

# COLLECTING AND REPORTING OF SEX- AND AGE-DISAGGREGATED DATA ON ADOLESCENTS AT THE SUB-NATIONAL LEVEL



## Acknowledgements

This document was produced by UNICEF headquarters through a joint effort of the Data and Analytics Section, Division of Data, Research and Policy, and HIV Section, Programme Division. The document was co-authored by Chiho Suzuki, Statistics and Monitoring Specialist and Tyler Porth, Statistics and Monitoring Officer, with support from Priscilla Idele, Chief of Data Analysis Unit. The document also benefited from review and input from Susan Kasedde, Senior Specialist and Team Leader, HIV (Adolescents); Tajudeen Oyewale, Programme Specialist HIV (Adolescents); and Padraic Murphy, Consultant for HIV/AIDS Statistics and Monitoring.

Technical reviews were also provided by the members of the Strategic Information Working Group of the Inter-Agency Task Team on HIV/AIDS and Young People, with valuable inputs from staff at CDC, Atlanta and USAID, Washington D.C.

Particular thanks go to Braeden Rogers for her technical inputs during the conceptualization of this document, Padraic Murphy for his extensive efforts in consolidating and editing the document, to Natalie Leston for copy-editing, and to Era Porth for design and lay-out.

# Contents

I. Background . . . . .	01
II. Purpose . . . . .	01
III. Data Sources, Strengths and Limitations . . . . .	02
IV. Collecting and Reporting Adolescent Sex- and Age-Disaggregation. . . . .	06
i. Selecting indicators . . . . .	06
ii. Data availability . . . . .	06
iii. Proxy indicators . . . . .	07
iv. Selecting geographical locations . . . . .	07
v. Sampling or selection of service sites . . . . .	07
vi. Data abstraction from selected site . . . . .	08
vii. Data collection, management and analysis. . . . .	10
V. Calculating and Estimating Denominators. . . . .	11
VI. Data Review and Strategic Planning. . . . .	13
VII. Integrating Adolescent Sex- and Age-Disaggregated Data into Routine Monitoring . . . . .	14
Appendix 1: Preparing for Data Abstraction – A Few Helpful Tips . . . . .	15
Appendix 2: Generic Indicator Table for HIV Interventions . . . . .	16
Appendix 3: Templates for Data Abstraction Summary Sheets . . . . .	26

## TABLES AND FIGURES

Table 1: Data source strengths and limitations. . . . .	03
Table 2: Selected examples by data source category. . . . .	09

# I. Background

The paucity of sex and age disaggregated data on adolescents remains a critical element to be addressed in many countries working towards improved health and developmental outcomes for adolescents. Sex- and age-disaggregated programme data are often unavailable in national information systems for the adolescent cohort. Moreover, survey data availability is affected in contexts where legal barriers and ethical concerns restrict the collection of adolescent data, particularly in areas like family planning and sexual and criminalized behaviours (e.g., men who have sex with men or injecting drug users). With the World Health Organization (WHO) reporting that only half of the proposed adolescent health indicators show coverage of more than 50 per cent for the world's adolescents, it is clear that adolescent data disaggregation efforts must be accelerated.<sup>1</sup>

Adolescent sex- and age-disaggregated data are urgently needed to inform programme design and

implementation, particularly at the sub-national level. Without such data at the sub-national level, the understanding of the situation for adolescents often remains incomplete, as national-level data, where available, often masks sub-national or sub-population disparities; e.g., programme coverage gaps or inequity in outcomes across regions or populations. The collection of more granular, sub-national data is an initial step towards uncovering these disparities that may not be apparent in the national-level aggregate data. As programme efforts are intensified, systematic and higher-quality sex- and age-disaggregated data will be relied upon to monitor progress and tailor programmes to respond to differences by sex, age, place of residence and socio-economic factors.<sup>2</sup> Ultimately, with the collection and reporting of sex- and age-disaggregated data at the sub-national level, national stakeholders and policymakers are better equipped to strategically plan and implement programmes to improve social and developmental outcomes for adolescents.

# II. Purpose

This document guides countries through the process of collecting and reporting sub-national data on adolescents to inform programme planning and implementation efforts. This guidance has been developed with the specific aim of identifying data gaps for adolescents and informing immediate programme planning needs at the sub-national level. Specifically, where national systems are being adapted to integrate adolescent sex- and age-disaggregated data into routine monitoring, this guidance informs interim measures to fill data gaps to capture and report adolescent age- and sex-disaggregated data. It is neither designed nor intended to replace existing national monitoring or

global reporting mechanisms.<sup>3</sup>

As the content of this guidance draws on examples primarily from the HIV sector to illustrate the collection of sub-national data and service site statistics, it has drawn heavily on the *WHO Consolidated Strategic Information Guidelines for HIV in the Health Sector*. Please note, however, that the guidance may be applied with modification to disaggregation efforts beyond HIV-specific interventions within and outside of the health sector. Furthermore, this guidance draws on the experiences of collecting and reporting sub-national data on adolescents in a number of countries.<sup>4</sup>

1 World Health Organization, *Health for the World's Adolescents: A second chance in the second decade*, WHO, Geneva, 2014.

2 Idele, Priscilla, et al., 'Epidemiology of HIV and AIDS among Adolescents: Current status, inequities, and data gaps', *Journal of Acquired Immune Deficiency Syndrome*, vol. 66, 2014, pp. S144–S153.

3 For more on recommended approaches to integrating adolescent age- and sex-disaggregated data into routine monitoring, see section VII on page 17.

4 Zimbabwe's experience in the adaptation of the '2013 World Health Organization Consolidated Guidelines on the Use of Antiretroviral' and status of its implementation in the country, 2015; Optimizing HIV Treatment Access (OHTA) for Pregnant and Breastfeeding Women Initiative: Assessment of facility-community characteristics for better PMTCT outcomes, 2014 (Malawi, Democratic Republic of the Congo and Uganda); Uganda's experience in 'Laying the Ground for Scale of ART for adolescents: Experience from Uganda', presented at the 2013 International Conference for AIDS and sexually transmitted infections (STIs) in Africa (ICASA) Conference.

Of those countries seeking to fill data gaps regarding adolescent age-disaggregated data at the sub-national level, the primary users of this guidance may include national stakeholders tasked with collecting and reporting on data, a process that involves estimating denominators and collecting numerators from existing service sites, as well as drawing on sub-national estimates from household surveys or surveillance data where appropriate. Obtaining and reporting these data can facilitate analyses aimed at identifying and addressing programme coverage gaps and bottlenecks.

For those countries pursuing assessments at the sub-national level through the All In initiative, this guidance also serves as a companion to the *All In Guidance Document: Strengthening the adolescent component*

*of national HIV programmes through country assessments.* For reference, the table of generic indicators for adolescent HIV interventions from the guidance document is reproduced in Appendix 1.

This document proceeds with an overview of the data sources and their corresponding strengths and limitations. Next, the process of collecting and reporting adolescent sex- and age-disaggregated data at selected geographical locations is discussed, with a focus on data availability, selection of indicators and sites, sampling considerations, data abstraction, and data collection, management and analysis. Lastly, data review, strategic planning and sex- and age-disaggregated data integration are discussed to complete the data continuum cycle.

### III. Data Sources, Strengths and Limitations

The ability of data collection systems to generate comprehensive patient information to inform planning, management and analysis of care and patient outcomes is often limited by the absence of a uniform system to monitor patient care across multiple points of contact. This lack of integration across parallel systems speaks to a larger effort required to harmonize data collection across systems throughout the continuum of care. As efforts intensify to collect and report sex- and age-disaggregated adolescent data at the sub-national level, it is imperative that countries (1) bear in mind the limitations associated with the particular data sources from which data are derived and (2) strategically approach data collection efforts to maximize utility while contributing to data collection system strengthening efforts. This section provides

an overview of data sources, examples, and strengths and limitations (Table 1).

#### BOX 1

#### Comparisons across Data Sources

Some indicator data, such as HIV prevalence, can be obtained from multiple sources: household surveys, targeted surveys, programme statistics and modelled estimates. In such cases, it is stressed that comparisons across data sources cannot be made, as methodologies, degree of rigour and target populations vary widely.

TABLE 1

## Data source strengths and limitations

Data source	Strengths	Limitations <sup>5</sup>
<b>Programme and administrative records</b>		
<p><i>Health facility programme data</i></p> <ul style="list-style-type: none"> <li>• Patient monitoring data; i.e., individual patient records recorded via electronic or paper-based systems</li> <li>• Case reporting data from passive surveillance</li> <li>• Outreach-based data for adolescents; e.g., community-based testing, school health services</li> </ul>	<ul style="list-style-type: none"> <li>• Monitoring data for each individual are routinely available through client intake forms and registers</li> <li>• Data recorded by age of client, permitting calculation of indicators specific to adolescents</li> </ul>	<ul style="list-style-type: none"> <li>• Data quality concerns regarding accuracy and completeness; data are often aggregated for higher-level reporting, which limits the possibility to examine adolescent-specific indicators; and facility-based data often do not include private facilities (in contexts where adolescents are more likely to seek services at private facilities, data from public facilities are likely to under-report adolescent service use)</li> <li>• Some longitudinal systems capture age but not date or birth, or sometimes only date of birth; this can cause challenges in maintaining updated patient age or knowing when patients graduate into adult services</li> <li>• Case reporting only provides a general impression of the magnitude and geographical distribution due to many cases going undetected</li> <li>• Even when done as part of the facility programme, outreach-based data for adolescents may also be captured through a parallel system that might limit the scope of the patient's care and may introduce double-counting</li> </ul>
<p><i>NGO/CBO outreach data</i></p> <ul style="list-style-type: none"> <li>• Outreach data comprising non-governmental organization (NGO) or community-based organization (CBO) records that collect data on a particular key population or geographical location</li> </ul>	<ul style="list-style-type: none"> <li>• Monitoring data for each individual participant/client in the programme are available in NGO/CBO registers and records</li> <li>• If age of participant/client is recorded, calculations of data specific to adolescents is possible</li> </ul>	<ul style="list-style-type: none"> <li>• Data quality regarding accuracy and completeness affected by varied monitoring and evaluation (M&amp;E) capacity across NGOs and CBOs</li> </ul>
<p><i>Financial and health system records</i></p> <ul style="list-style-type: none"> <li>• Financial records – e.g., National Health Accounts (NHA) or National AIDS Spending Assessment (NASA); procurement, supply management, and human resources data; relevant policies; facilities listings; and public or private health insurance data, if available</li> </ul>	<ul style="list-style-type: none"> <li>• Data are available and require no additional effort to collect</li> </ul>	<ul style="list-style-type: none"> <li>• Data quality regarding accuracy and completeness varies widely; and differences across administrative systems can complicate data collation efforts – e.g., misclassified or duplicate data</li> <li>• Some data may be perceived as sensitive (e.g., financial records) and may be difficult to access</li> </ul>
<p><i>Civil registration and vital statistics (CRVS)</i></p> <ul style="list-style-type: none"> <li>• Civil registry data – e.g., birth and death records</li> </ul>	<ul style="list-style-type: none"> <li>• In countries with mature CRVS systems, data on cause of death (e.g., AIDS-related death) may be available</li> </ul>	<ul style="list-style-type: none"> <li>• Data quality regarding accuracy and completeness varies widely between countries and within geographical locations and populations; may encounter poor compliance with reporting requirements, misclassification or incomplete cause/s of death</li> </ul>

<sup>5</sup> MEASURE Evaluation, 'Summary of Methodologies to Measure Prevention of HIV/AIDS among Young People', 2013.

Data source	Strengths	Limitations <sup>5</sup>
<b>Population-based surveys</b>		
<p><i>General population surveys</i></p> <ul style="list-style-type: none"> <li>• Demographic and Health Survey (DHS), Multiple Indicator Cluster Survey (MICS) and AIDS Indicator Survey (AIS)</li> </ul>	<ul style="list-style-type: none"> <li>• Household and individual questionnaires usually conducted every 3–5 years with female and male participants ages 15–49 years old (for some surveys, male age range may be 15–59)</li> <li>• Range of outcome-level indicators can be disaggregated by age to identify the older adolescent and youth population; this sample is representative of general population of older adolescents/youth living in households that can be compared across time and countries</li> <li>• Wide range of outcome-level indicators collected across many countries (comparability)</li> <li>• Can measure programme coverage</li> <li>• Instruments well tested (quality control)</li> </ul>	<ul style="list-style-type: none"> <li>• Typically not designed for district-level estimates; data not routinely collected (e.g., every 3–5 years); and not recommended for concentrated epidemics where a prohibitively large sample size would be required to achieve representative samples of sub-populations</li> <li>• Data cannot detect small changes or changes over short periods of time without large sample sizes</li> <li>• Estimating HIV prevalence among youth is expensive to collect; also, where the HIV prevalence is low, a large sample size is needed to permit having reliable estimates; this also increases the costs</li> </ul>
<p><i>Key population surveys</i></p> <ul style="list-style-type: none"> <li>• Behavioural Surveillance Surveys (BSS); Behavioural and Biological Surveillance Surveys (BBSS); Integrated Bio- and Behavioural Surveys (IBBS)</li> </ul>	<ul style="list-style-type: none"> <li>• Detailed information collected to track risk behaviours and high-risk behaviour concurrency in specific target groups and high-risk populations to inform prevention efforts</li> <li>• Able to focus data collection on groups most at risk for acquiring and transmitting HIV</li> <li>• Highly adaptable to meet specific needs regarding the state of a country's epidemic and programme activities – behaviour data may provide early warning signs for increases in HIV transmission</li> </ul>	<ul style="list-style-type: none"> <li>• Provide information on specific sub-populations but <b>cannot be extrapolated to the general population</b></li> <li>• Inquiring about sensitive behaviours may not elicit accurate information (respondents may not provide honest information on sensitive behaviours); data triangulation often needed through complementary qualitative data to achieve a complete picture; and necessitates secure data collection and management systems and ethical protocols to protect subjects</li> <li>• Collect highly sensitive information on target groups vulnerable to stigmatization; must have sophisticated system to protect subjects and data collected</li> </ul>
<p><i>Global School-Based Student Health Survey (GSHS)</i></p>	<ul style="list-style-type: none"> <li>• Allows for comparability of school-based HIV prevention programmes and youth risk behaviours within and across countries</li> <li>• May provide a representative sample of youth depending on country and region-specific enrolment</li> <li>• Standard scientific sample selection process; generalizable to school-based populations</li> </ul>	<ul style="list-style-type: none"> <li>• Selection bias (only captures information from youth in school)</li> <li>• Limited age range (GSHS is a school-based survey conducted primarily among students 13–17 years old)</li> </ul>
<p><i>Health facility surveys</i></p> <ul style="list-style-type: none"> <li>• Service Availability and Readiness Assessment (SARA);</li> <li>• Service Provision Assessment (SPA)</li> </ul>	<ul style="list-style-type: none"> <li>• Provide data on health systems' capacity, service readiness and availability, equipment and supplies, logistics, facility and provider performance; may be used to inform policy and planning, staffing and budgeting</li> </ul>	<ul style="list-style-type: none"> <li>• Representativeness may be incomplete if surveys exclude private facilities; the establishment of a mechanism to collect private-sector data may be required</li> </ul>

Data source	Strengths	Limitations <sup>5</sup>
<b>Sentinel surveillance</b>		
<ul style="list-style-type: none"> <li>• Data collected from sentinel sites over time</li> </ul>	<ul style="list-style-type: none"> <li>• Data collected in a well-designed sentinel system can be used to assess trends, identify outbreaks/spikes in disease prevalence and monitor the burden of disease in a community, providing a rapid, economical alternative to other surveillance methods.<sup>6</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Because sentinel surveillance is conducted only in selected locations, it may not be as effective for detecting rare diseases or diseases that occur outside the catchment areas of the sentinel sites.<sup>7</sup></li> <li>• Analysis of data from sentinel sites may have limited generalizability when surveillance is not universal; i.e., sentinel surveillance data may only be representative of the particular geographical locations and populations being surveyed</li> </ul>
<b>Modelled estimates</b>		
<ul style="list-style-type: none"> <li>• Epidemiological and demographic data derived from statistical modelling – e.g., Joint United Nations Programme on HIV/AIDS (UNAIDS) Spectrum</li> </ul>	<ul style="list-style-type: none"> <li>• Allow programme managers to predict the effectiveness of HIV interventions and assess their cost-effectiveness</li> <li>• Relatively easy to implement</li> <li>• Modelled estimates are based on data from national programmes, nationally representative surveys, as well as fertility and demographic models, and generate data that are otherwise not readily available</li> </ul>	<ul style="list-style-type: none"> <li>• Require substantial amount of data on a wide variety of indicators; results only as valid as the data inputs in the model</li> <li>• Statistical modelling presupposes a degree of uncertainty (e.g., UNAIDS Spectrum uncertainty ranges); modelling improvements often necessitate updated assumptions, leading to estimates that may vary more than anticipated</li> </ul>

6 <[www.who.int/immunization/monitoring\\_surveillance/burden/vpd/surveillance\\_type/sentinel/en/](http://www.who.int/immunization/monitoring_surveillance/burden/vpd/surveillance_type/sentinel/en/)>, accessed 31 August 2015.

7 <[www.who.int/immunization/monitoring\\_surveillance/burden/vpd/surveillance\\_type/sentinel/en/](http://www.who.int/immunization/monitoring_surveillance/burden/vpd/surveillance_type/sentinel/en/)>, accessed 31 August 2015.

## IV. Collecting and Reporting Adolescent Sex- and Age-Disaggregated Data

As countries embark on processes to integrate adolescent sex and age disaggregation data into routine monitoring, *periodic rapid assessments* at the sub-national level are recommended whereby adolescent data are collected and reported from a purposive or convenience sample of service sites in selected geographical location(s).<sup>8,9</sup> The data collected serve to fill the 'data gap' on adolescents at the sub-national level, contribute to dialogues on adolescent programmes and policies, and may also inform design of a future study seeking to produce more representative results. With those considerations in mind, the following sections discuss the periodic rapid assessment process, from selecting indicators to reviewing and analysing collected data.

### i. Selecting indicators

Countries seeking to collect and report adolescent sex- and age-disaggregated data should select those indicators deemed most context-appropriate and that not only inform a more complete picture of the status of adolescents in a given geographical area, but also facilitate the identification of bottlenecks preventing effective coverage of interventions. To this end, it is recommended that countries employ the determinant analysis framework<sup>10</sup> in pursuit of strengthening adolescent programming through collection of more robust data for sub-national level analysis.<sup>11</sup> This framework looks at a comprehensive set of indicators related to supply, demand, quality and enabling environment. It also assesses the social norms and practices that influence certain behaviour in the specific geographic location. Arrival at such a set of indicators may best be pursued through an inclusive selection process that brings together key stakeholders across national government, United Nations agencies, and local and

international NGOs, including adolescents and young people working on the intervention area of interest.

### ii. Data availability

In many cases, sub-national data for selected indicators may already be available at the national level (e.g., Ministry of Health or Ministry of Education) or sub-national level (e.g., district health or education office). For example, for the intervention related to life skills-based education (LSBE) or comprehensive sexuality education (CSE), it is likely the numerator and denominator for the indicator that examines a supply side dimension – *Proportion of primary schools with at least one teacher trained on teaching LSBE/CSE* – are available at the Ministry of Education or the district education office. Similarly, it is likely the numerator and denominator for the indicator looking at another supply side dimension (namely, human resources) – *Proportion of antiretroviral (ART) sites offering HIV treatment with a health-care worker trained to counsel adolescents on ART* – are available at the Ministry of Health, district national AIDS control programme office, or the district health office. Further, many indicators, particularly concerning the utilization and quality aspects of an intervention, will draw on secondary analysis of existing survey or census data to obtain sub-national estimates. When these sources lack sufficient data for the indicator of interest, it may be necessary to conduct data abstraction from programme records. For example, in looking at an intervention such as 'HIV testing and counselling for adolescents', indicators pertaining to quality may be: 'proportion of adolescents (15–19 years old) who tested positive for HIV and were initiated on treatment in the past 12 months; or 'proportion of adolescents (15–19 years old) who tested negative for HIV and were linked

8 Service site selection will be informed by the appropriate data source per indicator of interest. For example, with regard to various HIV-specific interventions, data may be obtained from health facilities; however, social protection, education or key population indicators may require selecting a sample of service sites outside of the health sector (e.g., schools, community-based organizations) where desired data are available.

9 When a convenience sample is employed – i.e., a rapid assessment means data are collected from selected sites in only a few districts – please note the following: (1) data are not generalizable to the whole country; (2) depending on the number of sites selected, data collected from selected sites in each district or region are unlikely to be generalizable at the district and regional levels; and (3) data are specific to the sites

that were selected and should be interpreted in relation to those sites only.

10 Tanahashi, T., 'Health Service Coverage and Its Evaluation', Bulletin of the World Health Organization, vol. 56, no. 2, 1978, pp. 295–303, available at <[www.ncbi.nlm.nih.gov/pmc/articles/PMC2395571/pdf/bullwho00439-0136.pdf](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2395571/pdf/bullwho00439-0136.pdf)>.

11 Specifically, the determinant analysis framework examines the supply, demand and quality aspects of interventions with a view to identifying bottlenecks preventing effective coverage of interventions. A bottleneck is a constraint affecting one or more determinants, thus impeding effective coverage. Effective coverage refers to the extent to which interventions reach their intended target population, as defined by the proportion of the target population that participates in or is reached by an intervention or adopts a desired behaviour.

to HIV prevention services in the past 12 months. Data sources for these indicators are programme records/ Health Management Information System (HMIS). In countries where data for these indicators are not reported routinely through the HMIS, the assessment team may need to embark on data abstraction from programme records maintained at health facilities.

### iii. Proxy indicators

In the event data are not available at the sub-national level due to infrequent or outdated, non-existent, or survey data that are not representative of the population of interest, countries may be prompted to select an alternative **proxy indicator** or **proxy measurement**. Regarding **proxy indicators**, countries must exercise caution when selecting a proxy so as to choose an indicator of conceptual proximity (i.e., as close as possible to the desired indicator).

It is critical that countries also take care to ensure that any **proxy indicator** under consideration is reviewed to ensure that its definition aligns as closely as possible with the unavailable desired indicator. For example, if the desired indicator concerns sexual violence, selecting an indicator concerning intimate partner violence as a proxy might not be advised, as the parameters of a sexual violence indicator are much narrower than the definition of intimate partner violence, which is broad and may include emotional, physical or sexual violence. Use as a proxy, however, may be warranted under circumstances where no other viable alternative exists.

## BOX 2

### Example: Selection of proxy indicator for condom use

If data constraints prompt a country to select an alternative for the *condom use at last sex* indicator, it would be inappropriate to substitute with *condom use at last commercial sex*, as this indicator concerns a different population altogether. Indicators that are conceptually close, like *condom use at last sex among adolescents in the previous 12 months* and *condom use at last sex among adolescents in the previous 6 months*, make more appropriate proxies, as they only differ in reference periods.

Countries may opt to construct a **proxy measurement** from various data sources when a particular indicator is unavailable or data are not at the appropriate level. For example, with regard to HIV prevalence among adolescents, countries may calculate a proxy prevalence value relying on the number of adolescents living with HIV drawn from UNAIDS Spectrum estimates as the numerator and employing a United Nations Statistics Division adolescent population estimate as the denominator. As such, when a proxy indicator is neither the product of a nationally representative survey nor an output of a global validation mechanism (e.g., UNAIDS estimates), it must be interpreted with caution. The limitations of these data sources must be appreciated, and country teams should interpret the data with caution.

### iv. Selecting geographical locations

The identification of geographic areas of focus for in-depth analysis comprises another essential component needed to construct a more complete picture for adolescent programming in a particular intervention area. For example, regarding adolescent HIV programming, in order to describe the situation of adolescents in given geographical locations, an important first step is to identify those areas within a country with the greatest HIV-related adolescent deprivation (risk; prevalence; incidence of the outcome). Existing survey and surveillance data may be used to guide this process.

### v. Sampling or selection of service sites

Taking resource limitations and efficiency into consideration, sampling of service sites for data abstraction in a given geographical location (i.e., district or sub-district) is recommended.<sup>12</sup> This might involve selecting a purposive sample (i.e., subset of service sites) in the selected area(s) to conduct rapid assessments based on meaningful criteria that maximize data collection for adolescents and generate reasonable sample sizes. Purposive selection of a subset of service sites should take into account the following with regard to adolescent HIV:

- HIV prevalence in the area;

<sup>12</sup> Note that unless country teams undertake systematic random sampling of sites in a given sub-national area, estimates derived from this exercise are not generalizable. However, they inform the picture for adolescents and HIV in that particular area.

- Youth-friendly sites;
- Large-scale or high-volume sites serving adolescents;
- Mix of urban and rural locations (i.e., geographic spread);
- Mix of type of service sites: public and private service sites, and district and sub-district level sites;
- Type of indicator desired to be measured, as some indicators yield low proportions (rare occurrence) while others yield higher proportions (common occurrence); indicators that yield higher proportions can generate a reasonable sample size more easily, but rare events (lower proportions) need a larger number of sites to enable a reasonable sample size;
- Availability of data for the desired indicators at potential locations;
- Feasibility of a rapid assessment considering anticipated costs, human resources, timelines and logistical support; and
- Small, defined geographic areas to facilitate ease of measurement

It is important that the selection criteria, process and decisions are documented; it is equally important that relevant line ministries and agencies endorse the service sites selected for data abstraction. To gain a more comprehensive perspective and with consideration given to available capacity and resources, smaller service sites at lower levels of the service delivery system may also be included. Please note, however, that existing capacities and available resources should be considered when assessing selection of lower-level sites, as the number of such sites required to achieve a sufficient sample size could prove costly and resource-prohibitive.

#### **vi. Data abstraction from selected sites**

At the outset, it is critical that key line ministries and implementing partners are engaged in the development of a data abstraction strategy and that a broader agreement is reached with respect to M&E roles and responsibilities, data abstraction sites, and indicators of interest. A consensus also needs to be reached on the mechanisms and implementation of data extraction, recording, validation, analysis and use – i.e. identify responsible parties for specified tasks and the corresponding lines of accountability.

Next, it is important for the national stakeholders to agree on how many months back the data abstraction team will go – e.g. three or six months – and whether or how to randomly select individuals from registers at high-volume sites. At high-volume sites, for example, country teams may wish to use systematic random sampling to select clients from the health facility registers using the following steps: (1) determine sampling interval; (2) randomly select first client; and then (3) utilize the sampling interval to reach the target number of clients per service site. If there are exact numbers or fewer clients than the selected sampling interval that meet the conditions of an indicator, then consider abstracting data for all clients from that service site. Also, in instances where the client volume for a given indicator is extremely low at a given selected site (e.g., number of adolescent girls initiated on ART), it is recommended that the country teams re-consider the abstraction period to allow sufficient sample (i.e., abstracting six months of records as opposed to three months).

When abstracting adolescent sex- and age-disaggregated data, take into consideration the multiple service delivery points and multiple registers within a given health facility that need to be reviewed for data abstraction. Adolescents, for examples, may be tested for HIV at antenatal care, HIV testing and counselling (HTC) and youth-friendly clinics located in separate buildings on the same compound within a large health facility. Each of these HTC sites maintains registers from which to abstract data on adolescents tested for HIV.

Furthermore, consider that services, like HTC, may also be offered in communities and schools that may be linked to a health facility in the same area where data are consolidated and summarized. If this is the case, it is important to clarify how HTC services for adolescents in communities and schools are recorded and consolidated at a nearby health facility so as not to miss or overestimate uptake of HTC among adolescents in a given geographical area.

For each of the indicators selected for sub-national analysis, it is important to consider where the information can be obtained and whether sampling is required. Table 2 provides examples and considerations to illustrate how desired indicator information may be obtained.

TABLE 2

## Selected examples by data source category

Data source	Examples of data source	Indicator examples	Comments
<b>Administrative data</b>	Ministries/national programme records	Proportion of primary schools with an LSBE/CSE curriculum	If not captured through a school-based survey, then obtain sub-national-level estimates from the national Management Information System (MIS) database (e.g., Education Management Information System (EMIS), HMIS) and ensure appropriate statistical procedures (e.g. weighting).
	Programme records at district office (e.g., health, education, social welfare)	Proportion of secondary schools providing LSBE/CSE in the first year of secondary school within the current academic year	Obtain district estimates/data from the district office.
	Programme records at service sites (e.g., health facility records, school records)	Proportion of adolescents (15–19 years old) who tested positive for HIV and were initiated on treatment in the past 12 months	Sampling may be required (see Section v: Sampling or selection of service sites); remain cognizant of potential duplicate data; many of the demand-side indicators fall into this category of data source.
	Logistics management information system (LMIS)	Proportion of health facilities currently providing HTC services that report no stock-outs of HIV test kits in the past three months	Obtain sub-national level estimates from the national LMIS database; or from the district-level LMIS database.
	CBO/NGO programme data	Proportion of villages/clusters within the geographic area providing LSBE/CSE education for out-of-school adolescents (10–19 years old) at least once during the past year	For the selected geographical location, obtain the denominator from the district office, and draw on programme records at district offices or programme records at CBO/NGOs to obtain the numerator.  If the information, particularly for the numerator, is not available, consider pursuing a Lot Quality Assurance Survey (LQAS) approach (i.e., rapid surveys) to sample village chiefs or administrators. Depending on the size of the district and the number of villages or clusters, it may not require much effort to take all (i.e., census).  Alternatively, consider gathering qualitative data through key informant interviews with the district offices (e.g., education, youth, health) to obtain an impression of the situation.
<b>Population-based surveys</b>	Household survey data (secondary data analysis)	Proportion of out-of-school adolescents (15–19 years old) who know three ways of HIV/STI transmission and two methods of HIV/STI prevention (comprehensive knowledge)	Calculate sub-national-level estimates (be mindful of cell size allowable for meaningful calculation of sub-national-level estimates for adolescent age group)
	Key population surveys (e.g., Integrated Biological and Behavioural Surveys (IBBS))	Percentage of [key population] adolescents (15–19 years old) within the geographic area who were tested for HIV and received their HIV test results in the past 12 months	Calculate sub-national-level/geographical location-specific estimates (be mindful of cell size allowable for meaningful calculation of subnational level/geographical location specific estimates for adolescent key population). Age criteria for key population surveys often start at age 15, and therefore data specific to adolescents 10–14 years old are rarely available (i.e., there may not be enough adolescents 15–19 years old in surveys), and data specific to a given geographical area may be even more limited. In that case, use the estimates for the given key population aged below 25 as proxy.

Data source	Examples of data source	Indicator examples	Comments
Facility assessments	Facility survey	Proportion of health facilities currently providing HTC services that report having at least one health-care worker trained on testing and counselling adolescents	For the selected geographical location, obtain the denominator from the district office, and draw on training records to obtain the numerator (this information may be available at the national level, by district).  If the data are not available and a country has recently had HIV Service Provision Assessment (HSPA), then obtain sub-national-level estimates through secondary analysis of data.

## vii. Data collection, management and analysis

### Development of data abstraction and summary form for data collection

While some of the key indicators may already be a part of health facility-level data collection and reporting (e.g., stock-outs), data collection and reporting tools for adolescent sex- and age-disaggregated data will likely need to be developed, pilot-tested and implemented. The age disaggregation required is less than 1 year; 1–4 years; 5–9 years; 10–14 years; 15–19 years; 20–24 years; and 25+ years. In particular, tally sheets and summary forms for data abstraction will need to be developed (see Appendix 2 for sample templates). Data abstracted at selected service sites may be managed in an electronic database system that can be further refined. Some considerations requiring consensus among the all-national stakeholders (government and partners) include:

- Who will abstract data and complete summary forms?
- Will this task be done on paper or electronically?
- Who will the summary forms be submitted to, and how (paper or electronically)?
- Who will supervise these tasks?
- Who is responsible for ensuring data quality, and how?

### Data analysis and presentation

When interpreting data abstracted from service sites, it is important to consider:

- Data collected from selected sites in a few regions/districts are:
  - o Not generalizable to the whole country
  - o Unlikely to be generalizable at the district and regional levels
  - o Specific to the sites that were selected and should be interpreted in relation to those sites only (except when sites are selected to be representative of the district/region)

Also, data from service sites may be presented in the form of:

- Summary tables
- Charts displaying performance across districts or health facilities and trends over time

Dashboards on performance across districts and service sites over time

- Maps displaying patterns across districts
- Fact sheets

## BOX 3

### Ethical considerations

To protect individuals' sensitive information, particularly behaviour(s) that may be illegal in certain countries, data should be handled with extreme care at the service sites. Registers of service records, as well as client folders and cards, *should never leave the service site and individual names should not be extracted or made public.*

## V. Calculating and Estimating Denominators

Calculating coverage for various indicators is often a challenge at the sub-national level or when using programme data since the target population (or denominator) is unknown and needs to be determined. There are various ways to determine denominators

for coverage indicators. Here we use an example of HIV to determine the distribution of adolescents living with HIV at sub-district level (i.e., different administrative units within a selected district).

### BOX 4

#### Example 1: Calculating sub-national estimates of people living with HIV

To calculate sub-national estimates of adolescents living with HIV, which in some cases represent the denominators for certain intervention coverages, the following methodology is recommended to apportion the national estimate into sub-national areas, with a corresponding calculation found in the table below.

A: Compile the following data:

- Population estimates for adolescents 10–19 years old for all sub-national areas within the national entity. This could come from a most recent census or survey, or from national estimates.
- HIV prevalence (per cent) values for each of the same sub-national areas. This could come from a recent household survey or from routine surveillance data.

B: Calculate the proportion of the adolescent population per sub-national area

- For each sub-national area, divide the population estimate for that area by the estimated population for the country. Repeat this for each sub-national area.

C: Calculate the sub-national weight of people living with HIV

- For each sub-national area, multiply the proportion of the population living with HIV in each sub-national area (from B) by the HIV prevalence (per cent) to get the weight of each area; repeat this per sub-national area.

D: Calculate the proportion of the national estimate of people (within the age group of interest) living with HIV per sub-national area

- For each sub-national area, divide the sub-national weight of people living with HIV by the sum of all the sub-national weights of people living with HIV. Repeat this for each sub-national area.

E: Calculate the estimated number of people (within the age group of interest) living with HIV per sub-national area

- For each sub-national area, multiply that area's proportion of the national estimate of people living with HIV by the national estimate of people living with HIV. Repeat this for each sub-national area.
- Check that the values of all the sub-national areas add up to the original national estimate. If they do not, please revisit the steps above and check for errors before proceeding.

#### Country X: 100,000 adolescents (10–19 years old), of which 10,000 are living with HIV

District name	Population		HIV prevalence <sup>A</sup>	District weight <sup>C</sup>	Proportion of national estimate <sup>D</sup>	Adolescents living with HIV <sup>E</sup>
	# <sup>A</sup>	% <sup>B</sup>				
District 1	50,000	50%	8%	$(.5 * .08) = .040$	$(.040 / .102) = .3922$	$(10,000 * .3922) = 3,922$
District 2	30,000	30%	14%	$(.3 * .14) = .042$	$(.042 / .102) = .4118$	$(10,000 * .4118) = 4,118$
District 3	20,000	20%	10%	$(.2 * .10) = .02$	$(.020 / .102) = .1961$	$(10,000 * .1961) = 1,961$
<b>Country X</b>	<b>100,000</b>	<b>100%</b>	<b>10%</b>	<b>.102</b>	<b>1.0</b>	<b>10,000</b>

**Notes:** (1) Since HIV prevalence data are only available at the provincial level for ages 15–24, the assumption that is being made by applying this methodology is that the pattern/distribution of HIV prevalence for ages 10–14, 15–19 and 20–24 is similar to the pattern/distribution among ages 15–24. However, this does NOT mean that we assume the magnitudes of the prevalence rates are the same across the age groups – just the patterns; and (2) this methodology will work only if all sub-national areas within the national entity are represented by both population and HIV prevalence data. In some circumstances, proxy data may be required.

**BOX 5**

**Example 2: Calculating sub-national estimates of the number of adolescents (15–19 years old) who have had sex in the past 12 months**

- Some of the generic indicators involve calculating sub-national estimates from survey data to obtain the denominator. For example, to calculate sub-national estimates of adolescents aged 15–19 years who have had sex in the past 12 months, which in some cases also represents the denominator for certain intervention coverage indicators, the following methodology is recommended:
  - o A. Obtain population estimates for adolescents aged 15–19 years old for the sub-national area or interest. This could come from the most recent census, survey or national estimates.
  - o B. Calculate the proportion of adolescents 15–19 years old who have had sex in the past 12 months for the sub-national area(s) – this information can come from a recent household survey. Note that most nationally representative household surveys are sampled in such a way to generate estimates at the national level as well as the one level immediately below (e.g., province, state, or county or region). The estimated proportions are usually not available at lower levels. Use the available estimate of the province, state or county where the selected district(s) or sub-district(s) is/are located and assume low variability among districts and sub-districts within that province, state or county.
  - o C. Using the population estimates for adolescents and the estimated proportion of adolescents 15–19 years old who have had sex in the past 12 months, calculate the estimated number of adolescents 15–19 years old who have had sex in the past 12 months.

**Country X: Number of adolescents (15–19 years old) who have had sex in the past 12 months**

District name	Population estimate of adolescents <sup>A</sup>	Estimated per cent of adolescents who have had sex in the past 12 months <sup>B</sup>	Estimated # of adolescents who have had sex in the past 12 months <sup>C</sup>
	#		
District 1	2,500	31%	(2,500*.31) = 775
District 2	1,200	34%	(1,200*.34) = 408
District 3	710	22%	(710*.22) = 156

**BOX 6**

**Example 3: Calculating sub-national key population estimates of the number of adolescents (15–19 years old) who inject drugs, are men who have sex with men (MSM), or who sell sex**

- Some of the generic indicators involve estimating the number of adolescent 15–19 years old in key populations. Size estimation studies have been implemented in a number of countries for the various key population groups. However, age-specific size estimates for each group are usually not available. In such cases, it is recommended that countries: (1) utilize the under-25 population estimate as a proxy, if available; or (2) rely on expert opinion to gain ‘consensus estimates’ by engaging organizations that provide services to key populations as well as representatives of the community of key populations.

## Countries in low and concentrated HIV epidemic settings

### *Selection of sites*

Abstracting programme service data on adolescent key populations (e.g., gay and bisexual boys, adolescents who sell sex and children exploited through selling of sex, adolescents who inject drugs, and transgender adolescents), poses a particular challenge because of criminalization and stigma towards them. It is unlikely that these data would contain information specifying key population groups. It is not common for a client in the register to be described with an identifier such as MSM, commercial sex worker (CSW) or injecting drug user (IDU). This has implications for the ability to disaggregate data by these sub-population groups. On the other hand, CBO sites providing services to key populations are likely to maintain some form of records where information pertaining to adolescents' behaviours may be available.

In low and concentrated epidemic settings where the programmes are likely to be focused on adolescent key populations, selection of data abstraction sites needs to consider how and where HIV services for key populations are delivered. More often, services for key populations are provided by NGOs, and, in a few instances, by public facilities. Care should be taken to ensure that NGOs or public facilities providing relevant services for key populations are part of the data collection process. Depending on the number of sites (NGOs and public), all or some of them might be selected for data collection purposes.

It is imperative that personal information be handled with extreme care and in strict confidence to protect the individuals whose information is being abstracted and used, as such behaviours are illegal in many countries.

## VI. Data Review and Strategic Planning

### i. Reporting and reviewing data

It is recommended that data on selected indicators be reported from the facility to sub-national and national counterparts to be reviewed following each rapid assessment. While limited due to its nature of being drawn from purposively selected sites, this process will allow programme managers at the sub-national and national levels to draw on the data to identify implementation challenges along the continuum of care and guide decisions on corrective actions to improve programmes for adolescents.

Data review meetings at the facility, sub-national and national programme levels should be held following each rapid assessment. At the review meetings, the data collected should be analysed, reviewed and used to: (1) identify and implement corrective actions; and (2) influence policy dialogue to ensure that priority solutions are reflected in national and sub-national strategies and plans. Reviews of the data for the core

indicators following each periodic assessment should occur at facility, sub-national and national programme levels. If data are collected for additional indicators, these should be reviewed alongside the core indicators to the extent possible. Key questions to consider include:

- Who will analyse and produce reports?
- How will progress be presented and shared?
- What will be the discussion forums and how frequently will the forum take place?
  - o Consider using existing mechanisms, such as support supervision, management team meetings, joint work plan or programme reviews, as well as leveraging health facility coordination teams (facility in charge, HTC staff (midwife/nurse), partners, communities at service sites, and at the district level, coordination teams at school, and youth groups).

## ii. Data use for strategic planning

It is important to engage stakeholders in the identification and monitoring of corrective actions to address challenges and avert bottlenecks at the sub-national level and among key populations. An inclusive process whereby key stakeholders identify and validate corrective actions to facilitate the development of a strategic plan to implement the actions, address emerging data needs and establish lines of accountability.

### BOX 8

For those countries pursuing county assessments at the sub-national level through the All In initiative, please refer to the All In Guidance Document: 'Strengthening the Adolescent Component of National HIV Programmes through Country Assessments'

# VII. Integrating Adolescent Sex- and Age-Disaggregated Data into Routine Monitoring

To enable disaggregated programme data collection and reporting, adjustments need to be made in the routine data collection, aggregation, and reporting systems for programme and service sites to report sex- and age-disaggregated data.<sup>13</sup> Such an adjustment requires changes to the current data system (i.e., client registers; monthly/quarterly summary forms; HMIS) as well as accompanying skills and capacity building of appropriate personnel. To engender ownership and elicit stakeholder insights, it is recommended that an inclusive process involving all relevant government and implementing partners be undertaken to this end. The integration of sex- and

age-disaggregated data into routine monitoring not only affords the opportunity to strengthen capacities and achieve a more complete picture for adolescents through data triangulation, but it also provides a prominent platform to demonstrate the utility of sex- and age-disaggregated data for programming and planning efforts. Ultimately, integrating disaggregated sub-national data into routine monitoring to close adolescent data gaps is an objective relevant to all stakeholders and across all sectors, as it pays dividends for informed and effective policy, planning, and programming approaches for adolescents.

### BOX 9

#### Key steps for integrating adolescent disaggregated data into routine monitoring

- Review of indicators and disaggregation in current registers, monthly/quarterly summary forms and HMIS system;
- Revision of registers, monthly/quarterly summary forms and National Health Monitoring Information System (NHMIS) for alignment with the global guidance documents on indicators and age disaggregation;
- Pilot-test the tools and revise as needed;
- Institutionalize systems to collect and report adolescent sex- and age-disaggregated data, including the training of personnel on the new forms;
- Analyse and review adolescent-specific sex- and age-disaggregated data as part of the routine monitoring activities; and
- Ensure commitment of sufficient resources to realize robust monitoring activities (e.g., reporting tools; programme performance or data review meetings; supervisory visits; partner support and resources; coordination mechanisms).

<sup>13</sup> Age disaggregation includes: less than 1 year; 1–4 years; 5–9 years; 10–14 years; 15–19 years; 20–24 years; and 25+ years. Data should also be disaggregated by sex.

# Appendix 1: Preparing for Data Abstraction – A Few Helpful Tips

Once the national and sub-national processes with key stakeholders have been completed, as well as the selection of interventions for sub-national analysis and associated indicators requiring data abstraction, there are steps that country teams may wish to consider to prepare for data abstraction. **The purpose of this document is to provide a few helpful ‘tips’ on how country teams may wish to organize and plan for data abstraction.**

## I. Mechanisms and implementation of data abstraction

- Agree on mechanisms and implementation of data abstraction, recording, data-quality check/validation, as well as accountability – e.g., what party oversees and is responsible for these processes or will abstracted data be recorded on paper or electronically?
- Agree on communication mechanisms and focal point (national counterpart) who supervises and coordinates with all the teams during fieldwork to ensure that any questions or issues are addressed and communicated to all the teams.
- Agree on mechanisms and implementation of data submission – i.e., who will submit the completed form to whom and how (paper or electronically)?
- Agree on roles and responsibilities for entering and managing data in a consolidated database.

## II. Develop data summary tables and tally sheets

- Develop summary tables for each indicator or each group of indicators that are to include at a minimum: sex (female/male) and age group (five-year age group is recommended). The summary form should also be designed to enable recording of the following information: month/year (of data); region/province; district; name of service site; location of site (urban vs. rural); date of data abstraction; and person responsible for the information recorded. See Appendix 2 for generic templates and examples.

- Tally sheets refer to sheets that contain tables designed for ease of data abstraction and computation to complete data summary tables. The tally sheet should also be designed to enable recording of the following information: month/year (of data); region/province; district; name of service site; location of site (urban vs. rural); date of data abstraction; and person responsible for the information recorded. See Appendix 2 for generic templates and examples.
- No personal identifiers (names or otherwise) may be abstracted even when abstracting data from individual client records at health service sites or individual children’s records at schools; there should not be a column in the summary table that indicates ‘name’ or other personal identifiers that may link personal and sensitive information to any specific individual.

## III. Training of data abstraction teams and pilot-testing

- Continue to engage with key implementing partners who might have resources to support data abstraction and in-depth analysis.
- Organize training of data abstraction teams; review the draft data summary tables and tally sheets against the national registers and forms that are found in service sites and confirm the location of each data element for abstraction, specifically the actual data source, columns and cells.
- Pilot the draft summary tables and tally sheets; adjust the draft summary tables and tally sheets as needed.

## IV. Implement data abstraction from selected sites

- Once the summary form is completed at the site and the data are checked for accuracy, copies should be made (both hard and electronic copies where possible), and the original form should be submitted according to the agreed mechanisms (*see Point I*).

# Appendix 2: Generic Indicator Table for HIV Interventions

Generic indicators for determinant analysis of HIV interventions for adolescents in selected geographic areas				
Determinant of coverage	Generic indicator	Numerator	Denominator	Data source/s
<b>1. In-school life skills-based HIV prevention and reproductive and sexual health education (10–14 years old; 15–19 years old; and 20–24 years old)</b>				
<b>Commodity</b>	(A) Proportion of primary schools with a LSBE/CSE curriculum	Number of primary schools with an LSBE/CSE curriculum for the current academic year	Number of primary schools	Ministry of Education records
	(B) Proportion of secondary schools with an LSBE/CSE curriculum	Number of secondary schools with an LSBE/CSE curriculum for the current academic year	Number of secondary schools	Ministry of Education records
<b>Human resource</b>	(A) Proportion of primary schools with at least one teacher trained on teaching LSBE/CSE	Number of primary schools providing LSBE/CSE with at least one teacher trained on teaching LSBE/CSE for the current academic year	Number of primary schools providing LSBE/CSE	Programme records with district education office
	(B) Proportion of secondary schools with at least one teacher trained on teaching LSBE/CSE	Number of secondary schools providing LSBE/CSE with at least one teacher trained on teaching LSBE/CSE for the current academic year	Number of secondary schools providing LSBE/CSE	Programme records with district education office
<b>Accessibility</b>	Proportion of primary schools providing LSBE/CSE <sup>14</sup> for the current academic year	Number of primary schools providing LSBE/CSE for the current academic year	Number of primary schools	Programme records (via district education office)
	Proportion of secondary schools providing LSBE/CSE for the current academic year	Number of secondary schools providing LSBE/CSE for the current academic year	Number of secondary schools	Programme records (via district education office)
<b>Utilization</b>	Proportion of primary schools providing LSBE/CSE in the fifth year of primary school within the current academic year	Number of primary schools providing LSBE/CSE in the fifth year of primary school within the current academic year	Number of primary schools	Programme records (via district education office)
<b>Continuity</b>	Proportion of secondary schools providing LSBE/CSE in the first year of secondary school within the current academic year	Number of secondary schools providing LSBE/CSE in the first year of secondary school within the current academic year	Number of secondary schools	Programme records (via district education office)
<b>Quality</b>	Proportion of in-school adolescents (10–14; 15–19; 20–24 years old) who know three ways of HIV/STI transmission and two methods of HIV/STI prevention (comprehensive knowledge)	Number of in-school adolescents (10–14; 15–19; and 20–24 years old) who know three ways of HIV/STI transmission and two methods of HIV/STI prevention	Number of in-school adolescents (10–14; 15–19; and 20–24 years old)	Secondary analysis of survey data (e.g., MICS/DHS)

14 Per national curriculum.

## Generic indicators for determinant analysis of HIV interventions for adolescents in selected geographic areas

Determinant of coverage	Generic indicator	Numerator	Denominator	Data source/s
<b>2. Out-of-school life skills-based HIV prevention and reproductive and sexual health education (10–14 years old; 15–19 years old; and 20–24 years old)</b>				
<b>Commodity</b>	Proportion of villages/clusters within the geographic area <sup>15</sup> with LSBE/CSE training materials	Number of villages/clusters <sup>16,17</sup> within the geographic area where there is at least one CBO/NGO providing LSBE/CSE equipped with LSBE/CSE training materials	Number of villages/clusters within selected geographic areas	Programme records at district offices or programme records at CBO/NGOs
<b>Human resource</b>	Proportion of villages/clusters within the geographic area that have at least one trained worker/volunteer/peer counsellor on LSBE/CSE education for adolescents	Number of villages/clusters within the geographic area where there is at least one CBO/NGO providing LSBE/CSE with at least one trained worker/volunteer/peer counsellor on LSBE/CSE education for adolescents	Number of villages/clusters within selected geographic areas	Programme records at district offices or programme records at CBO/NGOs
<b>Accessibility</b>	Proportion of villages/clusters within the geographic area that have at least one youth centre, CBO or community centre providing LSBE/CSE education during the past year	Number of villages/clusters within the geographic area that have at least one youth centre, CBO, or community centre providing LSBE/CSE education during the past year	Number of villages/clusters within selected geographic areas	Programme records at district offices or programme records at CBO/NGOs
<b>Utilization</b>	Proportion of villages/clusters within the geographic area providing LSBE/CSE education for out-of-school adolescents (10–19 years old) at least once during the past year	Number of villages/clusters within the geographic area where there is at least one CBO/NGO providing LSBE/CSE education for adolescents (10–19 years old) at least once during the past year	Number of villages/clusters within selected geographic areas	Programme records at district offices or programme records at CBO/NGOs
<b>Continuity</b>	Proportion of villages/clusters within the geographic area providing LSBE/CSE education for out-of-school adolescents (aged 10-19 years) at least twice during the last year	Number of villages/clusters within the geographic area where there is at least one CBO/NGO providing LSBE/CSE education for out-of-school adolescents (10–19 years old) at least twice during the past year	Number of villages/clusters within selected geographic areas	Programme records at district offices or programme records at CBO/NGOs
<b>Quality</b>	Proportion of out-of-school adolescents (aged 15-19 and 20-24 years) who know three ways of HIV/STI transmission and two methods of HIV/STI prevention (comprehensive knowledge)	Number of out-of-school adolescents (15–19 and 20–24 years old) who know three ways of HIV/STI transmission and two methods of HIV/STI prevention	Number of out-of-school adolescents (15–19; 20–24 years old)	Secondary analysis of survey data <sup>18</sup> (e.g., MICS/DHS)
<b>3. Condom use among adolescents 15–19 and 20–24 years old (girls and boys)</b>				
<b>Commodity</b>	Proportion of health facilities that had no stock-out of condoms in the past three months	Number of health facilities that had no stock-out of condoms in the past three months	Number of health facilities	District programme records

15 To be defined per country.

16 Provided that LSBE/CSE provision has been verified by at least one CBO in at least one village within the specified geographical area.

17 Countries may consider the following approaches: (1) integrate LSBE/CSE indicators into an existing survey, if one is planned; (2) investigate programme records at the district-level office or at CBO/NGO offices for requisite data; or (3) gather qualitative data through key informant interviews with the district offices (education, youth and health) to get a sense of the situation.

18 Please note that nationally representative household surveys may not include the desired district-level estimates to facilitate a secondary analysis of the survey data. Alternatively, it may be the case that the regional average is applied at the district level as a proxy or, in the presence of strong NGO programmes with sufficient coverage in a given district, available district-level estimates from the implementing organization are relied on.

**Generic indicators for determinant analysis of HIV interventions for adolescents in selected geographic areas**

Determinant of coverage	Generic indicator	Numerator	Denominator	Data source/s
<b>Human resource</b>	Proportion of health facilities with at least one staff member trained to provide family planning methods	Number of health facilities with at least one staff member trained to provide family planning methods	Number of health facilities	District programme records; HMIS
<b>Accessibility</b>	Percentage of adolescents (aged 15–19 and 20–24 years old) who know a source of condoms <sup>19</sup>	Number of adolescents (aged 15–19 and 20–24 years old) who know a source of condoms	Number of all adolescents (15–19 and 20–24 years old)	Secondary analysis of survey data (e.g., MICS/DHS)
<b>Utilization</b>	Proportion of adolescents (15–19 and 20–24 years old) who had sex in the past 12 months who reported ever using a condom	Number of adolescents (aged 15–19 and 20–24 years old) who have had sex in the past 12 months who reported ever using a condom	Number of adolescents (15–19 and 20–24 years old) who have had sex in the past 12 months	Secondary analysis of survey data (e.g., MICS/DHS)
<b>Continuity</b>	Proportion of adolescents (15–19 and 20–24 years old) who had sex in the past 12 months who reported using a condom at last sex	Number of adolescents (15–19 and 20–24 years old) who have had sex in the past 12 months who reported using a condom at last sex	Number of adolescents (15–19 and 20–24 years old) who have had sex in the past 12 months	Secondary analysis of survey data <sup>6</sup> (e.g., MICS/DHS)
<b>Quality</b>	Proportion of adolescents (15–19 and 20–24 years old) who report having had more than one sexual partner in the past 12 months who reported using a condom at last sex	Number of adolescents (15–19 and 20–24 years old) who report having had more than one sexual partner in the past 12 months who reported using a condom at last sex	Number of adolescents (15–19 and 20–24 years old) who report having had more than one sexual partner in the past 12 months	Secondary analysis of survey data (e.g., MICS/DHS)

**4. Control of STIs for adolescents 15–19 and 20–24 years old (girls and boys)**

<b>Commodity</b>	(A) Proportion of health facilities providing STI services that report no stock-outs of essential commodities <sup>20</sup> for STIs in the past three months	Number of health facilities providing STI services that report no stock-outs of essential commodities for STIs in the past three months	Number of health facilities currently providing STI services	LMIS
	(B) Proportion of youth centres providing STI services that report no stock-outs of essential commodities for STIs in the past three months	Number of youth centres providing STI services that report no stock-outs of essential commodities for STIs in the past three months	Number of youth centres currently providing STI services	LMIS
<b>Human resource</b>	(A) Proportion of health facilities with at least one provider (or specified number of staff per national policy) trained in the management and treatment of STIs	Number of health facilities with at least one provider (or specified number of staff per national policy) trained in the management and treatment of STIs	Number of health facilities currently providing STI services	National or district-level programme records; HMIS; health facility survey
	(B) Proportion of youth centres with at least one provider (or specified number of staff per national policy) trained in the management and treatment of STIs	Number of youth centres with at least one provider (or specified number of staff per national policy) trained in the management and treatment of STIs	Number of youth centres currently providing STI services	District programme data; health facility survey

<sup>19</sup> Per DHS, the following are not considered a source for condoms: friends, family members and home.

<sup>20</sup> Essential commodities for STIs include: testing kits, drugs and counselling aids.

**Generic indicators for determinant analysis of HIV interventions for adolescents in selected geographic areas**

Determinant of coverage	Generic indicator	Numerator	Denominator	Data source/s
<b>Accessibility</b>	(A) Proportion of adolescents (15–19 and 20–24 years old) who know where to access treatment for STIs	Number of adolescents (15–19 and 20–24 years old) who know where to access treatment for STIs	Number of adolescents (15–19 and 20–24 years old)	Secondary analysis of survey data (e.g., MICS/DHS)
	(B) Proportion of health facilities currently providing STI services (per national standard)	Number of health facilities targeted for STIs services that are currently providing STI services	Number of health facilities providing STI services	District programme records
	(C) Proportion of youth centres currently providing STI services (per national standard)	Number of youth centres targeted for STIs services that are currently providing STI services	Number of youth centres providing STI services	District programme records
<b>Utilization</b>	Proportion of adolescents (15–19 and 20–24 years old) who tested positive for STIs in the past three months	Number of adolescents (15–19 and 20–24 years old) who tested positive for STIs in the past three months	Number of adolescents (15–19 and 20–24 years old) who were tested for STIs in health facilities in the past three months	District programme records
<b>Continuity</b>	Proportion of adolescents (15–19 and 20–24 years old) who tested positive for STIs and were initiated on treatment in the past three months	Number of adolescents (15–19 and 20–24 years old) who tested positive for STIs and were initiated on treatment in the past three months	Number of adolescents (15–19 and 20–24 years) who tested positive for STIs in health facilities in the past three months	Programme records
<b>Quality</b>	(A) Proportion of adolescents (15–19 and 20–24 years old) who tested positive for STIs, were initiated on treatment, and whose partner was tested for STIs in the past three months	Number of adolescents (15–19 and 20–24 years old) who tested positive for STIs, were initiated on treatment, and whose partner was tested for STIs in the past three months	Number of adolescents (15–19 and 20–24 years old) who tested positive for STIs in health facilities in the past three months	Programme records
	(B) Proportion of adolescents (15–19 and 20–24 years old) tested positive for STIs and received condoms during the course of STI treatment	Number of adolescents (15–19 and 20–24 years old) who tested positive for STIs and received condoms during the course of STI treatment	Number of adolescents (15–19 and 20–24 years old) who tested positive for STIs in health facilities in the past three months	Programme records

**5. HIV testing and counselling for adolescents 15–19 and 20–24 years old**

<b>Commodity</b>	Proportion of health facilities currently providing HTC services that report no stock-outs of HIV test kits in the past three months	Number of health facilities currently providing HTC services that report no stock-outs of HIV test kits in the past three months	Number of health facilities currently providing HTC services	National- and district-level programme records
<b>Human resource</b>	Proportion of health facilities currently providing HTC services that report having at least one health-care worker trained on testing and counselling adolescents	Number of health facilities currently providing HTC services that report having at least one health-care worker trained on testing and counselling adolescents	Number of health facilities currently providing HTC services	National- and district-level programme records; health facility survey

**Generic indicators for determinant analysis of HIV interventions for adolescents in selected geographic areas**

Determinant of coverage	Generic indicator	Numerator	Denominator	Data source/s
<b>Accessibility</b>	Proportion of health facilities providing HIV testing that is adolescent/youth friendly (per national guidelines)	Number of health facilities providing HIV testing that is adolescent/youth friendly (per national guidelines)	Number of health facilities currently providing HTC	Programme records
<b>Utilization</b>	Proportion of adolescents (15–19 and 20–24 years old) who report ever testing for HIV	Number of adolescents (15–19 and 20–24 years old) who report ever testing for HIV	Number of adolescents (15–19 and 20–24 years old) surveyed	Survey (e.g., MICS/DHS)
<b>Continuity</b>	Percentage of adolescents (15–19 and 20–24 years old) who were tested for HIV and received their HIV test results in the past 12 months	Number of adolescents (15–19 and 20–24 years old) who were tested for HIV and received their HIV test results in the past 12 months	Number of adolescents (15–19 and 20–24 years old) surveyed	Survey (e.g., MICS/DHS)
<b>Quality</b>	(A) Proportion of adolescents (15–19 and 20–24 years old) who tested positive for HIV and were initiated on treatment in the past 12 months	Number of adolescents (15–19 and 20–24 years old) who tested positive for HIV and were initiated on treatment in the past 12 months	Number of adolescents (15–19 and 20–24 years old) who tested positive for HIV	Programme records; HMIS
	(B) Proportion of adolescents (15–19 and 20–24 years old) who tested negative for HIV and were linked to HIV prevention services in the past 12 months	Number of adolescents (15–19 and 20–24 years old) who tested negative for HIV and were linked to HIV prevention services in the past 12 months	Number of adolescents (15–19 and 20–24 years old) who tested negative for HIV	Programme records; HMIS
<b>6. ART for adolescents living with HIV 10–14, 15–19 and 20–24 years old</b>				
<b>Commodity</b>	Proportion of ART sites providing HIV treatment with no stock-out of any recommended antiretrovirals (ARVs) in the past three months	Number of ART sites providing HIV treatment with no stock-out of any recommended ARVs in the past three months	Number of ART sites offering HIV treatment	National or district programme records; health facility survey
<b>Human resource</b>	Proportion of ART sites providing HIV treatment with a health-care worker trained to counsel adolescents on ART	Number of ART sites providing HIV treatment with a health-care worker trained to counsel adolescents on ART	Number of ART sites providing HIV treatment	National or district programme records; health facility survey
<b>Accessibility</b>	Proportion of ART sites providing HIV treatment that have youth-friendly services (per national norm/local definition)	Number of ART sites providing HIV treatment that have youth-friendly services (per national norm/local definition)	Number of ART sites providing HIV treatment	Programme records
<b>Utilization</b>	Proportion of adolescents (10–19 and 20–24 years old) who tested positive for HIV and were initiated on treatment in the past 12 months	Number of adolescents (10–19 and 20–24 years old) who tested positive for HIV and were initiated on treatment in the past 12 months	Estimated number of adolescents (10–19 and 20–24 years old) in the past 12 months	Programme records; HIV estimates
<b>Continuity</b>	Proportion of adolescents (10–19 and 20–24 years old) who tested positive for HIV, were initiated on treatment, and are alive and on treatment 12 months after initiation	Number of adolescents (10–19 and 20–24 years old) who tested positive for HIV, were initiated on treatment, and are alive and on treatment 12 months after initiation	Estimated number of adolescents (10–19 and 20–24 years old) living with HIV initiated on treatment	Programme records; HIV estimates

**Generic indicators for determinant analysis of HIV interventions for adolescents in selected geographic areas**

Determinant of coverage	Generic indicator	Numerator	Denominator	Data source/s
<b>Quality</b>	Proportion of adolescents (10–19 and 20–24 years old) initiated on treatment who are virologically suppressed (viral load below 1,000 copies) at 12 months after initiating treatment	Number of adolescents (10–19 and 20–24 years old) initiated on treatment who are virologically suppressed (viral load below 1,000 copies) at 12 months after treatment initiation	Estimated number of adolescents (10–19 and 20–24 years old) living with HIV initiated on treatment	Programme records; HIV estimates
<b>7. Prevention of mother-to-child transmission of HIV (PMTCT) for adolescent pregnant and breastfeeding girls and mothers living with HIV (15–19 and 20–24 years old)</b>				
<b>Commodity</b>	Proportion of health facilities currently providing PMTCT with no stock-outs of ARVs during the past three months	Number of health facilities currently providing PMTCT services with no stock-outs of ARVs during the previous three months	Number of health facilities currently providing PMTCT services	National or district programme records
<b>Human resource</b>	Proportion of health facilities currently providing PMTCT with sufficient (per national guidelines) health-care workers trained on initiation/management of ARVs for PMTCT	Number of health facilities currently providing PMTCT with sufficient (per national guidelines) health-care workers trained on initiation/management of ARVs for PMTCT	Number of health facilities currently providing PMTCT services	National- and district-level programme records; health facility survey
<b>Accessibility</b>	Proportion of ANC facilities currently providing PMTCT services (ARVs)	Number of ANC facilities currently providing PMTCT services (ARVs)	Number of health facilities targeted to provide PMTCT services (ARVs)	Programme records
<b>Utilization</b>	Proportion of pregnant adolescent girls (15–19 and 20–24 years old) who were identified through ANC, including known positives, and tested for HIV in the past 12 months	Number of pregnant adolescent girls (15–19 and 20–24 years old) who were identified through ANC, including known positives, and tested for HIV in the past 12 months	Estimated number of pregnant adolescent girls (15–19 and 20–24 years old) living with HIV	Programme records; estimates
<b>Continuity</b>	Proportion of pregnant adolescent girls (15–19 and 20–24 years old) who tested positive for HIV and were initiated on treatment in the past 12 months	Number of pregnant adolescent girls (15–19 and 20–24 years old) who tested positive for HIV and were initiated on treatment in the past 12 months	Estimated number of pregnant adolescent girls (15–19 and 20–24 years old) living with HIV	Programme records; estimates
<b>Quality</b>	Proportion of pregnant adolescent girls (15–19 and 20–24 years old) who tested positive for HIV, were initiated on treatment, and are alive and on treatment six months after initiation	Number of pregnant adolescent girls (15–19 and 20–24 years old) who tested positive for HIV, were initiated on treatment, and are alive and on treatment six months after initiation	Estimated number of pregnant adolescent girls (15–19 and 20–24 years old) living with HIV initiated on treatment	Programme records
<b>8. Voluntary medical male circumcision (VMMC) for adolescents (10–19 and 20–24 years old)</b>				
<b>Commodity</b>	Proportion of sites providing VMMC experiencing stock-out of any essential commodities <sup>21</sup> in the past three months	Number of sites experiencing stock-out of any essential commodities in past three months	Number of sites providing VMMC	National/district programme records; facility-based records

21 Essential commodities include: sterile scalpels, local anesthetics, sutures and sterile clamps in working order.

## Generic indicators for determinant analysis of HIV interventions for adolescents in selected geographic areas

Determinant of coverage	Generic indicator	Numerator	Denominator	Data source/s
<b>Human resource</b>	Proportion of sites providing VMMC with at least one health-care worker trained to counsel adolescents on VMMC	Number of sites providing VMMC with at least one health-care worker trained to counsel adolescents on VMMC	Number of sites providing VMMC	National- and district-level programme records; health facility survey
<b>Accessibility</b>	Proportion of sites providing VMMC that have ever provided services to male adolescents (10–19 and 20–24 years old)	Number of sites providing VMMC that have ever provided services to male adolescents (10–19 and 20–24 years old)	Number of sites providing VMMC	Programme records; facility-based survey
<b>Utilization</b>	Among those adolescent males (10–19 and 20–24 years old) estimated to be in need of VMMC, the proportion who received VMMC in the past 12 months	Number of adolescent males (10–19 and 20–24 years old) estimated to be in need of VMMC who received VMMC in the past 12 months	Estimated number of adolescent males (10–19 and 20–24 years old) in need of VMMC (according to national plan) in the past 12 months	Programme records; estimates of adolescents in need of VMMC
<b>Continuity</b>	Among those adolescent males (10–19 and 20–24 years old) estimated to be in need of VMMC, the proportion who received VMMC and attended at least one postoperative follow-up visit (routine or emergency), during the past 12 months	Number of adolescent males (10–19 and 20–24 years old) estimated to be in need of VMMC who received VMMC and attended at least one postoperative follow-up visit (routine or emergency), during the past 12 months	Estimated number of adolescent males (10–19 and 20–24 years old) in need of VMMC (according to national plan) in the past 12 months who received VMMC	Programme/facility-based records
<b>Quality</b>	(A) Among those adolescent males (10–19 and 20–24 years old) estimated to be in need of VMMC, the proportion who received VMMC and were referred to at least one essential service <sup>22</sup> as part of VMMC during the past 12 months	Number of adolescent males (10–19 and 20–24 years old) estimated to be in need of VMMC who received VMMC and were referred to at least one essential service as part of VMMC in the past 12 months	Estimated number of adolescent males (10–19 and 20–24 years old) in need of VMMC (according to national plan) in the past 12 months who received VMMC	Programme/facility-based records
	(B) Among those adolescent males (10–19 and 20–24 years old) estimated to be in need of VMMC, the proportion who received VMMC and were vaccinated against tetanus in past 12 months	Number of adolescent males (10–19 and 20–24 years old) estimated to be in need of VMMC who received VMMC and were vaccinated against tetanus in the past 12 months	Estimated number of adolescent males (10–19 and 20–24 years old) in need of VMMC (according to national plan) in the past 12 months who received VMMC	Programme/facility-based records

### 9. Needle and syringe programmes (NSPs) for adolescents (15–19 and 20–24 years old)

<b>Commodity</b>	Proportion of NSPs with no stock-outs of any essential commodities <sup>23</sup> during the past three months	Number of NSPs with no stock-outs of any essential commodities during the past three months	Number of NSPs	Programme records
<b>Human resource</b>	Proportion of NSPs that have at least one health worker trained in IDU for adolescents	Number of NSPs that have at least one health worker trained in IDU for adolescents	Number of NSPs	Programme records

22. The 2008 WHO *Operational Guidance for Scaling Up Male Circumcision Services for HIV Prevention* and 2010 *Considerations for Implementing Models for Optimizing the Volume and Efficiency of VMMC* denote the following essential services for VMMC: HTC; STI screening and treatment; condom promotion and provision; risk reduction counselling; and the VMMC procedure with postoperative counselling and care.

23. Beyond needles and syringes, current guidance recommends provision of condoms, filters, sterile water, swabs, spoons, puncture-proof containers, acidifiers, tourniquets and disinfectants (e.g., bleach).

## Generic indicators for determinant analysis of HIV interventions for adolescents in selected geographic areas

Determinant of coverage	Generic indicator	Numerator	Denominator	Data source/s
<b>Accessibility</b>	Proportion of NSPs currently providing IDU services that employ more than one service delivery model <sup>24</sup>	Number of NSPs currently providing IDU services that employ more than one service delivery model	Number of NSPs	Programme records
<b>Utilization</b>	Proportion of adolescents (15–19 and 20–24 years old) who inject drugs who have accessed IDU services through NSPs in the past 12 months	Number of adolescents (15–19 and 20–24 years old) who inject drugs who accessed IDU services through NSPs in the past 12 months	Estimated number of adolescents (15–19 and 20–24 years old) who inject drugs	Targeted survey; programme records
<b>Continuity</b>	Percentage of adolescents (15–19 and 20–24 years old) who inject drugs who report using sterile injecting equipment the last time they injected	Number of adolescents (15–19 and 20–24 years old) who inject drugs who report using sterile injecting equipment the last time they injected drugs	Estimated number of adolescents (15–19 and 20–24 years old) who inject drugs	Targeted survey; programme records
<b>Quality</b>	Percentage of [key population] adolescents (15–19 and 20–24 years old) who inject drugs seeking IDU services who were tested for HIV in the past 12 months	Number of [key population] adolescents (15–19 and 20–24 years old) who inject drugs seeking IDU services who were tested for HIV in the past 12 months	Estimated number of adolescents (15–19 and 20–24 years old) who inject drugs	Targeted survey; programme records

### 10. Condom use among key population adolescents 15–19 and 20–24 years old

<b>Commodity</b>	Proportion of centres/facilities within the geographic area providing services to [key population <sup>25</sup> ] adolescents that had no stock-out of condoms in the past three months	Number of centres/facilities within the geographic area providing services to [key population] adolescents that had no stock-out of condoms in the past three months	Number of centres/facilities within the geographic area providing services to [key population] adolescents	Programme records
<b>Human resource</b>	Proportion of centres/facilities within the geographic area providing services to [key population] adolescents with at least one staff member trained to provide family planning methods	Number of centres/facilities within the geographic area providing services to [key population] adolescents with at least one staff member trained to provide family planning methods	Number of centres/facilities within the geographic area providing services to [key population] adolescents	Programme records
<b>Accessibility</b>	Percentage of [key population] adolescents (15–19 and 20–24 years old) within the geographic area who know a source of condoms <sup>26</sup>	Number of [key population] adolescents (15–19 and 20–24 years old) within the geographic area who know a source of condoms	Number of [key population] adolescents (15–19 and 20–24 years old) within the geographic area	Programme records
<b>Utilization</b>	Proportion of sexually active [key population] adolescents (15–19 and 20–24 years old) within the geographic area who reported ever using a condom	Number of sexually active [key population] adolescents (15–19 and 20–24 years old) within the geographic area who reported ever using a condom	Number of sexually active [key population] adolescents (15–19 and 20–24 years old)	Programme records

24 Service delivery models may include: fixed-site services, mobile services, vending machines, outreach, and home delivery and secondary distribution through other services such as sexual health clinics, drug treatment services and hospital emergency services.

25 Key population to be specified: People who inject drugs (PWID), MSM, sex workers and transgender people.

26 Per DHS, the following are not considered a source for condoms: friends, family members and home.

**Generic indicators for determinant analysis of HIV interventions for adolescents in selected geographic areas**

Determinant of coverage	Generic indicator	Numerator	Denominator	Data source/s
<b>Continuity</b>	Percentage of [key population] sexually active adolescents (15–19 and 20–24 years old) within the geographic area reporting the use of a condom the last time they had sexual intercourse	Number of [key population] sexually active adolescents (15–19 and 20–24 years old) within the geographic area who reported that a condom was used the last time they had sex	Number of [key population] sexually active adolescent (15–19 and 20–24 years old) who report having had sexual intercourse in the past [1, 6, 12] months <sup>27</sup>	Programme records; targeted survey
<b>Quality</b>	Proportion of [key population] sexually active adolescents (15–19 and 20–24 years old) who report having had more than one sexual partner in the past 12 months who also report using a condom at last sex	Number of [key population] sexually active adolescents (15–19 and 20–24 years old) who report having had more than one sexual partner in the past 12 months who also reported using a condom at last sex	Number of sexually active adolescents (15–19 and 20–24 years old) who report having had more than one sexual partner in the past 12 months	Programme records; targeted survey
<b>11. HTC for adolescent key populations</b>				
<b>Commodity</b>	Proportion of centres/facilities within the geographic area currently providing HTC services to [key population] adolescents that report no stock-outs of HIV test kits in the past three months	Number of centres/facilities within the geographic area currently providing HTC services to [key population] adolescents that report no stock-outs of HIV test kits in the past three months	Number of centres/facilities within the geographic area currently providing HTC services to [key population] adolescents	Programme records
<b>Human resource</b>	Proportion of centres/facilities within the geographic area currently providing HTC services to [key population] adolescents that report having at least one health-care worker trained on testing and counselling [key population] adolescents	Number of centres/facilities within the geographic area currently providing HTC services to [key population] adolescents that report having at least one health-care worker trained on testing and counselling [key population] adolescents	Number of centres/facilities within the geographic area currently providing HTC services to [key population] adolescents	National- and district-level programme records; health facility survey
<b>Accessibility</b>	Proportion of centres/facilities within the geographic area providing HIV testing to [key population] adolescents that is adolescent/youth friendly (per national guidelines/policy)	Number of centres/facilities within the geographic area providing HIV testing to [key population] adolescents that is adolescent/youth friendly (per national guidelines/policy)	Number of centres/facilities within the geographic area currently providing HTC to [key population] adolescents	Programme records; health facility survey
<b>Utilization</b>	Proportion of [key population] adolescents (15–19 and 20–24 years old) within the geographic area who report ever testing for HIV	Number of [key population] adolescents (15–19 and 20–24 years old) within the geographic area who report ever testing for HIV	Estimated number of [key population] adolescents (15–19 and 20–24 years old) within the geographic area	Programme data; key population estimates; targeted survey
<b>Continuity</b>	Percentage of [key population] adolescents (15–19 and 20–24 years old) within the geographic area who were tested for HIV and received their HIV test results in the past 12 months	Number of [key population] adolescents (15–19 and 20–24 years old) within the geographic area who were tested for HIV and received their HIV test results in the past 12 months	Estimated number of [key population] adolescents (15–19 and 20–24 years old) within the geographic area	Programme data; key population estimates; targeted survey

<sup>27</sup> PWID is in the past one month, MSM is in the past six months, and sex workers is in the past 12 months.

**Generic indicators for determinant analysis of HIV interventions for adolescents in selected geographic areas**

Determinant of coverage	Generic indicator	Numerator	Denominator	Data source/s
<b>Quality</b>	(A) Proportion of [key population] adolescents (15–19 and 20–24 years old) within the geographic area who tested positive for HIV who were initiated on HIV treatment in the past 12 months	Number of [key population] adolescents (15–19 and 20–24 years old) within the geographic area who tested positive for HIV and were initiated on HIV treatment in the past 12 months	Estimated number of [key population] adolescents (15–19 and 20–24 years old) living with HIV within the geographic area	Programme data; key population estimates
	(B) Proportion of [key population] adolescents (15–19 and 20–24 years old) within the geographic location who tested negative for HIV who were linked to HIV prevention services in the past 12 months	Number of [key population] adolescents (15–19 and 20–24 years old) within the geographic area who tested negative for HIV who were linked to HIV prevention services in the past 12 months	Number of [key population] adolescents (15–19 and 20–24 years old) within the geographic area who tested negative for HIV	Programme data
<b>12. ART for [key population] adolescents living with HIV</b>				
<b>Commodity</b>	Proportion of centres/facilities providing ART with no stock-out of any recommended ARVs in the past three months	Number of centres/facilities providing ART with no stock-out of any recommended ARVs in the past three months	Number of centres/facilities providing ART	Programme records
<b>Human resource</b>	Proportion of centres/facilities providing ART with a health-care worker trained to counsel adolescents [key population] on ART	Number of centres/facilities providing ART with a health-care worker trained to counsel adolescents [key population] on ART	Number of centres/facilities providing ART	National- and district-level programme records; health facility survey
<b>Accessibility</b>	Proportion of centres/facilities providing ART that have youth-friendly services (per national guidelines/definition)	Number of centres/facilities providing ART that have youth-friendly services (per national norm/local definition)	Number of centres/facilities providing ART	Programme records; health facility survey
<b>Utilization</b>	Proportion of [key population] adolescents (10–19 and 20–24 years old) within the geographic area who tested positive for HIV in the past 12 months	Number of [key population] adolescents (10–19 and 20–24 years old) within the geographic area who tested positive for HIV in the past 12 months	Estimated number of [key population] adolescents (10–19 and 20–24 years old) within the geographic area	Programme records
<b>Continuity</b>	Proportion of [key population] adolescents (10–19 and 20–24 years old) within the geographic area who tested positive for HIV and initiated on treatment in the past 12 months	Number of [key population] adolescents (10–19 and 20–24 years old) within the geographic area who tested positive for HIV and were initiated on treatment in the past 12 months	Estimated number of [key population] adolescents (10–19 and 20–24 years old) living with HIV within the geographic area	Programme records
<b>Quality</b>	Proportion of [key population] adolescents (10–19 and 20–24 years old) within the geographic area initiated on treatment who are virologically suppressed (viral load below 1,000 copies) at 12 months after initiating treatment	Number of [key population] adolescents (10–19 and 20–24 years old) within the geographic area initiated on treatment who are virologically suppressed (viral load below 1,000 copies) at 12 months after initiating treatment	Number of [key population] adolescents (10–19 and 20–24 years old) currently on ART	Programme records

# Appendix 3: Templates for Data Abstraction Summary Sheets

Please find the below set of generic summary sheet templates that are accompanied by summary sheets completed with example data. Each set of templates is organized to capture sex, age, reference period, and data collection details per desired indicator. Please note that these templates serve as a suggestion and can be adapted by the country team as needed.

## Generic Template A:

Table [X]: [PLACE SELECTED INDICATOR DESCRIPTION HERE], [Month 1–Month 3] 2015

2015	10-14		15-19		20-24	
	M	F	M	F	M	F
Month 1						
Month 2						
Month 3						
<b>TOTAL</b>						

Province	District	Name of site	Urban/Rural	Completed by	Date

## Example Template A: HIV Testing and Initiation on Treatment by Age and Sex

**Table 1.1: Number of people newly tested for HIV in the past three months, September–November 2015**

2015	10-14		15-19		20-24	
	M	F	M	F	M	F
September	8	0	23	15	13	3
October	0	3	5	22	18	14
November	10	3	21	23	3	2
<b>TOTAL</b>	<b>18</b>	<b>6</b>	<b>49</b>	<b>60</b>	<b>34</b>	<b>19</b>

**Table 1.2: Number of people who tested positive for HIV in the past three months, September–November 2015**

2015	10-14		15-19		20-24	
	M	F	M	F	M	F
September	3	0	8	3	9	3
October	0	1	2	8	6	8
November	7	2	12	15	2	2
<b>TOTAL</b>	<b>10</b>	<b>3</b>	<b>22</b>	<b>26</b>	<b>17</b>	<b>13</b>

**Table 1.3: Number of people newly initiated on treatment in the past three months, September–November 2015**

2015	10-14		15-19		20-24	
	M	F	M	F	M	F
September	1	0	5	2	0	0
October	0	0	2	0	1	5
November	1	0	0	4	2	2
<b>TOTAL</b>	<b>2</b>	<b>0</b>	<b>7</b>	<b>6</b>	<b>3</b>	<b>7</b>

Province	District	Name of site	Urban/Rural	Completed by	Date
Bururi	Vyanda	Kigutu	Rural	J. Doe	Day/Month/Year

## Generic Template B: Three-Month Retention

Table [X]: [PLACE DESCRIPTION OF SELECTED INDICATOR HERE], [Month 0–Month 4] 2015

2015			THREE-MONTH RETENTION ASSESSMENT ART initiation in [Month 0] 2015				
Number	Client sex	Client age	ART initiation (Month 0)	Month 1 Follow-up	Month 2 Follow-up	Month 3 Follow-up	Month 4 Follow-up
			[Month]	[Month]	[Month]	[Month]	[Month]
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

Province	District	Name of site	Urban/Rural	Completed by	Date

## Example Template B: Three-Month Retention

Number of people who tested positive for HIV, were initiated on treatment, and are alive and on treatment three months after initiation, May–September 2015

2015			THREE-MONTH RETENTION ASSESSMENT ART initiation in May 2015				
Number	Client sex	Client age	ART initiation (Month 0)	Month 1 Follow-up	Month 2 Follow-up	Month 3 Follow-up	Month 4 Follow-up
			[Month]	[Month]	[Month]	[Month]	[Month]
1	F	15	6 MAY 2015	4 JUN 2015	2 JUL 2015	5 AUG 2015	1 SEP 2015
2	F	15	7 MAY 2015		3 JUL 2015		7 SEP 2015
3	F	17	7 MAY 2015		6 JUL 2015	8 AUG 2015	9 SEP 2015
4	M	16	8 MAY 2015	14 JUN 2015	11 JUL 2015		
5	M	20	10 MAY 2015			12 AUG 2015	14 SEP 2015
6	F	18	16 MAY 2015		15 JUL 2015	15 AUG 2015	17 SEP 2015
7	M	18	19 MAY 2015			17 AUG 2015	
8	F	14	22 MAY 2015	21 JUN 2015			
9	M	19	29 MAY 2015	27 JUN 2015	28 JUL 2015	26 AUG 2015	
10	F	16	30 MAY 2015	28 JUN 2015		30 AUG 2015	23 SEP 2015

Province	District	Name of site	Urban/Rural	Completed by	Date
Bururi	Vyanda	Kigutu	Rural	J. Doe	31/9/2015

## Generic Template C: Six-Month Retention

Table [X]: [PLACE DESCRIPTION OF SELECTED INDICATOR HERE], [Month 0, 2015–Month 7, 2016]

2015			SIX-MONTH RETENTION ASSESSMENT ART initiation in [Month 0] 2015							
Number	Client sex	Client age	ART initiation (Month 0)	Month 1 Follow-up	Month 2 Follow-up	Month 3 Follow-up	Month 4 Follow-up	Month 5 Follow-up	Month 6 Follow-up	Month 7 Follow-up
			[Month]	[Month]	[Month]	[Month]	[Month]	[Month]	[Month]	[Month]
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

Province	District	Name of site	Urban/Rural	Completed by	Date

## Example Template C: Six-Month Retention

Number of people who tested positive for HIV, were initiated on treatment, and are alive and on treatment six months after initiation, February 2015–September 2015

2015			SIX-MONTH RETENTION ASSESSMENT ART initiation in February 2015							
Number	Client sex	Client age	ART initiation (Month 0)	Month 1 Follow-up	Month 2 Follow-up	Month 3 Follow-up	Month 4 Follow-up	Month 5 Follow-up	Month 6 Follow-up	Month 7 Follow-up
			[Month]	[Month]	[Month]	[Month]	[Month]	[Month]	[Month]	[Month]
1	F	15	6 FEB 2015	4 MAR 2015	2 APR 2015	5 MAY 2015	1 JUN 2015		3 AUG 2015	2 SEP 2015
2	F	15	7 FEB 2015		3 APR 2015		7 JUN 2015	7 JUL 2015	5 AUG 2015	
3	F	17	7 FEB 2015		6 APR 2015	8 MAY 2015	9 JUN 2015		7 AUG 2015	
4	M	16	8 FEB 2015	14 MAR 2015	11 APR 2015			14 JUL 2015	12 AUG 2015	10 SEP 2015
5	M	20	10 FEB 2015			12 MAY 2015	14 JUN 2015			
6	F	18	16 FEB 2015		15 APR 2015	15 MAY 2015	17 JUN 2015	20 JUL 2015	17 AUG 2015	14 SEP 2015
7	M	18	19 FEB 2015			17 MAY 2015		21 JUL 2015		
8	F	14	22 FEB 2015	21 MAR 2015					23 AUG 2015	
9	M	19	29 FEB 2015	27 MAR 2015	28 APR 2015	26 MAY 2015				24 SEP 2015
10	F	16	30 FEB 2015	28 MAR 2015		30 MAY 2015	23 JUN 2015			29 SEP 2015

Province	District	Name of site	Urban/Rural	Completed by	Date
Bururi	Vyanda	Kigutu	Rural	J. Doe	9/30/2015



unite for  
children



# COLLECTING AND REPORTING OF SEX- AND AGE-DISAGGREGATED DATA ON ADOLESCENTS AT THE SUB-NATIONAL LEVEL

