



# Sénégal

Continuous Survey  
Year One: 2012-2013

Key Findings



This report summarizes the key findings from the first year of the Sénégal Continuous Survey. The Continuous Survey has two components: the Continuous Demographic and Health Survey (Continuous DHS) and the Continuous Service Provision Assessment (Continuous SPA). The 2012-2013 Continuous DHS was conducted from September 2012 to June 2013 by the National Statistics and Demography Agency [*l'Agence Nationale de la Statistique et de la Démographie (ANSD)*]. The Government of Sénégal, USAID, UNICEF and l'UNFPA provided financial assistance for the 2012-2013 Continuous DHS. ICF International provided technical assistance for the Continuous DHS through the MEASURE Demographic and Health Surveys Program, a USAID-funded project designed to collect, analyze and disseminate demographic and health data on topics such as fertility, mortality, family planning, maternal and child health, nutrition, malaria and HIV. Additionally, the Center for Research and Human Development [*le Centre de Recherche pour le Développement Humain (CRDH)*] and the Parasitology Laboratory of the University Cheikh Anta Diop School of Medicine [*le Laboratoire de Parasitologie de la Faculté de Médecine de l'Université Cheikh Anta Diop*] provided technical assistance for the 2012-2013 Continuous DHS. The 2012-2013 Continuous SPA was conducted by the National Statistics and Demography Agency [*l'Agence Nationale de la Statistique et de la Démographie (ANSD)*] and the Ministry of Health and Social Action [*Ministère de la Santé et de l'Action Sociale*]. ICF International provided technical assistance for the Continuous SPA through the MEASURE Demographic and Health Surveys Program. USAID provided financial assistance for the 2012-2013 Continuous SPA. The Center for Research and Human Development [*le Centre de Recherche pour le Développement Humain (CRDH)*] also provided technical assistance for the Continuous SPA.

Additional information about both components of the 2012-2013 Continuous Survey can be obtained from: The National Statistics and Demography Agency [*l'Agence Nationale de la Statistique and de la Démographie (ANSD)*], Rocade Fann Bel-air Cerf-volant- B.P. 116; Dakar RP (Sénégal), Telephone: (221) 33 869 21 39/33 869 21 60, Fax: (221) 33 824 36 15, Email: statsenegal@ansd.sn/statsenegal@yahoo.fr, Website: www.ansd.sn

Additional information about the MEASURE DHS Program can be obtained from: ICF International, 530 Gaither Road, Rockville, MD 20850 USA, Telephone: 301-407-6500, Fax: 301-407-6501, Email: reports@dhsprogram.com, Website: www.dhsprogram.com

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# CONTINUOUS SURVEY IN SÉNÉGAL: FIRST YEAR 2012-2013

Sénégal is the first country in Africa to undertake a continuous survey, as part of the USAID-funded MEASURE Demographic and Health Surveys Program. The Continuous Survey collects data every year in order to achieve two objectives:

- Respond to the ongoing need for data to plan, monitor, and evaluate population and health programs
- Strengthen the capacity of Senegalese institutions in the areas of data collection and use.

The National Statistics and Demography Agency [*l'Agence Nationale de la Statistique et de la Démographie (ANSD)*] and the Ministry of Health and Social Action [*Ministère de la Santé et de l'Action Sociale*] implement the Continuous Survey, which has two components:

- Household survey: called the Continuous Demographic and Health Survey (Continuous DHS), collects data from household members, women, men, and children under age five.
- Facility survey: called the Continuous Service Provision Assessment (Continuous SPA), collects data from health facilities, health care providers, and health facility clients.



Altitude in meters



# CONTINUOUS DHS METHODOLOGY

The Continuous Demographic and Health Survey (Continuous DHS) was designed to have five phases. Certain elements remain the same across the five phases. For example, the sample size is fixed at 200 clusters and approximately 4,000 households for each phase. In contrast, other elements vary across the five phases. Women age 15-49 will be surveyed in each phase, but men will only be surveyed in Phases 2, 4, and 5. Each phase will use an abridged standard DHS questionnaire and will include a special module that will differ each phase according to national priorities. Each phase will include anthropometry, anemia testing, and malaria testing for children. Phase 5 will include HIV testing for women age 15-49 and men age 15-59. Data from Phase 1 is representative at the national level, by urban-rural residence and for four grand regions. For the subsequent phases, the data from the previous phases will be aggregated to produce certain indicators that will be representative for Sénégal's 14 regions. Other indicators will be based only on data from that specific phase of data collection. (See the table below).

During Phase 1 (2012-2013), 4,175 households and 8,636 women age 15-49 were successfully interviewed. Moreover, 5,829 children under age five had their height and weight measured to assess their nutritional status, 5,293 children age 6-59 months were tested for anemia, and 5,401 were tested for malaria. The results from Phase 1 are representative nationally, by urban-rural residence, and for four grand regions : **North** (Louga, Saint Louis, and Matam), **West** (Thiès and Dakar), **Central** (Diourbel, Fatick, Kaffrine, and Kaolack) and **South** (Tambacounda, Kédougou, Kolda, Sédhiou, and Ziguinchor). The special module for Phase 1 was female genital cutting of girls under age 15.

	2012-2013 Phase 1	2014 Phase 2	2015 Phase 3	2016 Phase 4	2017 Phase 5
Sampling	200 clusters, 4,000 households per phase				
Indicators	Representative: nationally, by urban-rural residence, and for 4 grand regions (North, West, Central, South)	Representative: nationally, by urban-rural residence, and for 4 grand regions (North, West, Central, South)  Certain indicators are based on aggregated data from Phases 1-2 to provide estimates that are representative for all 14 regions.	Representative: nationally, by urban-rural residence, and for 4 grand regions (North, West, Central, South)  Certain indicators are based on aggregated data from Phases 2-3 to provide estimates that are representative for all 14 regions.	Representative: nationally, by urban-rural residence, and for 4 grand regions (North, West, Central, South)  Certain indicators are based on aggregated data from Phases 3-4 to provide estimates that are representative for all 14 regions.	Representative: nationally, by urban-rural residence, and for 4 grand regions (North, West, Central, South)  Certain indicators are based on aggregated data from Phases 4-5 to provide estimates that are representative for all 14 regions.
Questionnaires	Abridged standard DHS questionnaire Special module	Abridged standard DHS questionnaire Special module Men's questionnaire	Abridged standard DHS questionnaire Special module	Abridged standard DHS questionnaire Special module Men's questionnaire	Abridged standard DHS questionnaire Special module Men's questionnaire
Personnel	3 teams per phase (supervisor, 4 interviewers and driver)				
Respondents	Women age 15-49	Women age 15-49 Men age 15-59	Women age 15-49	Women age 15-49 Men age 15-59	Women age 15-49 Men age 15-59
Biomarkers and anthropometry	Anthropometry Anemia Malaria prevalence	Anthropometry Anemia Malaria prevalence	Anthropometry Anemia Malaria prevalence	Anthropometry Anemia Malaria prevalence	Anthropometry Anemia Malaria prevalence HIV

# CONTINUOUS SPA METHODOLOGY

The Continuous Service Provision Assessment (Continuous SPA) was also designed to have five phases. Similar to the Continuous DHS, certain elements remain the same across the five phases, while others change from one phase to the next. The indicators for each of the five phases are representative by facility type, managing authority, and for Sénégal's 14 regions. During each phase, 50% of Sénégal's hospitals and health centers will be surveyed, as well as 20% of health posts and some of their associated health huts. In the third, fourth, and fifth phases, 10% of the facilities surveyed in the previous phase will be resurveyed. The Continuous SPA uses four data collection methods for each phase: inventories, interviews with health care providers, consultation observations, and interviews with health facility clients. During each phase the themes for the consultation observations are the same as the themes for the interviews with health facility clients. However, these themes change between phases. For example, during Phase 1 the themes were family planning and curative care for children, while in Phase 2 the themes are antenatal care and curative care for children. (See table below)

During Phase 1 (2012-2013), 438 facilities were successfully interviewed: 35 hospitals, 64 health centers, 265 health posts and 74 health huts. In Continuous SPA tables, the total only includes results for hospitals, health centers, and health posts. Results for health huts are presented separately because the services that health huts offer are limited in comparison to other facility types.

	<b>2012-2013 Phase 1</b>	<b>2014 Phase 2</b>	<b>2015 Phase 3</b>	<b>2016 Phase 4</b>	<b>2017 Phase 5</b>
<b>Sampling</b>	50% of hospitals and health centers  20% of health posts and some of their associated health huts	50% of hospitals and health centers  20% of health posts and some of their associated health huts	50% of hospitals and health centers  20% of health posts and some of their associated health huts  10% of facilities from the previous phase are resurveyed	50% of hospitals and health centers  20% of health posts and some of their associated health huts  10% of facilities from the previous phase are resurveyed	50% of hospitals and health centers  20% of health posts and some of their associated health huts  10% of facilities from the previous phase are resurveyed
<b>Indicators</b>	Representative nationally, by facility type, managing authority, and for Sénégal's 14 regions				
<b>Personnel</b>	4 teams for this phase (supervisor, 2 interviewers and driver)	3 teams for the subsequent phases (supervisor, 2 interviewers and driver)			
<b>Data collection methods</b>	Inventory  Interviews with health care providers  Consultation observations and interviews with clients (Family planning and child curative care)	Inventory  Interviews with health care providers  Consultation observations and interviews with clients (Antenatal care and child curative care)	Inventory  Interviews with health care providers  Consultation observations and interviews with clients (Themes not yet determined)	Inventory  Interviews with health care providers  Consultation observations and interviews with clients (Themes not yet determined)	Inventory  Interviews with health care providers  Consultation observations and interviews with clients (Themes not yet determined)

# CHARACTERISTICS OF HOUSEHOLDS AND RESPONDENTS

## Housing characteristics

More than half (57%) of households have electricity. Overall, 76% of households (63% in rural areas and 90% in urban areas) have access to an improved source of drinking water. Eleven percent of households require more than 30 minutes round-trip to fetch water. Nearly four in ten households (39%) have access to an improved, not shared sanitation facility, 25% have access to a shared improved sanitation facility, and 36% use a non-improved sanitation facility. In rural areas, 38% of households have no toilet at all, compared to 2% in urban areas.

## Education

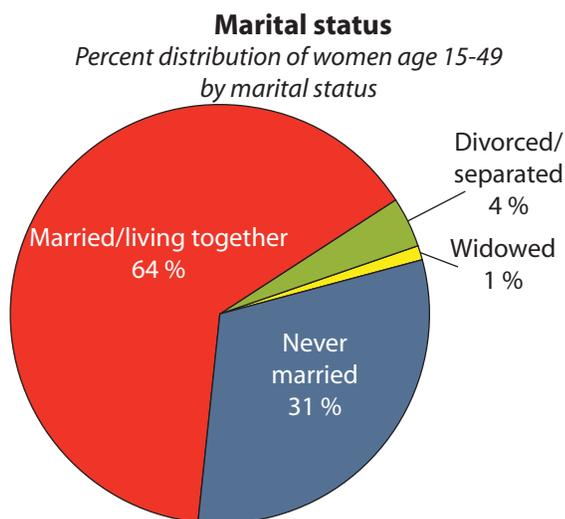
More than half (55%) of women age 15-49 have no formal education. In contrast, 23% of women have attended secondary school or higher education.

## Marital status

Two-thirds (64%) of women age 15-49 are married or living together with their partner. Nearly one-third (31%) of women have never been married. Five percent are divorced, separated, or widowed.



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# BASIC CLIENT SERVICES AND BASIC AMENITIES FOR CLIENT SERVICES

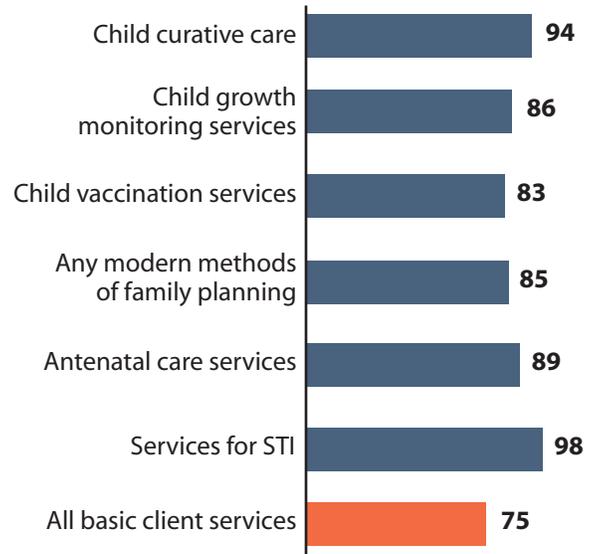
## Basic client services

Nearly all (98%) health facilities\* offer services for sexually transmitted infections (STI) and 94% of facilities offer curative child care. Nearly nine in ten facilities (89%) offer antenatal care services, 86% offer child growth monitoring services, 85% offer any modern methods of family planning and 83% offer child vaccination services. Three-quarters (75%) of all health facilities offer all these basic client services. Availability of all basic client services is higher in public facilities (85%) than in private facilities (26%) and ranges from a low of 57% in the Kolda region to a high of 100% in the Fatick region.

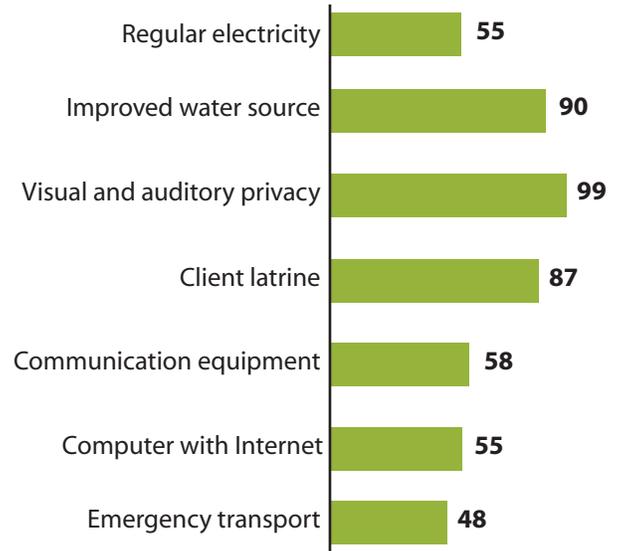
## Basic amenities for client services

The Continuous SPA assessed the availability of basic amenities for client services in all health facilities. The vast majority of facilities have a client latrine (87%), an improved water source (90%) and visual and auditory privacy (99%). Only 58% of facilities have communication equipment (a functioning land-line telephone, a functioning facility-owned cellular phone, a private cellular phone that is supported by the facility, or a functioning short wave radio available in the facility), 55% have regular electricity, 55% have a computer with Internet and just 48% have emergency transport. Availability of emergency transport varies by facility type, from 43% of health posts to 67% of hospitals and 87% of health centers. Similarly, emergency transport availability varies by region, from 16% in the Saint-Louis region to 86% in the Ziguinchor region.

**Availability of basic client services**  
Among all facilities (N=364), the percentage offering indicated basic client services and all basic client services



**Availability of basic amenities for client services**  
Among all facilities (N=364), percent with indicated amenities considered basic for quality services



\*Note: Percentages presented for all health facilities only include hospitals, health centers and health posts. The results for health huts are not presented on this page, nor subsequent pages. For more information, see Page 5.

# FERTILITY AND FAMILY PLANNING

## Total fertility rate

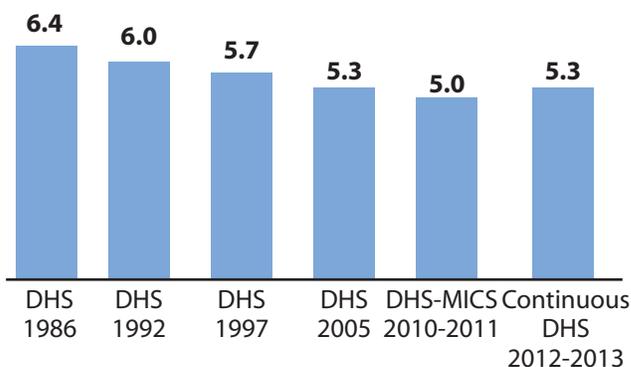
Currently, women in Sénégal have an average of 5.3 children. Fertility is lower in urban areas (4.1) than in rural areas (6.3). Fertility has decreased by more than one child per woman since 1986, but has remained stable since 2005. The difference between the total fertility rates for 2010-2011 and 2012-2013 is not statistically significant.

## Current use of family planning

Eighteen percent of currently married women are using any method of family planning and 16% are using a modern method. Currently married women essentially use three methods of family planning: injectables (6%), the pill (5%), and implants (3%). Modern method use is higher in urban areas than in rural areas (27% versus 9%). Use of modern methods of family planning is highest in the West grand region (27%) and lowest in the South grand region (9%). Modern method use increases as the wealth of the respondent's household\* increases: 6% of women from households in the lowest quintile are using a modern method, compared to 30% of women from households in the highest wealth quintile. Use of modern methods of family planning has been steadily increasing, from 5% in 1992 to 16% in 2012-2013. However, use of traditional methods of family planning has decreased over the same time period.

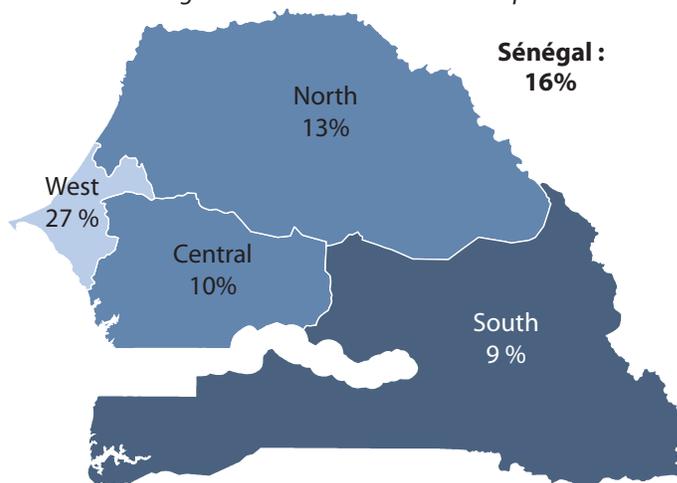
## Trends in fertility

Total fertility rate (number of children per woman) for the three-year period before the survey



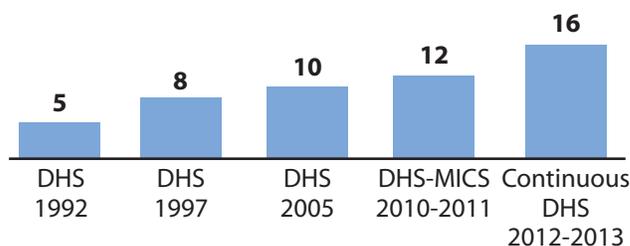
## Modern method use by grand region

Percent of currently married women age 15-49 using a modern method of contraception



## Trends in modern method use

Percent of currently married women age 15-49 using a modern method of contraception



\*In the 2012-2013 Continuous DHS, wealth of households is calculated through household characteristics and assets assessed in the survey. This information is combined to form an index of household wealth. The index is divided into five equal pieces: the wealth quintiles.

# FAMILY PLANNING

## Availability of family planning (FP) services

Overall, 85% of all health facilities offer any temporary modern method of family planning (pill, injectables, implants, IUD, male or female condom, CycleBeads, diaphragm, or spermicides). Less than half (45%) of facilities offer male or female sterilization. The majority (85%) of facilities offer any modern family planning method. The availability of modern methods of family planning is higher in health posts than in hospitals (87% and 65%, respectively).

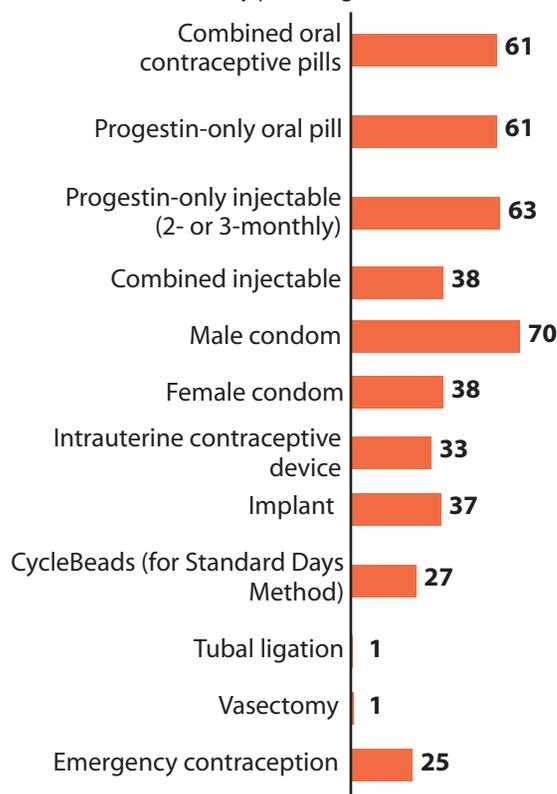
## Family planning methods provided by facilities

The Continuous SPA considers a health facility as providing a method of family planning if the facility reports that it stocks the method in the facility and makes it available to clients without clients having to go elsewhere to obtain it. In the case of vasectomy and tubal ligation, the facility reports that providers in the facility perform these procedures. The Continuous SPA shows that the three most popular methods (according to the Continuous DHS) are not universally available. Only 63% of facilities that offer any family planning service (N=309) provide the progestin-only injectable (2- or 3-monthly), 38% provide the combined injectable, 61% provide combined oral contraceptive pills or progestin-only pills, and 37% provide implants. The male condom is provided by 70% of facilities, though only 1% of married women use male condoms according to the Continuous DHS.

## Availability of family planning commodities provided by facilities

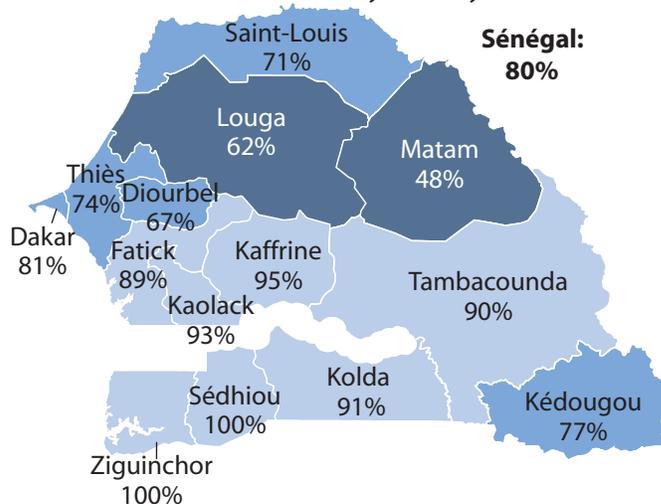
Among facilities that offer family planning methods, 80% had all the methods that the facility reported providing available on the day of the survey. Availability of the most commonly used family planning methods (according to the Continuous DHS) is high: 94% of facilities who provide combined oral contraceptive pills or progestin-only pills had these methods available the day of the survey, 96% of facilities providing the progestin-only injectable (2- or 3-monthly) had the method available, 97% of facilities providing the combined injectable had the method available, as well as 95% of facilities that provide implants. The availability of all family planning methods provided by health facilities varies by region, from a minimum of 48% in the Matam region to a maximum of 100% in the Sédhiou and Ziguinchor regions.

**Methods of family planning provided**  
Among facilities offering any family planning services (N=309), percentage that provide clients with specific modern family planning methods



## Availability of family planning methods provided by facilities by region

Among facilities that provide family planning methods, percent where every method provided by facility was available on day of survey



# MATERNAL HEALTH

## Antenatal care

Nearly all (95%) women receive antenatal care from a skilled provider (doctor, midwife, nurse/nurse supervisors). The effectiveness of antenatal care depends on the quality of services provided during consultations. Eighty-two percent of last births were protected against neonatal tetanus and 93% of mothers received iron supplements during pregnancy.

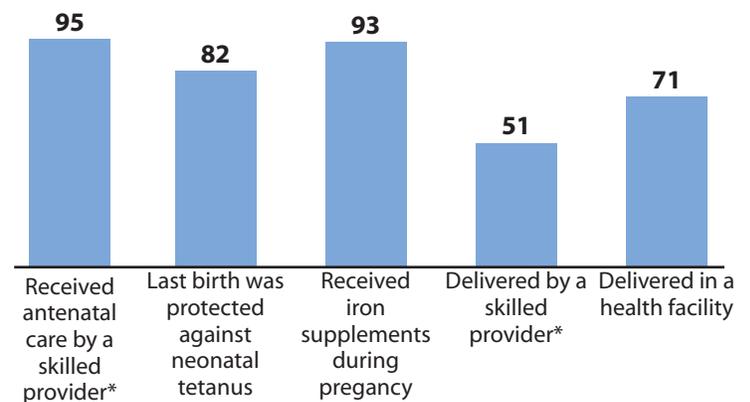
## Delivery

More than seven in ten (71%) births took place in a health facility and 51% of births were assisted by a skilled provider. Women living in households in the lowest wealth quintile (20%) and those living in rural areas (36%) are least likely to receive delivery assistance from a skilled provider.

## Maternal health

Percent of women age 15-49 with a live birth in the last five years :

Percent of live births in the last five years :



\*Doctors, midwives and nurses/nurse supervisors



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# MATERNAL HEALTH

## Availability of maternal health services

Overall, 89% of all facilities offer antenatal care (ANC), 76% offer normal delivery services, and 4% offer Cesarean delivery. Three-quarters of facilities offer ANC and normal delivery services. Only 4% offer ANC, normal delivery services, and Cesarean delivery. The availability of these three maternal health services is substantially higher in hospitals than in health posts (55% versus 1%).

## Antenatal care (ANC)

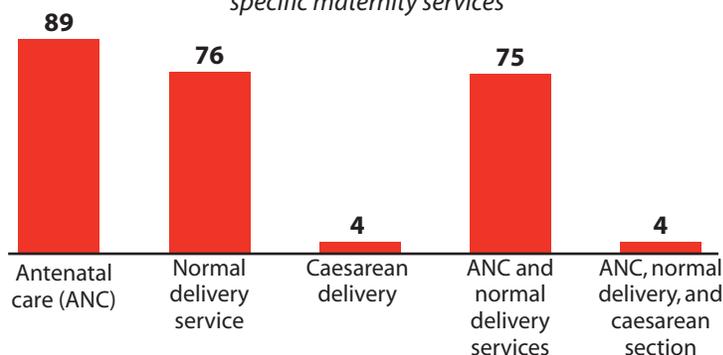
Among all facilities offering ANC (N=324), 93% offer these services five or more days per week. Nearly all (95%) facilities offering ANC offer tetanus toxoid vaccination all the days that ANC is offered. More than eight in ten (85%) facilities offering ANC had iron supplements available the day of the survey and 78% had folic acid supplements available.

## Delivery services

Among facilities offering normal delivery services (N=275), 61% have guidelines on the Integrated Management of Pregnancy and Childbirth (IMPAC) and only 38% have trained personnel in IMPAC in 24 months before the survey. About half (51%) of facilities offering normal delivery services have emergency transport. Overall, 98% of facilities offering normal delivery services performed assisted vaginal delivery at least once in the three months before the survey and 97% applied oxytocic parenterally. Only 2% of facilities offering normal delivery services performed a blood transfusion at least once in the three months before the survey.

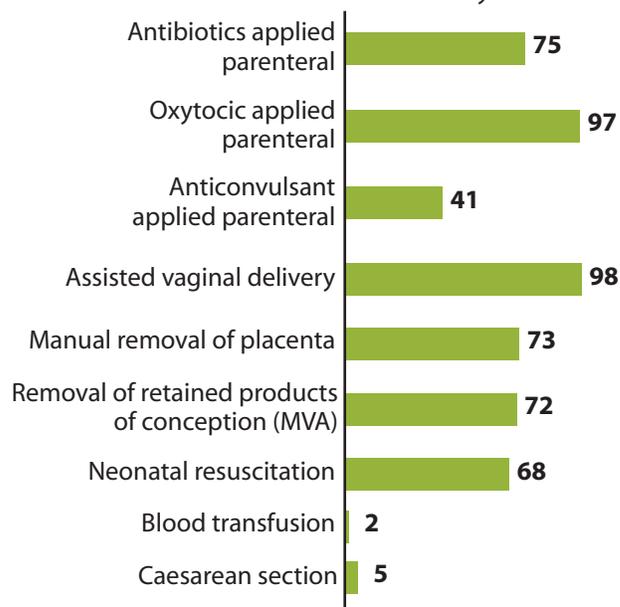
## Availability of maternal health services

Among all facilities (N=364), percent offering specific maternity services



## Signal functions for emergency obstetric care

Among facilities offering normal delivery services (N=275), percent reporting that they performed the following signal functions for emergency obstetric care at least once during the three months before the survey :



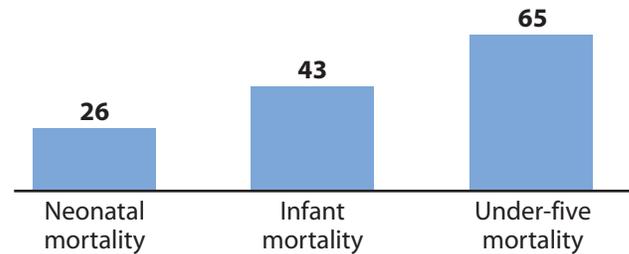
# CHILDHOOD MORTALITY

## Levels and trends

Infant mortality for the five-year period before the survey is 43 deaths per 1,000 live births (26 deaths between age 0 and 1 month exact and 17 deaths between age 1 and 12 months exact). For every 1,000 children age one year, 23 do not reach their fifth birthday. Overall, the risk of dying between birth and age five is 65 deaths per 1,000 live births.

Infant mortality has declined over the past eight years, from 61 deaths per 1,000 live births in 2005, to 47 in 2010-2011 to 43 in 2012-2013. Similarly, under-five mortality has declined from 121 deaths per 1,000 live births in 2005 to 72 in 2010-2011 to 65 in 2012-2013.

**Childhood mortality**  
Deaths per 1,000 live births



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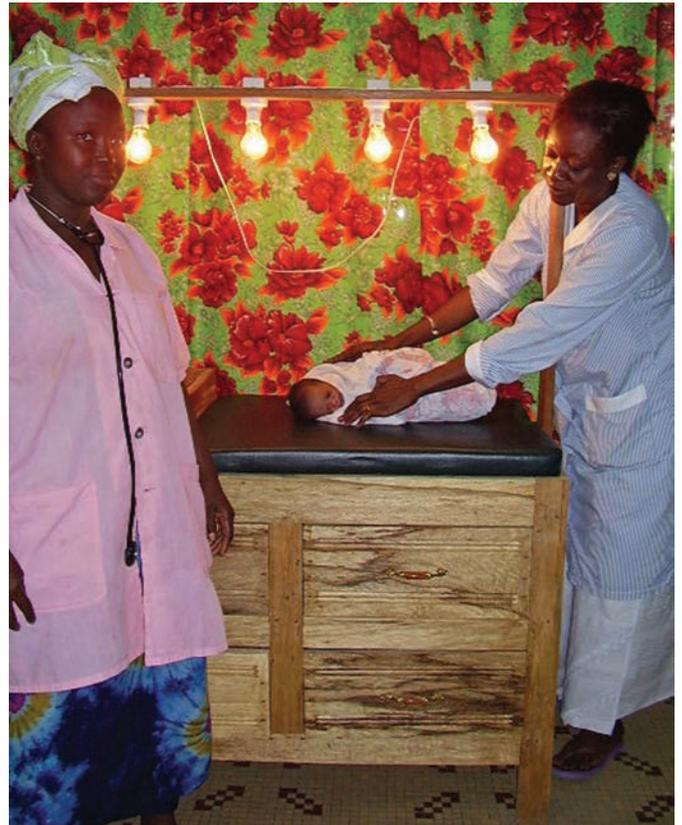
# NEWBORN HEALTH AND PREVENTION OF MOTHER-TO-CHILD TRANSMISSION OF HIV

## Medicine for newborns

Among facilities offering normal delivery services (N=275), 47% have antibiotic eye ointment for newborns. Approximately the same proportion (48%) of facilities have 4% chlorhexidine solution for cleaning the umbilical cord. More than half (52%) of facilities have injectable gentamicin, an antibiotic. Only 23% of facilities have ceftriaxone powder for injection, another antibiotic. More than three-quarters (78%) of facilities have amoxicillin suspension, an antibiotic.

## Prevention of mother-to-child transmission (PMTCT) of HIV in facilities offering antenatal care (ANC)

Among all facilities offering ANC (N=324), 97% offer any PMTCT service, which means that the facility provides any of the following services for the prevention of transmission of HIV from an HIV-positive pregnant woman to her child: HIV testing and counseling for pregnant women, HIV testing for infants born to HIV-positive women, ARV prophylaxis for HIV-positive pregnant women, ARV prophylaxis for infants born to HIV-positive women, infant and young child feeding counseling for prevention of mother-to-child transmission, nutritional counseling for HIV-positive pregnant women and their infants, and family planning counseling for HIV-positive pregnant women. Almost all (99%) facilities offering ANC and any PMTCT services (N=316) provide HIV testing for pregnant women, but only 8% provide HIV testing for infants born to HIV-positive women. The availability of ARV prophylaxis for HIV-positive women very limited, as is the availability of ARV prophylaxis for infants born to HIV-positive women (8%, each).



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# CHILD HEALTH

## Vaccination coverage

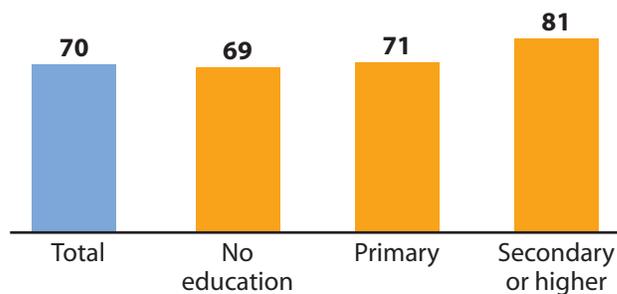
Overall, 70% of children age 12-23 months have received all the recommended vaccines – one dose each of BCG and measles and three doses each of Pentavalent and polio. Only 3% of children did not receive any of the recommended vaccines. Ninety-six percent of children age 12-23 months received the BCG vaccine, 89% the three doses of Pentavalent, 83% the three doses of polio and 78% were vaccinated against measles. Vaccination coverage increases with the mother's level of education: 69% of children born to mothers with no formal education are fully vaccinated, compared to 81% of children born to mother's with secondary or higher education. Vaccination coverage has increased over the past eight years, from 59% in 2005 to 70% in 2012-2013.

## Childhood illnesses

In the two weeks before the survey, 3% of children under age five were ill with cough and rapid breathing, symptoms of an acute respiratory infection (ARI). Among children with symptoms of ARI, 53% were taken to a health facility or provider for treatment or advice. One in seven (14%) children under age five had diarrhea in the two weeks before the survey. Overall, 22% of children with diarrhea received oral rehydration therapy (ORT), either via oral rehydration salts or recommended home fluids.

## Vaccination coverage by mother's level of education

Percent of children age 12-23 months fully vaccinated (BCG, measles, 3 doses each of Pentavalent and polio)



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# CHILD HEALTH

## Availability of child health services

Overall, 94% of all facilities offer child curative care services, 86% offer growth monitoring, and 83% offer child vaccination. Eight in ten facilities offer all three basic child health services. Additionally, 82% offer routine vitamin A supplementation. The availability of all three basic child health services is substantially higher in health posts than in hospitals (84% and 30%, respectively).

## Frequency of availability of child health services

Among facilities offering child curative care services (N=343), 97% offer these services five or more days per week. However, only 52% of facilities offering growth monitoring (N=313) offer these services five or more days per week. More than one-third (35%) of facilities offering routine polio vaccination services (N=305) offer the vaccine five or more days per week. Approximately the same proportion (39%) of facilities offering routine DTC/Pentavalent vaccination services (N=305) offer these vaccines five or more days per week. Only 6% of facilities offering routine measles vaccination services (N=304) offer the vaccine five or more days per week. Moreover, 4% of facilities offering routine BCG vaccination services (N=300) offer the vaccine five or more days per week.

## Availability of vaccines

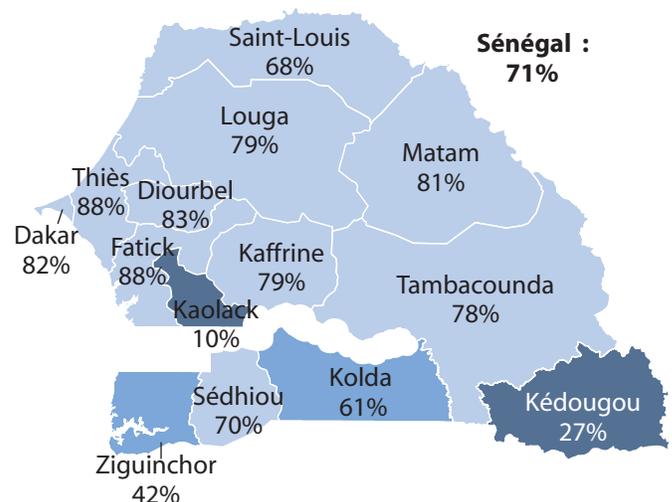
The Continuous SPA 2012-2013 assessed the availability of unexpired vaccines among facilities offering child vaccination services and storing vaccines (N=287). Overall, 89% of these facilities had the Pentavalent vaccine available the day of the survey, 91% had the oral polio vaccine, 91% had the measles vaccine, and 83% had the BCG vaccine. More than seven in ten facilities (71%) had these four vaccines available on the day of the survey. The availability of these four vaccines varies by region, from a minimum of 10% in the Kaolack region to a maximum of 88% in the Thiès and Fatick regions.



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## Availability of vaccines by region

Among facilities that offer child vaccination services and routinely store vaccines at the facility (N=287), percent having all unexpired indicated vaccines observed on the day of the survey



# MALARIA

## Ownership of mosquito nets and indoor residual spraying

In Sénégal, 73% of households own at least one insecticide-treated net (ITN). Ownership of ITNs is lowest in the West grand region (50%) and highest in the North grand region (93%).

Overall, 12% of households had indoor residual spraying in the 12 months before the survey. Indoor residual spraying is highest among households in the lowest wealth quintile and households in the South grand region (20% each).

## Use of mosquito nets by children and pregnant women

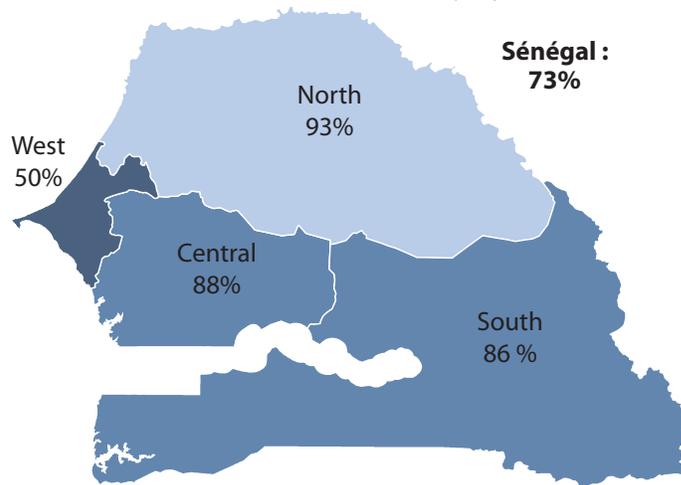
Forty-six percent of children under age five slept under an ITN the night before the survey. About the same proportion (43%) of pregnant women age 15-49 slept under an ITN the night before the survey. Use of ITNs by children under age five is almost five times higher in 2012-2013 than in 2005.

## Intermittent preventive treatment

Malaria during pregnancy contributes to low birth weight, infant mortality, and other complications. To prevent malaria, pregnant women should receive two or more doses of SP during an antenatal care (ANC) visit. Nearly three-quarters (74%) of pregnant women with a live birth in the two years before the survey received SP during an ANC visit, but only 41% received two or more doses.

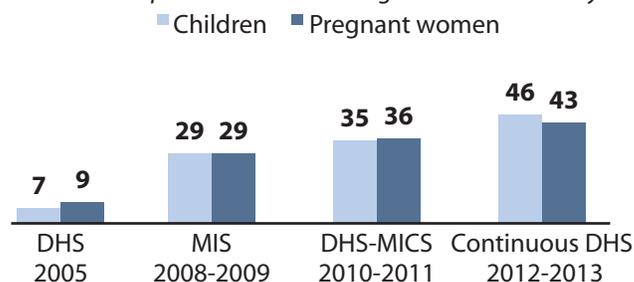
### Ownership of ITNs by grand region

Percent of households with at least one insecticide-treated net (ITN)



### Trends in the use of ITNs

Percent of children under age five and pregnant women age 15-49 who slept under an ITN the night before the survey



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# MALARIA

## Availability of malaria services

Nearly all (99%) facilities offer malaria diagnosis and/or treatment services, which includes facilities offering antenatal care services that reported that they provide malaria rapid diagnosis tests (RDT) or were found on the day of the survey visit to be conducting such tests at the ANC service site. Also, facilities offering curative care for sick children where providers of sick child services were found on the day of the survey to be making diagnosis of malaria or offering treatment for malaria were counted as offering malaria diagnosis and/or treatment services.

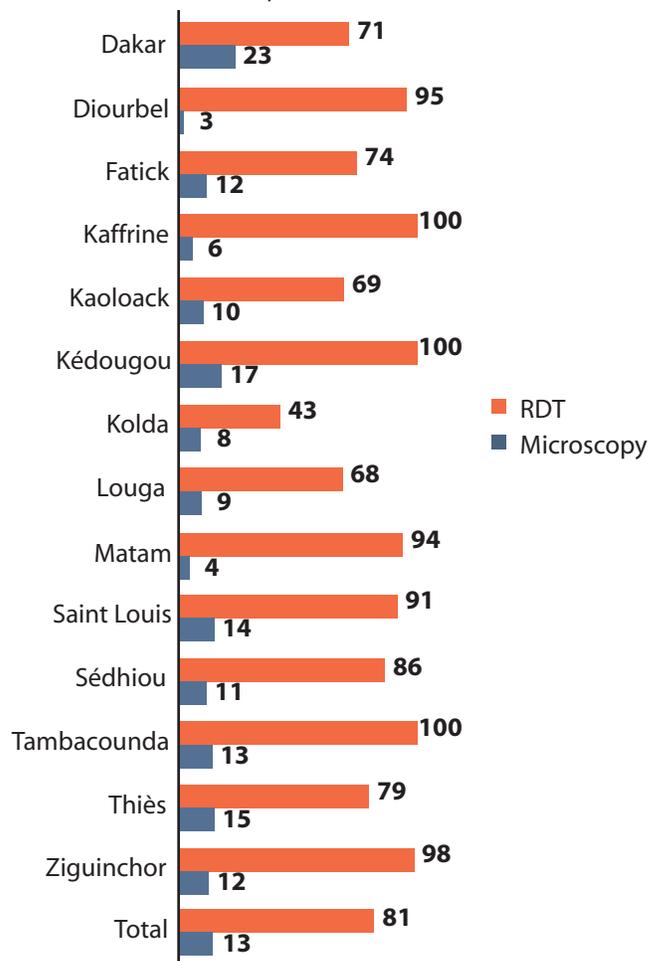
## Malaria diagnostic capacity

The majority (81%) of facilities offering malaria diagnosis and/or treatment services (N=360), had unexpired rapid diagnostic test kits (RDT) available in the facility. The availability of RDTs varies by region, from 43% in the Kolda region to 100% in the Kaffrine, Kédougou and Tambacounda regions. Only 13% of facilities offering malaria diagnosis and/or treatment services have the capacity to perform malaria microscopy. Malaria microscopy capacity also varies by region, from 3% in the Diourbel region to 23% in Dakar.

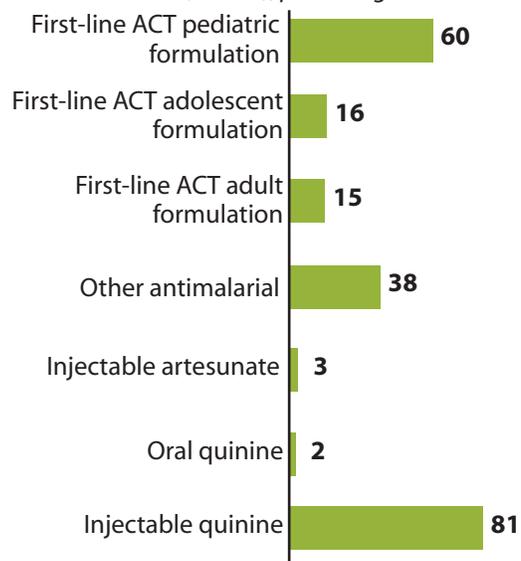
## Availability of antimalarials

The 2012-2013 Continuous SPA assessed the availability of antimalarial medicines among facilities offering malaria diagnosis and/or treatment services (N=360). Six in ten facilities have the first-line pediatric formulation of ACT, compared to just 15% of facilities that have the first-line adult formulation of ACT. More than one-third (38%) of facilities have another antimalarial medicine. The majority (81%) of facilities have injectable quinine.

**Malaria diagnostic capacity by region**  
Among facilities offering malaria diagnosis and/or treatment services (N=360), percent who have RDT kits or microscopy



**Availability of malaria medicines**  
Among facilities offering malaria diagnosis and/or treatment services (N=360), percentage that have :



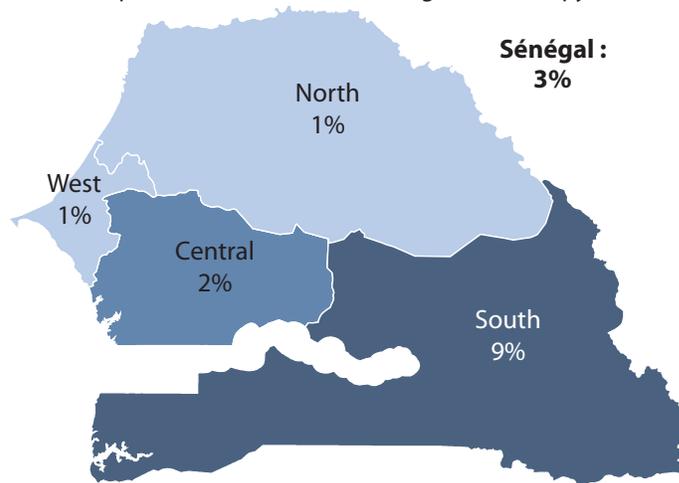
# MALARIA

## Malaria prevalence

During the Continuous DHS children age 6-59 months were eligible for malaria prevalence testing. Overall, 3% of children tested positive for malaria according to the malaria microscopy. Malaria prevalence is higher in rural areas than in urban areas (4% versus <1%). The West and North grand regions have the lowest malaria prevalence (1%, each) while malaria prevalence is highest in the South grand region (9%). Malaria prevalence varies with the education level of the child's mother: 4% of children whose mothers have no formal instruction tested positive for malaria, compared to 1% of children whose mother has secondary or higher education. Malaria prevalence also varies by household wealth: 8% of children living in households in the lowest wealth quintile tested positive for malaria, compared to <1% of children living in households in the highest wealth quintiles. Data collection for the Continuous DHS was divided into two waves; the first took place from September to January and the second from February to June. Malaria prevalence was higher during the first data collection wave than during the second (5% versus 1%).

## Malaria prevalence in children by grand region

*Percent of children age 6-59 months who tested positive for malaria according to microscopy*



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# TUBERCULOSIS

## Tuberculosis (TB) services

Among facilities offering any TB diagnostic, treatment, and/or treatment follow-up services (N=153), 15% have the capacity to conduct TB smear microscopy. This proportion varies by facility type, from 72% of hospitals to 3% of health posts. The majority (88%) of facilities offering any TB diagnostic, treatment, and/or treatment follow-up services have HIV diagnostic capacity, regardless of facility type. Nearly four in ten (38%) facilities offering any TB diagnostic, treatment, and/or treatment follow-up services have a system for diagnosing HIV among TB patients. This proportion is more than two times higher in health centers (71%) than in health posts (31%). Sixty-one percent of facilities offering any TB diagnostic, treatment, and/or treatment follow-up services have first-line treatment for TB. Less than half (49%) of hospitals have the first-line treatment, compared to 81% of health centers. Nearly one-quarter (24%) of facilities offering any TB diagnostic, treatment, and/or treatment follow-up services have injectable streptomycin. Just 15% of health posts have injectable streptomycin, compared to 70% of health centers.

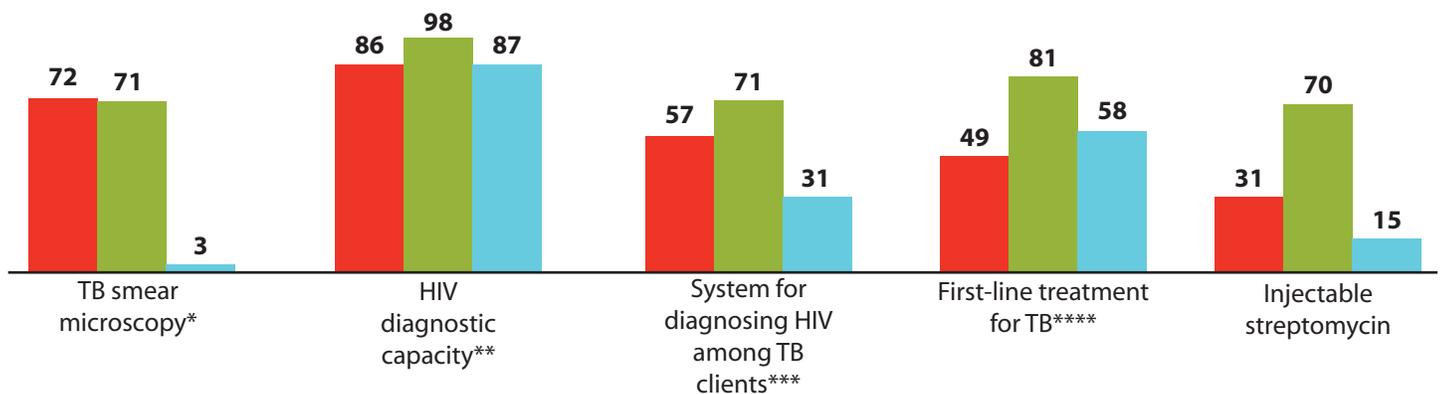


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### Diagnostic capacity and availability of medicines to treat tuberculosis (TB)

Among facilities offering any TB diagnostic, treatment, and/or treatment follow-up services (N=153), percent with:

■ Hospital ■ Health center ■ Health post



\*Functioning microscope, slides, and all stains for Ziehl-Neelson test (carbol-fuchsin, Sulphuric acid and methyl blue) all were available in the facility on the day of the survey visit.

\*\*HIV rapid diagnostic test kits available, or ELISA with reader, incubator, and specific assay.

\*\*\*Record or register indicating TB clients who had been tested for HIV.

\*\*\*\*Four-drug fix-dose combination (4FDC) available, or else isoniazid, pyrazinamide, rifampicin, and Ethambutol are all available, or a combination of these medicines, to provide first-line treatment.

# NUTRITION

## Breastfeeding and the introduction of complementary foods

WHO and UNICEF recommend that children receive nothing but breastmilk (exclusive breastfeeding) for the first six months of life. Complementary foods should be introduced when a child is six months old to reduce the risk of malnutrition. In Sénégal, only 38% of children under age six months are exclusively breastfed and 65% of children age 6-9 months received complementary foods.

## Children's nutritional status

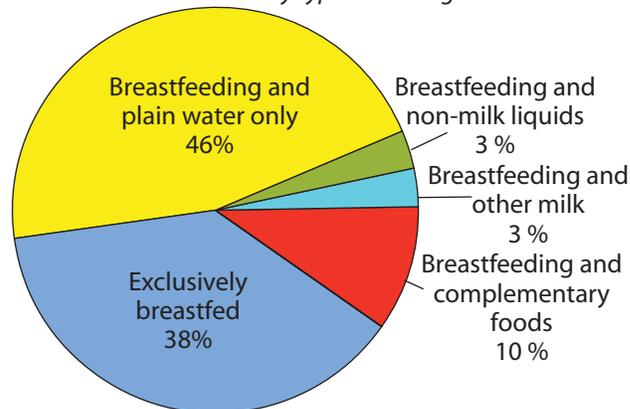
Nineteen percent of children under age five are stunted, or too short for their age. This indicates chronic malnutrition. Six percent of children under age five are severely stunted. Chronic malnutrition is highest in the South grand region (27%). Stunting is twice as high among children whose mothers have no formal education as among children whose mothers have secondary or higher education (21% versus 10%).

Among children under age five, 9% suffer from acute malnutrition, or are too thin for their height. Additionally, 16% of children under age five are underweight.

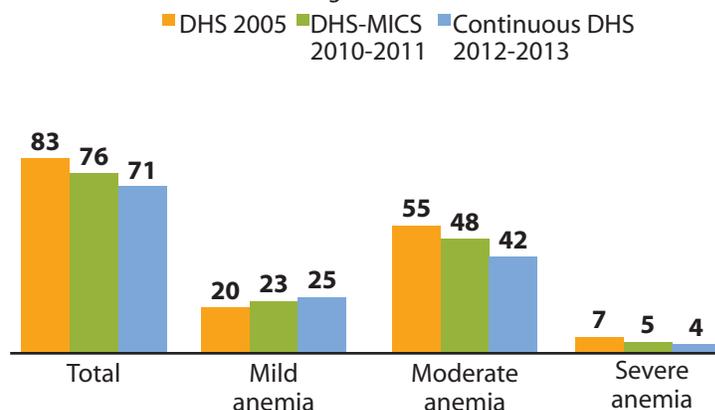
## Anemia

The 2012-2013 Continuous DHS measured anemia among children age 6-59 months. More than seven in ten (71%) children age 6-59 months are anemic, the majority have moderate anemia. Anemia prevalence is highest among children age 12-23 months (83%). Anemia prevalence has decreased since 2005, from 83% in 2005, to 76% in 2010-2011 to 71% in 2012-2013.

**Feeding Practices for children under age six months**  
Percent distribution of last-born children under age six months by type of feeding



**Trends in anemia among children**  
Percent of children age 6-59 month with anemia



# HIV/AIDS

## Availability of HIV testing and counseling services

Overall, 82% of all facilities have an HIV testing system, which means that the facility reports conducting HIV testing in the facility or in an external site with which they have an agreement that test results will be returned to the facility. Among facilities with an HIV testing system (N=298), 40% have HIV testing and counseling guidelines. This proportion varies by region, from 3% in the Sédhiou region to 93% in the Kaolack region. Only 6% of facilities with an HIV testing system have visual and auditory privacy, which means a private room or screened-off space available in the HIV testing and counseling area that is a sufficient distance from sites where providers and/or other clients may be so that a normal conversation could not be overheard, and the client could not be observed by others.



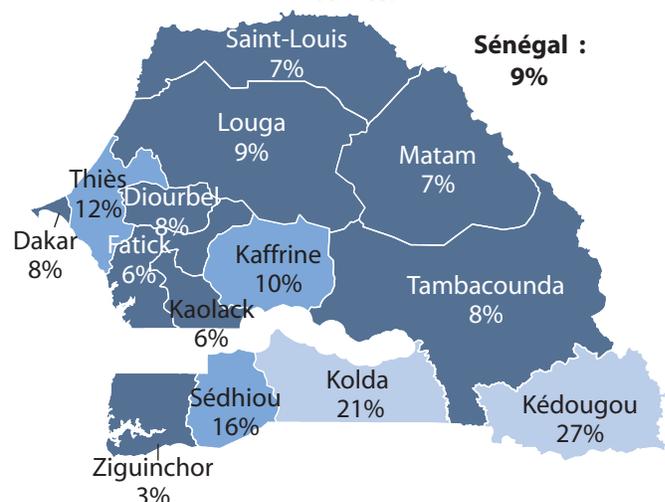
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## Antiretroviral therapy (ART) services

Less than one in ten facilities (10%) in Sénégal offer ART services. The availability of ART services varies by facility type, from 63% of health centers to 2% of health posts. Similarly, the availability of ART services is nine times higher in the Kédougou region than in the Ziguinchor region (27% and 3%, respectively). The majority (87%) of facilities offering ART services (N=33) had the first-line adult ART regimen available the day of the survey. The diagnostic capacity among facilities offering ART services is relatively limited : 22% can perform CD4 cell counts and 16% can perform RNA viral load tests.

## Availability of antiretroviral therapy services by region

Among all facilities (N=364), percent where providers in the facility prescribe ART for HIV/AIDS patients or provide treatment follow-up services for persons on ART, including providing community-based services

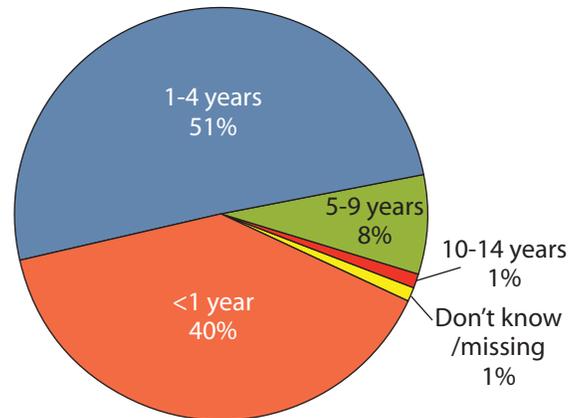


# FEMALE GENITAL CUTTING

## Female genital cutting

Among girls under age 15, 18% have undergone female genital cutting. The prevalence of female genital cutting is highest among girls living in the South (47%) and North (33%) grand regions. Female genital cutting is more common in rural areas than in urban areas (22% versus 10%). The vast majority (91%) of girls who have undergone female genital cutting were circumcised between the ages of 0-4 years. Seven percent of girls age 0-9 who have undergone female genital cutting underwent the extreme form of female genital cutting where their vagina was sewn closed.

**Age at FGC among girls under age 15**  
Percent distribution of girls under age 15 who underwent FGC by age at circumcision



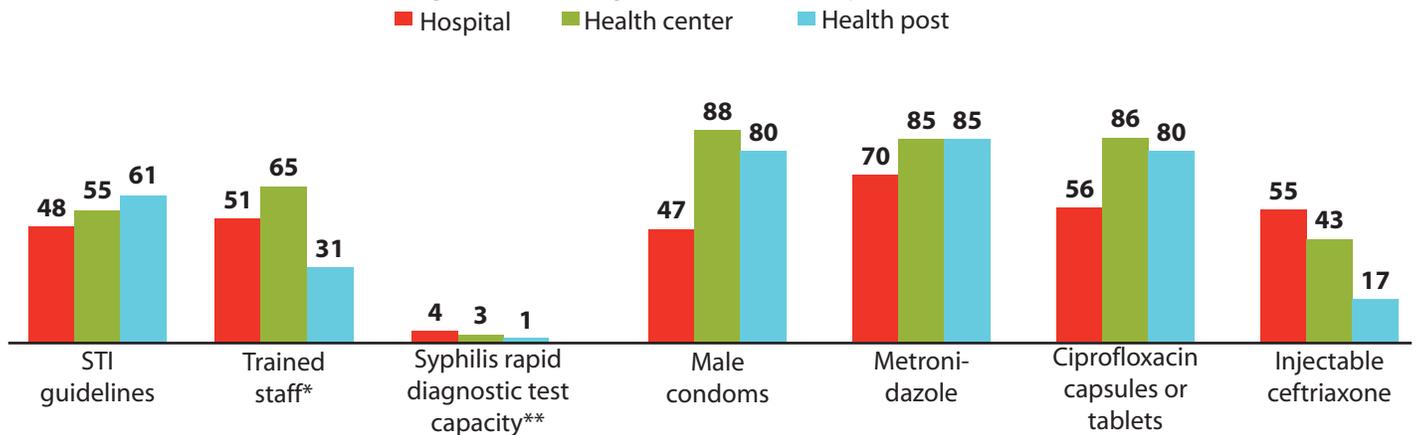
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# SEXUALLY TRANSMITTED INFECTIONS (STI)

## Sexually Transmitted Infection (STI) services

Nearly all (98%) facilities offer STI services, which means providers in the facility diagnose STIs, or prescribe treatment for STIs, or both. There are no substantial differences in the availability of STI services by facility type, managing authority, or region.

**Sexually Transmitted Infection (STI) services**  
Among facilities offering STI services (N=355), percent who have:



\*At least one interviewed provider of STI services reported receiving in-service training on STI diagnosis and treatment during the 24 months preceding the survey. The training must have involved structured sessions; it does not include individual instruction that a provider might have received during routine supervision.

\*\*Facility had unexpired syphilis rapid test kit available in the facility.

Among facilities offering STI services (N=355), 60% have STI guidelines. This proportion varies by facility type, from 48% of hospitals to 61% of health posts. In contrast, the proportion of facilities offering STI services who have trained staff is highest in health centers (65%) and lowest in health posts (31%). Only 1% of facilities offering STI services have syphilis rapid diagnostic test capacity. Nearly eight in ten (79%) facilities offering STI services have male condoms. Overall, 80% of facilities have ciprofloxacin capsules or tablets. This proportion is higher in health centers (86%) and health posts (80%) than in hospitals (56%). One in five (21%) facilities have injectable ceftriaxone. The availability of injectable ceftriaxone is more than three times higher in hospitals than in health posts (55% versus 17%).



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