharp focus the problem of violence against women. There is growing recognition that women and girls' risk of, and vulnerability to, HIV infection is shaped by deep-rooted and pervasive gender inequalities - violence against them in particular. Studies conducted in many countries indicate that a substantial proportion of women have experienced violence in some form or another at some point in their life. Studies from Rwanda, Tanzania, and South Africa show up to three-fold increases in risk of HIV among women who have experienced violence compared to those who have not.

http://www.who.int/gender/violence/en/vawinformationbrief.pdf

Numerator: Women aged 15-49 who currently have or ever had an intimate partner, who report experiencing physical or sexual violence by at least one of these partners in the past 12 months.

Explanation of Numerator

Ever married or partnered women aged 15-49 include women who have ever been married or had an intimate partner. An intimate partner is defined as a cohabiting partner, whether or not they had been married at the time. These women are asked if they experienced physical or sexual violence from a male intimate partner in the past 12 months. Physical or sexual violence is determined by asking women if their partner did any of the following:

- Slapped her or threw something at her that could hurt her
- Pushed her or shoved her
- Hit her with a fist or something else that could hurt
- Kicked, dragged, or beat her up
- Choked or burnt her
- Threatened her with, or actually used a gun, knife or other weapon against her
- Physical forced her to have sexual intercourse against her will
- Forced her to do something she found degrading or humiliating
- Made her afraid of what he would do if she did not have sexual intercourse with him

Those reporting at least one incident corresponding to any one of these items the last 12 months are included in the numerator.

Denominator: Total women surveyed aged 15-49 who currently have or had an intimate partner.

Measurement

Population based surveys that are already being used within countries, such as WHO Multi-country surveys, DHS/AIS (domestic violence module), International Violence Against Women Surveys (IVAWS). Data collection on violence against women requires special methodologies that adhere to the ethical and safety standards to ensure that information is gathered in an ethical manner that does not pose a risk to study subjects, and in a way that maximizes data validity and reliability. The questions asked in the DHS module on domestic violence and the WHO multi-country study on domestic violence and women's health are slightly different. However, the estimates produced from either methodology are comparable. WHO ethical and safety guidelines for collecting data on violence against women. 2003, http://www.who.int/gender/documents/en/final%20recommendations%2023%20oct.pdf.

Data source: Population-based survey (AIDS Indicator Survey (AIS), Demographic and Health Survey (DHS))

Frequency: 3-5 years

Strengths and weaknesses: This indicator assesses progress in reducing the proportion of women who have experienced recent intimate partner violence (IPV), as an outcome in of itself. Further, the indicator should also be interpreted as a proxy for gender equality. A change in the prevalence level of recent violence over time will indicate a change in the level of gender equality—which is one of the structural factors driving the HIV epidemic. Gender equality has a clear, inverse relationship with IPV: In countries where IPV is high, gender equality, women's rates of education, and women's reproductive health and rights are low.

This indicator focuses on recent incidents of IPV, i.e. in the preceding 12 months, rather than life-time experience of IPV This in order to enable monitoring and evaluating progress over time. Ever experience of IPV would show little change over time, no matter what the level of programming, since the numerator would include the same women for as long as they fell into the target age group. Sustained reductions in IPV are not possible without fundamental changes occurring in unequal gender norms, gender relations at the household and community level, women's legal and customary rights, gender inequalities in access to health care, education, and economic and social resources, and male involvement in reproductive and child health. Thus, changes in this one IPV indicator will be a bellwether for changes in the status and treatment of women in all the different societal domains, which in turn directly and indirectly contributes to reduced risk of HIV.

Even after adhering to the WHO ethical and safety guidelines and providing a good setting in which to conduct interviews, there will always be some women who will not disclose this information. This means that estimates will likely be more conservative than the actual level of violence which has taken place in the surveyed population

The complex relationship between violence against women and HIV has been conceptually illustrated in a comprehensive review of the current state of evidence and practice in developing and implementing interventions and strategies to address the intersection of violence against women and HIV. For over a decade, research world-wide has documented the undeniable link between violence against women (VAW) and HIV. Studies have demonstrated an association between VAW and HIV as both a contributing factor for infection as well as a consequence of infection. This relationship operates through a variety of direct and indirect mechanisms. For example:

- fear of violence may keep women from insisting on condom use by a male partner whom they suspect is HIV infected;
- fear of IPV may keep women from disclosing their HIV status or seeking treatment;
- forced vaginal penetration increases the likelihood of HIV transmission;
- rape is one manifestation of gender inequality and can result in HIV infection, although this represents a minority of cases
- Rape, other sexual and physical abuse can result in psychological distress that is manifested in risky sexual behaviour, with the result of becoming infected with HIV.

Resources:

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/863.

Investing in gender equality: ending violence against women and girls. UNIFEM Brief, Oct. 2010.

WHO (2010). Addressing violence against women and HIV/AIDS: What works? Geneva, WHO.

Dunkle KL, Head S, Garcia Moreno C. Current intervention strategies at the intersection of gender-based violence and HIV: A systematic review of the peer-reviewed literature describing evaluations of interventions addressing the interface between gender, violence and HIV. Geneva, WHO, 2009, and Program on International Health and Human Rights at Harvard School of Public Health (2009). Gender-Based Violence and HIV, final draft report.

Maman, Suzanne, Jacquelyn Campbell, Michael D. Sweat, Andrea C. Gielen. (2000) The intersections of HIV and violence: directions for future research and interventions Social Science & Medicine 50 459-478.

Program on International Health and Human Rights at Harvard School of Public Health (2009). Gender-Based Violence and HIV, final draft report.

HIV indicator
Outcome indicator

Percentage of currently married women who usually make a decision about their own health care either by themselves or jointly with their husbands (HIV-O11)

Rationale

The ability to make decisions about their own life is important to women's empowerment. After marriage, gender restrictions and social norms (including limited mobility and decision making), in addition to an unsupportive environment for young women's reproductive health, may prevent women from accessing RH care and family planning services. Gender inequality is often cited as a barrier to improving maternal health, and several studies have found that women's autonomy is associated with lower fertility and greater contraceptive use (Gage 1995; Morgan and Niraula 1995; Govindasamy and Malhotra 1996), especially in marriage. These results suggest that women who enjoy greater mobility, decision making power, and control over resources are better able to allocate resources to benefit their children, to make use of health-care and family planning services, and to engage in healthier practices in general.

This indicator of women's roles in decision-making about their own health care helps to evaluate women's control over their lives and environment. Further, since it measures decisionmaking about health, it provides direct insight into women's ability to access healthcare, potentially including care of HIV related needs.

Numerator: Number of currently-married women who usually make a decision about own health care either by themselves or jointly with their husbands

Denominator: Number of currently-married women surveyed

Measurement

Population-based survey, such as DHS

Data source: Demographic and Health Survey (DHS)

Frequency: 4-5 years

Strengths and weaknesses: The indicator has been measured using a standard question since late 1990s. The question used is easy to implement and understand. Use of standardized data collection and analysis methods, which allow for cross-country comparisons, enhance the usefulness of the indicator for measuring variations across countries and changes over time.

This indicator assesses progress in changing gender norms about women's roles, and provides an indication of the level of gender equality. This means that an increase in women's direct participation in decisions about their own health care is reflective of a decline in gender inequality—which is one of the structural factors driving the HIV epidemic. Due to the fact that this indicator monitors change in norms, it can be expected to change only slowly over time, and would not be directly linked to level of programming. It should be analyzed together with other indicators looking at changes in unequal gender norms, gender relations at the household and community level, women's legal and customary rights, gender inequalities in access to health care, education, and economic and social resources, and male involvement in reproductive and child health.

This indicator is based on a question put to respondents in a survey, which means it is self- reported. Further, since the question is asked only to currently married women, it is more directly a manifestation of norms within marriage; however, such norms are likely to be reflective of gender inequality in the society as a whole.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/888

For further information on DHS/AIS methodology and survey instruments, visit www.measuredhs.com

HIV indicator
Impact indicator

AIDS-related mortality (HIV-I1)

Rationale

Estimated mortality due to HIV/AIDS is the number of adults and children that have died in a specific year due to HIV/AIDS-related causes based in the modeling of HIV surveillance data using standard and appropriate tools. The mortality rates of adults (aged more than 15 years) and of children (aged less than 5 years) are leading indicators of the level of impact of the HIV/AIDS epidemic and of the impact of interventions, particularly the scaling-up of treatment and prevention of mother-to-child transmission in countries with generalized HIV epidemics.

Numerator: Number of deaths attributed to HIV/AIDS-related causes in a given time period

Denominator: For adults (aged more than 15 years): Total number of population (per 100 000 people)

For children (aged less than 5 years): Total number of population (per 1000 life births)

Measurement

Empirical data from different HIV surveillance sources are consolidated to obtain estimates of the level and trend in adults and children mortality by using standard methods and tools for HIV estimates appropriate to the level of HIV epidemic. However, to obtain the best possible estimates, judgment needs to be made on data quality and how representative it is of the population. UNAIDS/WHO produce country specific estimates every two years (i.e., estimates of under-five HIV-related deaths and adult HIV-related deaths are available from national estimates and projections, using the Spectrum computer package).

Disaggregation by sex and age (below 5 years, 15 years and older).

Even though countries are increasingly collecting information on adult and child mortality, the reporting systems in many countries are weak and there is underreporting due in part to stigma and lack of diagnosis. High quality and complete civil registration systems and high quality survey or census data are crucial. WHO estimates that there is substantial variation in data quality and consistency across countries in the level of underestimation within civil registration systems.

Data source: Vital registration where possible, calculated from HIV surveillance data derived from sentinel surveillance and or household surveys.

Frequency: Annually

Resources

Estimated rate of adults (15 years and older) dying of HIV/AIDS. WHO Statistical Information System. Available at: http://www.who.int/entity/whosis/whostat2006MortalityRateHIVAIDS.pdf

http://www.indicatorregistry.org/node/887

HIV indicator
Impact indicator

Percentage of young women and men aged 15-24 years who are HIV infected (HIV – I2)

Rationale

It measures progress towards reducing HIV infection.

The goal in the response to HIV is to reduce HIV infection.

HIV prevalence at any given age is the difference between the cumulative numbers of people that have become infected with HIV up to this age minus the number who have died, expressed as a percentage of the total number alive at this age. At older ages, changes in HIV prevalence are slow to reflect changes in the rate of new infections (HIV incidence) because the average duration of infection is long. Furthermore, declines in HIV prevalence can reflect saturation of infection among those individuals who are most vulnerable and rising mortality rather than behaviour change. At young ages, trends in HIV prevalence are a better indication of recent trends in HIV incidence and risk behaviour. Thus, reductions in HIV incidence associated with genuine behaviour change should first become detectable in trends in HIV prevalence figures for 15–24 years old (or even earlier in 15-19-year-olds if this age breakdown is available). Where available, parallel behavioural surveillance survey data should be used to aid interpretation of trends in HIV prevalence.

Numerator: Number of antenatal clinic attendees (aged 15–24) tested whose HIV test results are positive

Denominator: Number of antenatal clinic attendees (aged 15–24) tested for their HIV infection status

Measurement

UNAIDS/WHO guidelines for HIV sentinel surveillance. This indicator is calculated using data from pregnant women attending antenatal clinics in HIV sentinel surveillance sites in the capital city, other urban areas and rural areas. The sentinel surveillance sites used for the calculation of this indicator should remain constant to allow for the tracking of changes over time. For further information, please consult the following website: http://www.unaids.org/en/HIV_data/Methodology/default.asp http://data.unaids.org/publications/irc-pub06/jc954-anc-serosurveys_guidelines_en.pdf

Data source: ANC Surveillance

Frequency: Annual

Strengths and weaknesses: In countries where the age at which young people first have sexual intercourse is late and/or levels of contraception use are high, HIV prevalence among pregnant women of 15–24 years of age will differ from that among all women in the age group.

This indicator (using data from antenatal clinics) gives a fairly good estimate of relatively recent trends in HIV infection in locations where the epidemic is heterosexually driven. It is less reliable as an indicator of HIV-epidemic trends in locations where most infections remain temporarily confined to key populations.

To supplement data from antenatal clinics, an increasing number of countries have included HIV testing in population-based surveys. If a country has produced HIV prevalence estimates from survey data these estimates should be included in the comments box for this indicator to allow for comparisons between multiple surveys. Survey based estimates should be disaggregated by sex.

The addition of new sentinel sites will increase the samples representativeness and will therefore give a more robust point estimate of HIV prevalence. However, the addition of new sentinel sites reduces the comparability of values. As such it is important to use consistent sites when undertaking trend analyses.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/844.

HIV indicator
Impact indicator

Percentage of sex workers who are HIV-infected (HIV-I3)

Rationale

It measures progress on reducing HIV prevalence among sex workers.

Sex workers typically have higher HIV prevalence than the general population in both concentrated and generalized epidemics. In many cases, prevalence among these populations can be more than double the prevalence among the general population. Reducing prevalence among sex workers is a critical measure of a national-level response to HIV.

Countries with generalized epidemics may also have a concentrated sub-epidemic among sex workers. If so, it is valuable to calculate and report on this indicator for this population.

Numerator: Number of respondents who test positive for HIV

Denominator: Number of respondents tested for HIV.

Measurement

UNAIDS and WHO Working Group on Global HIV/AIDS and STI Surveillance: Guidelines among populations most at risk for HIV (WHO/UNAIDS, 2011). This indicator is calculated using data from HIV tests conducted among respondents in the primary sentinel site or sites. The sentinel surveillance sites used for the calculation of this indicator should remain constant to allow for the tracking of changes over time. For further information, please consult the following website: http://www.unaids.org/en/HIV_data/Methodology/default.asp Revised guidelines on HIV surveillance for key populations at higher risk are available at: http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2011/20110518_Surveillance_among_most_at_risk.pdf

Data source: HIV sero-sentinel surveillance

Frequency: Annual

Strengths and weaknesses: In theory, assessing progress in reducing the occurrence of new infections is best done through monitoring changes in incidence over time. However, in practice, prevalence data rather than incidence data are available. In analyzing prevalence data of sex workers for the assessment of prevention programme impact, it is desirable not to restrict analysis to young people but to report on those persons who are newly initiated to behaviours that put them at risk for infection (e.g. by restricting the analysis to people who have or participated in sex work for less than one year) This type of analysis also has the advantage of not being affected by the effect of ART in increasing survival and thereby increasing prevalence.

If prevalence estimates are available disaggregated by greater than and less than one year in sex work countries are strongly encouraged to report this disaggregation in their Country Progress Report, and to use the comments field in the reporting tool for this indicator to present disaggregated estimates.

Due to difficulties in accessing sex workers, biases in sero-surveillance data are likely to be far more significant than in data from a more general population, such as women attending antenatal clinics. If there are concerns about the data, these concerns should be reflected in the interpretation.

An understanding of how the sampled population(s) relate to any larger population(s) sharing similar risk behaviours is critical to the interpretation of this indicator. The period during which people belong to a key population is more closely associated with the risk of acquiring HIV than age. Therefore, it is desirable not to restrict analysis to young people but to report on other age groups as well.

Trends in HIV prevalence among sex workers in the capital city will provide a useful indication of HIV-prevention programme performance in that city. However, it will not be representative of the situation in the country as a whole.

The addition of new sentinel sites will increase the samples representativeness and will therefore give a more robust point estimate of HIV prevalence. However, the addition of new sentinel sites reduces the comparability of values. As such it is important to use consistent sites when undertaking trend analyses.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/847.

HIV indicator
Impact indicator

Percentage of men who have sex with men who are HIV-infected (HIV – I4)

Rationale

It measures progress on reducing HIV prevalence among men who have sex with men.

Men who have sex with men typically have the highest HIV prevalence in countries with either concentrated or generalized epidemics. In many cases, prevalence among these populations can be more than double the prevalence among the general population. Reducing prevalence among men who have sex with men is a critical measure of a national-level response to HIV.

Note: Countries with generalized epidemics may also have a concentrated sub-epidemic among one or more most-at-risk population. If so, it would be valuable for them to calculate and report on this indicator for those populations.

Numerator: Number of respondents who test positive for HIV.

Denominator: Number of respondents tested for HIV.

Measurement

UNAIDS and WHO Working Group on Global HIV/AIDS and STI Surveillance: Guidelines among populations most at risk for HIV (WHO/UNAIDS, 2011). This indicator is calculated using data from HIV tests conducted among respondents in the primary sentinel site or sites. The sentinel surveillance sites used for the calculation of this indicator should remain constant to allow for the tracking of changes over time. For further information, please consult the following website: http://www.unaids.org/en/HIV_data/Methodology/default.asp Revised guidelines on HIV surveillance for key populations at higher risk are available at: http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2011/20110518_Surveillance_among_most_at_risk.pdf

Data source: HIV sero-sentinel surveillance

Frequency: Annual

Strengths and weaknesses: In theory, assessing progress in reducing the occurrence of new infections is best done through monitoring changes in incidence over time. However, in practice, prevalence data rather than incidence data are available.

In analyzing prevalence data of men who have sex with men for the assessment of prevention programme impact, it is desirable not to restrict analysis to young people but to report on those persons who are newly initiated to behaviours that put them at risk for infection (e.g. by restricting the analysis to people who first had sex with another man within the last year). This type of analysis also has the advantage of not being affected by the effect of ART in increasing survival and thereby increasing prevalence.

If prevalence estimates are available disaggregated by greater than and less than one year of sexual activity with other men countries are strongly encouraged to report this disaggregation in their Country Progress Report, and to use the comments field in the reporting tool for this indicator to present disaggregated estimates.

Due to difficulties in accessing men who have sex with men, biases in sero-surveillance data are likely to be far more significant than in data from a more general population, such as women attending antenatal clinics. If there are concerns about the data, these concerns should be reflected in the interpretation.

An understanding of how the sampled population(s) relate to any larger population(s) sharing similar risk behaviours is critical to the interpretation of this indicator. The period during which people belong to a key population is more closely associated with the risk of acquiring HIV than age. Therefore, it is desirable not to restrict analysis to young people but to report on other age groups as well.

Trends in HIV prevalence among men who have sex with men in the capital city will provide a useful indication of HIV-prevention programme performance in that city. However, it will not be representative of the situation in the country as a whole.

The addition of new sentinel sites will increase the samples representativeness and will therefore give a more robust point estimate of HIV prevalence. However, the addition of new sentinel sites reduces the comparability of values. As such it is important to use consistent sites when undertaking trend analyses.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/850.

HIV indicator
Impact indicator

Percentage of people who inject drugs who are HIV-infected (HIV –I5)

Rationale

It measures progress on reducing HIV prevalence among people who inject drugs.

People who inject drugs typically have the highest HIV prevalence in countries with either concentrated or generalized epidemics. In many cases, prevalence among these populations can be more than double the prevalence among the general population. Reducing prevalence among people who inject drugs is a critical measure of a national-level response to HIV.

Countries with generalized epidemics may also have a concentrated sub-epidemic among people who inject drugs. If so, it is valuable for them to calculate and report on this indicator for those populations.

Numerator: Number of respondents who test positive for HIV.

Denominator: Number of respondents tested for HIV.

Measurement

UNAIDS and WHO Working Group on Global HIV/AIDS and STI Surveillance: Guidelines among populations most at risk for HIV (WHO/UNAIDS, 2011). This indicator is calculated using data from HIV tests conducted among respondents in the primary sentinel site or sites or in the context of a surveillance survey. The sentinel surveillance sites used for the calculation of this indicator should remain constant to allow for the tracking of changes over time. For further information, please consult the following website: http://www.unaids.org/en/HIV_data/Methodology/default.asp Revised guidelines on HIV surveillance for key populations at higher risk are available at: http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2011/20110518_Surveillance_among_most_at_risk.pdf

Data source: HIV sero-sentinel surveillance

Frequency: Annual

Strengths and weaknesses: In theory, assessing progress in reducing the occurrence of new infections is best done through monitoring changes in incidence over time. However, in practice, prevalence data rather than incidence data are available.

In analysing prevalence data of people who inject drugs for the assessment of prevention programme impact, it is desirable not to restrict analysis to young people but to report on those persons who are newly initiated to behaviours that put them at risk for infection (e.g. by restricting the analysis to people who have initiated injecting drug use within the last year). This type of analysis also has the advantage of not being affected by the effect of ART in increasing survival and thereby increasing prevalence.

If prevalence estimates are available disaggregated by greater than and less than one year of injecting drugs countries are strongly encouraged to report this disaggregation in their Country Progress Report, and to use the comments field for this indicator in the reporting tool to present disaggregated estimates.

Due to difficulties in accessing people who inject drugs, biases in sero-surveillance data are likely to be far more significant than in data from a more general population, such as women attending antenatal clinics. If there are concerns about the data, these concerns should be reflected in the interpretation.

An understanding of how the sampled population(s) relate to any larger population(s) sharing similar risk behaviours is critical to the interpretation of this indicator. The period during which people belong to a key population is more closely associated with the risk of acquiring HIV than age. Therefore, it is desirable not to restrict analysis to young people but to report on other age groups as well.

Trends in HIV prevalence among people who inject drugs in the capital city will provide a useful indication of HIV-prevention programme performance in that city. However, it will not be representative of the situation in the country as a whole.

The addition of new sentinel sites will increase the samples representativeness and will therefore give a more robust point estimate of HIV prevalence. However, the addition of new sentinel sites reduces the comparability of values. As such it is important to use consistent sites when undertaking trend analyses.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/855.

HIV indicator
Impact indicator

Percentage of adults and children with HIV known to be on treatment 12 months after initiation of antiretroviral therapy (HIV – I6)

Rationale

It measures progress in increasing survival among infected adults and children by maintaining them on antiretroviral therapy.

One of the goals of any antiretroviral therapy. programme is to increase survival among infected individuals. As antiretroviral therapy. is scaled up in countries around the world, it is also important to understand why and how many people drop out of treatment programmes. These data can be used to demonstrate the effectiveness of those programmes and highlight obstacles to expanding and improving them.

Numerator: Number of adults and children who are still alive and on treatment at 12 months after initiating treatment

Denominator: Total number of adults and children who initiated antiretroviral therapy who were expected to achieve 12-month outcomes within the reporting period, including those who have died since starting antiretroviral therapy., those who have stopped antiretroviral therapy, and those recorded as lost to follow-up at month 12.

Measurement

Explanation of Numerator: The numerator requires that adult and child patients must be alive and on ART at 12 months after their initiation of treatment. For a comprehensive understanding of survival, the following data must be collected:

- Number of adults and children in the ART start-up groups initiating ART at 12 months prior to the end of the reporting period (denominator)
- Number of adults and children still alive and on ART at 12 months after initiating treatment (numerator).

The numerator does not require patients to have been on antiretroviral therapy continuously for the 12-month period. Patients who may have missed one or two appointments or drug pick-ups, and temporarily stopped treatment during the 12 months since initiating treatment but are recorded as still being on treatment at month 12 are included in the numerator. On the contrary, those patients who have died, stopped treatment or been lost to follow-up at 12 months since starting treatment are not included in the numerator.

For example, for those patients who started antiretroviral therapy in May 2009, if at any point during the period May 2009 to May 2010 these patients die, are lost to follow-up (and do not return), or stop treatment (and do not restart), then at month 12 (May 2010), they are not on antiretroviral therapy, and not included in the numerator. Conversely, a patient who started antiretroviral therapy in May 2009 and who missed an appointment in June 2009, but is recorded as on antiretroviral therapy in May 2010 (at month 12) is on antiretroviral therapy and will be included in the numerator. What is important is that the patient who has started antiretroviral therapy in May 2009 is recorded as being alive and on antiretroviral therapy after 12 months, regardless of what happens from May 2009 to May 2010.

Explanation of Denominator

The denominator is the total number of adults and children in the antiretroviral therapy start-up groups who initiated antiretroviral therapy at any point during the 12 months prior to the beginning of the reporting period, regardless of their 12-month outcome.

For example, for the reporting period January 1 to December 31 2009, this will include all patients who started antiretroviral therapy during the 12-month period from January 1 to December 31 2008. This includes all patients, both those on antiretroviral therapy as well as those who are dead, have stopped treatment or are lost to follow-up at month 12.

At the facility level, the number of adults and children on antiretroviral therapy at 12 months includes patients who have transferred in at any point from initiation of treatment to the end of the 12-month period and excludes patients who have transferred out during this same period to reflect the net current cohort at each facility. In other words, at the facility level, patients who have transferred out will not be counted either in the numerator or the denominator. Similarly, patients who have transferred in will be counted in both the numerator and denominator. At the national level, the number of transferred-in patients should match the number of transferred-out patients. Therefore, the net current cohort (the patients whose outcomes the facility is currently responsible for recording—the number of patients in the start-up group plus any transfers in, minus any transfers out) at 12 months should equal the number in the start-up cohort group 12 months prior.

Programme monitoring tools; cohort/group analysis forms. Antiretroviral therapy registers and antiretroviral therapy cohort analysis report form. The reporting period is defined as any continuous 12-month period that has ended within a pre-defined number of months from the submission of the report. The pre-defined number of months can be determined by national reporting requirements. If the reporting period is January 1 to December 31 2011, countries will calculate this indicator by using all patients who started antiretroviral therapy. any time during the 12-month period from January 1 to December 31 2010. If the reporting period is July 1 2010 to June 30,2011, countries will include patients who started antiretroviral therapy from July 1, 2009 to June 30, 2010. A 12-month outcome is defined as the outcome (i.e., whether the patient is still alive and on antiretroviral therapy, dead or lost to follow-up) at 12 months after starting antiretroviral therapy. For example, patients who started antiretroviral therapy during the 12-month period from January 1 to December 31 2009 will have reached their 12-month outcomes for the reporting period of January 1 to December 31 2011.

Data source: Program records

Frequency: Annual

Strengths and weaknesses: Using this denominator may underestimate true "survival", since a proportion of those lost to follow-up are alive. The number of people alive and on antiretroviral therapy (i.e. retention on antiretroviral therapy) in a treatment cohort is captured here.

Priority reporting is for aggregate survival reporting. If comprehensive cohort patient registries are available then it is encouraged for countries to track retention on treatment at 24, 36, and 48 months and yearly thereafter. This will enable comparison over time of survival on ART. As it stands, it is possible to identify whether survival at 12 months increases or decreases over time. However, it is not possible to attribute cause to these changes. For example, if survival at 12 months increases over time, this may reflect an improvement in care and treatment practices or earlier initiation of ART. The retention on antiretroviral therapy at 12 months therefore needs to be interpreted in view of the baseline characteristics of the cohort of patients at the start of antiretroviral therapy: mortality will be higher in sites where patients accessed antiretroviral therapy at a later stage of infection. Therefore, collection and reporting of survival over longer durations of treatment outcomes may provide a better picture of the long-term effectiveness of ART.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/860.

HIV indicator
Impact indicator

Estimated percentage of child infections from HIV-infected women delivering in the past 12 months – estimated mother-to –child transmission (HIV-I7)

Rationale

It measures progress towards eliminating mother-to-child HIV transmission.

Efforts have been made to increase access to interventions that can significantly reduce mother-to-child transmission, including combination antiretroviral prophylactic and treatment regimens and strengthened infant-feeding counselling. It is important to assess the impact of PMTCT interventions in reducing new paediatric HIV infections through mother-to-child transmission.

The percentage of children who are HIV-positive should decrease as the coverage of interventions for PMTCT and the use of more effective regimens increases.

Numerator: The numerator is the estimated number of children who will be newly infected with HIV due to mother-to-child transmission among children born in the previous 12 months to HIV-positive women.

Denominator: Estimated number of HIV positive women who delivered in the previous 12 months.

Measurement

The mother-to-child transmission probability differs with the antiretroviral drug regimen received and infant-feeding practices. The transmission can be calculated by using the Spectrum model. The Spectrum computer programme uses the information on: a) the distribution of HIV-positive pregnant women receiving different antiretroviral regimens prior to and during delivery (peripartum) by CD4 category of the mother b) the distribution of women and children receiving antiretrovirals after delivery (postpartum) by CD4 category of the mother c) the percent of infants who are not breastfeeding in PMTCT programmes by age of the child d) mother-to-child transmission of HIV probabilities based on various categories of antiretroviral drug regimen and infant feeding practices. The estimated national transmission rate is reported in the Children 0-14 summary display in Spectrum. This variable can also be calculated using the variables in Spectrum on "New HIV infections" for children 0-14 years and dividing this by the variable "Women in need of PMTCT". There is not enough information available about other HIV transmission routes for children to include such infections in the model. In addition other modes of transmission are believed to be a small fraction of the overall infections among children. The Spectrum output variable "New HIV infections for children 0-1 years" is not used because some infections due to breastfeeding will take place after age 1 year. Spectrum software is a suite of models that can be used to project the impact of the HIV epidemic. Spectrum is developed by Futures Institute and can be downloaded from http://www.futuresinstitute.org/Pages/Spectrum.aspx. Default values exist in Spectrum if data are not available from the country. In the Spectrum model, children 0-14 can only become infected through mother to child transmission, and thus represents the estimated number of children newly infected with HIV, which is represented by the Spectrum output variable "New HIV infections (children 0-14)".

Data source: Projection Modelling

Frequency: Annual

Strengths and weaknesses: Over time, this indicator assesses the ability of PMTCT programmes by estimating the impact of increases in the provision of antiretroviral drugs and the use of more efficacious regimens and optimal infant feeding practice. This indicator is generated from a model, which provides estimates of HIV infection in children. The estimated indicator is reliant on the assumptions and data used in the model. The indicator may not be a true measure of mother-to-child transmission. For example, in countries where other forms of PMTCT (e.g. caesarean section) are widely practised, the indicator will overestimate mother-to-child transmission. It also relies on programme data that often captures antiretroviral drug regimens provided rather than taken, thus could underestimate mother-to-child transmission.

This indicator allows countries to assess the impact of PMTCT programmes by estimating the HIV transmission rate from HIV positive women to their children. It is difficult to follow up mother–children pairs, particularly at national level, because of the lag in reporting and the multiple health facility sites that mother-child pairs can visit for the wide range of PMTCT and child care interventions delivered over a timespan. In countries where data are available, facility attendance is high, and confirmatory tests are conducted systematically, efforts should be made to monitor the impact through directly assessing the percentage of children found to be HIV-positive among those born to HIV-positive mothers. All countries should make efforts to monitor the HIV status and survival of children born to HIV-positive women, gathered during follow-up health care visits.

Resources

UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/858.

Monitoring and Evaluating the Prevention of Mother-to-Child Transmission of HIV: A guide for national programmes. Towards the Elimination of Mother-to-Child Transmission, 2011. Available at: http://www.who.int/hiv/pub/me/en/index.html.

HIV indicator
Impact indicator

Percentage of newly registered people with TB who are HIV positive (HIV-I8)

Rationale
Surveillance of HIV prevalence among TB patients will give information about the epidemics of both TB and HIV. In particular, it indicates the degree of overlap in the epidemics in any given setting and, when compared with the HIV prevalence in the general population, indicates the contribution of HIV to the TB epidemic in any given setting.

Numerator: Total number of all TB patients registered during the reporting period with documented HIV-positive status

Denominator: Total number of TB patients registered during the reporting period with documented HIV status (and included in the surveillance system)

Measurement
Selecting the appropriate strategy for HIV surveillance among TB patients depends mainly on the existing surveillance system and the underlying HIV epidemic state in a country. There are three main methods for surveillance of HIV among TB patients. Routine HIV testing data can form the basis of a reliable surveillance system at all levels of HIV epidemic (low-level, concentrated and generalized), provided that high coverage is achieved (more than 80 percent of all TB patients giving consent and being tested). These routine data can be calibrated by periodic (special) or sentinel surveys. Sentinel surveillance collects information regularly and consistently from a predetermined number of people from specific sites and population groups that are of particular interest or are representative of a larger population. The difficulty with sentinel surveillance is in determining how representative the people are of the population from which they are taken and how representative they are of the general population of TB patients. Sentinel surveillance systems are usually based on unlinked anonymous testing methods, often using blood specimens that have been collected for other purposes and stripped of all identifying markers. Periodic special surveys have a specific role in which the prevalence of HIV among TB patients has not been previously estimated and are an essential part of the initial assessment of the situation. Surveys using representative sampling methods and appropriate sample sizes can provide accurate estimates of the burden of HIV among TB patients. This information may alert TB programs to a potential HIV problem and enable action to be taken that may include the implementation of more systematic surveillance. Surveillance of HIV prevalence should ideally include all newly registered TB patients, diagnosed according to international standards. However, if periodic special surveys or sentinel methods are used and resources are limited, countries may choose to include only adults with smear-positive pulmonary TB: those with a definitive diagnosis of TB. Countries with scarce resources in which the HIV epidemic state is either low or concentrated may also choose to only include a smaller subgroup of TB patients, such as adults aged 15–59 years. Relapse cases should be excluded from surveillance systems because of the risk of surveying the same patient twice, unless they are identified as such and the results are analyzed separately. However, relapse cases may be included and need not be identified as such if surveillance is based on survey methods and these surveys are undertaken over a short period of time, ideally less than 2–3 months.

Data source: HIV sero-sentinel surveillance, special study

Frequency: Annually

Resources
UNAIDS Indicator Registry. UNAIDS: Geneva. Available at: http://www.indicatorregistry.org/node/773.

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