



# Gaps in Global Monitoring and Evaluation of Adolescent and Youth Reproductive Health

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### Cover

Adolescents and youth in Niamey, Niger. From left to right: Hassimi Sipti, Abdoul-Wahid Aboubacary, Abdou Nassirou Sipti, and Fatouma Almou. Photo: Bridgit Adamou, MEASURE Evaluation

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## ABBREVIATIONS

AYRH	adolescent and youth reproductive health
DHS	Demographic and Health Survey
FGC	female genital cutting
FP	family planning
FP2020	Family Planning 2020
GBV	gender-based violence
GEAS	Global Early Adolescent Study
HMIS	health management information system
HTSP	healthy timing and spacing of pregnancy
IAWG	Inter-agency Working Group
KII	key informant interview
LGBT	lesbian, gay, bisexual, or transgender
LMIC	low- and middle-income country
LSBE/CSE	life skills-based education/comprehensive sexuality education
M&E	monitoring and evaluation
MHM	menstrual hygiene management
MICS	Multiple Indicator Cluster Survey
PAC	postabortion care
PEPFAR	United States President’s Emergency Plan for AIDS Relief
PMA	Performance, Monitoring and Accountability
RH	reproductive health
STI	sexually transmitted infection
TWG	technical working group
UNAIDS	Joint United Nations Programme on HIV/AIDS
USAID	United States Agency for International Development
WASH	water, sanitation, and hygiene
WHO	World Health Organization
VMMC	voluntary medical male circumcision

## EXECUTIVE SUMMARY

Adolescents and youth are recognized increasingly as a key population for reproductive health (RH) interventions, because young people suffer disproportionately from negative RH outcomes, including acquisition of HIV and other sexually transmitted infections (STIs); unintended, unwanted, or mistimed pregnancy; unsafe abortion; and gender-based violence (GBV). Effective monitoring and evaluation (M&E) of RH interventions designed for adolescents and youth is essential to determine their success and impact and show where improvement is needed.

MEASURE Evaluation, which is funded by the United States Agency for International Development (USAID), conducted the research presented in this report to identify gaps in the M&E of adolescent and youth reproductive health (AYRH) programs. This process consisted of reviewing the landscape of M&E of AYRH interventions, outcomes, and impacts; identifying measurement gaps; and making recommendations to improve the M&E of AYRH activities and programs across a spectrum of RH categories.

A desk review of available resources and key informant interviews (KIIs) provided in-depth knowledge about how AYRH activities are monitored and evaluated. The document review examined published peer-reviewed and gray literature on AYRH. The KIIs with in-country M&E and program staff gathered in-depth information on AYRH indicators and M&E challenges, best practices, and lessons learned in the field. Indicators were gathered from the desk review and KIIs. A total of 803 output, outcome, and impact indicators used to measure AYRH were collected. After a systematic assessment of each indicator, 103 were identified as key AYRH indicators.

This review found several gaps in the M&E of AYRH. The main measurement gap was related to the lack of data collected from specific groups of young people: unmarried youth, adolescent boys, very-young adolescents, and youth who are the most marginalized or vulnerable. Effective M&E of AYRH requires age- and sex-disaggregated data, which are not always collected. Data deficiencies related to nonheterosexual behavior and impact of digital approaches on AYRH outcomes were also found.

Additional M&E is necessary to track key aspects of AYRH. There have been efforts to monitor and evaluate adolescents' access to contraceptives since actual care may differ greatly from what laws and policies intend, but innovative research methods and study designs are needed to improve measurement in this area. More evaluations are needed to measure the effects of interventions at the community level, such as changes in norms, attitudes or behaviors. And certain key facets of RH of adolescents and youth are not being tracked because they are not commonly measured, including fertility intentions, self-efficacy, and what influences young people's decisions.

The review revealed that gathering sensitive information from adolescents is difficult, and this often leads to underreporting gaps, particularly on induced abortion, GBV, and STIs.

Finally, the use of multiple variations of the same indicator makes it difficult to assess impact across programs and countries.

To improve the M&E of AYRH, data should be disaggregated by age and sex, at a minimum. Other disaggregations should be used as needed. More adolescents from marginalized groups should be captured in surveys so their needs can be better understood and addressed. Likewise, measures of important social determinants of adolescent health and well-being, such as child marriage and lack of school participation, should be included in program M&E plans.

To obtain reliable data from young people, data collection tools should have clearly understood terms and use standard definitions. Increasing the use of digital technology and capitalizing on youths' comfort with mobile devices could improve accuracy of data and reduce underreporting of sensitive behaviors.

There is a need to develop and validate standard indicators on STIs. Moreover, currently defined indicators for AYRH should be used whenever possible, rather than creating new variations of the same indicator. Lastly, programs are encouraged to select relevant key AYRH indicators, as recommended in this review, to allow better comparisons across interventions and countries.

By addressing gaps in M&E of AYRH, stakeholders will be better prepared to address the needs of all young people so they can transition into adulthood well and lead healthier lives.

# INTRODUCTION

## Background

One out of six people in the world is an adolescent between the ages of 10 and 19 (World Health Organization [WHO], 2018). Most adolescents live in low- and middle-income countries (LMICs) and represent the greatest resource for sustained economic growth and development in their countries. Yet to succeed, adolescents and youth (ages 15–24) in developing countries must have the opportunity to adopt healthy behaviors and decision making so they can better confront challenges and improve their overall well-being (Coalition to Advance Adolescent and Youth Sexual and Reproductive Health, 2009).

Action and investment to ensure that boys and girls grow up healthy and develop the capabilities for adult life is a global agenda (Sheehan, et al., 2017). Young people are recognized increasingly as a key population for RH interventions, because they suffer disproportionately from negative RH outcomes, including acquisition of HIV and STIs; unintended, unwanted, or mistimed pregnancy; unsafe abortion; and GBV. In response, AYRH programs seek to prevent early marriage, early pregnancy, early parenthood and STIs; engage in efforts to improve youth-centered health services; address gender and social norms that create barriers to RH services and information for young people; work to improve comprehensive sexuality education; aim to increase awareness of and response to GBV among adolescents and youth; and direct attention to the needs of young people reflected in policies and strategies, among other AYRH programmatic arenas (Save the Children, n.d.). It is essential that RH interventions designed for adolescents and youth are effectively monitored and evaluated to determine their success and impact. Gaps in the M&E of AYRH programs and interventions prevent program implementers, policymakers, donors, and researchers from gaining a full understanding of the RH status of young people and how best to serve them.

## Research Objectives

The main objective of this research was to identify gaps in the M&E of AYRH programs. To achieve this goal, MEASURE Evaluation reviewed the landscape of M&E of AYRH interventions, outcomes, and impacts and identified measurement gaps. This report presents recommendations to address these gaps in measuring AYRH activities and programs across the spectrum of RH categories affecting young people. These RH categories include menstruation; marriage; sexual behaviors; pregnancy and childbirth; STIs; AYRH providers and services; AYRH information, attitudes, and perceptions; broader AYRH programs; and policies. The findings and recommendations contribute to MEASURE Evaluation’s goal of improving the application of methods, tools, and approaches to address RH information challenges and gaps.

## Definitions

The definitions in this report are based on those used by WHO, the United Nations, and Save the Children (WHO, 2014b; United Nations, n.d.; and Save the Children, n.d.):

- Very young adolescents: 10–14 years old
- Adolescents: 10–19 years old
- Young people: 10–24 years old
- Youth: 15–24 years old
- Teenagers: 13–19 years old
- Young adults: 20–24 years old

Although the terms in this report are consistent with these definitions, the terms (particularly youth and adolescents) are used with some flexibility when making statements that apply broadly.

## METHODS

To understand how AYRH programs and activities are monitored and evaluated, and where the gaps in gathering comprehensive data on AYRH exist, MEASURE Evaluation employed two data collection methods: a desk review of available resources and KIIs. Details on the approaches for these two methods are provided below.

### Desk Review

A document review was conducted of published peer-reviewed and gray literature on M&E of AYRH. Databases searched were PubMed, Popline, USAID's Development Experience Clearinghouse, and Google Scholar. Websites of international organizations, donors, and research initiatives were also searched to identify relevant documents. Using Boolean operators, search terms included adolescent, youth, young people, reproductive health, family planning, sexual health, monitoring and evaluation, and indicators. The gray literature included program reports, working papers, and research briefs. The inclusion criteria were publications that addressed an RH activity, intervention, or project related to youth, adolescents, or young people and how the activity, intervention, or project was monitored or evaluated. Articles were also included if they were written in English, were published in a 15-year period between January 2003 and December 2018, and addressed AYRH programming in LMICs. Articles that did not meet these criteria were excluded from review, as were conference abstracts, posters, webinars, or presentations.

The initial search yielded 417 publications. After excluding publications whose titles and abstracts did not meet the inclusion criteria, 63 publications were extracted and entered into an Excel spreadsheet specifically created for this activity. This subset was reviewed and further publications were excluded to eliminate redundant articles covering the same intervention, study, or evaluation, and to ensure that articles included a description of how an AYRH activity was monitored and/or evaluated. The search resulted in a total of 23 relevant publications. These publications were assessed to extract information on the monitoring and evaluation of AYRH programs, M&E challenges, M&E data gaps, indicators used, and data sources. The indicators were entered into a master Excel spreadsheet for further assessment (detailed below).

Additional websites were searched (e.g., Performance, Monitoring and Accountability [PMA] 2020 Glossary of FP Indicators, Demographic and Health Surveys [DHS], and Breakthrough ACTION Social and Behavior Change Indicator Bank for FP) to gather information about the M&E of AYRH, understand data gaps, and compile a comprehensive list of AYRH indicators. The indicators extracted from this component of the desk review were added to the Excel spreadsheet.

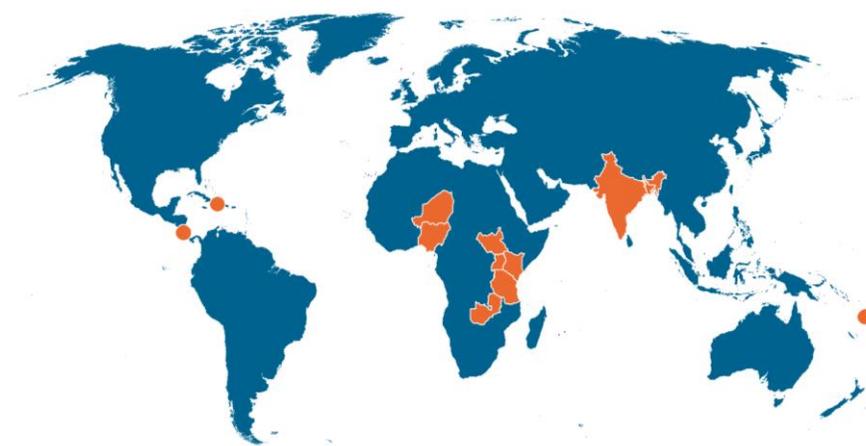
### Key Informant Interviews

Key informant interviews were conducted with in-country M&E and program staff to gather in-depth information on AYRH indicators and M&E challenges, best practices, and lessons learned in the field. First, an initial list of organizations to contact was developed from the sub-grantee organizations in MEASURE Evaluation's small grants program. Potential key informants were also identified from AYRH sessions at the 2018 International Family Planning Conference. Additional names were obtained by drawing from professional connections and in-person contacts in the field. The snowball sampling strategy was employed to recruit other participants in LMICs who had experience with providing RH services to young people and/or had experience with implementing AYRH programs or interventions. Contacts who did not have AYRH service delivery nor programmatic experience in an LMIC were excluded.

Thirty-three people from 24 organizations and three public entities (one ministry of health and two public health facilities) were contacted. Some contacts did not reply, made referrals to a different colleague better suited to answer the questions, or were unable to make the scheduled interview appointment. A total of 19

people were interviewed from 18 organizations in 12 countries: Bangladesh, Costa Rica, Haiti, India, Kenya, Niger, Nigeria, South Sudan, Tanzania, Uganda, Vanuatu, and Zambia (Figure 1).

**Figure 1. Countries represented in KIIs**



Interviews were conducted by phone or Skype between October 2018 and May 2019. The interviews lasted between 30 and 60 minutes. After conducting the 19 interviews, a point of information redundancy was reached and recruiting stopped. Appendix A provides the list of organizations and countries involved in the KIIs.

Using an interview guide (Appendix B), the KIIs covered the following areas:

- What AYRH-specific indicators does your organization use, are they disaggregated, and if so, how?
- What are the data sources for the indicators?
- Are there any AYRH indicators you find problematic and if so, why? Conversely, are there any indicators you would like to include but do not (i.e., are there data you would like to be collecting but currently are not)?
- Do you have any challenges, best practices, or lessons learned from your experience with M&E of AYRH activities and programs?

The information from the KIIs was reviewed, assessing how the organization/project monitored and evaluated its AYRH activities/programs, with a focus on the indicators and data sources used. The indicators provided from the KIIs were added to the master Excel spreadsheet which contained all the indicators related to AYRH extracted from the literature review (Appendix C).

## Identification and Collation of Indicators for AYRH

From the desk review and KIIs, 816 output, outcome, and impact indicators used for measuring AYRH were extracted and entered into the master Excel spreadsheet. Gathering the breadth of AYRH indicators was important for the selection of key AYRH indicators. For ease of analysis, the indicators were organized into thematic categories by AYRH topical area, as shown in Table 1.

**Table 1. Indicator categories**

• Menstruation/menstrual hygiene management (MHM)	• Sexual activity
• FP	• Marriage
• Healthy timing and spacing of pregnancy (HTSP)	• Pregnancy
• Abortion and PAC	• Birth

• Voluntary medical male circumcision (VMMC)	• HIV and AIDS
• STIs	• Violence
• Female genital cutting (FGC)	• Outreach and peer education
• Service providers	• Health facilities or centers
• Policy	• School-based RH programs
• RH attitudes, intentions, and perceptions	• RH information and knowledge
• Self-efficacy	• Parental/adult involvement
• Mass media	• AYRH programs

For the purposes of simplification, each indicator was included only once even though some indicators fit into multiple categories of interventions or approaches.

When extracting indicators from the literature review and KIIs, general FP/RH indicators were included only if they directly addressed young people in the data collection (e.g., number of women of reproductive age that want to avoid pregnancy) or if young people were included in the indicator’s purpose (e.g., legality of contraceptive sales to youth). Input<sup>1</sup> and process indicators were excluded because most were designed for a specific project or nongovernmental organization and were therefore too varied for the scope of this report. There are many more indicators on RH programs and services in general that are described elsewhere (for example, MEASURE Evaluation’s FP/RH Indicators Database); however, they were not relevant for this research.

Indicators having to do with general approaches around pregnancy and birth with primary objectives related to maternal, newborn, or child health outcomes (e.g., geographic distribution of emergency obstetric care facilities, kangaroo care for the newborn, and initiation of breastfeeding) were excluded. Other adolescent health topics (such as mental health, tobacco use, alcohol and drug use, nutrition, physical activity, injuries, and general youth engagement) and distal factors associated with RH (such as livelihoods, economic development, and social policies) were excluded if they did not measure the effects of AYRH outcomes.

The indicators were copied verbatim from the desk review and indicator documents provided by the KIIs. Some indicators were found in multiple sources. For reasons of confidentiality, the source of individual indicators is not noted. Some indicators are broadly applicable, whereas others pertain to a specific intervention. Although the format and wording of the indicators vary, they are presented in their original form to provide a snapshot of the breadth, variation, and quality of the indicators that are being used to measure AYRH. Appendix D presents a list of the indicator sources.

## Selecting Key AYRH Indicators

Following the compilation of the indicators, a categorical review and assessment of each indicator was conducted to select a menu of key AYRH indicators. These are indicators that are strong, high quality, and crucial for measuring progress toward an intended result, such as later age at first birth, better condom availability for young people, or fewer adolescents who have undergone FGC.

Indicators that were not specific to adolescents or youth were excluded, for example, number of additional users of modern methods of contraception and percent of women who have a say over the number of children they will have. Indicators that could be aggregated into one indicator were also excluded. For example, percent of sexually active, never-married women aged 15–19 currently using modern contraception and percent of married women aged 15–19 currently using modern contraception both fall under the

<sup>1</sup> Input indicators are defined as the human and financial resources, physical facilities, equipment, and operational policies that enable programs to be implemented. Process indicators refer to the activities (e.g., meetings and trainings) carried out to achieve the objectives of the program. Output indicators refer to the immediate results of activities at the program level. Outcome indicators refer to the changes that occurred as a result of the intervention and are measurable at the population level in the given catchment area. Impact indicators measure the long-term effects of the outcomes on the general population.

indicator, current use of modern contraceptives by young women (15–19, 20–24), married and sexually active unmarried.

The remaining indicators were analyzed based on standard indicator criteria (Table 2). When analyzing similarly worded indicators, the indicator that was from a more well-known source, such as Family Planning 2020 (FP2020) or the FP/RH Indicators Database, was prioritized. Indicators that were identified as core AYRH indicators by a reputable source, such as WHO or the Lancet Commission, were also prioritized.

**Table 2. Indicator criteria and definitions**

Criteria <sup>2</sup>	Explanation
Specific	The indicator is specific to the change being measured. It is precisely formulated, not vague.
Measurable	The indicator is easily monitored and amenable to independent validation.
Attainable	The indicator requires data and information that can be collected.
Relevant	The indicator is appropriate to the subject of AYRH.
Commonly used	The indicator is frequently used by programs to monitor or evaluate AYRH.
Validated and/or already collected in routine data collection	The indicator is already validated and/or used in routine data collection, such as DHIS2, DHS, or other validated surveys.
Generalizable	The indicator is not specific to one method, activity, or project.
Applicable to AYRH programs sponsored by a variety of funding agencies, governments, or organizations worldwide	The indicator can be used by any program/project regardless of implementing or funding agency.

## Ethical Considerations

The University of North Carolina at Chapel Hill Institutional Review Board determined that this study (#18-3008) did not constitute human subjects research as defined under federal regulations and was therefore exempt from further review.

Interview participants were informed of the purpose of the KII, including an overview of the topics to be covered, how the data would be used, and how names/organizations would be referenced in the report. Verbal consent was obtained before each interview. The key informants were given the option of remaining anonymous. For a few of the key informants who did not want to be identified in the report, they were assured that any information they provided would be deidentified.

<sup>2</sup> Although “time bound” is often included as an indicator criterion (it represents the “T” in “SMART” indicators), most standardized indicators do not have a time element in the indicator itself. The preference is generally to include the time period (e.g., “past three months,” “last year,” “specified reference period”) in the indicator definition. Therefore, although many indicators are implicitly time bound, the time frame should be explicitly mentioned in the indicator reference sheet (either the definition or calculation) for clarification.

## RESULTS and DISCUSSION

Because following the usual format of presenting findings in one section and discussing them in another would be cumbersome for this complex topic, instead this section does both. As it presents each finding from the desk review and KIIs it discusses their significance. The gaps in M&E of AYRH are described first, followed by the results of the key AYRH indicator selection.

The review revealed several common gaps in health M&E generally, such as lack of electronic data entry at the service delivery level, lack of monitoring visits, and data quality issues (e.g., missing data, incomplete data, misunderstandings of indicator definitions and calculations, and overreporting). For the purpose of this research, the focus is on gaps in M&E specific to AYRH.

### Data Deficiencies

#### Age- and Sex-Disaggregated Data

To discern how well RH programs and interventions are serving young people, program implementers must know if young people are being reached. Obtaining this information requires disaggregating the people served or reached by age. AYRH data should be disaggregated by sex and age, at a minimum. The United States President's Emergency Plan for AIDS Relief (PEPFAR) indicators are required to be reported by sex and by five-year age bands (e.g., 10–14, 15–19, and 20–24) (PEPFAR, 2019). However, age and sex disaggregations are still problematic with data collection around the world and remain a crucial element to be addressed in many countries working toward improved health outcomes for young people (UNICEF, 2016). Many health management information systems (HMISs) are not capturing data on the age and sex of clients or are collecting the data unreliably (FP2020, n.d.).

Even when age and sex are recorded by primary data collectors, these distinctions get lost as data are aggregated and reported. In most LMICs, by the time data are aggregated at the national level, it is no longer possible to identify adolescent-specific data. Even in high-income countries where HMIS are better developed, nationally available data are often not sufficiently disaggregated by age to be able to focus on young people (WHO, 2014b). The key informant from Pathfinder International, Uganda commented, “In Ugandan health facilities, the data that are recorded in the registers are not the same as what are entered in DHIS 2. Along the way, you lose the disaggregations.” The key informant from Levy Mwanawasa Teaching Hospital in Zambia reiterated this problem, “When they send the information up the chain, the age disaggregation is lost.”

**“[Data collectors] don’t see the value of disaggregating by age and sex. . . . We may have an indicator that is important for a certain intervention, and they don’t see it; so, we don’t get that information. So, sometimes people don’t pay attention to the disaggregations. Or sometimes they come up with their own forms, and they don’t collect the information we need.”**

**–KII, Plan International, Tanzania**

The Girls Not Brides partnership advocates that at the most basic level, all AYRH programs should collect sex- and age-disaggregated data grouped in five-year age bands: 10–14, 15–19, and 20–24 (International Center for Research on Women, 2016). Although this many age categories may be unwieldy in an HMIS, individual programs and interventions focusing on young people should include these disaggregations.

#### Very Young Adolescents

The period from 10–14 years old is a key developmental stage, where boys and girls are developing attitudes and skills that lay the foundation for future RH and well-being (Palmer, 2010). Furthermore, national quantitative data show sexual debut has already begun in this age group among many females in some parts of

the world, particularly in sub-Saharan Africa and countries in Latin America and the Caribbean (Woog & Kågesten, 2017). Yet, the authors of a scoping paper assessing the evidence on the effectiveness of AYRH programming noted that the evidence base on very young adolescents is sparse (Rankin, Heard, & Diaz, 2016), suggesting that M&E of this group is weak.

Younger adolescents are largely missing, both in specific indicators and age disaggregation, with counting generally starting from the age of 15 years (Patton, et al., 2016; FP2020, n.d.; Woog & Kågesten, 2017). Nationally representative household surveys such as the DHS, Multiple Indicator Cluster Survey (MICS), and the AIDS Indicators Survey typically only include older adolescents (ages 15–19 years) and/or married adolescents (Azzopardi, Kennedy, & Patton, 2017; Vogel, et al., 2015; WHO, 2014b).

Young people are at extra risk, especially girls who have sex with older men. The younger the age of sexual initiation, the more likely it is to involve force or coercion. Among adolescents, the most common victims of sexual abuse are young people just past puberty (WHO, 2004). Yet without data on very young adolescents, it is difficult to ascertain if programmatic responses are reaching this population and if they are sufficiently tailored to the development stage of 10–14-year-olds.

Because this population is young, and because there are many religious, traditional, and political sensitivities related to discussing sexuality and RH with very young adolescents, in certain circumstances, using adolescent-focused surveys may be more successful than adapting current national fertility and health surveys to collect information from this population. This type of approach was successful in four sub-Saharan African countries, where nationally representative adolescent-focused surveys were implemented in 2004, providing data from adolescents ages 12–19 about their sexual behaviors and the barriers they face in preventing HIV, other STIs, and pregnancy (Biddlecom, 2007).

Obtaining data on sexual activity and reproductive behavior directly from those younger than 15 presents serious challenges. These include obtaining approval from institutional review boards, obtaining consent and assent for the child's voluntary and confidential participation, consulting with community stakeholders, developing appropriate survey methods, and selecting topics and phrasing questions in ways that are appropriate to younger respondents (Darroch, Singh, Woog, Bankole, & Ashford 2016). M&E plans should account for these special considerations, and programs should weigh the costs and benefits of collecting this information.

The Global Early Adolescent Study (GEAS) data collection tools collect information from very young adolescents on sociodemographic and contextual characteristics, health and behaviors (e.g., RH, adverse childhood experiences, violence, and media engagement), and perceptions of gender norms and attitudes (GEAS, n.d.). The GEAS measures can help fill a gap in collecting quantitative and qualitative data on the health and well-being of very young adolescents.

Furthermore, although the DHS does not include very young adolescents, it does include retrospective data from women and men ages 15–24 to investigate health outcomes from children as young as 10 years old (MacQuarrie, K. L. D., Mallick, L., & Allen C., 2017). Therefore, it is possible to use DHS data to assess some indicators related to sexual, maternal, and RH for 10–14-year-olds.

## Unmarried Women and Girls

National quantitative data demonstrate that not all sexual activity occurs within the context of marriage (Darroch, et al., 2016), yet data on unmarried women and girls is universally lacking. In a large number of countries, unmarried women (including unmarried adolescents) are excluded from surveys about RH, or they are included but not asked questions related to sexual activity, contraceptive use, and desired fertility, due to sensitivities about sexual activity outside of marriage (FP2020, n.d.; Darroch, et al., 2016; WHO, 2004). As a result, there is a data gap in several countries on women who have never married or been in union, most of whom are adolescents or women in their early 20s (Anderson, Panchaud, Singh, & Watson, 2013).

In recognition that unmarried youth have sex, in some parts of the world, the DHS and MICS now include unmarried women in the sexual activity questions. However, in many North African and Asian countries, the strong cultural unacceptability of sex outside of marriage still prevents data collection for never-married women in the DHS and MICS (Dasgupta, Ueffing, & Kantorová, 2017).

In addition, data in reports tend to pool married and unmarried adolescents together, despite the very different RH needs of these two groups (Evidence to Action & Full Access, Full Choice, 2018).

## Adolescent Boys

Most of the focus on FP and RH programming is justifiably on women and girls. In addition to experiencing maternal morbidity and mortality, girls and young women suffer disproportionately from gender inequality, GBV, forced early marriage, and STIs, including HIV (Temin & Levine, 2009.) This focus, however, has led to a gap in RH data on adolescent boys.

**“When disaggregated by sex, many studies provide only a cursory comparison of results of boys and girls. They do not provide further discussion on why each group may respond differently to programming and why effects on boys and girls may (or may not) be different.”**

**–Rankin, et al., 2016, p. 60**

In the MICS, which focuses on the health of women and children, data for adolescent males remains limited compared to those for adolescent females (Azzopardi, et al., 2017). Similarly, the sample size for men in the DHS is much smaller than that for women (Anderson, et al., 2013). Among more than 160 DHS surveys in 68 countries that have included men, not enough questions are asked of men to obtain additional information about adolescent men’s sexual and reproductive behaviors, contraceptive needs and use, and fertility preferences (Darroch, et al., 2016).

From this dearth of information, there emerges a lack of understanding of adolescent boys’ FP and RH needs. Furthermore, data are missing on what programs are effective for improving boys’ roles as supportive partners, increasing their responsibility to prevent unintended pregnancy, and ensuring that sexual activity is consensual (Hardee, Croce-Galis, & Gay, 2017).

## Most Marginalized or Vulnerable Groups of Adolescents

Both the literature review and KIIs revealed that a significant gap in the M&E of AYRH is the lack of data on marginalized or vulnerable groups of adolescents, such as refugees; migrants; ethnic minorities; those with disabilities; lesbian, gay, bisexual, or transgender (LGBT) adolescents; out-of-school adolescents; adolescents involved with transactional sex; young men who have sex with men; street youth; those in jail or juvenile detention; and those living with HIV. Although these groups have the greatest health needs, because health information systems are often fragmented, with disaggregations getting lost as data are reported up, the needs of these groups remain invisible and unmet (Patton, et al., 2016).

In a systematic review of impact evaluations of AYRH in LMICs, Rankin, et al. (2016) found no studies on adolescent first-time parents, adolescents with disabilities, LGBT adolescents, or adolescent commercial sex workers, and there were very few studies on ethnic minorities (Rankin, et al., 2016). The authors argue that as development priorities shift to fragile and conflict-affected states, there will be greater need for information about the RH needs of displaced and refugee adolescents.

**“It would be good to get better information about at-risk populations, such as LGBT. How can you tailor your interventions to these people if you don’t have adequate information about them?”**

**–KII, Pathfinder International, Uganda**

One way to capture information on marginalized or vulnerable groups is to disaggregate the data in relevant ways beyond age and sex disaggregations, such as by disability status, sexual orientation, or place of residence.

This is necessary for extracting meaningful information on rights from a dataset and helps to ensure that the discrimination and exclusion that marginalized, disenfranchised, or vulnerable groups face are not masked by national averages (WHO, 2014a).

The key informant from Medical Teams International shared the problem with lack of key disaggregated data in refugee camps in Tanzania:

*There are some tribals that because of their traditions, the females are getting married sooner because of their tribe's culture. But we don't collect information on that. And there are some tribals that don't prefer their children to use FP. But I think it's important to get information on this for research and programmatic purposes to expand the reach. These are disadvantaged people, and it's a missed opportunity.*

Ideally, data should be representative of all young people. But even when a randomly selected sample is taken from the population or group of interest to be used as an estimation, in practice, the samples are often not fully representative. For example, adolescent health data are often measured from young people sampled from schools, either with special surveys or the Global School-Based Student Health Survey (for students ages 13–17). Although schools provide an opportunity to sample many adolescents efficiently, the representativeness of the data depends on school enrolment and attendance. Because schooling is linked to many factors, including gender, disability status, and socioeconomic status, these data often provide a biased picture, for instance, in settings where girls and the poor have less access to education or in countries where adolescents disengaged from school account for a significant proportion of the adolescent population (Azzopardi, et al., 2017).

Household surveys may also fail to capture socially marginalized adolescents. Excluded groups require focused attention and targeted sampling and data collection (Azzopardi, et al., 2017; Darroch, et al., 2016).

It is important to note that in some countries data disaggregation by ethnicity, race, or color is a common procedure, but in other countries it is prohibited by national law and/or data collection is not possible owing to issues around confidentiality (Inter-agency and Expert Group on Sustainable Development Goal Indicators, United Nations Economic and Social Council, 2018).

Special protection and considerations are warranted when most-at-risk populations are involved. Because these populations are already socially vulnerable for their behaviors or other characteristics, data collection efforts that identify or bring attention to these populations may place them at additional risk (Joint United Nations Programme on HIV/AIDS [UNAIDS], 2007).

Therefore, countries, implementing organizations, and projects must decide which disaggregations beyond age and sex are appropriate for their AYRH programs, while keeping in mind that the more data are disaggregated, the smaller the sample sizes become and the more difficult it is to draw meaningful conclusions.

To help monitor progress in reaching groups in need of attention with specific program services, the Population Council developed a relatively low-cost tool, the Coverage Exercise, to identify vulnerable subgroups of young people in need of attention. When used in conjunction with population-based data such as household surveys and censuses, it can be a useful program monitoring tool to determine if key resources are reaching vulnerable groups of youth (Weiner, 2011).

**“We have the problem with small sample sizes. Everyone is extremely geographically dispersed and extremely difficult to get to.”**

**–KII, Director, World Vision Vanuatu**

## Nonheterosexual Behavior

Traditionally, RH and FP programs, policies, and research have excluded nonheterosexuality. Ela and Budnick found that “Questions on nonheterosexual behavior, identity, and attraction have not been included in demographic surveys until recently, reflecting an assumption that heterosexuality is implicit in the core

demographic topics of fertility and family formation” (2017). In fact, the authors explain, lesbian and bisexual young women often have sex with men and have a higher risk of teenage pregnancy and some STIs than their straight peers.

Unsurprisingly, Rankin, et al. (2016) found almost no available data addressing the full spectrum of sexual experiences young people may have. Most studies either specify behaviors as occurring between females and males or make no explicit mention of nonheterosexual behaviors (Rankin, et al., 2016; Woog & Kågesten, 2017).

## Digital Health Approaches on AYRH Outcomes

Around the world, mobile phones have become ubiquitous. Given their popularity among young people, service providers and program implementers are increasingly using mobile phones and other interactive media to link adolescents to health information and services (L’Engle, Mangone, Parcesepe, Agarwal, & Ippoliti, 2016). Although digital health interventions can make an important contribution to health outcomes, the M&E of digital health approaches has not yet caught up with implementation (WHO, 2015).

Fedele, Cushing, Fritz, Amaro, & Ortega (2017) found that digital health interventions are a promising and potentially effective approach to use with young people; however, more research is needed to test how the different modalities affect health knowledge, behavior, and outcomes (Fedele, et al., 2017). Another review found innovative and effective uses of mobile phones to improve AYRH. However, the evidence on this approach in LMICs is lacking, as is the evidence on primary outcomes of RH norms and behaviors (L’Engle, et al., 2016).

In Rankin, et al.’s review (2016), most of the respondents said there was insufficient evidence to determine the effectiveness of digital technologies in AYRH programs and reiterated the lack of evaluations on digital approaches for adolescent health outcomes in LMICs (Rankin, et al., 2016).

## **Additional M&E Required to Track Key Aspects of AYRH**

### Access to Contraceptive Information and Services

Adolescents often face obstacles in obtaining contraceptive information and services, such as judgmental attitudes of providers, a lack of confidentiality, limited contraceptive options, and poor policies and guidelines for protecting adolescents’ access to information and services (Darroch, et al., 2016). There have been efforts to monitor and evaluate access, but innovative research methods and study designs are needed to improve measurement in this area.

The DHS and other major data sources provide little information on access to FP information and services because this topic is not their focus (Anderson, et al., 2013). Furthermore, the right of adolescents to obtain contraceptive services is generally absent from the impact evaluation evidence base, only appearing in a small selection of studies and with little description of what these rights include and how they are addressed (Rankin, et al., 2016).

In 2017 the Population Reference Bureau developed a Global Youth Family Planning Index to measure and compare the key policies and programs in countries that govern young people’s ability to access FP information, services, and commodities. The index is supporting monitoring efforts to understand how countries address the FP needs of youth, how access to contraceptive information and services to youth is supported in their laws and policies, and what areas need improvement (Population Reference Bureau, 2017).

## Changes in AYRH at the Community Level

There is plenty of evidence to support engaging the community to change norms and improve AYRH outcomes (Family Health International [FHI], 2005; WHO, 2009; Inter-agency Working Group on the Role of Community Involvement in ASRH [IAWG], 2007; MEASURE Evaluation, 2017). However, few evaluations have been conducted to measure the effects of interventions at the community level, such as changes in norms, attitudes, or behaviors of community members. Rankin, et al. (2016) found that although many of the studies evaluated an intervention focused on community mobilization and dialogue, most of them measured effects on adolescents only. Few studies evaluated the effects of parents or communities, such as changing attitudes towards adolescents' access to RH services and contraception (Rankin, et al., 2016). A key informant from Plan International/Tanzania underscored this point: "We don't have any indicators to track changes in the community."

An evaluation of Programa Geração Biz, a multi-sectoral adolescent health initiative that was scaled up throughout Mozambique, found that the program's M&E poorly captured changes in social norms around gender and AYRH in families and communities (Chandra-Mouli, et al., 2015).

The IAWG on the Role of Community Involvement in ASRH was formed in 2005 to propose outcome-level indicators to measure the full impact of community involvement in improving AYRH (IAWG, 2007). However, the ability to monitor community-level social changes that result from AYRH interventions and evaluate communities' capacity to sustain positive behavior change is still a challenge and remains an M&E gap.

## Neglected Yet Important Facets of AYRH

Certain key facets of RH are not being tracked among adolescents and youth because they are not being measured or are not measured consistently. This includes fertility intentions, fertility awareness, parity, and what influences adolescents' decisions (Evidence to Action & Full Access, Full Choice, 2018), along with adolescent empowerment, agency, and self-efficacy (Azzopardi, et al., 2017).

**"It's difficult for peer educators to report back on how decision making has increased among adolescents."**

**—KII, Governance Links Tanzania**

A key informant with Tanzania's Ministry of Health, Community Development, Gender, Elderly and Children, commented that there are certain variables that are closely linked to AYRH outcomes, such as place of residence, that are not recorded and thus are not tracked despite being key to understanding adolescents' environments and decision making.

Our limited understanding of some important aspects of adolescent development and well-being may be a result of missing or poor indicators (e.g., inconsistent or nonstandard indicators or a lack of clear indicator definitions). It may also be a reflection of traditional AYRH programs having a narrower scope, focusing mostly on FP and pregnancy outcomes and having less of a focus on more holistic approaches that examine adolescents' circumstances and drivers of choice affecting RH outcomes more broadly.

## Difficulty of Gathering Sensitive Information from Adolescents

There is an inherent difficulty around gathering personal and sensitive information from adolescents who tend to feel shy talking about personal matters, particularly sexuality and sexual relationships, even more so in socially conservative societies. Several key informants identified this reticence as a barrier to collecting data and monitoring interventions. The key informant from Pathfinder International, Uganda shared, "Young people don't want to mention what type of family planning they've used. They may come with bleeding or something, but they don't want to say what method they may have been using." The key informant from Rivers State Primary Health Care Management Board in Nigeria reiterated, "There are plenty of challenges

dealing with adolescents. They do not talk freely. They are shy and scared.” She said that this causes problems for service providers and is a reason that both providers and youth want to see a separate section for youth; dealing with adolescent and adult clients in the same space is difficult.

The manner in which programs and interventions reach young people affects how comfortable, engaged, and honest they will be. The key informant from BRAC found that girls were not comfortable answering questions posed by men or boys, so they adjust their data collection accordingly.

Using peer educators is one approach for helping youth feel less afraid or embarrassed about sharing personal RH information. The Konbit Sante key informant explained the situation in Haiti as follows:

*Adolescents enjoy the peer approach because there’s no intimidation. There was one youth in a focus group discussion who had a lot of taboo ideas about sexuality, like menstruation. It was very critical to have a peer with whom she could confide in and get correct information.*

While meta-analyses have found that peer education programs have limited effects in promoting healthy behaviors and improving health outcomes in the population being served (Chandra-Mouli, Lane, & Wong, 2015), several key informants mentioned the benefits of using peer providers to both share RH information and gather sensitive RH data from young people.

Another approach is relying more on technology for data collection so young people can avoid potentially embarrassing or uncomfortable face-to-face interactions with data collectors. The key informant from Pathfinder International, Uganda said, “Youth are very tech-savvy, so we should figure out how to harness that.” The key informant from SNEHA shared, “For best practices, we use smart phones and we use tablets that use dashboards and cloud-based servers.” Capitalizing on young people’s comfort with mobile devices has the potential to both gather more accurate data and improve programs’ ability to store, analyze, and share that data.

## **Underreporting Gaps**

Sexual activity and RH behaviors are self-reported. Because of social desirability bias and the reasons mentioned above, these behaviors—particularly among adolescent girls—subjects them to underreporting. This is especially true for stigmatized or illegal behaviors such as early and premarital sexual activity, induced abortion, and GBV.

## **Sexual Activity**

Respondents may be reluctant to admit to having intercourse at young ages, outside of marriage, or with same-sex partners, thereby underestimating the proportion of adolescents who are sexually active (Dasgupta, et al., 2017; Anderson, et al., 2013). Anderson, et al. (2013) reported the following:

*The DHS and other surveys usually obtain information on sexual behavior by asking respondents whether they have had sexual intercourse and at what age their first experience took place. The fact that the questions on first sexual intercourse follow questions on marriage implies that these questions would have measured only intercourse between a man and a woman. Moreover, these large, national surveys do not provide information on forms of sexual activity such as kissing, fondling, or oral and anal sex, nor do they provide information on homosexual or queer identity and same-sex sexual behavior. (p. 10)*

In communities that censure sex outside of marriage, some young women may feel the need to adjust their responses to make it appear that first sex occurred after marriage (Neal & Hosegood, 2015).

This underreporting gap is also related to the way that sexual activity is defined, analyzed, or reported. “Sexually active” generally pertains to having had coitus<sup>3</sup> within the past month, whereas all married women are considered sexually active (FP2020, n.d.).

“Data shows that when the timeframe for sexual activity is expanded to the past year, 90% of adolescents who have ever had sex are captured.”

–FP2020, Mind the Gap

The measurement for sexual activity requires modifications to ensure not just recent sexual activity is captured. Furthermore, apart from creating a safe, nonjudgmental environment to discuss personal experiences, obtaining better, more consistent data around sexual activity requires that questionnaires use unambiguous language. Likewise, data collectors need to be well-versed and comfortable with terminology around sex that adolescents will understand and be familiar with. For example, an adolescent and data collector may both be discussing sexual activity but have very different definitions in mind for what sexual activity entails.

## Induced Abortion

Accurate information about numbers of induced abortions and the conditions under which they occur is extremely limited, especially in countries with restrictive abortion laws. Not only are reliable reporting systems typically absent where abortion is legally prohibited, but abortion is also highly underreported (Singh, et al., 2017). For example, a large proportion of female survey respondents will not report their abortion experience because of the strong stigma against abortion. In addition, data on abortion from such surveys are likely to be nonrepresentative of all women, because underreporting typically varies according to women’s characteristics. Consequently, measures of abortion incidence, prevalence, and morbidity from face-to-face surveys of women are likely affected by both underreporting and bias (Singh, Remez, & Tartaglione, 2010).

Limited information is available on the age distribution and marital status of women having induced abortions in LMICs (Darroch, 2016). The key informants reported challenges obtaining information about abortion. The key informant from Pathfinder International, Uganda said, “It is difficult to get any information related to abortion. There’s an issue around stigma and adolescents not wanting to talk about how many kids they have or how many pregnancies they’ve had. They are embarrassed about it.”

In addition to this underreporting gap being a factor of young people’s reluctance to share this information, it is also a result of lack of funds and/or sanction for programs to collect this information.

## STIs

In both developed and LMICs there is evidence of STIs being underreported (Francis, et al., 2018; Duron, et al., 2018; Nimalasuriya, 2011). STIs are common worldwide, especially among young people, who are at greater risk of contracting an STI (U.S. Centers for Disease Control and Prevention, 2017). Despite the harmful consequences of STIs for reproductive, maternal, newborn, child, and adolescent health, many STIs go undetected and untreated.

The problem of monitoring and evaluating STI trends in countries is exacerbated by weak STI surveillance systems (PATH, 2017). Although more than half of countries worldwide have an STI surveillance system, the availability and quality of STI data varies significantly across countries and is often not comparable, owing to a lack of consistent indicators. For example, there are no globally accepted indicators for chlamydia (PATH, 2017).

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<sup>3</sup> Coitus refers to the physical union of male and female genitalia: <https://www.merriam-webster.com/dictionary/coitus>

## GBV

The lack of data on the nature, prevalence, and incidence of GBV is a barrier to effective interventions and policy making (United Nations Division for the Advancement of Women, 2005). Due to a myriad of reasons, globally, the boys, girls, men, and women who experience sexual violence rarely come forward to report the crime, making it difficult to understand the scope of the problem (World Population Review, 2019). Obtaining reliable data on experiences with GBV, either as a victim or a perpetrator, is very culturally sensitive and challenging to measure.

Data on boys' experience with sexual violence are especially lacking. According to a 2019 report from The Economist Intelligence Unit on child sexual abuse and exploitation (2019), although some data on sexual violence against girls are often available, only seven countries have internationally comparable data for boys. Furthermore, boys are often not addressed in legal frameworks that cover sexual violence against children, nor are they the focus of much governmental action (The Economist Intelligence Unit, 2019).

Several key informants identified lack of GBV data as an M&E gap. The key informant from Plan International, Tanzania said, "We need to get more information about GBV survivors, such as who is receiving services, who is getting referred, how many boys and girls, etc."

According to a key informant, World Vision, Vanuatu is trying to collect this information in a thoughtful and appropriate manner:

*World Vision doesn't explicitly ask if first sex was coerced, because if the adolescents report yes, then we are ethically required to report violence. So, we try to phrase questions to protect anonymity and be sensitive about experiences with violence.*

–Director of World Vision, Vanuatu

**"GBV is another tricky area. If you don't have a strong community network, you won't get this data. It's worse if they're married."**

**–KII, Deutsche Stiftung Weltbevölkerung, Kenya**

The Violence against Children Survey is a cross-sectional household survey of 13–24-year-old males and females designed to produce national-level estimates of experiences with physical, sexual, and emotional violence in childhood (U.S. Centers for Disease Control and Prevention, n.d.). Although the survey is not implemented in most countries, where it is conducted it can identify prevalence of violence in the past 12 months for teenagers ages 13–17 years, risk and protective factors, and consequences of violence.

## Indicators

### Multiple Variations of the Same Indicators

While compiling the comprehensive list of indicators, it became apparent that many indicators have multiple variations, which poses a challenge for comparing data. For instance, there were nine variations to the indicator, Median age at first sex, and 12 variations to the indicator, Percent of adolescents who have ever had sex (Table 3). Indicators around sexual activity, FP, and birth have especially numerous variations.

**Table 3. Examples of variations of common indicators**

Variations for the indicator, Median age at first sex
The age by which one half of young men or women aged 15–24 have had penetrative sex, of all young people surveyed
Age at first intercourse by key characteristics of youth
Mean age at first sex
Average age of sexual initiation among youth ages 14–19
Median age at first sex among 15–19, smoothed using running average

Median age at first sex among 15–19 and 20–4
Median age at first sex among young men and women
Median age at first sexual intercourse among young women
Median age at first sexual intercourse among young men
<b>Variations for the indicator, Percent of adolescents who have ever had sex</b>
Percent of youth who have ever had intercourse by selected reference ages
Percent of youth who have had sex within a specified time period
Percent ever had sex among 15–19
Proportion of males and females aged 15–19 who have ever had sexual intercourse
Percent ever had sex among never married 15–19
Percent ever had sex in two or three year age groups (15–17, 18–19)
Percent of respondents reporting any type of sexual activity
Percent of women aged 15–19 who have ever been sexually active
Percent of men aged 15–19 who have ever been sexually active
Percent of women aged 20–24 who have ever been sexually active
Percent of men aged 20–24 who have ever been sexually active
Percent of young single people (aged 15–24) who have had sex in the last 12 months of all young single people surveyed

Each of these indicators has slightly different definitions (e.g., sex, versus sexual intercourse, versus sexual activity) and possibly different calculations. Redundancy and lack of standardization creates barriers to obtaining a clear picture of AYRH status.

## List of Key AYRH Indicators

Analyzing over 800 compiled indicators resulted in the identification of 103 recommended key AYRH indicators. Appendix E contains the key indicators.

These indicators were selected because they fulfilled the following criteria:

- Specifically addresses adolescents, youth, or young people
- Relates directly to RH
- Meets the criteria for a strong, high-quality indicator, as presented in Table 2
- Measures an essential activity or aspect of the category or topical area
- Is universal, but adaptable to local conditions

Some categories (i.e., MHM, VMMC, HTSP, parental involvement, and mass media) contain only one or two recommended key indicators, but others (i.e., sexual activity and STIs) contain as many as nine. Although this review lists 103 recommended key AYRH indicators, there are many other strong, high-quality indicators that could be used to effectively monitor and evaluate AYRH programs and interventions when applied to young people (e.g., contraceptive discontinuation rate, contraceptive method switching, number of individuals using GBV social services, percent of PAC clients counseled on contraception). However, these indicators are not specific to young people, so they were not identified as key AYRH indicators.

## Limitations

This review has several limitations worth noting. Only publications in English were searched, which potentially excluded indicators and gaps in M&E of AYRH presented in other languages. Indicators in other languages likely have issues similar to those presented in this report; however, I cannot comment on those.

Likewise, although the list of indicators is comprehensive, it is by no means complete; there are undoubtedly many more AYRH indicators that were not included in this review. However, it is likely they are either slight variations of the indicators contained in Appendix C or pertain to a specific activity, intervention, or policy and are therefore not among the most commonly used AYRH indicators.

The selection of key indicators was not conducted with direct input from various RH technical working groups (TWGs). Rather, meeting notes and reports from several M&E, RH, and adolescent TWGs were reviewed. Requesting feedback from TWG participants may have resulted in variations to the selected key AYRH indicators.

The data collection and indicator review were conducted by one person and may be subject to bias. But strict inclusion and exclusion criteria were applied to the identification of key indicators which helped to mitigate any biases.

It would have been preferable to get the perspectives of more health facility in-charges, supervisors, or others who regularly review routine health information to understand what gaps in M&E they experience related to AYRH. Not only was it difficult to find service providers in the field who review and analyze health facility data, the ones that were contacted were reluctant to answer questions on the record. In addition, interviewing key informants from more countries could have provided more insight into M&E gaps resulting from geographical or cultural differences. However, with key informants from the Caribbean, Central America, Africa, Asia, and Oceania, broad field experience is represented.

## RECOMMENDATIONS

This review revealed several gaps in the M&E of AYRH. The following recommendations will help address these gaps.

- **Use a selection of relevant key AYRH indicators, as recommended in Appendix E.** The indicators can be used selectively as part of the evaluation of national programs, regional programs, and country projects, or for routine monitoring purposes. Using relevant key AYRH indicators is particularly important in contexts where AYRH is prioritized in national FP and RH strategies. If organizations need more data, they can conduct special studies to evaluate the programs' performance in areas of interest to staff or select other indicators presented in Appendix C (the full list of AYRH indicators).

Naturally organizations select and adapt indicators to their specific circumstances as well as to the socioeconomic and cultural contexts in which their programs operate. This approach not only ensures that the indicators are relevant to the organization, donor, and/or intervention in question, but also promotes ownership of the M&E process. At the same time, it is recommended that countries and organizations consider using some of the indicators presented from the menu in Appendix E, as applicable.

- **Use currently defined indicators for AYRH whenever possible** rather than creating new variations for the same indicator. Looking at an example from Table 3, Percent of adolescents who have ever had sex, if the data are disaggregated by age and sex, as specified in the indicator reference sheet, several of the related indicators are rendered redundant. M&E staff should be instructed how to include disaggregations with existing indicators to avoid making multiple variations of the same indicator.
- **Improve HMIS systems' abilities to collect age- and sex-disaggregated data.** Disaggregate data by age and sex, at a minimum, and by other disaggregations, as needed. Maintain the sex and age disaggregations (at least including five-year age bands: 10–14, 15–19, 20–24, etc.) as data get consolidated and synthesized so national-level data does not mask subnational or subpopulation disparities. These disaggregations (as well as data disaggregation by location and social status) are required for the set of indicators tracking the 2030 Agenda for Sustainable Development (Bizikova, 2017).

Several countries have made significant progress in keeping age and sex disaggregations in their national-level HMIS reporting. These countries include El Salvador, Indonesia, Malawi, Moldova, and Tanzania (WHO, 2014b). But continued efforts should be made to help countries collect and support age- and sex-disaggregated data at the subnational level and adapt their national reporting systems to integrate these disaggregations into routine monitoring. This requires changing the current data system (i.e., client registers, data summary forms, HMIS) and strengthening the data skills capacity of appropriate personnel (UNICEF, 2016). Doing so will increase the use of health system data for monitoring trends across different population groups and analyzing national-level progress on reaching adolescents.

Where national health information systems are being adapted to fill data gaps in adolescent sex- and age-disaggregated data, UNICEF has developed guidance for informing measures to capture and report adolescent sex- and age-disaggregated data (UNICEF, 2016).

- **Improve the inclusion of adolescents from marginalized groups in program measurements.** This would entail improving data collection for the populations of interest (e.g., very young

adolescents, males, out-of-school youth, refugees) either by including these groups in existing surveys or by developing additional surveys (Azzopardi, et al., 2017).

- **Include specific, understandable terms when collecting data from adolescents.** Adolescents have their own vocabulary for and understanding of many things, and because of embarrassment and awkwardness talking about personal matters, they are less likely to ask for clarifications. Obtaining reliable data depends heavily on the data collection tools using clearly understood terms and standard definitions for each indicator.
- **Include important social determinants of adolescent health and well-being** in program M&E plans. WHO's Global Reference List of 100 Core Health Indicators (2018) now includes an indicator for early marriage, but neither the core nor supplementary list includes indicators for parent-child connectedness or policies and standards supporting the provision of RH services to young people. Including indicators for social determinants of AYRH will provide a more complete picture of contributing factors of adolescent health inequities and outcomes.
- **Increase use of digital technology to collect data on adolescents,** such as using tablets and mobile phones. Using technology-guided surveys and questionnaires has the potential to reduce underreporting of sensitive behaviors (Darroch, 2016) and leverages young people's familiarity and comfort with mobile devices. However, M&E staff should consider the appropriateness of using a digital technology approach if trying to capture data on certain project beneficiary populations, such as adolescents who are illiterate or most vulnerable.
- **Expand efforts to monitor adolescents' access to contraceptive information and services.** Although these efforts are underway, more information is needed on the accessibility and quality of FP services that adolescents receive, because actual care may differ greatly from what laws and policies intend. For instance, community and provider attitudes can make it difficult for adolescents to obtain FP services even where laws and regulations allow such access without parental or spousal consent (Darroch, 2016).
- **Develop and validate standardized indicators on STIs** (i.e., prevalence, incidence, testing, and treatment coverage for chlamydia, gonorrhea, and syphilis) and encourage the inclusion of these indicators in routine national and global surveillance systems (PATH, 2017).

## CONCLUSION

Young people have become a population of interest for empowerment, health, and development initiatives in LMICs. Although governments, donors, and civil society have increased attention on young people and their RH needs, there are several M&E gaps that limit programs from reaching their full potential and prevent all youth from benefiting from RH programs and policies. By addressing these gaps, such as improving data collection from different groups of young people; disaggregating data by age, sex, and other factors, as needed; improving measures to track key aspects of AYRH; and using a selection of key indicators for AYRH, stakeholders will be better prepared to address the needs of all young people so they can transition well into adulthood and lead healthier lives.

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## Appendix B. Key Informant Organizations

Organization	Country
ADRA (The Adventist Development and Relief Agency)	South Sudan
Amref Health Africa	Tanzania
BRAC	Bangladesh
Center for Integrated Health Public Hospital	Niger
DSW (Deutsche Stiftung Weltbevoelkerung) Kenya	Kenya
Governance Links Tanzania	Tanzania
Konbit Sante Cap-Haitien Health Partnership	Haiti
Levy Mwanawasa Teaching Hospital	Zambia
Marie Stopes International	Nigeria
Matibabu Foundation	Kenya
Medical Teams International	Tanzania
Ministry of Health, Community Development, Gender, Elderly & Children	Tanzania
Pathfinder International	Uganda
Plan International	Tanzania
Rivers State Primary Health Care Management Board	Nigeria
SNEHA (Society for Nutrition, Education & Health Action)	India
Soy Niña	Costa Rica
World Vision	Vanuatu

## Appendix C. Key Informant Interview Guide

### Monitoring and Evaluating Adolescent and Youth Reproductive Health Services, Activities, and Programs

#### Key Informant Interview Guide

*The objective of the activity is to assess how adolescent and youth reproductive health (AYRH) services, activities, and programs are monitored and evaluated, identify gaps in the monitoring and evaluation (M&E), and make recommendations.*

*This interview is intended to answer the following questions:*

- 1. What AYRH services, activities, or programs are being or have been provided by your organization or institution?*
- 2. What indicators are used to track these activities or services?*
- 3. What data sources are used?*
- 4. Are there any challenges with monitoring the activities or services?*
- 5. Have your AYRH activities, services, or programs been evaluated and if so, were there any challenges, best practices, or lessons learned?*

#### **BACKGROUND INFORMATION**

Interview date and time:

Name of key informant interviewee:

Job title and name of organization:

#### **INTRODUCTION & CONSENT**

Hello, my name is Bridgit Adamou and I work for the University of North Carolina at Chapel Hill on the USAID-funded MEASURE Evaluation Project. We are interviewing service providers and program and M&E staff who provide AYRH services or work in AYRH programming. We are interested in identifying what indicators and data sources are used to track AYRH services and activities and how these AYRH interventions and programs are evaluated. The purpose of this activity is to gain information on the gaps in monitoring and evaluating AYRH services and activities and make recommendations.

There are no direct benefits in participating in this interview, other than contributing to a better understanding of M&E of AYRH services and programs. The risks involved in participation are very low; these questions should not be stressful or upsetting in nature, as they focus on your daily work and organizational experience.

Your participation is important but completely voluntary; you may stop at any time or skip questions, with no penalty. The interview should take no more than 30 minutes. Please let me know if you would like to be interviewed at this time.

Are you willing to participate?  Yes  No (stop interview)

If NO, provide reason: \_\_\_\_\_

This information will help inform a report on improving the M&E of AYRH programs and services. I will only include the names and countries of the key informants' organizations in the appendix of the report. If you are quoted in the body of the report, do you wish to be deidentified?  Yes  No

## **INTERVIEW QUESTIONS**

### **GENERAL INFORMATION ABOUT THE PROGRAM(S) OR SERVICES**

I want to first ask you some questions about your organization or institution and its activities or services that include AYRH.

- 1) Are you implementing an AYRH project or program? (If no, skip to question 2.) If so, please briefly explain.
- 2) Do you implement general RH activities that include adolescents? If so, please explain.
- 3) Do you provide direct RH services to adolescents? If so, please explain.

### **MONITORING OF AYRH PROGRAMS OR SERVICES**

- 4) Now I'm going to ask about your experience with monitoring AYRH programs or services. Can you list for me the indicators you've used to monitor these programs services?
  - a. Are these indicators sex- and age-disaggregated?
  - b. Were they disaggregated any other way (e.g., by marital status, in- or out-of-school youth, etc.)?
  - c. Have reports of these programs or interventions been produced? [If "yes"] Are they available on a website, by request, or published?
- 5) What was your data source (or what were your data sources) for these indicators?
- 6) Were there any indicators you ended up not using or not reporting on and why? In other words, what did you find to be problematic with those indicators?

- 7) Conversely, were there any indicators you now wish you would have included? Why?
- 8) Is there anything you would change or do differently to monitor your AYRH programs?
- a. PROBE: Is there particular technology that you did not use for monitoring that you would use now, such as GIS?
  - b. PROBE: Are there any systems related to data collection, for example, that you would address prior to implementing such a project or offering such services again?

### **EVALUATION OF AYRH PROGRAMS OR SERVICES**

- 9) I'm going to ask you about evaluations. Do you have any experience with evaluating AYRH services or interventions? Please explain. We are interested in learning about challenges, best practices, or lessons learned.
- a. PROBE: Can you describe some approaches you or your colleagues have used that have led to a successful evaluation, or a successful step within an evaluation?
  - b. PROBE: If you were mentoring or giving advice to a colleague who had not been involved with such evaluations before, what if anything you would identify as a best practice in evaluating AYRH programs?
  - c. PROBE: What do you think are the challenges of evaluating an AYRH program?

IF INTERVIEWEE TALKS ABOUT AYRH PROGRAMS AS A WHOLE, PROBE ABOUT SPECIFIC EVALUATIONS THEY MIGHT BE REFERRING TO.

### **FINAL COMMENTS & THANK YOU**

Your feedback and thoughts have been very important, and we appreciate your assistance. Before we end, do you have anything else you would like to add? Anything else you think we should have asked?

### **SUPPLEMENTARY INFORMATION**

MAKE A NOTE OF WHAT INFORMATION THE PARTICIPANT HAS PROMISED TO SEND YOU.

- 1) [enter]
- 2) [enter]

## Appendix D. Full List of AYRH Indicators

Indicators in red have been identified as key indicators.

Menstruation/Menstrual Hygiene Management
Age of first menstruation
Average age of menarche
Anemia prevalence
Percent of girls or women who report having everything they need to manage menstruation
Percent of girls or women who report that they wash or reuse their MHM materials
Disposal of menstrual materials
Types of menstrual materials used
Main location used for MHM
Safety, cleanliness and privacy of MHM location
Schools with menstrual hygiene management services
Pre-service teacher training on MHM is included in national teacher curricula
Reduced menstruation-related absenteeism
Percent of health centers (of all types) teaching good MHM in their RH clinics
Percent of health workers who can answer a basic set of questions regarding MHM
Percent of girls and boys aged nine to 16 that can answer a basic set of questions regarding MHM
Percent of schools with MHM in their curriculum
Percent of girls who received information regarding MHM in school before the onset of menstruation
Percent of parents who have spoken to their children about menstruation
Percent of men who understand menstruation
Percent women and girls reporting any restrictions on their freedom during menstruation
Number or percent of institutional and public WASH [water, sanitation, and hygiene] facilities (e.g., schools, health centres) constructed with consideration for MHM
MHM clearly defined and articulated in national WASH, health and education policies
Consideration of MHM in WASH infrastructure designs for institutional and public facilities (e.g., schools, health facilities, marketplaces)
Number or percent of respondents (e.g., girls, boys, women, men, teachers) with improved knowledge and attitudes of MHM
Number or percent of men and boys with improved MHM practices
Number or percent of women and girls with improved MHM practices
Number or percent of women and girls using affordable and hygienic sanitary pads
Number or percent men and women with improved thinking on gender equality
Percent improvement in attendance at school of girls during menstruation

Sexual Activity
Number/Percent of youth practicing low-risk behaviors
Number of participants that reported abstinence from sex
Young people who have never had sex
Female and male adolescents who have never had sexual intercourse
Sexual readiness
Adolescents' level of sexual activity
Sex before the age of 15 among young people
The age by which one half of young men or women aged 15–24 have had penetrative sex, of all young people surveyed
Age at first intercourse
<b>Age at first sex</b>
Age at first intercourse by key characteristics of youth
Mean age at first sex
Average age of sexual initiation among youth ages 14–19
Median age at first sex
Median age at first sex among 15–19, smoothed using running average
Median age at first sex among 15–19 and 20–24
Median age at first sex among young men and women
Median age at first sexual intercourse among young women
Median age at first sexual intercourse among young men
<b>Percent adolescents who have ever had sex</b>
Percent of youth who have had sex within a specified time period
Number of times youth have had sex within a specified time period
Percent of youth who have had intercourse at selected reference ages
Percent ever had sex among 15–19
Proportion of males and females aged 15–19 who have ever had sexual intercourse
Percent ever had sex among never married 15–19
Percent ever had sex in two or three year age groups (15–17, 18–19)
Percent of respondents reporting any type of sexual activity
Percent of young single people (aged 15–24) who have had sex in the last 12 months of all young single people surveyed
Percent of women aged 15–19 who have ever been sexually active
Percent of men aged 15–19 who have ever been sexually active
Percent of women aged 20–24 who have ever been sexually active
Percent of men aged 20–24 who have ever been sexually active

<b>Early initiation of sexual activity</b>
Percent of women aged 15–24 who had sexual intercourse before age 15
Percent of men aged 15–24 who had sexual intercourse before age 15
Percentage of young women and men aged 15–24 who have had sexual intercourse before the age of 15
Percent of women aged 15–24 who had sexual intercourse before age 18
Women ages 20–24 who had sex by age 18
Men ages 20–24 who had sex by age 18
Percent had sex by age 18 among 20–24
Percent of men aged 15–24 who had sexual intercourse before age 18
More than one sex partner in the past 12 months among women and men aged 15–49
Number of sexual partners ever
Number of sequential sexual partners within a specified time period
Mean number of sexual partners, last 12 months
Number of sexual partners within a specified time period
<b>Number of sexual partners among sexually active adolescents during a specified reference period</b>
Sex with a non-regular partner in the last 12 months among men and women aged 15–49
Condom use at last sex with a non-regular partner among men and women aged 15–49
Percent of respondents with fewer than two sex partners in the last 12 months
Percentage of unmarried respondents who report at least two sexual partners in the past 12 months
Percentage of currently married youth, 20–24, with extramarital partners in the past 12 months
Percentage of respondents who reported extra-marital sexual experiences
Percentage of respondents reporting first having sex with someone other than a close friend
Percent of young males who have had sexual contact with another male
Percent of young males who have had anal intercourse with another male
Percent of young males who have ever used a condom for anal intercourse with another male
Percent of young males who used a condom at last anal intercourse with another male
<b>Number of same-sex partners</b>
Percentage of respondents who reported sexual relations with a casual partner
Percentage of respondents who reported sexual relations with a married woman
Percentage of respondents who reported sexual relations with a sex worker
Sex with a commercial sex worker among young people
Sex with a transactional partner in the last 12 months among men and women aged 15–49
Percentage of men (aged 15–49) reporting sex with a sex worker in the last 12 months
<b>Number/Percent of youth who have ever paid money or other form of exchange for sex</b>

Percentage of men (aged 15–49) reporting condom use the last time they had sex with a sex worker, of those who report having had sex with a sex worker in the last 12 months
Percent of young people (15–24) who have had sex with more than one partner in the last 12 months, of all young people surveyed
<b>Number/Percent of youth who have ever received money or other form of exchange for sex</b>
Sex while intoxicated among young people
Percent of young people aged 15–24 who had sex while intoxicated with alcohol or drugs in past 12 months
The percentage of women aged 15–19 who have had non-marital sex with a man 10 years or more older than themselves in the last 12 months, of all those 15–19 who had non-marital sex in the last 12 months
<b>Age mixing in sexual partnerships among young women</b>
Percent of youth who have felt pressured by their current partners to have sex
Percent of youth whose last sex was unwanted
<b>Sexual decision-making among young people</b>
<b>Family Planning</b>
Percentage of women with an unmet need for a modern method of contraception
<b>Unmet need for FP among young people</b>
Unmet need for FP among married as well as sexually active unmarried young people (15–19, 20–24)
Percent of sexually active, never-married women aged 15–19 who have unmet need for contraception
Percent of married women aged 15–19 who have unmet need for contraception
Married women ages 20–24 with an unmet need for FP
Percent of respondents identifying reasons for not using contraceptives
Percent of respondents that are not using any forms of contraceptive
Contraceptive discontinuation rate
Married girls'/ young women's influence over use of contraception/ timing and number of pregnancies
Percent of respondents who have correct knowledge about how to use contraceptive methods
Percent of women of reproductive age who have heard about at least three methods of FP
Average number of modern methods known among women aged 15–19
Percent of the population who know of at least one source of modern contraceptive services and/or supplies
FP seeking behavior among newly married/newly partnered boys and girls ages 15–19
Percent of modern contraceptive users who reported whether provider informed them about other methods, side effects, and what to do if experiencing side effects
Percentage of women of reproductive age who were informed of potential side effects of any type of FP method during their visit, among those who visited an FP provider in the past 12 months (or a specified reference period)
Percent of FP clients 15–49 who received information on the full range of methods
Number of women 15–49 counselled on FP
Percentage of women of reproductive age who were informed of other FP methods besides their preferred method, among those who visited an FP provider in the past 12 months (or a specified reference period)

Percent of women 15–49 who obtained the contraceptive method they wanted
Number of women 15–49 who received a modern contraceptive method
Current FP use among newly married/newly partnered boys and girls ages 15–19
Percent of respondents reporting current contraceptive use
Percent of sexually active youth who have ever used modern contraception
Percent of unmarried 15–19-year-olds who currently use any contraceptive method
Percent of married and/or parenting 15–19-year-olds who currently use any contraceptive method
Percent of sexually active, never-married women aged 15–19 currently using any contraception
Percent of sexually active, never-married women aged 15–19 currently using modern contraception
Current use of modern contraceptives by young women (15–19, 20–24), married as well as sexually active unmarried
Percent of sexually active, never-married women aged 15–19 currently using traditional contraception
Percent of sexually active men aged 15–19 currently using any contraception
Percent of sexually active men aged 15–24 currently using modern contraception
Percent of sexually active men aged 15–24 currently using the condom
Percent of sexually active men aged 15–24 currently using traditional contraception
Percent of married women aged 15–19 currently using any contraception
Percent of married women aged 15–19 currently using modern contraception
Percent of married women aged 15–19 currently using traditional contraception
Percentage of all women (15–49 years) who report that they are currently using a modern method of contraception
Percent of women 15–49 continuing a modern contraceptive method for 12 months
Percent of sexually active youth consistently using contraceptives over the past 12 months
Percent of sexually active youth who used contraception at first intercourse
Modern contraceptive at first sex
Modern contraceptive at last sex
Percent of sexually active youth who used contraception before first pregnancy
Number/Percent of sexually active youth who used contraception at last intercourse
Percent of sexually active youth who are currently using contraception, by method
Number/Percent of sexually active young people who used contraception at first/last sex
Adolescent and young adult females or their partners at risk of unintended pregnancy who used contraception at most recent sexual intercourse
Age at first contraceptive use
Number/Percent of family planning clients that are young people (under age 25)
Number of monthly FP clients ages 15–24
Number of monthly FP services disaggregated by age group, LARC, or counseling-only
Number of methods distributed to young people

Source of supply by method for sexually active youth who used a contraceptive/condom at last intercourse or are currently using a contraceptive/condom
Number of new contraceptive users
Number of acceptors new to modern contraception
Number of additional users of modern methods of contraception
Additional FP method users
Percent of respondents who have ever used modern contraception
Females aged 15–24-year-olds with met need for modern contraception
Number/Percent of young FP users who received FP counselling
Number/Percent of youth exposed to FP messaging at school
Number/Percent of out-of-school youth exposed to FP messaging
Number of participants in FP IEC sessions
Number of acceptors new to LARC methods
Percent of men and women who intend to use an LA/PM in the future
Demand for family planning satisfied with modern methods among females aged 15–19
Percent of women and men who have heard of at least one LA/PM
Percent of demand satisfied by modern contraception
Percent of women 15–49 currently using a modern contraceptive method who report satisfaction with their current method
Percent of women 15–49 currently using a modern contraceptive method who would recommend that method to a friend or family member
Percentage distribution of contraceptive method switching over the course of the program
Contraceptive method switching
Percent change in method mix
Method mix among young people by service delivery approach
Method mix
Percentage of women using each modern method of contraception
Contraceptive prevalence rate among young people
Contraceptive prevalence rate
Contraceptive prevalence rate, modern methods
Percentage of women whose demand is satisfied with a modern method of contraception
Couple years of protection
Number and percent of women and men aged 15–49 who use a private sector source to obtain modern FP methods
Percent of men who support the use of modern contraception for themselves or their partners
Percent of 15–19-year-olds who help their partner in FP use
Percentage of women who make family planning decisions alone or jointly with their husbands or partners
Percentage of intended audience who decided jointly with their spouse/partner which FP method to use

Number/percent of males who help partner use FP
Number/percent of men who report discussing FP with partner
Number/percent of men who report using FP
Proportion of women aged 15–49 who make their own informed decisions regarding sexual relations, contraceptive use and RH care
Communication with partner about FP use in last 3 months among newly married/newly partnered boys and girls ages 15–19
<b>Marriage</b>
<b>Age at first marriage</b>
Median age at first marriage
Median age at first marriage among young women
Median age at first marriage among young men
Gap between median ages at first sexual intercourse and first marriage among young men
Gap between median ages at first sexual intercourse and first marriage among young women
Child marriage rate (by ages 15 and 18)
Percentage of married girls who say that they wanted to get married at the time that they were married
<b>Percent of girls who report having a say in choice or timing of marriage</b>
Percent of youth who have ever been married or have cohabited
Of those who have ever married or cohabited, average age at marriage or cohabitation
<b>Percent of youth who are currently married or cohabiting</b>
Percent of women aged 15–19 who have ever been married
Percent of men aged 15–19 who have ever been married
Percentage of 20–24-year-olds married or in union before age 18
<b>Marriage before age 18 years in women aged 20–24 years</b>
Percentage of women age 20–24 that report being married by age 18
Percentage of women/men aged 20–24 who were first married or in union by age 18
Percentage of women/men aged 20–24 who were first married or in union before age 15
Percentage of women aged 20 to 24 who have had three or more children, by age at first marriage or union
Percent increase in median interval between marriage and first birth
<b>Healthy Timing and Spacing of Pregnancy</b>
Percent of currently married respondents who reported that someone discussed the importance of delaying the first pregnancy with them
Knowledge of benefits of adequate birth spacing
<b>Number/percent of married women under age 18 exposed to HTSP counseling/education who subsequently adopted a FP method to delay first pregnancy</b>
Percent of currently married respondents who reported using contraception to delay first pregnancy
Percent of women using contraception for spacing second child

Unmet need for spacing births
Percent of married respondents who wanted to practice contraception to delay the first pregnancy
Percentage of parents-in-law who think that other families wish to delay their daughters-in-law's first birth
<b>Pregnancy</b>
Number of women of reproductive age that want to avoid pregnancy
Percent of women who have a say over the number of children they will have
Number of sexually active women aged 15–49 years who are at risk of pregnancy, not pregnant, not using contraception, and not lactating, who report trying to become pregnant for $\geq 2$ years
Misconception about pregnancy
(Qualitative Measure) What should be done to address unplanned pregnancy?
Percentage of women (15–19, 20–24) that receive antenatal care during pregnancy
Youth receiving antenatal care
Antenatal care timing by mother's age
One antenatal care visit, by mother's age
Four antenatal care visits, by mother's age
Age at first pregnancy
Young women who have begun childbearing
Proportion of 15–19-year-olds who are pregnant
Percentage of teenage pregnancies
Prevalence of teenage pregnancy
Pregnancy rate among young females during a specified time period
Percent of young people who have ever been pregnant or caused a pregnancy
Percent of youth who were ever pregnant or caused a pregnancy
Percentage of female learners who fell pregnant during the previous academic year
Number of schoolgirls who got pregnant
Number of times young females have ever been pregnant
Percent of young females who dropped out of school because of pregnancy
Of young females who dropped out of school due to pregnancy, percent who returned or intend to return to school
Percent of young females who practice(d) a specified level of pregnancy-related care
Percent of young females who avoid repeat pregnancy
Number of youth who have had or caused an unintended pregnancy
Women under age 20 whose most recent birth was an unintended pregnancy
Number of unintended pregnancies
Number of unintended pregnancies averted due to use of modern methods of contraception
Incidence of health problems related to early pregnancy (e.g. fistula)

Number of deaths of women related to pregnancy
<b>Abortion and Postabortion Care</b>
Number of youth reached with youth-friendly PAC information
Percent of young females who have ever had an induced abortion
Number of induced abortions or abortion rate among young females during a specified time period
Abortions per 1000 live deliveries
Proportion of maternal deaths caused by abortion-related adverse events (spontaneous or induced)
Number of maternal deaths attributed to abortion (spontaneous or induced)
Proportion of maternal deaths attributed to abortion
Percentage of pregnant adolescents who had access to emergency contraception or safe abortion
Number of unsafe abortions averted due to use of modern methods of contraception
Percent of postabortion care clients who left the facility with a contraceptive method
Numbers of youth clients accepting a contraceptive method at the time of PAC service provision
Percent of abortion or post-abortion clients 15–49 who use a modern contraceptive method immediately/within six months/within 12 months
Percent of postabortion care clients counseled on contraception
Number of youth PAC clients served
<b>Birth</b>
Mean duration between age at first sex and age at first birth
Percent of recent births to mothers <20 that were unplanned
Age-specific fertility rates
Adolescent fertility rate
Adolescent fertility rate (< 18 years)
Adolescent fertility as a percentage of total fertility
Fertility rate among young females during a specified time period
Number of adolescent births
Adolescent birth rate (ages 10–19)
Adolescent birth rate (10–14, 15–19) per 1000 women in that age group
Percent of women aged 15–19 who have ever had a child
Percentage of adolescent girls aged 15–19 who have begun childbearing
Percentage of adolescent girls with a live birth before age 15 and before age 18
Percentage of women aged 20–24 that have given birth by age 18
Median age at first birth among all young women
Age at first birth
Birth rate per 1,000 10–19-year-old girls per year

C-section, by mother's age
Institutional delivery, by mother's age (15–17, 18–19, and 20–34)
Percent of mothers younger than 20 whose most recent birth was delivered at a health facility
<b>Skilled delivery, by mother's age (15–17, 18–19, 20–34)</b>
Percentage of births to women under age 20 attended by skilled personnel
Women under age 20 whose most recent birth was not delivered by a skilled attendant
<b>Postnatal health check for mother, by mother's age (15–17, 18–19, and 20–34)</b>
Percent of adolescents going to post-natal care after birth
Percent of women who received FP counseling before or after birth
Youth receiving postnatal care
Percent of women 15–49 who had a birth in the last two years who used a modern contraceptive method immediately postpartum/ within six months/within 12 months
<b>Adolescent maternal mortality ratio</b>
Maternal mortality rate (ages 10–24)
Maternal mortality among young women (15–19, 20–24)
Number of maternal deaths averted due to use of modern methods of contraception
<b>Voluntary Medical Male Circumcision</b>
Proportion of males circumcised in the intended population
Percent of population aged 15–49 years with correct knowledge of male circumcision for HIV prevention
Percent of uncircumcised males with a stated intention to be circumcised in the next 12 months in the intended population
Number of male circumcisions performed according to national standards during the reporting period
Number/percent of circumcised males experiencing at least one moderate or severe adverse event during or following surgery, during the reporting period
Number/percent of persons seeking male circumcision services tested for HIV on site
Percent of VMMC coverage among HIV-negative men, aged 15-29 years
Percent of males circumcised who received counseling on risk reduction and who received condoms during the reporting period
Percent of males circumcised who had at least one postoperative follow-up visit (routine or emergency), during the reporting period
Proportion of sites providing VMMC with at least one health-care worker trained to counsel adolescents on VMMC
Proportion of sites providing VMMC that have ever provided services to male adolescents (10–19 and 20–24 years old)
<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</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
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 as part of VMMC during the past 12 months
<b>HIV/AIDS</b>

Number of participants who did not know the HIV status of their last partner
Risk perception for HIV/AIDS among youth 15–24 years
Knowledge about HIV transmission among adolescents
Knowledge about HIV prevention among young people
Percentage of [most-at-risk populations] reached with HIV prevention programmes
Percentage of [most-at-risk populations] who received an HIV test in the last 12 months and who know their results
Percentage of [most-at-risk populations] who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission
Percentage of [most-at-risk populations] who are HIV infected
Percent with knowledge of HIV prevention among young people aged 15–24
Comprehensive HIV knowledge
Percentage of women 15–19 who have heard of AIDS, by source
Percentage of youth 15–19 who know of at least two programmatically important ways to avoid HIV/AIDS
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
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
Correct knowledge on HIV prevention
Percent of women aged 15–49 who know that HIV risk is reduced by condom use
Percent of women aged 15–49 who know that HIV risk is reduced by having one uninfected partner
Percent of women aged 15–24 with comprehensive knowledge of HIV/AIDS
Percent of men aged 15–24 with comprehensive knowledge of HIV/AIDS
Percent of the population age 15–19 with comprehensive correct knowledge of HIV/AIDS
Sexually active young people who have been tested for HIV and know the results
Percent of people aged 15–49 who have ever voluntarily requested an HIV test, received the test and received their results
HIV testing among adolescents
HIV testing behavior among young people
Number of adolescent girls and boys tested for HIV and received the result of the last test
HIV testing: proportion of sexually active adolescents who had an HIV test in the last 12 months
Proportion of adolescents (15–19 and 20–24 years old) who report ever testing for HIV
Proportion of key population adolescents (15–19 and 20–24 years old) within the geographic area who report ever testing for HIV
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
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
Proportion of adolescents (15–19 years old) who tested positive for HIV and were initiated on treatment in the past 12 months
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

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
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
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
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
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
Proportion of key population 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
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
Adolescents living with diagnosed HIV infection
Estimated number of adolescents 10–19 living with HIV
Prevalence of HIV infection among adolescents
<b>HIV prevalence (ages 15–24)</b>
HIV prevalence among young people in community-based surveys
HIV prevalence among young people (15–19, 20–24)
Women ages 20–24 living with HIV
Men ages 20–24 living with HIV
HIV prevalence among pregnant young women
HIV prevalence in subpopulations of young people with high-risk behaviour
Percent distribution of total new HIV infections among adolescents (aged 15–19) by sex
New (incident) HIV infections among adolescents and young adults
HIV incidence among young people (15–19, 20–24)
Number of adolescents 10–19 dying of AIDS-related causes
<b>Percent of adolescents accessing integrated HIV services</b>
<b>Antiretroviral therapy (ART) coverage of adolescents</b>
<b>Percent of HIV-positive children 0–14 years currently receiving ART</b>
New patients on ART
HIV load suppression in adolescents
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
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
Percent of virally suppressed, aged 0–14 years
<b>Adolescent mortality rate from HIV/AIDS</b>

Young people's participation in HIV prevention programmes
<b>Sexually Transmitted Infections</b>
Existence of skills to negotiate condom use
Percent of sexually active, unmarried adolescents who consistently use condoms
Condom availability for young people (15–24)
Number of condom distribution points that are active in geographic areas prioritized by the program
Number of condoms distributed
Percentage of adolescents (aged 15–19 and 20–24 years old) who know a source of condoms
Percentage of [key population] adolescents (15–19 and 20–24 years old) within the geographic area who know a source of condoms
Proportion of sexually active [key population] adolescents (15–19 and 20–24 years old) within the geographic area who reported ever using a condom
Proportion of adolescents (15–19 and 20–24 years old) who had sex in the past 12 months who reported ever using a condom
Percent of young single people (aged 15–24) who used a condom at last sex, of all young single sexually active people surveyed
Percentage of young people age 15–24 who report condom use at last sex
Percent of young people (aged 15–24) who have had sex in the last 12 months and used a condom at last sex with a non-marital, non-cohabiting partner, of all young people surveyed
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
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
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
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
Percentage of young people (aged 15–24) who used a condom the first time they ever had sex, of those who have ever had sex
Percent of young single people (aged 15–24) who used a condom at last sex, of all young single sexually active people surveyed
Percent of respondents who reported <i>not</i> using a condom at last sex
Condom use at last higher risk sex
Percentage of female and male sex workers reporting the use of a condom with their most recent client
Percentage of men reporting the use of a condom the last time they had anal sex with a male partner
Condom use during anal sex among young men who have sex with men (MSM)
Use of condom in last sexual encounter
Condom use among young people who had higher risk sex in the past year
Consistent condom use
Percent of sexually active young people who used a condom at first/last sex
Sexually active unmarried adolescents and young adult females and males who use condoms
Condom use at most recent sex among adolescents with multiple sexual partnerships in past 12 months
Condom use with non-regular partners among youth

Percent who have ever used a condom
Percent of sexually active youth who carry a condom
Percent of youth who report specific STI symptoms
Number of youth who seek treatment for STIs
Proportion of adolescents (15–19 and 20–24 years old) who know where to access treatment for STIs
Percent of youth who were ever diagnosed with an STI
Proportion of adolescents (15–19 and 20–24 years old ) who tested positive for STIs in the past three months
<b>Number of reported cases or incidence rate of STIs among youth during a specified period</b>
Prevalence rate of STIs among youth during a specified period
Young people with a sexually transmitted infection
Percent of girls received HPV vaccine
<b>Prevalence of HPV vaccination</b>
Percent of girls vaccinated with 2 doses of HPV vaccine by age 15 years
<b>Chlamydia rates among adolescent and young adult females</b>
<b>Percent of STI patients appropriately diagnosed and treated</b>
Percent of adolescents who were ever diagnosed and treated for an STI
Of those who were ever diagnosed with an STI, percent of youth who received treatment
Of those who were ever diagnosed with an STI, number of times youth had an STI in the last year
Of those who were ever diagnosed with an STI, percent of youth who avoid repeat infection
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
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
Proportion of adolescents (15–19 and 20–24 years old) tested positive for STIs and received condoms during the course of STI treatment
<b>Violence</b>
<b>Number/Percent of adolescents who have experienced coercive or forced sex</b>
Forced sex among young people
Number/Percent of youth who have ever been forced to have sex
Percent of young women aged 15–24 who report ever being forced to have sex when they did not want to
<b>Prevalence of intimate partner violence among adolescents</b>
Percentage ever-partnered adolescents experiencing intimate partner violence in last 12 months
Percent of girls/young women reporting physical or sexual violence over a given period
Violent response to partner conflict among newly married/newly partnered boys and girls ages 15–19
Attitudes towards the use of physical violence, sexual violence or sexual harassment against girls/ young women in different situations
<b>Proportion of women, children and adolescents subjected to violence</b>
Number/percent of youth who report having been victims of sexual abuse

<b>Sexual violence against children</b>
Inappropriate touching reported by males ages 15–19, unmarried and without children
Percent of girls who report not having been touched by a boy on their buttocks or breasts without their permission
Percent of boys who report not having touched a girl on her buttocks or breasts without her permission
Percent of adolescents who are willing to discuss gender-based violence incidences with others
Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months, by form of violence and by age
Percentage of women aged 15–49 subjected to physical or sexual violence in the last 12 months / at some time in their lifetime by an intimate partner/persons other than an intimate partner
Total and age specific rate of women subjected to psychological violence in the past 12 months/at some time in their lifetime by the intimate partner
Percent of adolescents accessing integrated post-GBV services
Percent of survivors (male and female) of sexual violence (10–19, 20+ years) who received post-exposure prophylaxis within 72 hours of sexual assault
<b>Female Genital Cutting</b>
Proportion of women and girls aged 15–49 who have undergone female genital mutilation/cutting (FGM/C), by age
<b>Percent of women 15–19 years old who have undergone FGC</b>
Among cut women aged 15–19, the nature of the procedure performed
Among cut women aged 15–19, percent who had it performed by a medical practitioner
Percent of mothers aged 15–49 who have at least one daughter who is cut
Percent of women who do not intend to have any of their daughters undergo FGC
Number of girls and women who received prevention and protection services on FGM/C
<b>Percent of service delivery points providing medical and psychological services and referrals for women/girls with FGC complications</b>
<b>Number of health providers trained in FGC management and counseling</b>
<b>Outreach and Peer Education</b>
Percent of youth ages 14–19 who seek FP or RH counseling services from peer educators
Number of young people trained as peer educators
Number of peer educators recruited and trained
Number of peer educators supervised/observed
<b>Number/Percent of peer educators who are competent to provide counseling to youth</b>
<b>Percent of young people trained as peer educators who are active during a reference period</b>
Number of peer educator referrals to youth friendly health services
Number of youth contacted and counseled by peer educators
Number of families or family members of youth counseled in ARH issues by peer educators
Number of ARH-related IEC materials distributed by peer educators
Number/percent of peer educators who distribute or sell contraceptives
Number and type of contraceptives distributed to youth by peer educators

Number/percent of youth contacted and/or counseled by peer educators who are willing to buy or did buy contraceptives from peer educators
Number/percent of youth contacted and/or counseled by peer educators who refer friends to peer educators
<b>Number of youth referred for RH counseling and/or services by peer educators</b>
Percent of respondents who report discussing FP with a health or family planning worker or promoter in the past 12 months
Number of community-based FP providers trained
Percent of women using a modern family planning method who obtained their current method from a community-based worker
Number/Percent of women referred for facility based methods by a community-based worker
Number of community members participating in community-level activities for FP in the last six months
Percent of community members reporting having helped a young person access SRH services
Number and content of RH counseling sessions held for families or family members of youth
Number of RH curriculum-related sessions held for families or family members of youth
Number and content of ARH sessions held for families or family members of youth
Number and content of RH counseling sessions held for youth
<b>Number/Percent of sites stocked with contraceptives and related educational materials that serve youth</b>
Number and type of contraceptives distributed or sold to youth
Number of youth who receive contraceptives and related educational materials
Proportion of villages/clusters within the geographic area providing LSBE/CSE [life skills-based education/comprehensive sexuality education] education for out-of-school adolescents (10–19 years old) at least once during the past year
Proportion of villages/clusters within the geographic area providing LSBE/CSE education for out-of-school adolescents (10–19 years old) at least twice during the past year
Proportion of villages/clusters within the geographic area with LSBE/CSE training materials
Proportion of villages/clusters within the geographic area that have at least one trained worker/volunteer/peer counsellor on LSBE/CSE education for adolescents
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 peer groups and clubs for girls that provide peer support, life skills lessons, financial literacy training, savings and credit literacy, information on sexual and RH rights, etc.
Percentage of adolescent girls who are members of groups for girls that address life skills, protection, nutrition, health, sexual and RH rights, gender norms, etc.
Percentage of girls who participate in peer group or girl club advocacy activities (e.g., for girls' higher education, delay of marriage beyond 18 years)
Percent of community activities devoted to ASRH awareness and/or services
Number of community-based organizations that integrate ARH components into their existing programmes
<b>Service Providers</b>
Trained health service providers
Percentage of service providers in health and education who have received training on child marriage laws, risk factors for child marriage, and how to report law violations

<b>Availability of a service provider trained in adolescent health</b>
Number of health workers trained to provide adolescent and youth-friendly SRH services
System in place for regular adolescent specific training for health providers in first level facilities
<b>Number/Percent of health workers trained to provide adolescent and youth-friendly services</b>
Number of trained health service providers in adolescent health
Number of service providers certified as youth-friendly
FP services provided in which at least one clinic provider received YFHS training
Number of health providers trained in long acting and permanent services
Percentage of women of reproductive age who have talked with an FP provider in the last 12 months
Percentage who would have been interested if the provider had offered FP counseling or services at time of visit
Percentage of women who were provided with information on FP during recent contact with a health service provider
Percent of women 15–49 who would return to the provider they saw for FP services
Percent of women 15–49 using a modern contraceptive method who would refer a relative or friend to a provider or facility for FP services
Percentage of intended audience members with favorable attitudes towards FP providers
Percentage of adolescent girls (married and unmarried) who report that they were offered health services (including contraception and counseling on STI prevention/treatment) without judgment by providers
Percentage of health care providers who report that they would provide FP to a sexually active youth client, including married and unmarried girls
Percent of FP clients served by service delivery approach
Percent of trained village health teams and healthcare workers reporting having helped a young person access SRH services
<b>Use of specified sexual and reproductive health services by young people</b>
Use of specified health services (e.g., FP, maternal health services, HIV testing, STI treatment) by young people (10–14, 15–19, 20–24)
Number of counselling visits for FP/RH
Percent of adolescents receiving ARH services
Percent of adolescents accessing integrated SRH services
Health service use by adolescents
<b>Health Facilities or Centers</b>
Number of "outlets" providing FP
Number of primary health facilities providing FP services
Coverage index of essential health services, including RMNCAH: FP, antenatal care, skilled birth attendance, breast feeding, immunization, childhood diseases treatment
Percent of facilities offering a mixture of short-acting and long-acting modern contraceptive methods
Number of technical support visits to health facilities
Number of facilities providing at least three FP methods
Proportion of service delivery points adequately prepared (with stocks and trained providers) to provide at least three contraceptive methods
Percent of clients indicating satisfaction for services received at clinics

Number/percent of youth served by facility who report favorably on key service characteristics
Percent of adolescent FP clients reporting satisfaction with family planning services
Standards for adolescent quality care
Access to YFHS
Percentage of married girls who have accessed a health clinic
Percentage of adolescent girls (married and unmarried) who have accessed nutrition and health services in the last six months (e.g., anemia control, sexual and RH, HIV testing)
Number of clients who did not receive an FP method, referral, or prescription at the time of visit
Number of facilities that provide youth-friendly services
Number of officially-certified youth-friendly service delivery points
Health services have institutionalized ASRH-friendly services
Number of facilities offering integrated youth-friendly SRH services
Percent of districts that are delivering adolescent-friendly health services
Percent of districts with functional adolescent/youth-friendly health spaces
Number of health facilities receiving a youth-friendly services corner
Number/percent of staff who welcome and accommodate youth drop-ins
Number of youth services provided
Number of target population accessing services
Number and distribution of health facilities with basic adolescent-friendly service capacity per 10,000 adolescent girls
Availability of alternative service delivery mechanisms for sexual and reproductive health of adolescents (e.g. peer education, social marketing of condoms)
Number/percent of youth who received RH services
Number of youth <i>first</i> clinic visits by type of RH service(s) provided
Number of youth <i>follow-up</i> visits by type of RH service(s) provided
Number/percent of youth referrals by source of referral
Percent of youth among all clients who received services
Number of users or visits of other RH services at youth-friendly sites and other sites in target community
Number of youth counselled in RH by staff
Number/percent of pregnant young women or parenting youth who have participated in parenting courses/sessions
RH service protocols adapted for youth needs
Percentage of health facilities with protocols and referral paths for cases of violence against women and girls (including forced and child marriage)
Number of cases of violence against women and girls (including child marriage) referred by health facilities to other services including law enforcement, education, social services, victim protection
Proportion of centres/facilities within the geographic area currently providing HTC [HIV testing and counselling] services to key population adolescents that report no stock-outs of HIV test kits in the past three months

Proportion of health facilities currently providing HTC services that report having at least one healthcare worker trained on testing and counselling adolescents
Proportion of health facilities currently providing HTC services to key population adolescents that report having at least one healthcare worker trained on testing and counselling key population adolescents
Proportion of centres/facilities within the geographic area providing HIV testing to key population adolescents that is adolescent/youth friendly (per national guidelines/policy)
Proportion of health facilities providing HIV testing that is adolescent/youth-friendly (per national guidelines)
Proportion of health facilities currently providing HTC services that report having at least one health-care worker trained on testing and counselling adolescents
Proportion of ART sites providing HIV treatment with a health-care worker trained to counsel adolescents on ART
Proportion of ART sites providing HIV treatment that have youth-friendly services (per national norm/local definition)
Proportion 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
Proportion of centres/facilities within the geographic area providing services to key population adolescents with at least one staff member trained to provide FP methods
Proportion of centres/facilities providing ART with a health-care worker trained to counsel key population adolescents on ART
Proportion of centres/facilities providing ART that have youth-friendly services (per national guidelines/definition)
Proportion of youth centres currently providing STI services (per national standard)
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
Proportion of youth centres providing STI services that report no stock-outs of essential commodities for STIs in the past three months
<b>Policy</b>
Clearly defined comprehensive package of health services for adolescents
Health services and citizens/youth have governance systems in place
Adolescents a specific target group in national policies/strategies/plans
Proportion of countries that report having national standards for health service delivery for adolescents
Availability of a youth and adolescents health strategy
National standards for delivery of health services specifically for young people (ages 10-24)
Country has national standards for the delivery of health services to young people
Youth-friendly FP service provision policy
Number of youth-friendly laws and policies
Number/proportion of youth who report living in a society with youth-friendly laws and policies
Number of new ARH policies and guidelines implemented
Institutionalizing youth-friendly health services
National index on policy related to young people and HIV/AIDS
National funds spent by government on HIV/AIDS prevention programmes for young people

Community support for youth FP services
Existence of supportive AYSRH policies
Degree of political support for ARH policies and programs
Number of policies that allow legal minors to consent to health interventions
Laws and regulations allow minor adolescents to seek services without parental/spousal consent
Number of countries with laws and regulations that guarantee women aged 15–49 have access to SRH care, information and education
Number of countries that have nationally introduced HPV in their immunization schedule
Comprehensive sexuality education
Budget allocated to support activities planned for adolescent health
Existence of adequate resources directed to ARH programs
National strategy or plan of action that specifically address adolescent health issues
Conducted specific national review covering adolescent health programmes, in past two years
User fee waived in public health sector for adolescents (15–19 years)
Implementation of national policies and guidelines in support of RH with a focus on youth
Existence of functional national adolescent health programme
Parental Consent, Spousal Consent, or Provider Discretion
Restrictions based on age
Restrictions based on marital status
Number of countries implementing a costed national action plan or strategy to end child marriage being implemented
Existence of national law that prohibits child marriage
Legal age of marriage
Existence of national legislation that requires the free and full consent for marriage of both female and male parties
Existence of minimum legal age for marriage
Enforcement of legal age for marriage
Percentage of community leaders who report having taken action against child marriage or in support of girls' rights
Percentage of influential leaders and communicators (traditional, religious, cultural, political, media) who have made public declarations against child marriage and in support of alternative roles for girls
Percent of community members who are willing to introduce sanctions in cases of child marriage and conception, discrimination against girls, or violence against women and girls
Number of community leaders who have implemented community bylaws that outlaw child marriage
Legality of contraceptive sales to youth
Legality of condom sales to youth
Ministry of health has an institutional commitment to ensuring that all eligible adolescents are served by health facilities
Provisions are made in laws or regulations allowing legal minors to consent to medical interventions
Number of ministries of health with earmarked funds for AYSRH

US money allocated to AYSRH within US foreign assistance
<b>School-Based RH Programs</b>
Sexual and reproductive health education curriculum conformity to "best practices"
Number/Percent of schools offering comprehensive sex education
Number of schools offering comprehensive sexuality education
Proportion of primary schools with an LSBE/CSE curriculum
Proportion of secondary schools providing LSBE/CSE in the first year of secondary school within the current academic year
Proportion of primary schools with at least one teacher trained on teaching LSBE/CSE
Proportion of secondary schools with at least one teacher trained on teaching LSBE/CSE
Proportion of primary schools providing LSBE/CSE for the current academic year
Proportion of secondary schools providing LSBE/CSE for the current academic year
Proportion of primary schools providing LSBE/CSE in the fifth year of primary school within the current academic year
Proportion of secondary schools providing LSBE/CSE in the first year of secondary school within the current academic year
Number/Percent of schools offering referrals for SRH and other health services at health facilities
School-based sexuality education is mandatory
Inclusion in the national school curriculum of skills-based HIV education or health education, including HIV prevention
Number of schools that provide ARH information
Requests for assistance with RH counselling/education from schools and community-based organizations
Percent of schools that provided skills-based HIV education in the last academic year
Provision of life-skills-based HIV/AIDS education in schools
Percentage of schools, teacher training institutions providing CSE
Percentage of schools that have staff trainings and procedures on how to address and take action on violence against women and girls at school, including reported cases of sexual abuse
Number of youth who attended and/or completed RH course
Number of youth referred for RH counseling and/or services from RH course
Percent of women aged 18–49 who agree that adolescents aged 12–14 should be taught about using a condom to prevent HIV
Percent of men aged 18–49 who agree that adolescents aged 12–14 should be taught about using a condom to prevent HIV
Number of teachers trained to implement sex education curriculums
Number of work plans/guides developed for FP/SRH lessons in school environments
<b>Reproductive Health Information and Knowledge</b>
Percent of respondents who reported discussing intervention topics with various friends/relatives
Percent of respondents who report discussing FP with their spouse or other friends or relatives
Percentage of individuals of the intended audience who talked about FP with their spouse/partner in the last 12 months (or a specified reference period)

Percentage of individuals of intended audience who talked about FP with others (friends, relatives, community) in the last 12 months (or a specified reference period)
Percent of audience that know of a product, practice or service
Percent of 10–19-year-olds who report having heard radio programs on SRH issues
Source of FP information among young clients
<b>Percent of youth who know a source of ARH information and services</b>
Percentage of intended audience who know where to obtain FP in their community
Percent of 15–19-year-olds who report knowing where to obtain an FP method if needed
Knowledge of a formal source of condoms among young people
Percent of women aged 15–24 who know a source for the condom
Percent of men aged 15–24 who know a source for the condom
Percent of youth who demonstrate knowledge of relevant ARH topic
Adolescents' knowledge of ways to prevent pregnancy and HIV infection
<b>Sexual and reproductive health knowledge among adolescents</b>
Percentage of adolescent girls (married and unmarried) who have correct knowledge of sexual and RH
Percent of 10–14-year-olds who recognize that boys and girls experience different rates of body changes in puberty
Percent of 10–14-year-olds able to identify at least 2 puberty indicators for boys and girls
<b>Young people reached with information, education and skills</b>
Percent of youth who can identify risk-taking behaviors
Percent of youth who can articulate options available to avoid risky behaviors
Percentage of adolescent boys, girls, and women who know their rights and entitlements
Percentage of adolescent girls (married and unmarried) who know where to access health and legal services
<b>Reproductive Health Attitudes, Intentions, and Perceptions</b>
Percent of youth who have particular attitudes and/or beliefs about key health-related behaviors, influences and issues
Percent of youth who have particular intentions about key health-related behaviors
Percent of youth who have discussed their intentions about key health-related behaviors
Percentage of youth who say they would advocate healthy behaviors among their peers and friends
Percent of youth who prefer to get information about sex from their peers
Percent of youth who have spoken with their peers about sex
Percent of youth who feel comfortable discussing RH issues with adults, health providers or peer educators
Percent of youth who have discussed attitudes on key health-related behaviors, influences and issues during an RH intervention
Percentage of intended audience that has encouraged others (friends, relatives, community) to use FP in the last 12 months (or a specified reference period)
Percent of respondents who believe that, if her husband has an STI, a wife can either refuse to have sex with him or propose condom use, of all respondents having heard of STIs aged 15–49

Percent of women aged 15–49 who agree with all three reasons why a wife is justified in refusing to have intercourse with her husband
Percent of surveyed men who agree with all three reasons why a wife is justified in refusing to have intercourse with her husband
Offense at wife requesting condom use among boys and girls 15–19 years old, unmarried, without children
Percent of women aged 15–49 who believe that if the husband has an STI, his wife is justified in asking him to use condom
Percent of men aged 15–49 who believe that if the husband has an STI, his wife is justified in asking him to use condom
Percent of women aged 15–49 who agree with at least one reason why a husband is justified in hitting or beating his wife
Percent of surveyed men who agree with at least one reason why a husband is justified in hitting or beating his wife
Percent of adolescents who believe that men can prevent physical and sexual violence against women and girls
Percent of adolescents who say that wife beating is acceptable way for husbands to discipline their wives
Percent of youth who think it is okay to pressure their partners for sex in some circumstances
Percent of adolescents who have "positive" attitudes toward key sexual and reproductive health issues
Percent of audience with a favorable attitude (toward the product, practice or service)
Percent of adolescents who agree it is safe for adolescent girls to use contraceptives
Percent of adolescents who believe girls who carry condoms are promiscuous
Percentage of intended audience with favorable attitudes towards FP
Percentage of intended audience with favorable attitudes towards modern FP methods
Percentage of intended audience who believe that their religious leaders would approve of people like them using FP
Percentage of intended audience who believe that their spouse/partner approve of them using a modern FP method
Percentage of intended audience who believe that their spouse/partner would approve of them using FP to space pregnancies
Percentage of intended audience who believe that their spouse/partner would approve of them using FP to limit pregnancy
Percentage of intended audience who discussed FP with their spouse/partner in the last 12 months and think their spouse/partner values their opinion on whether to use FP
Percentage of intended audience who believe that their spouse/partner would approve of them using FP
Percent of unmarried 15–19-year-olds who say that partner would support decision to use FP method
Percent of adolescents 15–19 reporting improved partner communication
Percent of youth who believe that the ideal age of marriage for males is below the average male age for marriage in the country
Percent of youth who believe the ideal age of marriage for females is below the average female age for marriage in the country
Perceptions of appropriate age at marriage
Percent of youth who expect to marry at an early age
Percent of youth who intend to have sex before marriage
Intention to abstain from sex until marriage
Percent of respondents who agree with various statements on ideal childbearing
Decrease in perception of childbearing as sign of real womanhood among boys and girls 15–19 years old, unmarried, without children
Percent of adolescents who believe it is solely a woman's responsibility to avoid getting pregnant
Percent of adolescents who believe a man and a woman should decide together what type of contraceptive to use

Changes in values that support healthful timing and spacing of pregnancies
Percent of audience who believe that an ideal couple should have a child in their first year of marriage
Percent of adolescents who believe an ideal couple will produce a child in their first year of marriage
Percent of audience who have encouraged (or discouraged) friends or relatives to adopt the specific practice
Percent of non-users who intend to adopt a certain practice in the future
Increased intention to use FP in the future among boys and girls 15–19 years old, unmarried, without children
Intention to use FP in the future among newly married/newly partnered boys and girls ages 15–19
Percentage of modern FP users who intend to continue using a modern FP method
Percent of audience who believe that spouse, friends, relatives, and community approve (or disapprove) of the practice
Percentage of intended audience who believe that most people in their community approve of people like them using FP
Percent of respondents who agree on expression of gender egalitarian attitudes
<b>Perceptions of peers' sexual activity</b>
Perceptions on whether sexually active girls/ young women can refuse sex with their partner
Percent of youth who perceive that their peers are having premarital sex
Percent of youth who perceive that their peers think it is wrong to have premarital sex
<b>Percent of youth who perceive that their sexually active peers are using contraception</b>
Percent of youth who perceive that their peers visit sex workers
<b>Perceived risk of HIV, STIs and pregnancy among adolescents</b>
Changes in perception of how leadership acknowledges ASRH issues as community issues
Adolescent (girls and boys) inclusion in community ASRH-related discussions and related actions
Number of ASRH-related issues identified by the community that have been resolved
Perception that ASRH issues are community issues
Perception that neighbors agree with ASRH-related community actions
Attitudinal change of community influential towards ARH
<b>Self-Efficacy</b>
Changes in leadership seeking representation by youth in ASRH discussions
Number of young people (girls and boys) in leadership roles for SRH and/or the community in general
Percent of 15–19-year-olds who report self-efficacy to use any FP method
<b>Percent of adolescents who are confident that they could get their partner(s) to use contraceptives/condoms if they desired</b>
Percent of youth who believe they could get their partners to use contraceptives/condoms
<b>Percent of adolescents who are confident they could obtain a condom</b>
Percent of women aged 15–24 who report that they could get condoms on their own
Percent of sexually active girls and young women who are confident that they can use a condom with all sex partners
Percent of sexually active girls and young women who are confident that they can resist pressure to have sex

Percent of adolescents who are confident that they could refuse sex if they didn't want it
Percent of youth who believe they could refuse sex if they didn't want it
Percent of adolescents who report feeling able to get help if being touched in a way that makes them feel uncomfortable
Percentage of girls who feel able to say no to sexual activity
Percentage of girls who say they would be willing to report any experience of unwanted sexual activity
Degree of girls' control in intimate relationships
Self-efficacy to seek help for inappropriate touching among boys and girls ages 15–19 years, unmarried and without children
Confidence to resist peer pressure
Percent of male participants reporting comfort/self-efficacy to discuss sex and FP with partner
Percentage of adolescent girls and young women reporting higher levels of self-efficacy
Percent of girls and young women who believe that they can access health services when they need them
Percent of 15–19-year-olds who report they can easily reach a location for SRH services
Percent of girls and young women who are confident that they could get an HIV test
Percent of youth who believe they could seek RH information and services if they needed them
Level of self-efficacy in SRH "social" situations
Percentage of girls who feel they can advocate for themselves
Percent of youth who believe they could advocate particular "healthy" behaviors among their peers, friends and partners
<b>Parental/Adult Involvement</b>
Percent of adolescents who feel "connected" with their parents/family
Connection to a parent or primary caregiver
Parental inclusion in community ASRH discussions and related actions
Improved communication between parents and adolescents on ASRH issues
Parent-child communication on SRH-related issues
Intention to grant adolescents right to SRH information and services
Improved economic support from families for adolescents seeking RH services
Adult gatekeepers' level of awareness of SRH in adolescent social situations
Percent of adults who mention speaking to a boy or a girl about the changes during puberty
Percent of adults who report giving advice to a young person about romantic relationship
Regulation of young people's behaviour by a parent or primary caregiver
Adult support of education on condom use for prevention of HIV/AIDS among young people
Number of RH curriculum-related sessions held for families or family members of youth
Number of families and family members who attended RH sessions
Percent of youth who have ever discussed sexual matters with either parent
Percent of adolescents who report having talked with an adult about SRH topics in the last three months

Mass Media
Number/Percent of youth in target audience who recall an RH intervention or message
Number/Percent of youth in target audience who understand a given message
Number/Percent of youth in target audience who report favorably about an RH message
Number and type of promotional activities carried out on the RH activities, services and/or contraceptives
Percent of youth who have seen an educational video/film or magazine on an RH issue
Number of times FP messages were aired on television or radio in the last 12 months (or a specific reference period)
Percentage of adolescents in project sites who can recall one or more communication messages
Percentage of adolescents in project sites who have been contacted through non-mass media, non-facility-based intervention activities
Percent of women aged 15–19 who have not heard of FP on any of three sources (radio, television or newspaper)
Percent of men aged 15–19 who have not heard of FP on any of three sources (radio, television or newspaper)
Percent of youth who have ever seen a pornographic film, magazine, or other form of media
Number of exposures to pornographic film, magazine, or other media
AYRH Programs
Percent of adolescents aware of the program
Number of ASRH program activities conducted
Number/Percent of adolescents served or reached by the program
Adolescents are/were involved in the design of materials and activities and in the implementation of the program
Degree of community support for ARH programs
Number of key stakeholders involved in ARH programs
Percent of youth who receive ARH information from organizations outside of school
Number of youth organizations in the community
Number of youth organizations that provide ARH information
Organizational capacity to design and implement ASRH programs
Extent of interorganizational collaboration on specific ASRH issues
Extent of gender equity in youth club participation
Increased resources for ASRH-related activities in an organization's health program

## Appendix E. Indicator Sources

Asterisks denote documents from the literature review.

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## Appendix F. Recommended Key AYRH Indicators

Key AYRH Indicators, by Category	Unit of Measurement
<b>Menstruation/Menstrual Hygiene Management</b>	
Percent of girls or women who report having everything they need to manage menstruation	Percent
MHM clearly defined and articulated in national WASH, Health and Education policies	Yes/No/Unknown
<b>Sexual Activity</b>	
Age at first sex	Percent
Percent of adolescents who have ever had sex	Percent
Early initiation of sexual activity	Percent
Number of sexual partners among sexually active adolescents during a specified reference period	Number
Number of same-sex partners	Number
Number/percent of youth who have ever paid money or other form of exchange for sex	Number/Percent
Number/percent of youth who have ever received money or other form of exchange for sex	Number/Percent
Age mixing in sexual partnerships among young women	Number/Percent
Sexual decision making among young people	Percent
<b>Family Planning</b>	
Unmet need for FP among adolescents	Number/Percent
Contraceptive prevalence rate among young people	Percent
Number/percent of sexually active youth who used contraception at first/last intercourse	Number/Percent
Number/percent of FP clients that are young people (under age 25)	Number/Percent
Females aged 15–24-year-olds with met need for modern contraception	Percent
Number/percent of young FP users who received FP counselling	Number/Percent
Method mix among young people by service delivery approach	Percent
<b>Marriage</b>	
Age at first marriage	Percent
Percent of girls who report having a say in choice or timing of marriage	Percent
Percent of youth who are currently married or cohabiting	Percent
Marriage before age 18 years in women aged 20–24 years	Percent
<b>Healthy Timing and Spacing of Pregnancy</b>	
Number/percent of married women under age 18 exposed to HTSP counseling/education who subsequently adopted an FP method to delay first pregnancy	Number/Percent
<b>Pregnancy</b>	
Percentage of women (15–19, 20–24) that receive antenatal care during pregnancy	Percent

Age at first pregnancy	Number
Percent of adolescents who have ever been pregnant or caused a pregnancy	Percent
Women under age 20 whose most recent birth was an unintended pregnancy	Percent
<b>Abortion and Postabortion Care</b>	
Percent of young females who have ever had an induced abortion	Percent
Number of youth clients accepting a contraceptive method at the time of PAC service provision	Number
Number of youth reached with youth-friendly PAC information	Number
Number of youth PAC clients served	Number
<b>Birth</b>	
Adolescent birth rate (ages 10–19)	Percent
Age at first birth	Number
Skilled delivery, by mother's age (15–17, 18–19, 20–34)	Percent
Postnatal health check for mother, by mother's age (15–17, 18–19, and 20–34)	Percent
Adolescent maternal mortality ratio	Ratio
<b>Voluntary Medical Male Circumcision</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	Percent
<b>HIV/AIDS</b>	
Knowledge about HIV transmission among adolescents	Percent
Knowledge about HIV prevention among young people	Percent
Number of adolescent girls and boys tested for HIV and received the result of the last test	Number
HIV prevalence (ages 15–24)	Percent
Antiretroviral therapy (ART) coverage of adolescents	Percent
Adolescent mortality rate from HIV/AIDS	Percent
<b>Sexually Transmitted Infections</b>	
Condom availability for young people (15–24)	Percent
Percent of sexually active, unmarried adolescents who consistently use condoms	Percent
Percent of young people (aged 15–24) who used a condom the first time they ever had sex, of those who have ever had sex	Percent
Percent of young single people (aged 15–24) who used a condom at last sex, of all young single sexually active people surveyed	Percent
Condom use with non-regular partners among youth	Percent
Number of reported cases or incidence rate of STIs among youth during a specified period	Number
Prevalence of HPV vaccination	Percent
Chlamydia rates among adolescent and young adult females	Percent
Percent of STI patients appropriately diagnosed and treated	Percent
<b>Violence</b>	

Number/percent of adolescents who have experienced coercive or forced sex	Number/Percent
Prevalence of intimate partner violence among adolescents	Percent
Proportion of women, children and adolescents subjected to violence	Percent
Sexual violence against children	Percent
<b>Female Genital Cutting</b>	
Percent of women 15–19 years old who have undergone FGC	Percent
Percent of service delivery points providing medical and psychological services and referrals for women/girls with FGC complications	Percent
Number of health providers trained in FGC management and counseling	Number
<b>Outreach and Peer Education</b>	
Number/percent of peer educators who are competent to provide counseling to youth	Number/Percent
Percent of young people trained as peer educators who are active during a reference period	Percent
Number of youth referred for RH counseling and/or services by peer educators	Number
Number/percent of sites stocked with contraceptives and related educational materials that serve youth	Number/Percent
<b>Service Providers</b>	
Availability of a service provider trained in adolescent health	Percent
Number/percent of health workers trained to provide adolescent and youth-friendly services	Number/Percent
Use of specified RH services by young people	Number
<b>Health Facilities</b>	
Percent of adolescent FP clients reporting satisfaction with FP services	Percent
Number of facilities offering integrated youth-friendly RH services	Number
Number and distribution of health facilities with basic adolescent-friendly service capacity per 10,000 adolescent girls	Number
Percent of youth among all clients who received services	Percent
Number of youth counselled in RH by staff	Number
<b>Policy</b>	
Clearly defined comprehensive package of health services for adolescents	Yes/No/Unknown
National standards for delivery of health services specifically for young people (ages 10–24)	Yes/No/Unknown
Youth-friendly FP service provision	Yes/No/Unknown
Laws and regulations allow minor adolescents to seek services without parental/spousal consent	Yes/No/Unknown
Provisions are made in laws or regulations allowing legal minors to consent to medical interventions	Yes/No/Unknown
Budget allocated to support activities planned for adolescent health	Yes/No/Unknown
<b>School-Based RH Programs</b>	
Reproductive health education curriculum conformity to "best practices"	Yes/No/Unknown
Number/percent of schools offering comprehensive sex education	Number/Percent

Number/percent of schools offering referrals for RH and other health services at health facilities	Number/Percent
School-based sexuality education is mandatory	Yes/No/Unknown
<b>Reproductive Health Information and Knowledge</b>	
Percent of youth who know a source of ARH information and services	Percent
Young people reached with information, education and skills	Number
Reproductive health knowledge among adolescents	Scale
<b>Reproductive Health Attitudes, Intentions, and Perceptions</b>	
Percent of adolescents who have "positive" attitudes toward key sexual and reproductive health issues	Percent
Percent of youth who expect to marry at an early age	Percent
Percent of youth who intend to have sex before marriage	Percent
Perceptions of peers' sexual activity	Percent
Percent of youth who perceive that their sexually active peers are using contraception	Percent
Perceived risk of HIV, STIs and pregnancy among adolescents	Percent
<b>Self-Efficacy</b>	
Percent of adolescents who are confident that they could get their partner(s) to use contraceptives/condoms if they desired	Percent
Percent of adolescents who are confident that they could refuse sex if they didn't want it	Percent
Percent of adolescents who are confident they could obtain a condom	Percent
Percent of girls and young women who are confident that they could get an HIV test	Percent
Percent of youth who believe they could seek reproductive health information and services if they needed them	Percent
<b>Parental Involvement</b>	
Parent-child communication on RH-related issues	Percent or scale
Percent of adolescents who feel "connected" with their parents/family	Percent
<b>Mass Media</b>	
Number/percent of youth in audience addressed who recall an RH intervention or message	Number/Percent
Number/percent of youth in audience addressed who report favorably about an RH message	Number/Percent
<b>AYRH Programs</b>	
Percent of adolescents aware of the program	Percent
Number/percent of adolescents served or reached by the program	Number/Percent
Adolescents are/were involved in the design of materials and activities and in the implementation of the program	Number/Percent
Number of youth organizations that provide ARH information	Number

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