

## HIV/AIDS MODULE

### Rationale

According to WHO “HIV/AIDS remains one of the world's most significant public health challenges, particularly in low- and middle-income countries. As a result of recent advances in access to antiretroviral therapy (ART), HIV-positive people now live longer and healthier lives. In addition, it has been confirmed that ART prevents onward transmission of HIV. At the end of 2013, 11.7 million people were receiving ART in low- and middle-income countries; this represents 36% [34–38%] of the 32.6 million [30.7–34.8 million] people living with HIV in low- and middle-income countries. Progress has also been made in preventing mother-to-child transmission and keeping mothers alive. In 2013, close to 7 out of 10 pregnant women living with HIV – 970 000 women – received antiretrovirals (ARVs).”<sup>1</sup>

Acquired Immune Deficiency Syndrome (AIDS), first recognized internationally in 1981, is caused by the human immunodeficiency virus (HIV). The virus compromises the immune system and makes the body prone to opportunistic infections. By the mid-80s many countries, particularly those in Sub-Saharan Africa had reported cases of HIV/AIDS. Sub-Saharan Africa remains the region most heavily affected by HIV. In 2011, there were an estimated 1.8 million new HIV infections in sub-Saharan Africa and 69 percent of all people living with HIV/AIDS at the time (an estimated 34 million worldwide) are found in sub-Saharan Africa (UNAIDS, 2012).

There are multiple modes of transmission of HIV which is often included in questions on knowledge and coverage of interventions. The predominant mode of HIV transmission is through heterosexual contact, which usually accounts for the great majority of new HIV cases, followed in magnitude by perinatal transmission, whereby the mother passes HIV to the child during pregnancy, at the time of birth, or after birth through breastfeeding. Other modes of HIV transmission can be through transfusion of infected blood and blood products and from transplant of donated organs or bone and tissue grafts.

Antenatal-care-based HIV sentinel surveillance is the main source of HIV/AIDS prevalence data in most countries and in many, antenatal sero-prevalence surveys are conducted annually. Since the mid-eighties, Demographic and Health Surveys (DHS) have been important sources of information on HIV/AIDS while complementing routine HIV/AIDS data sources in providing strategic information to guide programs. DHS has included questions on HIV/AIDS since the beginning of the program. However, given the magnitude and complexity of the HIV/AIDS epidemic in many countries, specialized surveys like the AIDS Indicator Survey (AIS) are required to effectively understand, monitor and design new strategies to combat the epidemic. Thirteen AIS have been implemented between 2003 and 2014.

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<sup>1</sup> <http://www.who.int/features/factfiles/hiv/en/>

## Experience and Evidence

Questions on sexual activity and HIV/AIDS knowledge, attitudes and behaviors have been included since 1988 in the DHS program and since 2000 in the MICS program. Indicators include knowledge of HIV prevention methods, attitudes towards those living with AIDS, beliefs about AIDS transmission, and experiences with higher-risk sex, including paid sex.

The AIDS Indicator Survey (AIS) was later developed to provide countries with a standardized tool to obtain indicators for effective monitoring of national HIV/AIDS programs. DHS, AIS and MICS use consistent sampling methodologies and questions, ensuring comparability among countries and over time.

Although the collection of accurate data on sexual activity is essential for understanding HIV transmission and prevention it is also challenging and there are still numerous concerns over the validity of the data: “Social desirability bias may result in under-reporting of more stigmatized sexual behavior, including paid sex, sex before marriage, and sex with extra-marital partners. Differences in reporting of sexual activity by women and men, as well as the notable proportion of couples with discordant HIV status in which the woman is HIV-positive and the man is HIV-negative, have led some researchers to suggest that, overall, women substantially under-report sexual activity” (Fishel and Bekele, 2014).

There are also issues regarding the collection of data on sexual behavior (prevention) and treatment. Questions regarding sexual behavior are usually subject to reporting bias due to their potentially sensitive nature. At the same time, the reliability and validity of questions on sexual behavior and STIs varies highly (Cleland et al 2004).

On the other hand, several issues affect the collection of data on HIV treatment in surveys:

(1) The availability of treatment of HIV infection but not a cure has further impact on data collection in surveys. HIV becomes a chronic condition. The presence of symptoms is even more complex than without treatment.

(2) Stigma and discrimination: direct questions about antiretroviral treatment are usually not asked in surveys, or are bound to underestimate treatment coverage.

## HIV/AIDS Indicators in the Global Reference List

The HIV/AIDS indicators included in the Global Reference List presented by WHO for partner review on August, 2014 are included in the table on next page. Core indicators are listed first and the indicators available from standard household surveys are shown in boldface. For each indicator, the following is available:

Indicator number  
Type of indicator (Core or Additional)  
Definition  
Numerator  
Denominator

## Global Reference List of HIV/AIDS Indicators (C=Core; A=Additional)

No.	C/A	Indicator name	Definition	Numerator	Denominator
14	C	HIV/AIDS mortality rate	Number of deaths due to HIV/AIDS per 100,000 population (age-standardized)	Number of deaths due to HIV/AIDS	Number of years of exposure
26	C	HIV incidence	Number of new HIV infections per year	Number of people who are newly infected	Number of persons years
27	C	HIV prevalence among key populations	Proportion of key populations who are living with HIV (including MSM, sex worker, people who inject drugs, transgender people, people in prisons)	Number of people living with HIV in the specific key population	Number of persons in the specific key population
28	C	HIV incidence rate among most at risk populations	Number of new HIV infections per 1,000 persons in the respective most-at-risk population in a specified time period (age standardized)	Number of new infections among specific most at risk population	Number of years of exposure
29	C	Mother to child transmission rate	Proportion of children born to HIV-infected mothers in the past 12 months who are HIV-infected	Number of children who are newly infected with HIV due to mother-to-child transmission	Estimated number of HIV positive women who delivered in the previous 12 months
66	C	Condom use at last sex among people with multiple sexual partnerships in past 12 months	Proportion of person 15-49 who had more than one sexual partner in the past 12 months who report the use of a condom during their last sexual intercourse	Number of respondents (aged 15-49) who reported having had more than one sexual partner in the last 12 months who also reported that a condom was used the last time they had sex	Number of respondents who reported having more than one sexual partner in the last 12 months
109	C	Antiretroviral (ARV) prophylaxis for newborns with HIV positive mothers	Proportion of infants born to HIV-infected women provided with ARV prophylaxis to reduce the risk of early mother-to-child-transmission in the first 6 weeks, in the last 12 months	Number of infants born to HIV positive women who received ARV prophylaxis	Estimated number of live births to pregnant HIV-infected women
113	C	Antiretroviral Therapy (ART) coverage	Proportion of adults and children currently receiving antiretroviral therapy among all adults and children living with HIV at the end of the reporting period	Number of adults and children currently receiving ART antiretroviral therapy	Number of adults and children living with HIV
67	A	Condom use among key populations: sex workers, men who have sex with men (MSM), injection drug users (IDU)	Proportion of sex workers/MSM/IDU reporting the use of a condom the last time they had sex with a client/male partner/any partner, respectively	Number of respondents who reported using a condom during last sex	Number of sex workers Number of MSM Number of IDU
68	A	Safe injecting practices	Proportion of people who inject drugs reporting the use of sterile injecting equipment the last time they injected	Number of respondents who report using sterile injecting equipment the last time they injected drugs.	Number of respondents who report injecting drugs in the last month
69	A	Sex before the age of 15	Proportion of young women and men aged 15-24 who have had sexual intercourse before the age of 15	Number of respondents (aged 15-24 years) who report the age at which they first had sexual intercourse as under 15 years.	Number of respondents aged 15-24 years
70	A	Multiple sexual partnerships	Proportion of women and men aged 15-49 who have had sexual intercourse with more than one partner in the last 12 months	Number of respondents aged 15-49 who have had sexual intercourse with more than one partner in the last 12 months	Number of respondents aged 15-49
71	A	Discriminatory attitudes towards people living with HIV	Proportion of women and men aged 15-49 who report discriminatory attitudes towards people living with HIV in two standard survey questions (respond "No" or "It depends" to any of two questions)	Number of respondents (15-49 years) who have a discriminatory attitude	Number of all respondents aged 15-49 years who have heard of HIV and are surveyed
102	A	Knowledge of HIV transmission among young women and men	Proportion of young women and men (15-24) who correctly identify ways of preventing the sexual transmission Number of HIV and who reject major misconceptions about HIV transmission	Number of respondents 15-24 years who gave the correct answer to all five questions detailed in the reference	Number of all respondents 15-24 years
103	A	Aware of positive HIV status	Proportion of all people living with HIV who are aware of their positive HIV status	Number of people living with HIV who have received results of a positive HIV test	Number of all people living with HIV
104	A	HIV testing in key populations	Percentage of key populations (sex workers / MSM /IDU) who received an HIV test in the past 12 months and know their results	Number of key populations who have been tested for HIV during the last 12 months and who know their results	Number of sex workers / MSM /IDU
105	A	HIV testing and counselling among pregnant women	Proportion of pregnant women who know their HIV status (tested for HIV and received their results, including those with previously known HIV status)	Number of pregnant women of known HIV status	Estimated number of pregnant women in the past 12 months
107	A	Prevention of mother-to-child transmission during breastfeeding	Proportion of women living with HIV who are provided with ARV prophylaxis for themselves or their infants to reduce the risk of mother-to-child transmission during breastfeeding	Number of women living with HIV who were breastfeeding who received ARVs	Estimated number of women living with HIV who were breastfeeding in the past 12 months
108	A	ART eligibility assessment among HIV-infected pregnant women	Proportion of HIV-infected pregnant women assessed for ART eligibility through either clinical staging or ICD4 testing	Number of HIV-positive pregnant women assessed for eligibility, on site or by referral, in the past 12 months.	Estimated number of HIV-positive pregnant women in the past 12 months
110	A	Co-trimoxazole (CTX) prophylaxis for infants born to HIV-infected women	Proportion of infants born to HIV-infected women started on CTX prophylaxis within two months of birth, in a specified time period	Number of infants born to HIV-infected women who started CTX prophylaxis within 2 months of birth	Estimated number of HIV-infected pregnant women who gave birth in the past 12 months
112	A	Coverage of prevention programs among key populations	Proportion of sex workers/MSM/IDU exposed to HIV prevention programmes ("yes" to two specific exposure questions in surveys)	Number in key population exposed to the prevention intervention	Total number of respondents in each key population surveyed.
120	A	Male circumcision	Percentage of men 15-49 who are circumcised	Number of men 15-49 years circumcised	Number of all men 15-49 years

One core indicator (66) and five additional ones in the Global Reference List are available from standard household surveys:

- 66 Core Condom use at last sex among people with multiple sexual partnerships in past 12 months.
- 69 Sex before the age of 15 among respondents 15-24
- 70 Multiple sexual partnerships (men and women) in the last 12 months
- 71 Discriminatory attitudes among women and men towards people living with HIV
- 102 Knowledge of HIV transmission among young women and men
- 120 Male circumcision (15-49)

The reasons why some indicators cannot be calculated from standard household surveys are detailed below. For some of the indicators (29, 103, 105, 107, 108, 109, 110, 113 and 114) knowledge of the HIV status of the respondent is necessary. Knowledge of the HIV status would require 1) the inclusion of HIV testing in the survey for the corresponding population subgroups; or 2) asking the respondent about his/her HIV status. However, the latter option is not a recommended practice in surveys given that asking a respondent about his/her HIV status can be highly intrusive and could compromise the reliability of the results. Even if HIV testing is included in the survey, it will apply to adults only, not to children, and as a result Core Indicators 29, 113 and 114 won't be available.

**Core indicators that are not available from standard household surveys since they require knowledge of the HIV status of both the respondent and a child**

- 29 Mother-to-child transmission rate (HIV status is required for both mother and child)
- 113 Antiretroviral Therapy (ART) coverage (HIV status is required for both adults and children)
- 114 ART retention rate (HIV status is required for both adults and children)

**Indicators that require knowledge of the HIV status of the respondent**

- 103 Aware of positive HIV status (denominator: number of all people living with HIV)
- 105 HIV testing and counselling among pregnant women who know their HIV status
- 107 Prevention of mother-to-child transmission during breastfeeding among women with HIV
- 108 ART eligibility assessment among HIV-infected pregnant women
- 109 Antiretroviral (ARV) prophylaxis for newborns with HIV positive mothers
- 110 Co-trimoxazole (CTX) prophylaxis for infants born to HIV-infected women

**Indicator that would require a very large sample of households in order to obtain a representative sample of subjects**

- 68 Safe injecting practices among respondents who injected drugs in the last month

**Indicators that are not cross-sectional (require years of exposure)**

- 26 HIV incidence
- 28 HIV incidence rate among most at risk population

**Indicators that refer to subpopulations groups that cannot be sampled in standard household surveys [sex workers, men who have sex with men (MSM), people who inject drugs (IDU)]**

- 27 HIV prevalence among key populations
- 67 Condom use among key populations
- 103 Aware of positive HIV status among all people living with HIV
- 104 HIV testing in key populations
- 112 Coverage of prevention programs among key populations

## Questionnaires for the Short and Long Modules

The modules proposed here for both the short and the long module are based on the standard questionnaires used by the leading programs in the collection of HIV/AIDS data: the Demographic and Health Surveys (DHS), AIDS Indicators Surveys (AIS) and Multiple Indicators Surveys (MICS).

### Short Module

Most of the questions included in the short module refer to sexual behavior and allow the calculation of four indicators, one of them Core (66):

- 66 Condom use at last sex among people with multiple sexual partnerships in past 12 months
- 69 Sex before the age of 15 among respondents 15-24
- 70 Multiple sexual partnerships (men and women) in the last 12 months
- 120 Male circumcision (15-49).

### Long Module

In addition to the previous indicators available from the short module, the long module includes questions to allow the calculation of two additional indicators:

- 71 Discriminatory attitudes among women and men towards people living with HIV
- 102 Knowledge of HIV transmission among young women and men (identify ways of prevention and reject major misconceptions)

If HIV testing is included, five non-core additional indicators can be calculated.

- 105 HIV testing and counselling among pregnant women who know their HIV status
- 107 Prevention of mother-to-child transmission during breastfeeding among women with HIV
- 108 ART eligibility assessment among HIV-infected pregnant women
- 109 Antiretroviral (ARV) prophylaxis for newborns with HIV positive mothers
- 110 Co-trimoxazole (CTX) prophylaxis for infants born to HIV-infected women

The questionnaires for the short and the long modules are included in the following pages. The specific questions in the modules and the corresponding indicators are shown at the end.

## HIV/AIDS: SHORT MODULE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	
613	How old were you when you had sexual intercourse for the very first time?	NEVER HAD SEXUAL INTERCOURSE ..... 00 AGE IN YEARS ..... <input type="text"/> <input type="text"/> FIRST TIME WHEN STARTED LIVING WITH (FIRST) HUSBAND/PARTNER ..... 95	→ 627
614	Now I would like to ask you some questions about your recent sexual activity. Let me assure you again that your answers are completely confidential and will not be told to anyone. If we should come to any question that you don't want to answer, just let me know and we will go to the next question.		
615	When was the <u>last</u> time you had sexual intercourse?  IF LESS THAN 12 MONTHS, ANSWER MUST BE RECORDED IN DAYS, WEEKS OR MONTHS. IF 12 MONTHS (ONE YEAR) OR MORE, ANSWER MUST BE RECORDED IN YEARS.	DAYS AGO ..... 1 <input type="text"/> <input type="text"/> WEEKS AGO ..... 2 <input type="text"/> <input type="text"/> MONTHS AGO ..... 3 <input type="text"/> <input type="text"/> YEARS AGO ..... 4 <input type="text"/> <input type="text"/>	→ 627
617	The last time you had sexual intercourse, was a condom used?	YES ..... 1 NO ..... 2	→ 627
625	Apart from this person, have you had sexual intercourse with any other person in the last 12 months?	YES ..... 1 NO ..... 2	→ 627
626	In total, with how many different people have you had sexual intercourse in the last 12 months?	NUMBER OF PARTNERS IN THE LAST 12 MONTHS <input type="text"/> <input type="text"/> DON'T KNOW ..... 9 8	
627	MALE <input type="checkbox"/> FEMALE <input type="checkbox"/>		→ 941
628	Some men are circumcised. Are you circumcised? <b>(3)</b>	YES ..... 1 NO ..... 2	
629	GO TO NEXT MODULE		

## HIV/AIDS: LONG MODULE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
613	<p>Now I would like to ask some questions about sexual activity in order to gain a better understanding of some important life issues.</p> <p>How old were you when you had sexual intercourse for the very first time?</p>	<p>NEVER HAD SEXUAL INTERCOURSE ..... 00</p> <p>AGE IN YEARS ..... <input type="text"/> <input type="text"/></p> <p>FIRST TIME WHEN STARTED LIVING WITH (FIRST) HUSBAND/PARTNER ..... 95</p>	→ 901
<p>614 Now I would like to ask you some questions about your recent sexual activity. Let me assure you again that your answers are completely confidential and will not be told to anyone. If we should come to any question that you don't want to answer, just let me know and we will go to the next question.</p>			
615	<p>When was the <u>last</u> time you had sexual intercourse?</p> <p>IF LESS THAN 12 MONTHS, ANSWER MUST BE RECORDED IN DAYS, WEEKS OR MONTHS.</p> <p>IF 12 MONTHS (ONE YEAR) OR MORE, ANSWER MUST BE RECORDED IN YEARS.</p>	<p>DAYS AGO ..... 1 <input type="text"/> <input type="text"/></p> <p>WEEKS AGO ..... 2 <input type="text"/> <input type="text"/></p> <p>MONTHS AGO ..... 3 <input type="text"/> <input type="text"/></p> <p>YEARS AGO ..... 4 <input type="text"/> <input type="text"/></p>	→ 901
617	The last time you had sexual intercourse, was a condom used?	<p>YES ..... 1</p> <p>NO ..... 2</p>	→ 901
625	Apart from this person, have you had sexual intercourse with any other person in the last 12 months?	<p>YES ..... 1</p> <p>NO ..... 2</p>	→ 901
626	In total, with how many different people have you had sexual intercourse in the last 12 months?	<p>NUMBER OF PARTNERS IN THE LAST 12 MONTHS <input type="text"/> <input type="text"/></p> <p>DONT KNOW ..... 9 8</p>	
901	Now I would like to talk about something else. Have you ever heard of an illness called AIDS?	<p>YES ..... 1</p> <p>NO ..... 2</p>	→ 941
902	Can people reduce their chance of getting the AIDS virus by having just one uninfected sex partner who has no other sex partners?	<p>YES ..... 1</p> <p>NO ..... 2</p> <p>DONT KNOW ..... 8</p>	
903 (1)	Can people get the AIDS virus from mosquito bites?	<p>YES ..... 1</p> <p>NO ..... 2</p> <p>DONT KNOW ..... 8</p>	
904	Can people reduce their chance of getting the AIDS virus by using a condom every time they have sex?	<p>YES ..... 1</p> <p>NO ..... 2</p> <p>DONT KNOW ..... 8</p>	
905 (1)	Can people get the AIDS virus by sharing food with a person who has AIDS?	<p>YES ..... 1</p> <p>NO ..... 2</p> <p>DONT KNOW ..... 8</p>	
906 (1)	Can people get the AIDS virus because of witchcraft or other supernatural means?	<p>YES ..... 1</p> <p>NO ..... 2</p> <p>DONT KNOW ..... 8</p>	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
907	Is it possible for a healthy-looking person to have the AIDS virus?	YES ..... 1 NO ..... 2 DONT KNOW ..... 8	
932	Would you buy fresh vegetables from a shopkeeper or vendor if you knew that this person had the AIDS virus?	YES ..... 1 NO ..... 2 DONT KNOW ..... 8	
933	If a member of your family got infected with the AIDS virus, would you want it to remain a secret or not?	YES, REMAIN A SECRET ..... 1 NO ..... 2 DK/NOT SURE/DEPENDS ..... 8	
934	If a member of your family became sick with AIDS, would you be willing to care for her or him in your own household?	YES ..... 1 NO ..... 2 DK/NOT SURE/DEPENDS ..... 8	
935	In your opinion, if a female teacher has the AIDS virus but is not sick, should she be allowed to continue teaching in the school?	SHOULD BE ALLOWED ..... 1 SHOULD NOT BE ALLOWED ..... 2 DK/NOT SURE/DEPENDS ..... 8	
939	MALE <input type="checkbox"/> FEMALE <input type="checkbox"/>		941
940	Some men are circumcised. Are you circumcised? (3)	YES ..... 1 NO ..... 2	
941	GO TO NEXT MODULE		

- (1) If Qs. 903, 905 and/or 906 do not apply to the local context, replace the question using a specific local misconception. At least two questions related to misconceptions are needed.
- (2) Coding categories to be developed locally and revised based on the pretest; however, the broad categories must be maintained.
- (3) Question should be omitted or revised depending on the practice of circumcision among men in the country. The question is of greater importance when HIV testing is included in the survey.



## QUESTIONS AND CORRESPONDING INDICATORS

NO.	QUESTION	INDICATOR NUMBER
613	How old were you when you had sexual intercourse for the very first time?	<b>69</b>
615	When was the <u>last</u> time you had sexual intercourse?	<b>66</b>
617	The last time you had sexual intercourse, was a condom used?	<b>66</b>
625	Apart from this person, have you had sexual intercourse with any other person in the last 12 months?	<b>70</b>
626	In total, with how many different people have you had sexual intercourse in the last 12 months?	<b>70</b>
901	Now I would like to talk about something else. Have you ever heard of an illness called AIDS?	
902	Can people reduce their chance of getting the AIDS virus by having just one uninfected sex partner who has no other sex partners?	<b>102</b>
903	Can people get the AIDS virus from mosquito bites?	<b>102</b>
904	Can people reduce their chance of getting the AIDS virus by using a condom every time they have sex?	<b>102</b>
905	Can people get the AIDS virus by sharing food with a person who has AIDS?	<b>102</b>
906	Can people get the AIDS virus because of witchcraft or other supernatural means?	<b>102</b>

NO.	QUESTION	INDICATOR NUMBER
907	Is it possible for a healthy-looking person to have the AIDS virus?	7102
932	Would you buy fresh vegetables from a shopkeeper or vendor if you knew that this person had the AIDS virus?	71
933	If a member of your family got infected with the AIDS virus, would you want it to remain a secret or not?	71
934	If a member of your family became sick with AIDS, would you be willing to care for her or him in your own household?	71
935	In your opinion, if a female teacher has the AIDS virus but is not sick, should she be allowed to continue teaching in the school?	71
940	Some men are circumcised. Are you circumcised?	120

## REFERENCES

### UNAIDS 2012

J Cleland, J T Boerma, M Carael, S S Weir. 2004. Monitoring sexual behavior in general populations: a synthesis of lessons of the past decade. *Sexually Transmitted Infections* 80 (Suppl II):ii1–ii7  
10.1136/sti.2004.013151

Fishel, Joy D., and Yodit Bekele. 2014. *Results of the Pilot Survey of an Experimental Module of Sexual Activity Questions*. DHS Methodological Reports No. 8. Rockville, Maryland, USA: ICF International.

UNAIDS. 2012. Report on the Global AIDS Epidemic. Available online at  
[http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2012/gr2012/20121120\\_UNAIDS\\_Global\\_Report\\_2012\\_en.pdf](http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2012/gr2012/20121120_UNAIDS_Global_Report_2012_en.pdf)