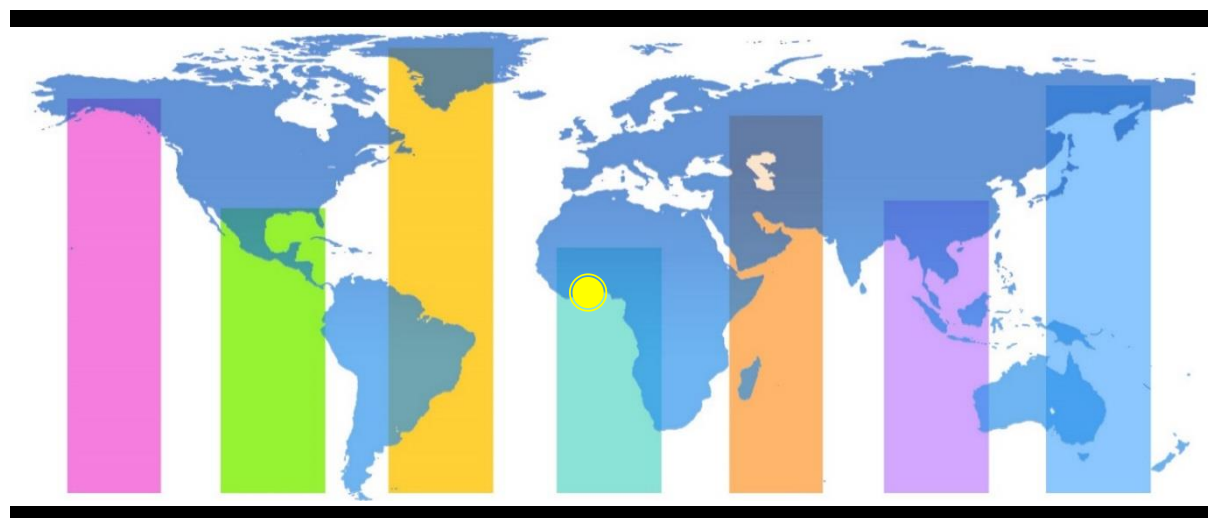# Ghana



# Demographic and Health Survey

# 2022

# Key Indicators Report

# Ghana
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## Key Indicators Report

**Ghana Statistical Service**
**Accra, Ghana**

**The DHS Program**
**ICF**
**Rockville, Maryland, USA**

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# TABLES AND FIGURES

# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| ACT | artemisinin-based combination therapy |
| ANC | antenatal care |
| ARI | acute respiratory infection |
| ASFR | age-specific fertility rates |
| | |
| BCG | bacillus Calmette-Guérin |
| | |
| CAPI | computer-assisted personal interviewing |
| CBR | crude birth rate |
| CPR | contraceptive prevalence rate |
| CSPro | Census and Survey Processing |
| | |
| DHS | Demographic and Health Survey |
| DPT | diphtheria, pertussis, and tetanus vaccine |
| | |
| EA | enumeration area |
| | |
| GBR | general fertility rate |
| | |
| HepB | hepatitis B |
| Hib | *Haemophilus influenzae* type B |
| HIV | human immunodeficiency virus |
| | |
| IFSS | internet file streaming system |
| IPTp | intermittent preventive treatment during pregnancy |
| IPV | inactivated poliomyelitis vaccine |
| ITN | insecticide-treated net |
| IUD | intrauterine contraceptive device |
| IYCF | infant and young child feeding |
| | |
| LAM | lactational amenorrhea method |
| LLIN | long-lasting insecticidal net |
| | |
| MR | measles rubella |
| | |
| OPV | oral polio vaccine |
| ORS | oral rehydration salts |
| | |
| PCV | pneumococcal conjugate vaccine |
| PNC | postnatal care |
| PSU | primary sampling unit |
| | |
| RDT | rapid diagnostic test |
| RV | rotavirus vaccine |
| | |
| SD | standard deviation |
| SDG | Sustainable Development Goal |
| SDM | standard days method |
| SP | sulfadoxine-pyrimethamine |
| | |
| TFR | total fertility rate |
| | |
| USAID | United States Agency for International Development |
| | |
| WHO | World Health Organization |

# FOREWORD

The Demographic and Health Survey (DHS) is a population-based survey designed to monitor progress on health service utilisation and management to inform decision makers. Since 1988, DHS surveys have been conducted in Ghana, led by the Ghana Statistical Service, in collaboration with the Ministry of Health/Ghana Health Service (MoH/GHS) and other stakeholders. Funds for the survey were received from the United States Agency for International Development (USAID), the Government of Ghana, and other partners. Prior to the 2022 Ghana Demographic and Health Survey (GDHS), six rounds of the DHS—in 1988, 1993, 1998, 2003, 2008, and 2014—were successfully completed, making this round the seventh in the series. These surveys provide information on mortality, morbidity, nutritional status, disease prevalence, service utilisation, and health seeking practices at both regional and national levels. The GDHS is an important source of information for measuring the outcomes and impact of health programmes and for developing annual and sectoral plans.

The 2022 GDHS provides national estimates of demographic and health indicators that are comparable to data collected in Ghana's six previous DHS surveys and to similar surveys in other developing countries. Data collected in the 2022 GDHS add to the large and growing international database of population-based indicators for Ghana. The 2022 GDHS collected data from a nationally representative sample of approximately 18,540 households from all 16 regions. The survey interviewed 17,933 households, 15,014 women of reproductive age (15 to 49), and 7,044 men age 15 to 59. In addition, 4,935 children age 0–5 were measured for anthropometry, and children age 6–59 months were tested for malaria using the Malaria Rapid Diagnostic Test (RDT) and microscopy.

The 2022 GDHS Key Indicators Report provides summary results from the survey and presents trends in the indicators using the previous rounds. Some of the statistics presented include total fertility rates, teenage pregnancy, current use of contraception, unmet need for family planning, childhood mortality rates, vaccination rates, nutritional status of children, minimum dietary diversity of children, anaemia among women and children, household possession of insecticide-treated nets, prevalence of malaria in children, and knowledge of HIV prevention methods. These statistics are disaggregated by region, type of locality, and by selected demographic characteristics including sex, age, education, and wealth. Findings from this report will support the design, implementation, monitoring, and evaluation of policies and programmes to improve population health in general, and reproductive maternal and child health in particular.


Professor Samuel Kobina Annim
Government Statistician
Ghana Statistical Service

# ACKNOWLEDGEMENTS

# 1    INTRODUCTION

The 2022 Ghana Demographic and Health Survey (GDHS) was implemented by the Ghana Statistical Service. Data collection took place from 17 October 2022 to 14 January 2023. ICF provided technical assistance through The Demographic and Health Survey Program (DHS), which is funded by the United States Agency for International Development (USAID) and the U.S. President's Malaria Initiative (PMI), which offers financial support and technical assistance for population and health surveys in countries worldwide. Other agencies and organisations that facilitated the successful implementation of the survey through technical or financial support were the Government of Ghana, UNFPA, UNICEF, the World Bank, the Global Fund, and the Korean International Cooperation Agency (KOICA), World Health Organisation (WHO) and Foreign, Commonwealth and Development Office, UK AID.

This Key Indicators Report presents a first look at selected findings from the 2022 GDHS. A comprehensive analysis of the data will be presented in a final report in 2024.

## SURVEY OBJECTIVES

The primary objective of the 2022 GDHS is to provide up-to-date estimates of basic demographic and health indicators. Specifically, the GDHS collected information on:

- Fertility levels and preferences; contraceptive use; maternal and child health; childhood mortality; childhood immunisation; breastfeeding and young child feeding practices; women's dietary diversity; violence against women; gender; nutritional status of women and children; awareness regarding HIV/AIDS and other sexually transmitted infections; tobacco use; and other indicators relevant for the Sustainable Development Goals

- Antenatal and delivery care, treatment of pregnancy care

- Haemoglobin levels of women and children

- Malaria parasitaemia prevalence (rapid diagnostic testing and thick slides for malaria parasitaemia in the field and microscopy in the lab) among children age 6–59 months

- Use of treated mosquito nets, persons who slept under the nets, and use of antimalarial drugs for treatment of fever among children under five

- Nutritional status (anthropometry) of women, men, and children

- Adult health and health care utilisation

The information collected through the GDHS is intended to assist policymakers and programme managers in designing and evaluating programmes and strategies for improving the health of the Ghana population. The 2022 GDHS also provides indicators relevant to the Sustainable Development Goals (SDGs) for Ghana.

# 2 SURVEY IMPLEMENTATION

## 2.1 SAMPLE DESIGN

To achieve the objectives of the 2022 GDHS, a national stratified representative sample of 18,450 households was selected in 618 clusters, which resulted in 15,014 interviewed women age 15–49 and 7,044 interviewed men age 15–59 (in one of every two households selected).

The sampling frame used for the 2022 GDHS is the updated frame prepared by GSS based on the 2021 Population and Housing Census.[1] The sampling procedure used in 2022 GDHS is a stratified two-stage cluster sampling, designed to yield representative results at the national level, for urban and rural areas, and for each of the 16 regions, for most DHS indicators. In the first stage, 618 target clusters were selected from the sampling frame using probability proportional to size (PPS) for urban and rural areas in each region. Then the target number of clusters was selected with equal probability, systematic random sampling of the clusters selected in the first phase, for the urban and rural areas in each region. In the second stage, after selection of the clusters, a household listing and map updating operation was carried out in all the selected clusters, to develop a list of all the households in the cluster. This list served as a sampling frame for selection of the household sample. GSS organised a 5-day training course on listing procedures for listers and mappers, with support from ICF. The listers and mappers were organised into 25 teams consisting of one lister and one mapper per team. The teams spent two months completing the listing operation. In addition to listing the households, the listers collected the geographical coordinates of each household using GPS dongles, provided by ICF and in accordance with the instructions in the DHS Listing Manual. The household listing was carried out using tablet computers, with software provided by The DHS Program. A fixed number of 30 households in each cluster was randomly selected from the list for interview.

Prior to training, the listing manual, adequate copies of all maps, listing forms, tablets computers, and GPS dongles were made available for use by the field staff. Each team worked in an average of 24–25 clusters.

GSS provided all logistical arrangements for the listing staff including planning for deployment to the various regions, distributing field supplies, and arranging for the distribution of allowances and salaries during training and fieldwork. To ensure a smooth field operation and an accurate and complete listing, 4 GSS personnel (3 master trainers and a project coordinator) and 16 regional statisticians visited the team regularly to monitor data quality. The survey director and two deputies visited some of the teams. Data processing supervisors assigned to support the household listing on the tablets, served as team backstops. When the field teams needed supports from the local government, they contacted the regional officers.

Upon completion of the listing operation, GSS verified that the results were complete and accurate and entered the total number of households into the household selection spreadsheet provided by the ICF sampling specialist, for the automatic selection of households for the main fieldwork. The spreadsheet, together with census maps, the listing database, and maps from field staff facilitated the identification of households to be interviewed.

## 2.2 QUESTIONNAIRES

Four questionnaires were used for the 2022 GDHS: the Household Questionnaire, the Woman's Questionnaire, the Man's Questionnaire, and the Biomarker Questionnaire. The questionnaires, based on The DHS Program's Model Questionnaires, were adapted to reflect the population and health issues relevant to Ghana. In addition, a self-administered Fieldworker Questionnaire collected information about the survey's fieldworkers.

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[1] The updated sampling frame was prepared by GSS.

GSS organised a questionnaire design workshop with support from ICF and obtained inputs from government and development partners expected to use the resulting data. The DHS Program optional modules on Domestic Violence, Malaria, and Social and Behaviour Change Communication (SBCC) were incorporated into the Woman's Questionnaire. ICF provided technical assistance in adapting the modules to the questionnaires.

### 2.2.1  Household Questionnaire

The Household Questionnaire is used to collect indicators for the household and to list all members of the household. The respondent for this questionnaire is 1) the head of household or 2) any adult living in the household. The Household Questionnaire collects basic information (sex, age, marital status, education, orphanhood) on each household member and on household characteristics (source of drinking water, type of toilet, number of sleeping rooms, type of cookstove, household possessions, availability of electricity, means of transportation), as well as on ownership and use of mosquito nets. Salt used for cooking by the household is tested for the presence of iodine.

### 2.2.2  Woman's Questionnaire

The Woman's Questionnaire is used to collect information on adult women in the household (for example, contraceptive use, antenatal care, and pregnancy history[2]), children born in the last five years (child health), and their children born in the last three years (vaccination coverage, breastfeeding, and infant and young child feeding practices). All women age 15–49 identified as household residents or as visitors who stayed the household the night before the survey are interviewed. Because of the sensitivity of some questions, only female interviewers are used to conduct the Woman's Questionnaire.

The Woman's Questionnaire consists of following sections:

1  *Background characteristics*: age, date of birth, duration of residency, previous residency, literacy, education, access to media, mobile phone financial transaction, internet use

2  *Reproduction*: children ever born, pregnancy history, current pregnancy, age at first menstrual period.

3  *Contraception*: knowledge and use of contraception, sources of contraceptive methods, information on family planning

4, 5, 6  *Pregnancy and postnatal care, child immunisation, child health and nutrition*: prenatal care, delivery, postnatal care, breastfeeding and complementary feeding practices, EPI coverage, prevalence and treatment of diarrhoea, ARI, and fever, knowledge and use of ORT; dietary diversity of women

7  *Marriage and sexual activity*: marital status, age at first marriage, age at first sexual intercourse, recent sexual activity, number and type of sexual partners, co-wives, use of condoms

8  *Fertility preferences*: desire for more children, ideal number of children, gender preferences, intention to use family planning, and who is making this decision, pressure to become pregnant, media messages about family planning

9  *Husband's background and woman's work*: (when applicable) husband's age, level of education, and occupation, and respondent's occupation, source of earnings; decision making; house and land ownership, attitude towards wife beating

10  *HIV*: knowledge of HIV, ways of transmission, sources of information, behaviour to avoid STIs and HIV, stigma, history of HIV testing

11  *Other health issues*: alcohol consumption and smoking, breast exams, cervical cancer tests, problems in accessing health care, health insurance

12  Malaria Indicator Survey, Malaria, Social and Behaviour Change Communication (SBCC) module

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[2] The pregnancy history provides information for the calculation of infant and child mortality. It is also used to calculate fertility rates.

13 *Domestic violence module:* this module collects information on prevalence and incidence of domestic violence. These questions were asked to one woman per household; random selection of this woman was done at the level of the Household Questionnaire

14. *Calendar:* a 5-year calendar of reproductive events (births, pregnancies and duration, contraceptive use)

All demographic and health indicators are calculated for each of the sampling domains, urban-rural residence, and at the national level. The Total Fertility Rate (TFR) is calculated for the 3-year period preceding the survey. Infant and child mortality rates are calculated at the national level for the 5-year period preceding the survey, and at the regional level, for the 10-year period preceding the survey.

### 2.2.3  Man's Questionnaire

The Man's Questionnaire consists of following sections:

1 *Background characteristics*: age, date of birth, duration of residency, previous residency, literacy, education, access to media, mobile phone use, use of the internet

2 *Reproduction*: children ever fathered, attending ANC and delivery for the most recent child under age 24 months

3 *Contraception:* knowledge of contraception, information on family planning, discussion of family planning with a health provider, knowledge of the risk of pregnancy, attitude towards women who use contraception

4 *Marriage and sexual activity*: marital status, age at first marriage, number of unions, age at first sexual intercourse, recent sexual activity, number and type of sexual partners, use of condoms, contraceptive use during last sex

5 *Fertility preferences*: desire for more children, ideal number of children, gender preferences

6 *Employment and gender roles*: employment, source of earnings, and decisions about use of earnings; house and land ownership, attitude towards wife beating

7 *HIV*: knowledge of HIV, of ways of transmission, sources of information, behaviour to avoid STIs and HIV, stigma, history of HIV testing

8 *Other health issues*: circumcision, smoking and alcohol use, health insurance coverage

### 2.2.4  Biomarker Questionnaire

The Biomarker Questionnaire collects anthropometric measurements and the results of testing for anaemia and malaria in the 2022 GDHS. In 50% of households, all children under the age of five, all eligible women age 15–49, and all eligible men age 15–59 are weighed and measured to assess their nutritional status. A blood test is performed on eligible children age 6–59 months and eligible women age 15–49 in the household, to estimate the prevalence of anaemia. Children age 6–59 months are eligible for malaria testing by RDT and slide preparation for microscopy in the lab.

Informed consent and the outcome of each test for each eligible individual is recorded in the Biomarker Questionnaire.

### 2.2.5  Fieldworker Questionnaire

The Fieldworker Questionnaire is used to collect background information on the persons who collect data in the field. This includes the Team Supervisor, Interviewer, and Biomarker Technician.

### 2.2.6  Finalisation of the Questionnaires

The ICF's data processing specialist checked all questionnaires internal coherence.

The definitive English versions of the questionnaires were translated into 3 local languages: Twi, Ga, and Ewe. Back translations into English were done by people other than the initial translators to verify the accuracy of the translations. All problems arising in the translations were resolved before the scheduled training of trainers and the pretest.

After finalisation of the questionnaires, ICF staff in collaboration with GSS staff developed the Interviewer and Supervisor/Editor's Manuals and fieldwork control forms to be used to track the progress of the survey. The manuals provide instructions to the interviewers and supervisors/editors on how to do their jobs, explain the purpose behind various questions and sections of the questionnaires, and assist the trainers in conducting the pretest and main survey training.

GSS submitted the survey protocol to the Ethical Review Committee (ERC) of the Ghana Health Service to assure that the survey procedures were in accordance with Ghana's ethical research standards. The ERC approved ethical clearance for the survey.

ICF submitted the GDHS survey protocol to the ICF Institutional Review Board (IRB) to obtain ethical clearance assuring that the survey procedures are in accordance with US and international ethical research standards. The IRB approved ethical clearance for the survey.

Tablet computers were used for data collection by the fieldworkers. The tablet computers were equipped with Bluetooth® technology to enable remote electronic transfer of files, such as assignments from the team supervisor to the interviewers, individual questionnaires to survey team members, and completed questionnaires from interviewers to team supervisors. The computer-assisted personal interviewing (CAPI) data collection system used in the GDHS was developed by The DHS Program with the mobile version of CSPro. The CSPro software was developed jointly by the U.S. Census Bureau, Serpro S.A., and The DHS Program.

## 2.3   ANTHROPOMETRY, ANAEMIA, AND MALARIA TESTING

The 2022 GDHS biomarkers included anthropometric measurements, anaemia testing, and malaria testing. Biomarker data was collected in half of the households that were selected for the men survey.

**Anthropometry.** Height and weight measurements were carried out for eligible women age 15–49 children age 0–59 months in these households. Similarly, anaemia testing was carried out for eligible women age 15–49, men age 15–59, and children age 6–59 months in these households. Weight measurements were taken using SECA 874U Doctor's scales with a digital display. Height was measured using the ShorrBoard® measuring board. Children younger than 24 months were measured lying down (recumbent length), while older children and adults were measured standing (height).

To assess precision of measurements, one child per cluster was randomly selected to be measured a second time. The DHS Program defines a difference of less than 1 centimetre between the two height measurements as an acceptable level of precision. Children with a $z$ score of less than –3 or more than 3 for height-for-age, weight-for-height, or weight-for-age were flagged and measured a second time. The remeasurement of flagged cases was performed to ensure accurate reporting of height. Following remeasurement, children identified by the CAPI system as having severe acute malnutrition, that is a child with a weight-for-height index below minus three standard deviations (–3 SD) from the mean of the reference population, was provided a referral form for the parent to take the child to the local health facility.

**Anaemia.** Blood specimens for anaemia testing were collected from women age 15–49 who consented to be tested. Blood specimens were also collected from children age 6–59 months whose parents or guardians had given consent to the testing. Blood samples were drawn from a drop of blood taken from a finger prick (or a heel prick in the case of children age 6–11 months) and collected in a microcuvette. Haemoglobin analysis was carried out onsite using a battery-operated portable HemoCue® 201+ device. Results were

provided verbally and in writing to those being tested. Parents or guardians of children with a haemoglobin level below 8 g/dl were provided with a referral and instructed to take the child to a health facility for follow-up care. Likewise, adults were referred for follow-up care if their haemoglobin level was below 8 g/dl.

**Malaria.** Children age 6–59 months in households selected for the survey were tested for malaria using Abbott Bioline, a rapid diagnostic test (RDT). Testing was performed using a 5µl of blood from the same finger or heel prick used for anaemia testing. Results were available in 15 minutes and given to the child's parent/responsible adult. Children who tested positive for malaria by RDT were referred to a health facility or offered a full course of treatment if they fulfilled the following conditions: were not severely anaemic, had no other symptom of severe malaria, were not on any treatment for malaria in the last 2 weeks and the parent or responsible adult accepted the medication. All treatment was administered according to Ghana's national malaria treatment guidelines. A blood sample was also collected on a microscope slide and used to prepare thick blood smears in the field. All the blood smears were sent to the National Public Health and Reference Laboratory (NPHRL) in Accra. Using the Malaria Data Entry and Testing System (MADETS), 10% of the smears were randomly selected and sent to Noguchi Memorial Institute for Medical Research (NMIMR) for external quality control.

## 2.4 TRAINING OF TRAINERS AND PRETEST

Twenty-seven participants (17 supervisor/interviewers and 10 biomarkers) took part in the pretest training for the 2022 GDHS survey over a 4-week period from 27 June to 21 July 2022. The first two weeks featured classroom training focused on questionnaire content. Participants initially practised using paper questionnaires, then using those questionnaires, participants trained on the CAPI system, an electronic data capture system programmed on tablet computers, from 11–19 July 2022. DHS Program staff and consultants cofacilitated the training with GSS personnel in English. The training consisted of classroom lectures and discussion, mock interviews, and interview practice in pairs, in English and in local languages. Tests and quizzes were given throughout the training to monitor progress and identify gaps in understanding. Four guest lecturers presented on mosquito net programmes and malaria treatment, family planning methods, immunisation, and HIV/AIDS. Biomarker technician training was held 4–19 July 2022 at the same venue. Ten participants (6 females and 4 males), as well as 2 biomarker coordinators (2 males), were trained on the paper biomarker questionnaire and on biomarker collection procedures. The training utilised a variety of learning tools such as formal lectures on the technical aspects of biomarker collection, instruction on how to fill out the questionnaires, informal discussion using case scenarios, videos to demonstrate the process of biomarker collection, demonstrations using adults, and hands-on practice with children and adults. In addition to the training, the biomarker technicians participated in anthropometry standardisation exercises, using adults on 13 July and children on 14 July. On 16 September, children and mothers came to the venue, and biomarker technicians practiced the entire biomarker collection from start to finish. After the practice, there was group discussion, and feedback was provided to the technicians. On 20–21 July interviewers and biomarker technicians conducted field practice to solidify the skills learned during the pretest training, and to provide a simulated fieldwork experience to test survey materials. Four teams comprised of 1 supervisor, 2 female interviewers, 1 male interviewer, and 2 biomarker technicians practiced data collection in three local communities, in both urban and rural areas. Each team was assigned a cluster, returning to that same cluster each day. Teams were expected to complete interviews with 16 households, half of which were selected for the Man's Questionnaire and biomarkers. Feedback was provided to individuals and teams during this exercise, and during the daily debriefs.

## 2.5 TRAINING OF FIELD STAFF

The 2022 GDHS training is sequential, began with questionnaire training followed by CAPI training. The questionnaire training for the 2022 GDHS began on 11 September 2022 and was completed on 24 September. A total of 168 candidates participated in the main survey training: 42 team supervisors (31 male and 11 female), 84 female interviewers, and 42 male interviewers. A larger number of participants

than needed was recruited and trained, enabled GSS to select the best candidates at the end of the training, and keep the rest as the back-up fieldworkers. All candidates participated in the questionnaire training. Twenty-seven GSS trainer/coordinators and a DHS staff person conducted the questionnaire training. The participants were recruited from regions across the country and required to speak at least one of the five languages used for interviewing in the 2022 GDHS.

The training was conducted in English and focused on the four main questionnaires: Household, Woman's, Man's questionnaires, and Biomarker questionnaire. The training included discussions of the different sections and modules of the questionnaires, mock interviews, role play, group work, presentations, and in-class practice sessions. The practical sessions included practices in local languages other than English.

The training also included the selection of different subsamples, and eligibility criteria of households, women, men, and children for different survey components and modules. A design diagram and several examples were used to demonstrate how households are selected and how eligible respondents are identified.

Examples were provided to the class on how to record correct information during data collection for case studies. Mock interviews were organised at the end of training. Each trainee completed three household questionnaires and three individual questionnaires. Data collected during the practice exercises was used in later training sessions to test the CAPI programmes and to practice collecting data on the tablets. Guest lecturers from the Ghana Health Services (GHS), the Ghana AIDS Commission, and the National Malaria Program (U.S. President's Malaria Initiative) visited the training and conducted presentations.

### 2.5.1 Computer-Assisted Personal Interviewing (CAPI) Training

**CAPI Training of Trainers:** From 20 to 24 September 2022, DHS staff conducted a training of trainers for 12 GSS and GHS coordinator/trainers (8 male and 4 female). Nine of the trainers had attended the pretest training in July 2022. This CAPI training aimed to provide the trainers with the competencies necessary to assist the DHS staff in the main CAPI training, and to equip them with the skills to monitor and resolve issues during the main fieldwork. Topics included understanding the sampling design, the subsamples, the 2022 GDHS directory structure, the key application files, an overview of interviewers' and supervisors' menus and applications, and the utilities required for data preparation and transfers. For practice purposes, the 12 trainers were grouped in two field teams (4 persons per team). Each team practiced in a cluster of six households. At the end of the CAPI training, trainers were divided into three groups, each group responsible for training one of the three CAPI classrooms. DHS and GSS staff prepared a schedule for the three groups of trainers, one per classroom on a rotation basis.

### 2.5.2 CAPI Training

DHS staff and the GSS trainers conducted the CAPI training from 26 September to 7 October. A total of 168 participants were organised into 42 teams of four (1 supervisor, 2 female interviewers, and 1 male interviewer) divided into three classrooms: 18 teams in room #1, 14 teams in room #2, and 10 teams in room #3. Training focused on a series of presentations on the CAPI system, tablet basics, interviewer menus, supervisor menus, household assignments, data transfers, the Biomarker Questionnaire, selection of children for remeasurement, and troubleshooting error and warning messages. During in-classroom practice sessions, hypothetical clusters were created. Each cluster had six households and was assigned to a team. Under the supervision of DHS staff, the trainers led these sessions and made several presentations on topics such as data collection system features, different scenarios and potential technical issues that may be encountered during fieldwork, and ways of resolving these issues. By the end of the training, all teams were able to successfully close many of their clusters, and supervisors had learned how to use an internet connection to access the SyncCloud for sending data to the central office and for receiving updates to the CAPI system.

## 2.5.3   Anthropometry Training

The 2022 GDHS includes the following biomarkers: anthropometry, anaemia testing, malaria rapid diagnostic testing, and thick smear preparation for malaria microscopy. During the pretest, 10 biomarker technicians were recruited to be trainers for this component. In this main training, 77 biomarker trainees (40 male and 37 female) joined the biomarker training. Biomarker training was led by a DHS staff person and supported by two consultants. The 10 biomarker technicians who successfully participated in the pretest were the biomarker trainers in breakout sessions during classroom practice and during the 3-day field practice when they were biomarker collection monitors. The training started on 19 September and ended 14 October 2022, with the conclusion of field practice, debriefing, and distribution of biomarker supplies to the various teams.

Following a general introduction to the survey, participants were given an overview of the biomarkers to be collected in the 2022 GDHS. This was followed by an exhaustive 2 days of training on the Biomarker Questionnaire and related documents, including the informational pamphlet, severe anaemia and malaria referral forms, and wasting referral form.

The training on the Biomarker Questionnaire and the collection of blood to test for malaria, anaemia, and to prepare thick blood smears included:

- Lectures on the technical components

- Videos illustrating the protocol, and hands-on practice sessions on the respondent's eligibility criteria, obtaining informed consent from a parent or responsible adult to conduct the anaemia and malaria testing on eligible children

- Procedures for recording data in the Biomarker Questionnaire and reporting forms

- Proper blood collection procedures

- Details on anaemia and malaria testing including appropriate reporting of test results

-  Filling out field forms

For each session, the ICF staff and other trainers used the integrated training approach, which included presentations and discussions of technical content from the biomarker manual and hands-on practical demonstrations, followed by hands-on practice by participants. Over 207 children were brought to the training venue during class training. The in-class training included practice on testing children who were brought to the training venue by their parents or guardians. In addition to in-class training, participants visited communities and clinics where they practiced the biomarker test protocol on eligible children whose parents or guardians consented to anaemia and malaria testing.

Training on anthropometry included measurement of the weight and height of children using the SECA 874U Doctor's scales with a digital display and the ShorrBoard®. Biomarker technicians received anthropometry training during 6 days of classroom practice, 2 days of community and clinic visits, and 3 days of field practice. Before starting field practice, eight anthropometry standardisation exercises and one re-standardisation exercise were conducted. All 77 biomarker technicians were standardised as measurers. For each standardisation exercise, 10 stations were laid out. At each station was a ShorrBoard® and a mother and child. The stations were assigned numbers from one to 10, and the children's numbers corresponded to the number of the station to which they were assigned. Depending on the age of the child, the ShorrBoard® was placed either standing or lying down. The height/length of each child was taken by DHS staff twice. Thereafter, each pair (measurer and assistant) measured every child once and recorded the measured values in the standardisation form designed for that purpose. This first round of measurements was collected by the DHS trainers, a second form was given, and the measurements were

repeated for every child. Results of the first and second round of measurements by both the trainers and trainees were entered into an Excel sheet and evaluated for accuracy and precision.

Accuracy was evaluated by comparing the average value of each trainee's measurement with that of the DHS staff. Precision was determined by comparing the difference between each participant's first and second measurements of the same child. A technical error of measurement (TEM) was used to determine whether a trainee passed the standardisation exercise. All 77 technicians who took part in the standardisation exercise passed during their first or second attempt.

On 13 October 2022, in a joint session of interviewers and biomarker technicians, there was a discussion of the measures The DHS Program has taken to improve data quality, including re-measurement procedures in anthropometry and use of checklists to monitor data collection for anthropometry, anaemia and malaria testing.

### 2.5.4  Fieldwork Practices

Fieldwork practice was implemented after the classroom training and onsite practices. The fieldwork exercise allows the participants to practise the functionality of the CAPI system and the biomarkers. Fieldwork practise was held 12–14 October 2022. Each team was assigned a cluster of 20 households. These clusters were selected from actual enumeration areas (EA) of the 2021 Ghana's Housing and Population Census (GHPC). Fieldwork practice is helpful as it allows the team to go through the entire process, from household assignment to closing a cluster successfully, to working through the most common error messages that can prevent closing a cluster. Together, these are the most important aspects of fieldwork practice, and they were accomplished by all the teams. The 42 clusters were sent to the central office via SyncCloud.

## 2.6  FIELDWORK

The main fieldwork for the 2022 GDHS was launched on 17 October 2022. There were 37 teams, each include a team supervisor, 2 female interviewers, 1 male interviewer, and 2 biomarker technicians. The GSS coordinators created a WhatsApp group for all fieldworkers to post questions and issues that arose during data collection. DHS staff participated in fieldwork monitoring in the Accra, Central, Western, and Northern regions during the first 2 weeks. They continued to monitor the field data collection via SyncCloud toward the end of fieldwork. Data were transmitted by every team to the central office daily and field check tables were available for review by DHS staff in SyncCloud at all times. DHS staff reviewed the field check tables periodically and communicated the observations with the GSS coordinators to evaluate the data quality and the performance of each team, and explained how to improve the quality of fieldwork.

## 2.7  DATA PROCESSING

### 2.7.1  Central Office Training and Secondary Editing

From 17–20 October 2022, DHS staff installed all central office programmes, data structure checks, secondary editing, and field check tables. Central office training was implemented using the practice data to test the central office system and field check tables. Seven GSS staff (4 male and 3 female) were trained on the functionality of the central office menu, including accepting clusters from the field, data editing procedures, and producing reports to monitor fieldwork.

### 2.7.2  Data Cleaning and Finalisation

From 27 February to 17 March, DHS staff visited the Ghana Statistical Service in Accra to work with the GSS's central office staff on finishing the secondary editing, and to clean and finalise all data received from the 618 clusters.

### 2.7.3   *Malaria Microscopy*

Beginning with the third week of fieldwork, the National Public Health Referral Laboratory (NPHRL) received blood slides from the field and started microscopy reading. Ten percent of the blood slides were randomly selected and sent to Noguchi Laboratory for the External Quality Control (EQC) reading. Microscopy at NPHRL was completed on 6 February 2023; and EQC at Noguchi Laboratory was completed on 20 February 2023.

# 3    KEY FINDINGS

## 3.1    RESPONSE RATES

**Table 1** shows the response rates for the 2022 GDHS. A total of 18,540 households were selected for the GDHS sample, of which 18,065 were found to be occupied. Of the occupied households, 17,933 were successfully interviewed, yielding a response rate of 99%. In the interviewed households, 15,317 women age 15–49 were identified as eligible for individual interview. Interviews were completed with 15,014 women, yielding a response rate of 98%. In the subsample of households selected for the male survey, 7,263 men age 15–59 were identified as eligible for individual interview and 7,044 were successfully interviewed, yielding a response rate of 97%.

**Table 1  Results of the household and individual interviews**

Number of households, number of interviews, and response rates, according to residence (unweighted), Ghana DHS 2022

|  | Residence | | |
| --- | --- | --- | --- |
| Result | Urban | Rural | Total |
| **Household interviews** | | | |
| Households selected | 9,120 | 9,420 | 18,540 |
| Households occupied | 8,869 | 9,196 | 18,065 |
| Households interviewed | 8,795 | 9,138 | 17,933 |
| Household response rate[1] | 99.2 | 99.4 | 99.3 |
| **Interviews with women age 15–49** | | | |
| Number of eligible women | 7,502 | 7,815 | 15,317 |
| Number of eligible women interviewed | 7,362 | 7,652 | 15,014 |
| Eligible women response rate[2] | 98.1 | 97.9 | 98.0 |
| **Household interviews in subsample** | | | |
| Households selected | 4,560 | 4,709 | 9,269 |
| Households occupied | 4,442 | 4,595 | 9,037 |
| Households interviewed | 4,400 | 4,568 | 8,968 |
| Household response rate in subsample[1] | 99.1 | 99.4 | 99.2 |
| **Interviews with men age 15–59** | | | |
| Number of eligible men | 3,369 | 3,894 | 7,263 |
| Number of eligible men interviewed | 3,251 | 3,793 | 7,044 |
| Eligible men response rate[2] | 96.5 | 97.4 | 97.0 |

[1] Households interviewed/households occupied.
[2] Respondents interviewed/eligible respondents.

## 3.2    CHARACTERISTICS OF RESPONDENTS

**Table 2** shows the percent distribution of weighted and unweighted women age 15–49 and men age 15–59 interviewed in the GDHS. Results presented in this report are based on weighted data, so they are representative of the country as a whole, by urban and rural residence, and by region.

▪ For both women and men, the percentage who are age 45–49 (9% each) is smaller than other age groups, reflecting Ghana's relatively young population.

▪ Most women and men are Christians; 19% of women and 21% of men are Muslim.

▪ Seventy-seven percent of women and men reported that they are in good or very good health; only 3% reported that their health is bad or very bad.

- Thirty-five percent of women and 51% of men have never been married. Forty percent of women and 38% of men are currently married; 15% and 7% of women and men, respectively, are living with someone as if married. About 8% of women and 4% of men are divorced or separated.

- More than half of women (57%) and men (55%) live in urban areas.

- By region, the largest percentage of women (20%) and men (19%) are in Ashanti, while 2% each are in Ahafo, Savannah, and North East.

- Seventy percent of women and 79% of men have attended secondary school or higher; 16% of women and 10% of men have no education.

**Table 2  Background characteristics of respondents**

Percent distribution of women (age 15–49 and men age 15–59), by selected background characteristics, Ghana DHS 2022

| Background characteristic | Women | | | Men | | |
|---|---|---|---|---|---|---|
| | Weighted percent | Weighted number | Unweighted number | Weighted percent | Weighted number | Unweighted number |
| **Age** | | | | | | |
| 15–19 | 17.9 | 2,682 | 2,835 | 22.7 | 1,424 | 1,430 |
| 20–24 | 17.9 | 2,695 | 2,669 | 16.5 | 1,033 | 1,023 |
| 25–29 | 15.6 | 2,342 | 2,388 | 14.1 | 888 | 882 |
| 30–34 | 15.0 | 2,252 | 2,228 | 13.6 | 853 | 899 |
| 35–39 | 13.7 | 2,057 | 2,020 | 12.9 | 809 | 806 |
| 40–44 | 11.1 | 1,674 | 1,645 | 11.4 | 713 | 711 |
| 45–49 | 8.7 | 1,312 | 1,229 | 8.9 | 557 | 542 |
| **Self-reported health status** | | | | | | |
| Very good | 31.2 | 4,680 | 4,879 | 31.3 | 1,965 | 1,788 |
| Good | 45.7 | 6,862 | 6,934 | 46.0 | 2,887 | 3,075 |
| Moderate | 19.7 | 2,957 | 2,648 | 19.4 | 1,216 | 1,187 |
| Bad | 3.0 | 451 | 480 | 3.1 | 192 | 222 |
| Very bad | 0.4 | 63 | 73 | 0.3 | 18 | 21 |
| **Religion** | | | | | | |
| Catholic | 9.1 | 1,367 | 1,669 | 8.1 | 508 | 676 |
| Anglican | 0.8 | 125 | 110 | 0.8 | 52 | 38 |
| Methodist | 5.0 | 751 | 567 | 5.5 | 346 | 244 |
| Presbyterian | 5.6 | 840 | 707 | 5.5 | 347 | 283 |
| Pentecostal/charismatic | 41.6 | 6,251 | 5,366 | 35.0 | 2,199 | 1,793 |
| Other Christian | 14.6 | 2,197 | 2,011 | 15.4 | 965 | 856 |
| Muslim | 19.4 | 2,906 | 3,994 | 21.1 | 1,322 | 1,808 |
| Traditional/spiritualist | 1.8 | 277 | 305 | 3.7 | 235 | 289 |
| No religion | 1.9 | 280 | 268 | 4.8 | 300 | 302 |
| Other | 0.1 | 20 | 17 | 0.1 | 4 | 4 |
| **Ethnic group** | | | | | | |
| Akan | 46.1 | 6,917 | 5,217 | 46.0 | 2,887 | 2,146 |
| GA/Dangme | 6.5 | 976 | 593 | 7.3 | 456 | 288 |
| Ewe | 11.6 | 1,746 | 1,641 | 10.9 | 687 | 662 |
| Guan | 3.2 | 476 | 697 | 3.5 | 223 | 314 |
| Mole-Dagbani | 18.6 | 2,789 | 4,024 | 18.4 | 1,155 | 1,646 |
| Grusi | 3.5 | 533 | 747 | 3.3 | 209 | 318 |
| Gurma | 6.7 | 1,013 | 1,484 | 6.7 | 422 | 615 |
| Mande | 3.0 | 445 | 479 | 2.6 | 161 | 212 |
| Other | 0.8 | 119 | 132 | 1.2 | 77 | 92 |
| **Marital status** | | | | | | |
| Never married | 35.1 | 5,268 | 4,916 | 51.1 | 3,208 | 3,024 |
| Married | 40.0 | 6,008 | 6,884 | 37.8 | 2,374 | 2,603 |
| Living together | 14.6 | 2,196 | 1,926 | 7.2 | 454 | 417 |
| Divorced/separated | 7.8 | 1,175 | 960 | 3.6 | 224 | 229 |
| Widowed | 2.4 | 367 | 327 | 0.3 | 18 | 20 |
| **Residence** | | | | | | |
| Urban | 57.0 | 8,557 | 7,362 | 54.8 | 3,442 | 2,925 |
| Rural | 43.0 | 6,457 | 7,652 | 45.2 | 2,835 | 3,368 |
| **Region** | | | | | | |
| Western | 6.4 | 955 | 797 | 6.6 | 414 | 345 |
| Central | 11.3 | 1,703 | 979 | 10.9 | 686 | 396 |
| Greater Accra | 15.5 | 2,327 | 969 | 17.2 | 1,076 | 438 |
| Volta | 4.7 | 713 | 837 | 3.7 | 235 | 285 |
| Eastern | 8.1 | 1,220 | 854 | 7.4 | 466 | 325 |
| Ashanti | 19.5 | 2,928 | 1,131 | 18.8 | 1,179 | 438 |

*(Continued…)*

**Table 2—Continued**

| Background characteristic | Women | | | Men | | |
|---|---|---|---|---|---|---|
| | Weighted percent | Weighted number | Unweighted number | Weighted percent | Weighted number | Unweighted number |
| Western North | 2.7 | 411 | 792 | 2.9 | 181 | 351 |
| Ahafo | 2.1 | 317 | 849 | 2.1 | 133 | 359 |
| Bono | 3.8 | 567 | 835 | 3.5 | 222 | 324 |
| Bono East | 4.5 | 676 | 974 | 5.0 | 316 | 461 |
| Oti | 2.7 | 403 | 921 | 3.0 | 187 | 411 |
| Northern | 7.7 | 1,149 | 1,169 | 7.7 | 484 | 491 |
| Savannah | 2.1 | 319 | 999 | 2.5 | 155 | 490 |
| North-East | 1.9 | 290 | 963 | 1.9 | 119 | 386 |
| Upper-East | 4.3 | 640 | 987 | 4.3 | 267 | 415 |
| Upper-West | 2.7 | 398 | 958 | 2.5 | 155 | 378 |
| **Education** | | | | | | |
| No education | 16.1 | 2,411 | 3,357 | 10.0 | 628 | 938 |
| Primary | 13.8 | 2,071 | 2,245 | 11.5 | 725 | 833 |
| Secondary | 59.9 | 8,999 | 8,111 | 63.6 | 3,990 | 3,652 |
| More than secondary | 10.2 | 1,533 | 1,301 | 14.9 | 935 | 870 |
| **Wealth quintile** | | | | | | |
| Lowest | 16.3 | 2,447 | 3,666 | 17.3 | 1,089 | 1,635 |
| Second | 18.1 | 2,712 | 3,366 | 18.0 | 1,133 | 1,391 |
| Middle | 20.8 | 3,121 | 3,008 | 18.1 | 1,137 | 1,176 |
| Fourth | 22.5 | 3,379 | 2,686 | 23.4 | 1,466 | 1,119 |
| Highest | 22.3 | 3,355 | 2,288 | 23.1 | 1,453 | 972 |
| Total 15–49 | 100.0 | 15,014 | 15,014 | 100.0 | 6,277 | 6,293 |
| 50–59 | na | na | na | na | 767 | 751 |
| Total 15–59 | na | na | na | na | 7,044 | 7,044 |

Note: Education categories refer to the highest level of education attended, whether or not that level was completed.
na = not applicable

## 3.3 FERTILITY

**Table 3** shows the total fertility rate (TFR) and the age-specific fertility rates (ASFRs) for women by 5-year age groups for the 3-year period preceding the survey.

> **Total fertility rate**
> The average number of children a woman would have by the end of her childbearing years if she bore children at the current age-specific fertility rates. Age-specific fertility rates are calculated for the 3 years before the survey, based on detailed pregnancy histories provided by women.
> *Sample:* Women age 15–49

- If fertility were to remain constant at current levels, a woman in Ghana would bear an average of 3.9 children in her lifetime.

- Fertility is low among adolescents (63 births per 1,000 women age 15–19), peaks at 190 births per 1,000 among women age 25–29, and then decreases.

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**Table 3  Current fertility**

Age-specific and total fertility rates, general fertility rate, and the crude birth rate for the 3 years preceding the survey, according to residence, Ghana DHS 2022

| | Residence | | |
|---|---|---|---|
| Age group | Urban | Rural | Total |
| 10–14 | [3] | [0] | [2] |
| 15–19 | 43 | 88 | 63 |
| 20–24 | 121 | 203 | 156 |
| 25–29 | 160 | 231 | 190 |
| 30–34 | 159 | 199 | 176 |
| 35–39 | 110 | 155 | 128 |
| 40–44 | 43 | 66 | 53 |
| 45–49 | [6] | [23] | [14] |
| TFR (15–49) | 3.2 | 4.8 | 3.9 |
| GFR | 109 | 162 | 132 |
| CBR | 25.1 | 30.9 | 27.9 |

Note: Age-specific fertility rates are per 1,000 women. Estimates in brackets are truncated. Rates are for the period 1–36 months preceding the interview. Rates for the 10–14 age group are based on retrospective data from women age 15–17.
TFR: Total fertility rate expressed per woman
GFR: General fertility rate expressed per 1,000 women age 15–44
CBR: Crude birth rate, expressed per 1,000 population

**Trends:** The TFR in Ghana declined steeply from 1988 (6.4 children per woman) to 1993 (5.2 children per woman) and 1998 (4.4 children per woman), remained stable in 2003 (4.4 children per woman), decreased to 4.0 children per woman in 2008, but increased slightly in 2014 (4.2 children per woman). In 2017 the TFR dropped to 3.9 children per woman and remained at that level in 2022 (**Figure 1**).

*Figure 1*  **Trends in fertility by residence**

*TFR for the 3 years before each survey*



| GDHS 1988 | GDHS 1993 | GDHS 1998 | GDHS 2003 | GDHS 2008 | GDHS 2014 | GMHS 2017 | GDHS 2022 |
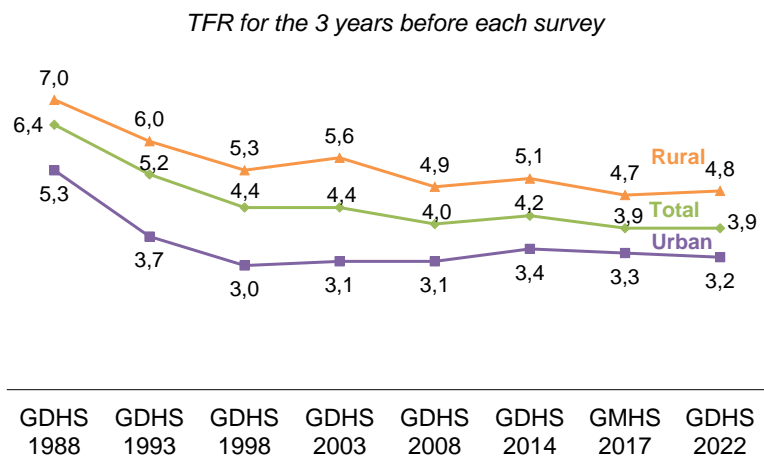
## 3.4    TEENAGE FERTILITY

**Teenage pregnancy**
Percentage of women age 15–19 who have ever been pregnant.
*Sample:* Women age 15–19

**Table 4** shows the percentage of women age 15–19 who have ever been pregnant at the time of the survey, according to background characteristics.

Overall, 15% of women age 15–19 have ever been pregnant, including 11% who have had a live birth, 4% who have had a pregnancy loss, and 2% who are currently pregnant.

**Table 4  Teenage pregnancy**

Percentage of women age 15–19 who have ever had a live birth, percentage who have ever had a pregnancy loss, percentage who are currently pregnant, and percentage who have ever been pregnant, according to background characteristics, Ghana DHS 2022

| | Percentage of women age 15–19 who: | | | | |
| Background characteristic | Have ever had a live birth | Have ever had a pregnancy loss[1] | Are currently pregnant | Have ever been pregnant | Number of women |
|---|---|---|---|---|---|
| **Age** | | | | | |
| 15 | 1.3 | 0.6 | 0.6 | 2.4 | 655 |
| 16 | 3.7 | 1.3 | 1.6 | 6.3 | 506 |
| 17 | 12.1 | 3.4 | 1.1 | 16.2 | 568 |
| 18 | 17.8 | 8.0 | 3.4 | 24.7 | 480 |
| 19 | 23.8 | 7.8 | 3.2 | 31.6 | 473 |
| **Residence** | | | | | |
| Urban | 8.0 | 4.2 | 1.1 | 11.4 | 1,458 |
| Rural | 14.4 | 3.5 | 2.8 | 19.7 | 1,223 |
| **Region** | | | | | |
| Western | 10.7 | 2.4 | 3.3 | 14.7 | 177 |
| Central | 7.0 | 5.4 | 2.4 | 12.9 | 354 |
| Greater Accra | 5.4 | 2.3 | 0.6 | 6.0 | 364 |
| Volta | 7.8 | 2.7 | 1.9 | 11.8 | 158 |
| Eastern | 11.4 | 3.0 | 0.0 | 13.7 | 202 |
| Ashanti | 16.8 | 8.4 | 1.1 | 23.9 | 470 |
| Western North | 10.6 | 6.0 | 4.0 | 18.9 | 79 |
| Ahafo | 8.5 | 3.5 | 2.6 | 13.4 | 59 |
| Bono | 6.0 | 1.9 | 0.9 | 8.3 | 113 |
| Bono East | 19.1 | 3.9 | 1.0 | 22.3 | 135 |
| Oti | 15.4 | 2.8 | 4.0 | 21.1 | 87 |
| Northern | 11.2 | 0.6 | 2.5 | 14.2 | 161 |
| Savannah | 17.5 | 3.9 | 6.1 | 25.9 | 67 |
| North East | 17.5 | 1.4 | 5.9 | 23.5 | 56 |
| Upper East | 6.2 | 0.0 | 2.1 | 8.2 | 111 |
| Upper West | 10.4 | 2.0 | 2.1 | 13.8 | 89 |
| **Education** | | | | | |
| No education | 26.5 | 5.7 | 8.3 | 34.3 | 99 |
| Primary | 20.3 | 4.9 | 2.8 | 26.2 | 404 |
| Secondary | 8.6 | 3.7 | 1.4 | 12.5 | 2,150 |
| More than secondary | * | * | * | * | 29 |
| **Wealth quintile** | | | | | |
| Lowest | 17.5 | 2.1 | 4.1 | 23.1 | 462 |
| Second | 15.0 | 3.7 | 2.2 | 19.2 | 568 |
| Middle | 13.0 | 6.1 | 1.5 | 17.9 | 639 |
| Fourth | 5.0 | 4.1 | 1.6 | 9.6 | 523 |
| Highest | 3.7 | 2.8 | 0.3 | 5.7 | 490 |
| Total | 10.9 | 3.9 | 1.9 | 15.2 | 2,682 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Stillbirth, miscarriage, or abortion

## 3.5    FERTILITY PREFERENCES

> **Desire for another child**
>
> Women were asked whether they wanted more children and, if so, how long they would prefer to wait before the birth of the next child. Women who are sterilised are assumed not to want any more children.
>
> *Sample:* Currently married women age 15–49

**Table 5** shows fertility preferences among currently married women age 15–49 by number of living children.

▪ Twenty-seven percent of women want another child soon (within the next 2 years), 30% want another child later (in 2 or more years), and 4% want another child but have not decided when.

▪ Thirty percent of women want no more children.

- Five percent of women are sterilised or declared themselves infecund.

- The percentage of women who want no more children rises with the number of living children she has, from 2% among women with no living children to 61% among those with six or more children.

**Table 5  Fertility preferences by number of living children**

Percent distribution of currently married women age 15–49 by desire for children, according to number of living children, Ghana DHS 2022

| | Number of living children[1] | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Desire for children | 0 | 1 | 2 | 3 | 4 | 5 | 6+ | Total |
| Have another soon[2] | 76.5 | 39.7 | 33.2 | 22.9 | 17.2 | 13.3 | 10.7 | 27.2 |
| Have another later[3] | 15.3 | 49.1 | 42.9 | 30.7 | 21.9 | 16.7 | 10.1 | 29.8 |
| Have another, undecided when | 3.5 | 6.3 | 4.4 | 3.9 | 3.1 | 2.2 | 1.5 | 3.8 |
| Undecided | 0.9 | 1.8 | 3.7 | 4.5 | 5.7 | 5.3 | 5.8 | 4.2 |
| Want no more | 2.1 | 1.4 | 13.3 | 31.2 | 45.3 | 55.6 | 61.4 | 29.8 |
| Sterilised[4] | 0.4 | 0.0 | 0.4 | 4.4 | 4.4 | 4.9 | 6.9 | 3.0 |
| Declared infecund | 1.3 | 1.6 | 2.0 | 2.3 | 2.4 | 2.0 | 3.7 | 2.2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of women | 449 | 1,351 | 1,610 | 1,571 | 1,321 | 923 | 980 | 8,205 |

[1] The number of living children includes a woman's current pregnancy.
[2] Wants next birth within 2 years
[3] Wants to delay next birth for 2 or more years
[4] Includes both female and male sterilisation

## 3.6  FAMILY PLANNING

### 3.6.1  Contraceptive Use

**Contraceptive prevalence**
Percentage of women who use any contraceptive method.
*Sample:* Currently married women age 15–49 and sexually active unmarried women age 15–49

**Modern methods**
Include male and female sterilisation, injectables, intrauterine devices (IUDs), contraceptive pills, implants, female and male condoms, emergency contraception, the standard days method, and lactational amenorrhea method.

**Table 6** shows contraceptive use among currently married women and sexually active, unmarried women.

- Thirty-six percent of currently married women are using a method of contraception, 28% are using a modern method, and 9% are using a traditional method.

- Among currently married women, the injectables and implants are the most commonly used modern methods (8% each), followed by the pill (4%), and female sterilisation (3%).

- The use of a modern method of contraception among currently married women is slightly higher in rural areas than in urban areas (29% versus 27%, respectively). Use of a traditional method is higher in urban areas (10%) than in rural areas (7%).

Table 6  Current use of contraception according to background characteristics

Percent distribution of currently married and sexually active unmarried women age 15–49, by contraceptive method currently used, according to background characteristics, Ghana DHS 2022

| Background characteristic | Any method | Any modern method | Modern method | | | | | | | | | | | | Any traditional method | Traditional method | | | Not currently using | Total | Number of women |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Female sterili-sation | Male sterili-sation | IUD | Inject-ables | Implants | Pill | Male condom | Emer-gency contra-ception | SDM | LAM | Other | | Rhythm | With-drawal | Other | | | |
| CURRENTLY MARRIED WOMEN | | | | | | | | | | | | | | | | | | | | | |
| **Number of living children** | | | | | | | | | | | | | | | | | | | | | |
| 0 | 19.8 | 12.0 | 0.2 | 0.1 | 0.3 | 2.6 | 1.9 | 1.7 | 3.4 | 1.6 | 0.1 | 0.0 | 0.0 | 7.8 | 5.8 | 1.9 | 0.0 | 80.2 | 100.0 | 593 |
| 1–2 | 33.2 | 24.0 | 0.2 | 0.0 | 0.3 | 8.4 | 6.8 | 3.6 | 1.7 | 1.2 | 0.3 | 1.1 | 0.1 | 9.2 | 5.7 | 2.4 | 1.1 | 66.8 | 100.0 | 3,018 |
| 3–4 | 41.5 | 32.4 | 4.6 | 0.0 | 1.0 | 8.5 | 8.6 | 5.1 | 1.3 | 0.9 | 0.6 | 1.8 | 0.0 | 9.1 | 5.9 | 1.6 | 1.5 | 58.5 | 100.0 | 2,792 |
| 5+ | 39.0 | 32.4 | 6.2 | 0.0 | 0.5 | 8.0 | 10.8 | 4.1 | 0.4 | 0.9 | 0.1 | 1.2 | 0.1 | 6.7 | 3.6 | 1.3 | 1.8 | 61.0 | 100.0 | 1,801 |
| **Age** | | | | | | | | | | | | | | | | | | | | | |
| 15–19 | 34.3 | 27.0 | 0.0 | 0.0 | 0.0 | 4.1 | 12.0 | 2.1 | 4.3 | 0.7 | 0.4 | 3.4 | 0.0 | 7.3 | 3.0 | 3.3 | 1.0 | 65.7 | 100.0 | 194 |
| 20–24 | 37.5 | 29.9 | 0.1 | 0.1 | 0.4 | 11.7 | 10.0 | 2.2 | 1.7 | 2.3 | 0.0 | 1.2 | 0.3 | 7.6 | 4.1 | 2.5 | 1.0 | 62.5 | 100.0 | 1,013 |
| 25–29 | 37.0 | 29.0 | 0.3 | 0.0 | 0.2 | 11.8 | 7.7 | 4.4 | 1.5 | 1.1 | 0.1 | 2.0 | 0.1 | 8.0 | 4.9 | 2.1 | 1.0 | 63.0 | 100.0 | 1,457 |
| 30–34 | 38.6 | 30.5 | 1.6 | 0.0 | 0.5 | 8.8 | 9.7 | 4.9 | 1.8 | 1.2 | 0.5 | 1.4 | 0.0 | 8.1 | 5.4 | 1.5 | 1.2 | 61.4 | 100.0 | 1,719 |
| 35–39 | 39.4 | 28.4 | 2.8 | 0.0 | 1.4 | 6.2 | 7.4 | 5.8 | 1.3 | 1.2 | 0.7 | 1.6 | 0.0 | 11.0 | 6.5 | 2.8 | 1.7 | 60.6 | 100.0 | 1,641 |
| 40–44 | 35.3 | 27.0 | 7.6 | 0.0 | 0.3 | 5.8 | 7.1 | 4.0 | 0.9 | 0.4 | 0.3 | 0.5 | 0.1 | 8.3 | 6.5 | 1.1 | 0.8 | 64.7 | 100.0 | 1,239 |
| 45–49 | 26.5 | 19.4 | 8.1 | 0.0 | 0.9 | 3.0 | 4.0 | 2.0 | 0.7 | 0.5 | 0.1 | 0.1 | 0.1 | 7.1 | 4.0 | 0.7 | 2.5 | 73.5 | 100.0 | 941 |
| **Residence** | | | | | | | | | | | | | | | | | | | | | |
| Urban | 37.1 | 26.7 | 3.8 | 0.0 | 0.8 | 6.6 | 6.5 | 4.0 | 2.0 | 1.0 | 0.5 | 1.2 | 0.1 | 10.4 | 6.5 | 2.5 | 1.4 | 62.9 | 100.0 | 4,248 |
| Rural | 35.5 | 29.1 | 2.2 | 0.0 | 0.3 | 9.4 | 9.4 | 4.3 | 0.8 | 1.1 | 0.1 | 1.3 | 0.0 | 6.5 | 4.0 | 1.2 | 1.2 | 64.5 | 100.0 | 3,956 |
| **Region** | | | | | | | | | | | | | | | | | | | | | |
| Western | 44.8 | 35.5 | 3.2 | 0.0 | 0.4 | 9.8 | 11.3 | 3.6 | 2.6 | 2.2 | 0.0 | 1.9 | 0.5 | 9.3 | 5.2 | 2.1 | 2.0 | 55.2 | 100.0 | 487 |
| Central | 50.8 | 34.5 | 4.5 | 0.0 | 0.1 | 9.7 | 8.2 | 3.8 | 1.5 | 2.2 | 0.0 | 4.5 | 0.0 | 16.3 | 7.6 | 5.7 | 3.0 | 49.2 | 100.0 | 816 |
| Greater Accra | 32.0 | 23.8 | 4.2 | 0.0 | 1.6 | 4.5 | 5.0 | 2.4 | 2.0 | 0.4 | 1.6 | 2.0 | 0.0 | 8.3 | 5.4 | 2.0 | 0.8 | 68.0 | 100.0 | 1,144 |
| Volta | 35.6 | 29.3 | 2.0 | 0.0 | 0.5 | 8.0 | 11.0 | 3.3 | 1.9 | 1.0 | 0.0 | 1.3 | 0.3 | 6.3 | 4.8 | 1.0 | 0.5 | 64.4 | 100.0 | 375 |
| Eastern | 35.3 | 28.6 | 4.3 | 0.0 | 0.6 | 5.4 | 9.2 | 5.0 | 2.3 | 1.2 | 0.0 | 0.6 | 0.0 | 6.7 | 5.0 | 0.7 | 1.0 | 64.7 | 100.0 | 633 |
| Ashanti | 44.4 | 32.1 | 4.2 | 0.0 | 0.5 | 9.9 | 7.0 | 6.3 | 1.4 | 2.1 | 0.0 | 0.8 | 0.0 | 12.3 | 10.0 | 1.1 | 1.1 | 55.6 | 100.0 | 1,426 |
| Western north | 39.2 | 29.1 | 4.6 | 0.0 | 0.0 | 10.2 | 6.1 | 4.5 | 1.0 | 1.6 | 0.9 | 0.0 | 0.0 | 10.2 | 5.3 | 3.0 | 1.8 | 60.8 | 100.0 | 231 |
| Ahafo | 42.8 | 35.8 | 3.3 | 0.0 | 1.3 | 11.3 | 8.8 | 5.0 | 0.5 | 1.6 | 0.2 | 4.0 | 0.0 | 7.0 | 3.0 | 2.5 | 1.5 | 57.2 | 100.0 | 183 |
| Bono | 38.6 | 28.6 | 4.1 | 0.0 | 0.2 | 7.0 | 8.9 | 5.3 | 1.1 | 1.3 | 0.2 | 0.2 | 0.3 | 10.0 | 9.6 | 0.4 | 0.0 | 61.4 | 100.0 | 284 |
| Bono east | 22.1 | 20.7 | 1.0 | 0.2 | 0.4 | 7.0 | 6.2 | 4.5 | 0.5 | 0.4 | 0.3 | 0.2 | 0.0 | 1.4 | 0.9 | 0.4 | 0.1 | 77.9 | 100.0 | 376 |
| Oti | 32.0 | 28.5 | 3.5 | 0.0 | 1.3 | 7.3 | 7.0 | 6.8 | 0.8 | 0.4 | 0.4 | 1.0 | 0.0 | 3.5 | 2.5 | 0.5 | 0.4 | 68.0 | 100.0 | 248 |
| Northern | 24.6 | 17.4 | 0.5 | 0.0 | 0.2 | 6.7 | 4.4 | 3.4 | 1.3 | 0.0 | 0.2 | 0.4 | 0.3 | 7.2 | 0.5 | 3.2 | 3.5 | 75.4 | 100.0 | 870 |
| Savannah | 23.5 | 19.2 | 0.8 | 0.0 | 0.1 | 5.7 | 7.9 | 3.8 | 0.4 | 0.3 | 0.0 | 0.3 | 0.0 | 4.3 | 4.0 | 0.1 | 0.2 | 76.5 | 100.0 | 218 |
| North East | 17.0 | 14.9 | 0.6 | 0.2 | 0.1 | 5.7 | 5.2 | 2.8 | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 | 2.0 | 1.5 | 0.5 | 0.0 | 83.0 | 100.0 | 229 |
| Upper East | 35.5 | 31.0 | 0.7 | 0.0 | 0.7 | 9.1 | 16.6 | 2.3 | 1.0 | 0.0 | 0.3 | 0.1 | 0.1 | 4.6 | 4.0 | 0.6 | 0.0 | 64.5 | 100.0 | 426 |
| Upper West | 36.8 | 33.8 | 1.4 | 0.0 | 0.3 | 14.6 | 14.4 | 2.2 | 0.5 | 0.2 | 0.0 | 0.1 | 0.0 | 3.0 | 2.4 | 0.6 | 0.0 | 63.2 | 100.0 | 258 |
| **Education** | | | | | | | | | | | | | | | | | | | | | |
| No education | 26.7 | 22.6 | 2.5 | 0.0 | 0.3 | 7.2 | 8.9 | 2.7 | 0.3 | 0.2 | 0.0 | 0.5 | 0.1 | 4.1 | 1.7 | 1.0 | 1.4 | 73.3 | 100.0 | 2,015 |
| Primary | 35.8 | 29.8 | 2.6 | 0.0 | 0.3 | 8.7 | 11.3 | 4.1 | 0.5 | 0.7 | 0.1 | 1.2 | 0.2 | 6.0 | 2.7 | 1.4 | 1.9 | 64.2 | 100.0 | 1,233 |
| Secondary | 40.8 | 30.4 | 3.1 | 0.0 | 0.7 | 9.1 | 7.2 | 4.8 | 1.8 | 1.7 | 0.4 | 1.5 | 0.1 | 10.4 | 7.1 | 2.1 | 1.3 | 59.2 | 100.0 | 4,174 |
| More than secondary | 38.6 | 25.0 | 4.9 | 0.0 | 1.4 | 2.4 | 4.2 | 4.1 | 4.0 | 1.0 | 1.0 | 2.1 | 0.1 | 13.6 | 9.5 | 3.8 | 0.4 | 61.4 | 100.0 | 783 |

*(Continued…)*

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**Table 6—*Continued***

| Background characteristic | Any method | Any modern method | Modern method | | | | | | | Emer-gency contra-ception | SDM | LAM | Other | Any tradi-tional method | Traditional method | | | Not currently using | Total | Number of women |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Female sterili-sation | Male sterili-sation | IUD | Inject-ables | Implants | Pill | Male condom | | | | | | Rhythm | With-drawal | Other | | | |
| **Wealth quintile** | | | | | | | | | | | | | | | | | | | | |
| Lowest | 27.3 | 24.2 | 1.6 | 0.0 | 0.3 | 8.8 | 9.0 | 2.8 | 0.3 | 0.5 | 0.1 | 0.6 | 0.1 | 3.1 | 1.5 | 0.5 | 1.1 | 72.7 | 100.0 | 1,662 |
| Second | 37.2 | 31.4 | 3.1 | 0.0 | 0.5 | 9.8 | 10.4 | 4.3 | 0.8 | 0.7 | 0.1 | 1.7 | 0.1 | 5.8 | 2.7 | 1.4 | 1.8 | 62.8 | 100.0 | 1,513 |
| Middle | 41.0 | 30.8 | 1.6 | 0.0 | 0.1 | 9.1 | 9.4 | 5.8 | 0.9 | 1.3 | 0.5 | 1.7 | 0.2 | 10.2 | 6.1 | 2.6 | 1.5 | 59.0 | 100.0 | 1,545 |
| Fourth | 38.7 | 28.2 | 3.8 | 0.0 | 0.3 | 7.7 | 7.0 | 4.3 | 1.9 | 1.6 | 0.2 | 1.3 | 0.1 | 10.6 | 7.1 | 2.1 | 1.4 | 61.3 | 100.0 | 1,743 |
| Highest | 37.8 | 25.3 | 4.8 | 0.0 | 1.6 | 4.6 | 4.3 | 3.5 | 3.0 | 1.4 | 0.7 | 1.3 | 0.0 | 12.5 | 8.9 | 2.7 | 0.9 | 62.2 | 100.0 | 1,742 |
| Total | 36.3 | 27.8 | 3.0 | 0.0 | 0.6 | 7.9 | 7.9 | 4.1 | 1.4 | 1.1 | 0.3 | 1.3 | 0.1 | 8.5 | 5.3 | 1.9 | 1.3 | 63.7 | 100.0 | 8,205 |
| SEXUALLY ACTIVE UNMARRIED WOMEN[1] | | | | | | | | | | | | | | | | | | | | |
| **Residence** | | | | | | | | | | | | | | | | | | | | |
| Urban | 62.7 | 45.6 | 0.2 | 0.0 | 0.5 | 8.7 | 8.4 | 4.9 | 9.5 | 12.7 | 0.4 | 0.0 | 0.2 | 17.1 | 9.1 | 6.7 | 1.4 | 37.3 | 100.0 | 812 |
| Rural | 63.2 | 45.7 | 0.5 | 0.0 | 0.1 | 11.4 | 12.2 | 4.7 | 6.8 | 9.6 | 0.0 | 0.4 | 0.0 | 17.4 | 9.7 | 6.9 | 0.8 | 36.8 | 100.0 | 511 |
| Total | 62.9 | 45.6 | 0.3 | 0.0 | 0.4 | 9.7 | 9.9 | 4.8 | 8.5 | 11.5 | 0.3 | 0.2 | 0.1 | 17.2 | 9.3 | 6.8 | 1.2 | 37.1 | 100.0 | 1,323 |

Note: If more than one method is used, only the most effective method is considered in this tabulation.
SDM = Standard days method
LAM = Lactational amenorrhea method
[1] Women who have had sexual intercourse within 30 days preceding the survey

**Trends:** Use of modern contraceptive methods by currently married women age 15–49 increased from 5% in 1988 to 28% in 2022. Use of traditional methods increased little during this time (8% in 1988 and 9% in 2022).

### 3.6.2   Need and Demand for Family Planning

**Unmet need for family planning**
Proportion of women who (1) are not pregnant and not postpartum amenorrhoeic and are considered fecund and want to postpone their next birth for 2 or more years or stop childbearing altogether but are not using a contraceptive method, or (2) have a mistimed or unwanted current pregnancy, or (3) are postpartum amenorrhoeic and their last birth in the last 2 years was mistimed or unwanted.

**Met need for family planning**
Current contraceptive use (any method).

*Sample:* Currently married women age 15–49 and sexually active unmarried women age 15–49

| **Demand for family planning:** | Unmet need for family planning + met need (current contraceptive use (any method)) |
|---|---|
| **Proportion of demand satisfied:** | $\dfrac{\text{Current contraceptive use (any method)}}{\text{Unmet need + current contraceptive use (any method)}}$ |
| **Proportion of demand satisfied by modern methods:** | $\dfrac{\text{Current contraceptive use (any modern method)}}{\text{Unmet need + current contraceptive use (any method)}}$ |

**Table 7** presents data on unmet need, met need, and total demand for family planning services for currently married and sexually active unmarried women. These indicators help evaluate the extent to which family planning programmes in Ghana are meeting the demand for services.

▪ Overall, the total demand for family planning among currently married women is 60%. This demand consists of the 36% of currently married women who have a met need for family planning—that is, they are currently using a contraceptive method—and the 23% of currently married women have an unmet need for family planning. If all currently married women who said they want to space or limit their children were to use family planning methods, contraceptive prevalence would increase from 36% to 60%.

▪ The total demand for family planning that is satisfied is 61%, of which 47% is satisfied by modern methods.

**Table 7 Need and demand for family planning among currently married women and sexually active unmarried women**

Percentage of currently married and sexually active unmarried women age 15–49 with unmet need for family planning, percentage with met need for family planning, percentage with met need for family planning who are using modern methods, percentage with demand for family planning, percentage of the demand for family planning that is satisfied, and percentage of the demand for family planning that is satisfied with modern methods, according to background characteristics, Ghana DHS 2022

| Background characteristic | Unmet need for family planning | Met need for family planning (currently using) | | Total demand for family planning[3] | Number of women | Percentage of demand satisfied[1] | |
|---|---|---|---|---|---|---|---|
| | | All methods | Modern methods[2] | | | All methods | Modern methods[2] |
| CURRENTLY MARRIED WOMEN | | | | | | | |
| **Age** | | | | | | | |
| 15–19 | 31.0 | 34.3 | 27.0 | 65.3 | 194 | 52.6 | 41.4 |
| 20–24 | 27.5 | 37.5 | 29.9 | 65.0 | 1,012 | 57.7 | 45.8 |
| 25–29 | 23.2 | 37.0 | 29.0 | 60.3 | 1,459 | 61.5 | 48.1 |
| 30–34 | 22.7 | 38.6 | 30.5 | 61.3 | 1,718 | 62.9 | 49.6 |
| 35–39 | 24.7 | 39.4 | 28.4 | 64.1 | 1,640 | 61.4 | 44.3 |
| 40–44 | 22.8 | 35.3 | 27.0 | 58.1 | 1,238 | 60.7 | 46.2 |
| 45–49 | 17.4 | 26.5 | 19.4 | 43.9 | 941 | 60.3 | 44.1 |
| **Residence** | | | | | | | |
| Urban | 22.3 | 37.1 | 26.7 | 59.4 | 4,248 | 62.4 | 44.8 |
| Rural | 24.6 | 35.5 | 29.1 | 60.1 | 3,955 | 59.1 | 48.3 |
| **Region** | | | | | | | |
| Western | 18.5 | 44.8 | 35.5 | 63.4 | 487 | 70.8 | 56.1 |
| Central | 21.3 | 50.8 | 34.5 | 72.1 | 816 | 70.4 | 47.9 |
| Greater Accra | 26.0 | 32.0 | 23.8 | 58.1 | 1,144 | 55.2 | 41.0 |
| Volta | 28.1 | 35.6 | 29.3 | 63.7 | 375 | 55.9 | 46.0 |
| Eastern | 27.3 | 35.3 | 28.6 | 62.7 | 633 | 56.4 | 45.6 |
| Ashanti | 23.0 | 44.4 | 32.1 | 67.4 | 1,426 | 65.9 | 47.7 |
| Western north | 22.5 | 39.2 | 29.1 | 61.7 | 231 | 63.6 | 46.9 |
| Ahafo | 24.1 | 42.8 | 35.8 | 66.9 | 183 | 64.0 | 53.5 |
| Bono | 23.5 | 38.6 | 28.6 | 62.2 | 284 | 62.1 | 45.4 |
| Bono east | 29.6 | 22.1 | 20.7 | 51.7 | 376 | 42.8 | 40.0 |
| Oti | 25.7 | 32.0 | 28.5 | 57.8 | 248 | 55.5 | 49.4 |
| Northern | 22.3 | 24.6 | 17.4 | 46.8 | 870 | 52.4 | 36.6 |
| Savannah | 21.2 | 23.5 | 19.2 | 44.7 | 217 | 52.6 | 42.7 |
| North East | 22.6 | 17.0 | 14.9 | 39.5 | 229 | 42.9 | 37.7 |
| Upper East | 17.9 | 35.5 | 31.0 | 53.5 | 425 | 66.5 | 57.9 |
| Upper West | 17.8 | 36.8 | 33.8 | 54.6 | 258 | 67.4 | 61.9 |
| **Education** | | | | | | | |
| No education | 23.4 | 26.7 | 22.6 | 50.0 | 2,015 | 53.3 | 45.1 |
| Primary | 25.7 | 35.8 | 29.8 | 61.4 | 1,233 | 58.2 | 48.1 |
| Secondary | 23.8 | 40.8 | 30.4 | 64.6 | 4,172 | 63.1 | 47.0 |
| More than secondary | 17.7 | 38.6 | 25.0 | 56.3 | 783 | 68.5 | 44.4 |
| **Wealth quintile** | | | | | | | |
| Lowest | 25.9 | 27.3 | 24.2 | 53.1 | 1,670 | 51.3 | 45.6 |
| Second | 24.6 | 37.2 | 31.4 | 61.8 | 1,514 | 60.3 | 50.4 |
| Middle | 25.1 | 41.0 | 30.8 | 66.1 | 1,553 | 62.0 | 46.8 |
| Fourth | 22.6 | 38.7 | 28.2 | 61.3 | 1,726 | 63.2 | 45.6 |
| Highest | 19.3 | 37.8 | 25.3 | 57.1 | 1,740 | 66.2 | 44.5 |
| Total | 23.4 | 36.3 | 27.8 | 59.7 | 8,202 | 60.8 | 46.5 |
| SEXUALLY ACTIVE UNMARRIED WOMEN[4] | | | | | | | |
| **Residence** | | | | | | | |
| Urban | 23.6 | 62.7 | 45.6 | 86.3 | 812 | 72.7 | 52.8 |
| Rural | 26.3 | 63.2 | 45.7 | 89.5 | 513 | 70.6 | 51.2 |
| Total | 24.6 | 62.9 | 45.6 | 87.5 | 1,325 | 71.8 | 52.2 |

Note: Numbers in this table correspond to the revised definition of unmet need described in Bradley et al. (2012).
[1] Percentage of demand satisfied is met need divided by total demand.
[2] Modern methods include female sterilisation, male sterilisation, IUD, injectables, implants, pill, male condom, female condom, emergency contraception, standard days method (SDM), lactational amenorrhea method (LAM) and other modern methods.
[3] Total demand is the sum of unmet need and met need.
[4] Women who have had sexual intercourse within 30 days preceding the survey

**Trends: Figure 2** shows the trend in unmet need for family planning and the percentage of demand satisfied by modern methods between 1993 and 2022. Unmet need declined from 37% in 1993 to 23% in 2022. The trend for demand satisfied by modern methods increased from 10% in 1993 to 28% in 2022.

*Figure 2* **Trends in use, need, and demand for family planning**

*Percentage of currently married women age 15–49*
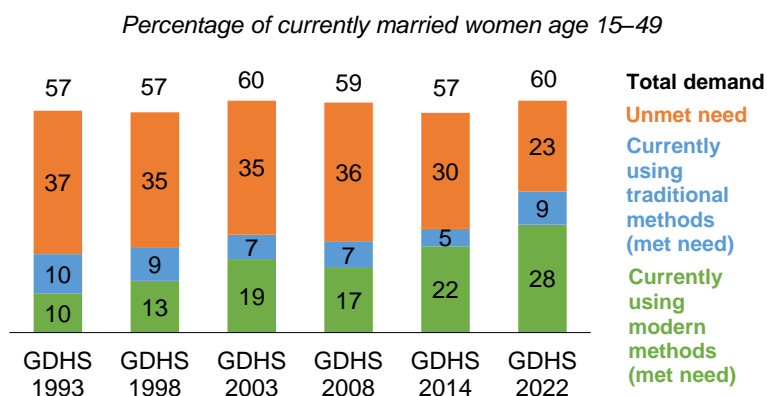


## 3.7 EARLY CHILDHOOD MORTALITY

**Neonatal mortality:** The probability of dying within the first month of life.

**Postneonatal mortality:** The probability of dying between the first month of life and the first birthday (computed as the difference between infant and neonatal mortality).

**Infant mortality:** The probability of dying between birth and the first birthday.

**Child mortality:** The probability of dying between the first and fifth birthday.

**Under-5 mortality:** The probability of dying between birth and the fifth birthday.

**Table 8** presents estimates of early childhood mortality rates for three successive 5-year periods prior to the 2022 GDHS. The rates are estimated directly from the information collected as part of a retrospective pregnancy history, in which female respondents list all the children to whom they have given birth, along with each child's date of birth, survivorship status, and current age or age at death.

- During the 5 years preceding the survey, the neonatal mortality rate was 17 deaths per 1,000 live births, the infant mortality rate was 28 deaths per 1,000 births, and the under-5 mortality rate was 40 deaths per 1,000 children.

- Mortality during the first month (neonatal mortality) accounts for 61% of infant deaths and 43% of under-5 deaths.

**Table 8  Early childhood mortality rates**

Neonatal, post-neonatal, infant, child, and under-5 mortality rates for 5-year periods preceding the survey, Ghana DHS 2022

| | Neonatal mortality (NN) | Post-neonatal mortality (PNN)[1] | Infant mortality ($_1q_0$) | Child mortality ($_4q_1$) | Under-5 mortality ($_5q_0$) |
|---|---|---|---|---|---|
| **Years preceding the survey** | | | | | |
| 0–4 | 17 | 11 | 28 | 12 | 40 |
| 5–9 | 20 | 11 | 32 | 16 | 47 |
| 10–14 | 27 | 11 | 38 | 16 | 53 |

[1] Computed as the difference between the infant and neonatal mortality rates

**Trends: Figure 3** shows the trends in early childhood mortality rates in Ghana between 1988 and 2022. Under-5 mortality decreased from 155 deaths per 1,000 live births in 1988 to 40 deaths per 1,000 live births in 2022. Infant and neonatal mortality have similarly declined.

## 3.8 MATERNAL CARE

Proper care during pregnancy and delivery is important for the health of both the mother and child. **Table 9** shows the key for maternal care in Ghana.



*Figure 3* **Trends in early childhood mortality rates**

*Deaths per 1,000 live births in the 5-year period preceding the survey*

**Table 9  Maternal care indicators**

Among women age 15–49 who had a live birth and/or a stillbirth in the 2 years preceding the survey, percentage who received antenatal care (ANC) from a skilled provider for the most recent live birth or stillbirth, percentage with four or more ANC visits for the most recent live birth or stillbirth, percentage who took any iron-containing supplements during pregnancy, and percentage whose most recent live birth was protected against neonatal tetanus; among all live births and stillbirths in the 2 years before the survey, percentage delivered by a skilled provider and percentage delivered in a health facility; and among women age 15–49 with a live birth or stillbirth in the 2 years preceding the survey, percentage who received a postnatal check during the first 2 days after giving birth, according to background characteristics, Ghana DHS 2022

| Background characteristic | Percentage receiving antenatal care from a skilled provider[1] | Percentage with 4+ ANC visits | Percentage who took any iron-containing supplements during pregnancy[2] | Percentage whose most recent live birth was protected against neonatal tetanus[3] | Number of women | Percentage delivered by a skilled provider[1] | Percentage delivered in a health facility | Number of births | Percentage of women with a postnatal check during the first 2 days after birth[4] | Number of women |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | LIVE BIRTHS | | | | | | |
| **Mother's age at birth** | | | | | | | | | | |
| <20 | 97.6 | 83.2 | 91.5 | 63.8 | 352 | 88.4 | 88.3 | 360 | 85.5 | 351 |
| 20–34 | 97.9 | 88.4 | 92.7 | 74.5 | 2,447 | 88.4 | 86.8 | 2,561 | 88.0 | 2,449 |
| 35–49 | 97.5 | 87.9 | 91.2 | 76.5 | 692 | 84.2 | 83.4 | 718 | 85.8 | 692 |
| **Residence** | | | | | | | | | | |
| Urban | 98.6 | 91.2 | 94.4 | 79.2 | 1,624 | 95.3 | 94.4 | 1,700 | 92.4 | 1,623 |
| Rural | 97.1 | 84.8 | 90.4 | 69.2 | 1,868 | 80.8 | 79.1 | 1,938 | 82.9 | 1,868 |
| **Region** | | | | | | | | | | |
| Western | 92.9 | 89.4 | 91.2 | 72.9 | 208 | 86.8 | 85.0 | 212 | 87.3 | 208 |
| Central | 98.2 | 88.0 | 95.9 | 80.0 | 357 | 85.0 | 82.9 | 380 | 85.8 | 357 |
| Greater Accra | 95.7 | 90.1 | 96.4 | 78.4 | 410 | 94.0 | 92.3 | 427 | 95.4 | 410 |
| Volta | 99.2 | 94.0 | 97.3 | 83.3 | 130 | 93.5 | 90.9 | 135 | 89.5 | 130 |
| Eastern | 99.5 | 88.7 | 95.9 | 81.9 | 246 | 90.3 | 89.5 | 252 | 95.0 | 246 |
| Ashanti | 100.0 | 89.7 | 94.2 | 80.8 | 631 | 93.6 | 92.4 | 666 | 87.9 | 631 |
| Western north | 99.6 | 86.8 | 88.7 | 76.5 | 96 | 89.3 | 88.9 | 101 | 87.4 | 96 |
| Ahafo | 97.7 | 88.6 | 95.8 | 77.8 | 77 | 93.4 | 92.2 | 81 | 88.2 | 77 |
| Bono | 98.8 | 91.2 | 98.3 | 69.2 | 113 | 91.3 | 90.7 | 117 | 94.1 | 113 |
| Bono east | 99.2 | 85.6 | 86.6 | 63.1 | 191 | 87.6 | 86.2 | 202 | 85.6 | 191 |
| Oti | 97.4 | 75.7 | 95.4 | 71.3 | 123 | 70.3 | 67.1 | 128 | 76.8 | 123 |
| Northern | 96.4 | 80.8 | 83.0 | 66.7 | 395 | 71.6 | 70.3 | 406 | 72.7 | 395 |
| Savannah | 95.1 | 79.5 | 81.2 | 43.1 | 105 | 72.0 | 70.6 | 111 | 81.5 | 105 |
| North East | 95.5 | 83.6 | 89.0 | 45.6 | 113 | 85.2 | 84.5 | 117 | 83.3 | 112 |
| Upper East | 99.0 | 94.8 | 88.1 | 75.1 | 191 | 98.0 | 97.4 | 196 | 96.7 | 191 |
| Upper West | 98.2 | 94.8 | 97.8 | 70.9 | 105 | 91.7 | 94.0 | 109 | 91.0 | 105 |
| **Mother's education** | | | | | | | | | | |
| No education | 96.2 | 80.8 | 85.5 | 60.4 | 728 | 74.2 | 72.8 | 761 | 78.3 | 728 |
| Primary | 96.9 | 84.8 | 89.9 | 72.2 | 542 | 83.9 | 82.7 | 562 | 86.4 | 542 |
| Secondary | 98.4 | 89.8 | 94.8 | 76.6 | 1,898 | 91.7 | 90.4 | 1,979 | 89.7 | 1,898 |
| More than secondary | 99.2 | 96.9 | 96.4 | 90.5 | 323 | 99.3 | 98.3 | 336 | 94.9 | 323 |

*(Continued…)*

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Table 9—*Continued*

| Background characteristic | Women who had a live birth and/or a stillbirth in the 2 years preceding the survey | | | | | Live births and stillbirths in the 2 years preceding the survey | | | Women who had a live birth and/or a stillbirth in the 2 years preceding the survey | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Percentage receiving antenatal care from a skilled provider[1] | Percentage with 4+ ANC visits | Percentage who took any iron-containing supplements during pregnancy[2] | Percentage whose most recent live birth was protected against neonatal tetanus[3] | Number of women | Percentage delivered by a skilled provider[1] | Percentage delivered in a health facility | Number of births | Percentage of women with a postnatal check during the first 2 days after birth[4] | Number of women |
| | | | | LIVE BIRTHS | | | | | | |
| **Wealth quintile** | | | | | | | | | | |
| Lowest | 95.6 | 77.9 | 87.1 | 60.3 | 844 | 72.9 | 71.4 | 887 | 78.0 | 853 |
| Second | 97.6 | 87.2 | 91.1 | 70.2 | 725 | 88.2 | 86.3 | 751 | 86.6 | 723 |
| Middle | 98.5 | 86.8 | 94.1 | 75.7 | 715 | 87.9 | 87.3 | 742 | 89.3 | 705 |
| Fourth | 98.2 | 94.4 | 95.6 | 81.3 | 623 | 96.3 | 95.0 | 659 | 90.7 | 631 |
| Highest | 99.8 | 97.0 | 95.4 | 87.6 | 584 | 98.5 | 97.2 | 600 | 95.3 | 579 |
| Total | 97.8 | 87.8 | 92.3 | 73.8 | 3,492 | 87.6 | 86.2 | 3,638 | 87.3 | 3,491 |
| | | | | STILLBIRTHS | | | | | | |
| Total | 91.1 | 77.1 | 82.4 | na | 57 | 93.1 | 93.1 | 57 | 78.6 | 57 |
| | | | | LIVE BIRTHS AND STILLBIRTHS[5] | | | | | | |
| Total | 97.7 | 87.6 | 92.1 | na | 3,549 | 87.6 | 86.4 | 3,695 | 87.1 | 3,548 |

Note: If more than one source of assistance was mentioned, only the provider with the highest qualifications is considered in this tabulation. Stillbirths are foetal deaths in pregnancies lasting 28 or more weeks. When pregnancy duration is reported in months, stillbirths are foetal deaths in pregnancies lasting 7 or more months.
na = not applicable
[1] Skilled provider includes doctor, midwife/nurse (CHN/CHO/EN/PHN/GN).
[2] Iron tablets and iron syrup
[3] Includes mothers with two injections during the pregnancy of her most recent live birth, or two or more injections (the last within 3 years of the most recent live birth), or three or more injections (the last within 5 years of the most recent live birth), or four or more injections (the last within 10 years of the most recent live birth), or five or more injections at any time prior to the last live birth.
[4] Includes women who received a check from a doctor, midwife, nurse, community health worker, or traditional birth attendant.
[5] For women who had both a live birth and a stillbirth in the 2 years preceding the survey, data on antenatal care and postnatal checks are tabulated for the most recent birth only.

## 3.8.1 *Antenatal Care*

> **Antenatal care from a skilled provider**
> Pregnancy care received from skilled providers, such as doctors and midwives/nurses (CHN/CHO/EN/PHN/GN).
> *Sample:* Women age 15–49 who had a live birth or stillbirth in the 2 years before the survey

Antenatal care (ANC) from a skilled provider is important to monitor pregnancy and reduce morbidity and mortality risks for the mother and child during pregnancy, at delivery, and during the postnatal period.

- Nearly all women (98%) reported receiving antenatal care from a skilled provider for their most recent live birth or stillbirth in the 2 years preceding the survey.

- Overall, 88% of women had four or more ANC visits for their most recent live birth or stillbirth.

- Ninety-two percent of women took iron-containing supplements during their most recent pregnancy.

### 3.8.2  Tetanus Toxoid

**Protection against neonatal tetanus**

The number of tetanus toxoid injections needed to protect a baby from neonatal tetanus depends on the mother's vaccinations. A birth is protected against neonatal tetanus if the mother has received any of the following:

- Two tetanus toxoid injections during the pregnancy
- Two or more injections, the last one within 3 years of the birth
- Three or more injections, the last one within 5 years of the birth
- Four or more injections, the last one within 10 years of the birth
- Five or more injections at any time prior to the birth

**Sample:** Women age 15–49 with a live birth in the 2 years before the survey

Tetanus toxoid injections are given during pregnancy to prevent neonatal tetanus, a major cause of early infant death in many countries. Neonatal tetanus is often caused by failure to observe hygienic procedures during delivery.

- Overall, 74% percent of women with a live birth in the 2 years before the survey received sufficient tetanus toxoid injections to protect their baby against neonatal tetanus.

### 3.8.3  Delivery Care

**Institutional deliveries**

Deliveries that occur in a health facility.
**Sample:** All live births and/or stillbirths in the 2 years before the survey

**Skilled assistance during delivery**

Births delivered with the assistance of doctors and midwives/nurses (CHN/CHO/EN/PHN/GN)
**Sample:** All live births and/or stillbirths in the 2 years before the survey

Access to proper medical attention and hygienic conditions during delivery can reduce the risk of complications and infections that could lead to death or serious illness for the mother and baby or both (Van Lerberghe and De Brouwere 2001; WHO 2006a).

- Eighty-six percent of livebirths and/or stillbirths took place in a health facility.

- Overall, 88% of live births and stillbirths were assisted by a skilled provider.

***Figure 4*  Trends in delivery assistance**

*Percentage of live births in the 2 years preceding the survey delivered by a skilled provider*
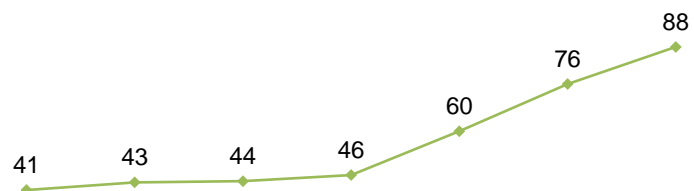


| | | | | | | |
|---|---|---|---|---|---|---|
| GDHS 1988 | GDHS 1993 | GDHS 1998 | GDHS 2003 | GDHS 2008 | GDHS 2014 | GDHS 2022 |
| 41 | 43 | 44 | 46 | 60 | 76 | 88 |

**Trends:** The percentage of live births assisted by a skilled provider has increased markedly over the past 3 decades, from 41% in 1988 to 88% in 2022 (**Figure 4**).

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### 3.8.4 Postnatal Care for the Mother

A large proportion of maternal and neonatal deaths occur during the first 48 hours after delivery. Prompt postnatal care (PNC) for both the mother and the child is important to treat any complications arising from the delivery, as well as to provide the mother with important information on how to care for herself and her child. Safe motherhood programmes recommend that all women receive a health check during the first 2 days after giving birth.

▪ Overall, 87% of women with a live birth and/or stillbirth in the 2 years preceding the survey received a postnatal check within 2 days after delivery.

## 3.9    VACCINATION COVERAGE

Universal immunisation of children against common vaccine-preventable diseases is crucial to reducing infant and child morbidity and mortality. In Ghana, routine childhood vaccines include bacillus Calmette-Guérin (BCG) (tuberculosis); HepB (hepatitis B); oral polio vaccine (OPV); inactivated polio vaccine (IPV); pentavalent or DPT–HepB–Hib vaccine (diphtheria, pertussis, tetanus; hepatitis B; and *Haemophilus influenzae* type b); pneumococcal conjugate vaccine (PCV); rotavirus vaccine (RV); measles-rubella vaccine; yellow fever vaccine; and meningococcal A vaccine.

Information on vaccination coverage was obtained in two ways in the Ghana DHS: from written vaccination records, including vaccination or health cards, and from verbal reports from the mother.

### 3.9.1 Basic Antigen Coverage

> **Fully vaccinated—basic antigens**
>
> Percentage of children who received specific vaccines at any time before the survey (according to a vaccination card or the mother's report). To have received all basic antigens, a child must receive at least:
>
> ▪ One dose of BCG vaccine, which protects against tuberculosis
> ▪ Three doses of polio vaccine given as oral polio vaccine (OPV), inactivated polio vaccine (IPV), or a combination of OPV and IPV
> ▪ Three doses of DPT-containing vaccine, which protects against diphtheria, pertussis (whooping cough), and tetanus
> ▪ One dose of measles-containing vaccine given as measles rubella (MR)
>
> ***Sample:*** Children age 12–23 months

Historically, an important measure of vaccination coverage has been the proportion of children receiving all "basic" antigens. Children are considered fully vaccinated against all basic antigens if they have received the BCG vaccine, three doses each of polio vaccine and DTP-containing vaccine, and a single dose of measles-containing vaccine. In Ghana, the BCG vaccine is usually given at birth or at first clinic contact, while the polio and DPT-containing vaccines are given at approximately age 6, 10, and 14 weeks. A first measles-containing vaccination should be given at or soon after age 9 months.

▪ Overall, 73% of children age 12–23 months are fully vaccinated with basic antigens.

▪ Ninety-five percent of children have received BCG, 89% have received three doses of pentavalent, and 83% have received three doses of oral polio. Coverage of vaccination against measles is 87%.

**Trends:** The percentage of children age 12–23 months who have been fully vaccinated against all basic antigens increased from 19% in 1988, peaked at 79% in 2008, declined slightly to 77% in 2014, and to 73% in 2022 (**Figure 5**). The percentage of children with no vaccinations declined to 2%.

*Figure 5* **Trends in childhood vaccinations**

*Percentage of children age 12–23 months*
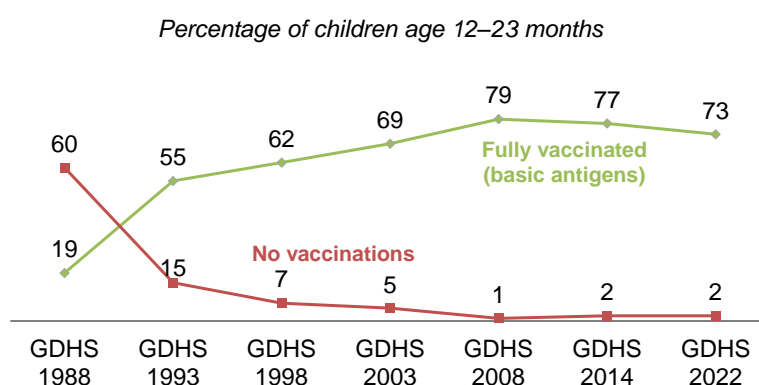


### 3.9.2   Vaccination Coverage According to the National Schedule

A second measure of vaccination coverage is the percentage of children age 12–23 months and 24–35 months who are fully vaccinated according to the national schedule. In this report, a child age 12–23 months is considered fully vaccinated according to the national schedule if the child has received all the basic antigens as well as a birth dose of OPV vaccine, a dose of IPV, three doses of HepB and Hib (given as part of DPT-containing vaccine), three doses of the pneumococcal vaccine, and two doses of rotavirus vaccine, and one dose of yellow fever vaccine. Children age 24–35 months are considered fully vaccinated according to the national schedule if they receive a second dose of measles-rubella and one dose of meningococcal A vaccine in addition to all the vaccinations relevant for a child age 12–23 months.

▪ Overall, 76% of children age 12–23 months received a birth dose of OPV vaccine, 92% received a dose of IPV, 89% received three doses of DPT HepB and Hib, 88% received three doses of the pneumococcal vaccine, 93% received two doses of rotavirus vaccine, and 84% received one dose of yellow fever vaccine. In addition, 73% of children age 24–35 months received 2 doses of measles-rubella vaccine and 74% received meningococcal A vaccine.

▪ Fifty-six percent of children age 12–23 months are fully vaccinated according to the national schedule.

▪ Forty-four percent of children age 24–35 months are fully vaccinated according to the national schedule.

▪ Two percent of children age 12–23 months have received no vaccinations.

Table 10  Vaccinations by background characteristics

Percentage of children age 12–23 months and children age 24–35 months who received specific vaccines at any time before the survey (according to a vaccination card or the mother's report), percentage fully vaccinated (basic antigens), percentage fully vaccinated (according to national schedule), and percentage who received no vaccinations, according to background characteristics, Ghana DHS 2022

| Background characteristic | BCG | HepB (birth dose)[1] | DPT-HepB-Hib 1 | DPT-HepB-Hib 2 | DPT-HepB-Hib 3 | OPV[2] 0 (birth dose) | OPV 1 | OPV 2 | OPV 3 | IPV | Pneumococcal 1 | Pneumococcal 2 | Pneumococcal 3 | Rotavirus 1 | Rotavirus 2 | MR 1 | Yellow fever | Fully vaccinated (basic antigens)[3] | Fully vaccinated (according to national schedule)[4] | No vaccinations | Number of children | MR 2 | Meningitis | Fully vaccinated (according to national schedule)[5] | Number of children |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sex** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Male | 95.5 | 17.8 | 97.4 | 95.7 | 89.3 | 75.2 | 96.2 | 91.8 | 83.0 | 92.6 | 96.8 | 94.8 | 89.9 | 95.9 | 92.2 | 86.3 | 83.6 | 73.2 | 54.1 | 2.0 | 928 | 74.5 | 74.7 | 46.3 | 764 |
| Female | 95.2 | 17.7 | 96.7 | 93.6 | 87.9 | 78.4 | 94.8 | 90.8 | 81.9 | 92.1 | 96.6 | 93.2 | 86.3 | 95.4 | 91.1 | 87.4 | 84.2 | 73.0 | 57.2 | 2.0 | 895 | 70.9 | 74.2 | 42.4 | 782 |
| **Birth order** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 97.1 | 20.4 | 97.2 | 94.0 | 86.8 | 81.5 | 95.7 | 91.9 | 83.4 | 92.1 | 97.4 | 93.7 | 86.7 | 96.6 | 92.8 | 88.5 | 84.6 | 75.0 | 59.7 | 1.7 | 529 | 72.4 | 74.2 | 45.8 | 380 |
| 2–3 | 94.2 | 16.7 | 96.9 | 94.7 | 89.5 | 79.8 | 95.6 | 91.1 | 83.5 | 93.6 | 96.0 | 94.2 | 88.6 | 95.4 | 91.3 | 86.7 | 82.8 | 73.4 | 57.9 | 2.0 | 663 | 76.0 | 78.5 | 48.6 | 623 |
| 4–5 | 94.8 | 16.6 | 96.6 | 94.6 | 90.0 | 70.4 | 94.9 | 92.5 | 82.9 | 91.1 | 96.4 | 92.8 | 88.6 | 94.4 | 90.9 | 86.1 | 84.7 | 74.1 | 53.2 | 2.4 | 401 | 69.4 | 69.6 | 42.3 | 355 |
| 6+ | 95.5 | 16.4 | 98.0 | 96.0 | 87.9 | 68.4 | 95.9 | 88.3 | 76.8 | 91.2 | 97.8 | 96.6 | 89.5 | 96.2 | 91.7 | 84.7 | 84.1 | 66.1 | 44.3 | 1.8 | 230 | 68.4 | 70.7 | 30.9 | 187 |
| **Vaccination card[6]** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Seen | 97.0 | 12.7 | 99.5 | 98.7 | 95.4 | 77.5 | 99.3 | 97.6 | 91.4 | 94.7 | 99.3 | 98.5 | 95.5 | 98.7 | 95.6 | 90.0 | 87.6 | 81.4 | 62.2 | 0.1 | 1,602 | 78.5 | 75.7 | 53.8 | 1,213 |
| Not seen or no longer has | 93.0 | 60.0 | 88.7 | 74.4 | 44.5 | 79.7 | 78.1 | 53.4 | 20.2 | 84.2 | 87.0 | 69.6 | 39.6 | 83.5 | 72.2 | 71.5 | 65.0 | 15.1 | 9.0 | 6.6 | 187 | 55.3 | 74.3 | 10.8 | 303 |
| Never had | (29.2) | (22.0) | (30.3) | (14.5) | (12.6) | (26.4) | (11.9) | (3.4) | (3.4) | (26.4) | (29.5) | (17.4) | (8.7) | (21.0) | (11.6) | (23.0) | (14.7) | (3.4) | (3.4) | (65.4) | 34 | (14.1) | (23.7) | (0.0) | 30 |
| **Residence** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urban | 98.0 | 18.3 | 98.1 | 96.0 | 91.0 | 83.0 | 97.2 | 93.9 | 85.5 | 94.3 | 98.0 | 95.6 | 88.6 | 96.8 | 92.9 | 87.8 | 85.3 | 77.2 | 62.1 | 1.0 | 858 | 69.4 | 72.2 | 45.5 | 786 |
| Rural | 93.0 | 17.2 | 96.1 | 93.5 | 86.4 | 71.3 | 94.1 | 89.0 | 79.8 | 90.5 | 95.6 | 92.6 | 87.7 | 94.6 | 90.6 | 86.0 | 82.7 | 69.4 | 49.9 | 2.9 | 965 | 76.1 | 76.8 | 43.1 | 760 |
| **Region** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Western | 93.2 | 13.6 | 93.5 | 91.3 | 81.6 | 61.4 | 92.5 | 87.6 | 66.6 | 87.9 | 93.0 | 93.0 | 78.9 | 91.4 | 88.9 | 77.3 | 71.8 | 56.7 | 39.1 | 4.5 | 112 | 54.9 | 56.9 | 31.5 | 102 |
| Central | 99.1 | 11.5 | 100.0 | 98.2 | 93.4 | 73.4 | 100.0 | 100.0 | 88.9 | 92.8 | 96.5 | 95.8 | 88.0 | 96.6 | 95.0 | 85.3 | 83.3 | 77.8 | 55.8 | 0.0 | 193 | 71.4 | 71.0 | 38.2 | 152 |
| Greater Accra | 98.8 | 12.0 | 97.7 | 97.2 | 93.3 | 89.2 | 97.7 | 95.0 | 88.8 | 96.9 | 98.8 | 96.8 | 92.4 | 97.7 | 93.2 | 94.7 | 92.3 | 84.9 | 69.9 | 1.2 | 207 | 85.5 | 86.5 | 61.2 | 210 |
| Volta | 99.1 | 28.7 | 100.0 | 95.2 | 87.6 | 89.0 | 97.5 | 93.1 | 86.4 | 94.3 | 100.0 | 94.3 | 89.9 | 97.9 | 91.8 | 90.7 | 86.9 | 79.6 | 70.6 | 0.0 | 75 | 88.6 | 88.6 | 74.5 | 60 |
| Eastern | 90.5 | 16.4 | 96.4 | 96.4 | 85.4 | 83.7 | 93.1 | 89.9 | 84.3 | 89.6 | 96.4 | 96.4 | 85.4 | 96.4 | 96.4 | 81.5 | 78.1 | 70.3 | 61.9 | 2.1 | 115 | 70.3 | 74.9 | 46.7 | 115 |
| Ashanti | 97.2 | 13.3 | 99.4 | 97.9 | 92.7 | 79.0 | 99.3 | 95.0 | 85.4 | 95.9 | 99.4 | 96.9 | 94.8 | 98.5 | 97.2 | 91.9 | 88.6 | 79.8 | 63.3 | 0.0 | 359 | 66.8 | 72.3 | 43.0 | 255 |
| Western north | 97.7 | 16.9 | 99.1 | 97.2 | 94.2 | 71.1 | 98.1 | 95.9 | 94.2 | 99.1 | 99.1 | 97.2 | 94.2 | 97.2 | 96.3 | 93.9 | 92.5 | 87.7 | 62.0 | 0.0 | 51 | 80.6 | 79.7 | 39.2 | 41 |
| Ahafo | 88.8 | 13.6 | 91.7 | 90.5 | 85.6 | 68.2 | 88.6 | 84.4 | 76.5 | 86.9 | 91.7 | 90.5 | 85.9 | 91.0 | 88.0 | 84.1 | 85.4 | 68.8 | 51.8 | 8.3 | 38 | 85.5 | 79.0 | 53.4 | 36 |
| Bono | 98.6 | 16.2 | 100.0 | 97.3 | 93.3 | 94.6 | 96.1 | 94.8 | 78.7 | 93.8 | 98.8 | 96.1 | 94.5 | 98.8 | 92.5 | 90.9 | 89.8 | 72.0 | 61.9 | 0.0 | 62 | 79.7 | 79.7 | 51.4 | 56 |
| Bono east | 97.7 | 10.8 | 98.9 | 96.4 | 89.7 | 78.1 | 95.8 | 88.8 | 79.9 | 96.9 | 98.9 | 96.6 | 90.4 | 96.7 | 91.5 | 91.2 | 89.0 | 73.1 | 56.2 | 0.7 | 106 | 71.1 | 77.5 | 42.0 | 77 |
| Oti | 94.9 | 28.4 | 98.2 | 96.1 | 91.5 | 74.2 | 94.5 | 91.9 | 83.5 | 94.7 | 99.5 | 94.7 | 88.4 | 98.5 | 90.8 | 87.4 | 83.6 | 72.9 | 53.8 | 0.5 | 56 | 83.0 | 84.7 | 50.5 | 48 |
| Northern | 86.5 | 22.9 | 89.1 | 83.4 | 76.2 | 60.6 | 86.6 | 78.1 | 68.6 | 81.1 | 88.7 | 83.9 | 75.8 | 87.0 | 78.2 | 71.4 | 67.4 | 52.5 | 29.2 | 9.0 | 200 | 56.5 | 54.6 | 20.9 | 168 |
| Savannah | 94.9 | 6.9 | 96.3 | 93.7 | 83.4 | 61.7 | 94.9 | 90.4 | 71.6 | 90.7 | 96.5 | 95.5 | 82.9 | 94.5 | 87.4 | 86.4 | 87.1 | 65.4 | 41.6 | 1.6 | 50 | 66.4 | 65.2 | 36.5 | 52 |
| North East | 96.3 | 32.2 | 95.4 | 93.2 | 89.3 | 68.7 | 95.7 | 90.1 | 84.7 | 90.8 | 95.6 | 91.7 | 89.2 | 94.8 | 89.3 | 87.2 | 86.4 | 77.8 | 52.3 | 2.7 | 53 | 82.1 | 79.5 | 42.9 | 56 |
| Upper East | 93.1 | 56.5 | 98.2 | 91.0 | 83.7 | 90.3 | 91.4 | 83.4 | 76.7 | 91.1 | 98.0 | 87.8 | 83.4 | 98.0 | 88.8 | 92.2 | 85.9 | 69.9 | 55.8 | 1.2 | 87 | 79.0 | 86.0 | 46.9 | 74 |
| Upper West | 95.7 | 9.9 | 97.3 | 95.3 | 93.0 | 79.0 | 97.0 | 93.6 | 83.4 | 92.3 | 96.7 | 94.6 | 92.4 | 93.2 | 91.8 | 84.6 | 82.4 | 72.9 | 55.1 | 1.7 | 58 | 86.8 | 90.2 | 56.6 | 44 |

*(Continued…)*

**Table 10—*Continued***

| Background characteristic | BCG | HepB (birth dose)[1] | DPT-HepB-Hib | | | OPV[2] | | | | IPV | Pneumococcal | | | Rotavirus | | MR 1 | Yellow fever | Fully vaccinated (basic antigens)[3] | Fully vaccinated (according to national schedule)[4] | No vaccinations | Number of children | Children age 24–35 months: | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 0 (birth dose) | 1 | 2 | 3 | | 1 | 2 | 3 | 1 | 2 | | | | | | | MR 2 | Meningitis | Fully vaccinated (according to national schedule)[5] | Number of children |
| **Education** | | | | | | | | | | | | | | | | | | | | | | | | | |
| No education | 90.0 | 19.1 | 91.9 | 88.1 | 82.0 | 63.7 | 90.1 | 83.4 | 73.7 | 85.7 | 91.9 | 88.2 | 80.8 | 89.5 | 82.7 | 76.5 | 75.7 | 61.3 | 41.2 | 6.5 | 390 | 69.9 | 70.3 | 31.2 | 376 |
| Primary | 96.8 | 14.6 | 98.6 | 97.4 | 88.9 | 78.2 | 96.8 | 89.6 | 80.2 | 94.5 | 98.3 | 96.2 | 88.8 | 97.0 | 94.7 | 87.6 | 83.6 | 70.7 | 51.6 | 0.6 | 291 | 66.3 | 67.4 | 44.3 | 231 |
| Secondary | 96.5 | 17.7 | 98.7 | 96.4 | 90.7 | 78.9 | 97.4 | 94.4 | 85.8 | 93.7 | 98.1 | 95.7 | 90.4 | 97.8 | 94.4 | 89.5 | 85.7 | 76.5 | 58.6 | 0.7 | 978 | 74.6 | 76.4 | 48.5 | 807 |
| More than secondary | 98.5 | 20.6 | 96.6 | 94.9 | 91.4 | 93.2 | 95.1 | 94.3 | 87.6 | 95.6 | 97.1 | 94.0 | 91.5 | 94.9 | 91.5 | 94.5 | 93.1 | 85.1 | 79.5 | 1.5 | 164 | 80.0 | 86.4 | 56.1 | 132 |
| **Wealth quintile** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lowest | 90.8 | 19.6 | 92.9 | 89.4 | 83.5 | 65.0 | 90.0 | 83.8 | 75.7 | 86.0 | 92.6 | 88.9 | 82.0 | 91.5 | 86.2 | 80.8 | 79.9 | 65.2 | 42.2 | 5.8 | 439 | 73.4 | 75.0 | 33.8 | 333 |
| Second | 96.0 | 15.2 | 98.0 | 95.3 | 87.0 | 74.6 | 96.5 | 91.8 | 78.7 | 92.9 | 97.7 | 94.8 | 90.3 | 96.8 | 92.8 | 86.1 | 81.7 | 68.5 | 50.7 | 0.9 | 385 | 71.0 | 71.1 | 38.7 | 337 |
| Middle | 98.0 | 20.1 | 99.2 | 97.3 | 91.2 | 80.7 | 97.8 | 93.6 | 86.4 | 95.9 | 99.2 | 96.8 | 91.3 | 97.4 | 93.6 | 84.2 | 80.1 | 72.9 | 57.2 | 0.6 | 373 | 70.3 | 71.7 | 46.9 | 300 |
| Fourth | 97.8 | 18.6 | 97.6 | 94.7 | 88.9 | 80.1 | 96.5 | 93.1 | 87.2 | 92.5 | 96.8 | 93.6 | 86.3 | 95.8 | 90.2 | 90.8 | 89.4 | 79.2 | 61.5 | 0.3 | 312 | 71.8 | 74.1 | 46.8 | 308 |
| Highest | 95.3 | 14.7 | 98.5 | 97.9 | 94.3 | 88.1 | 98.3 | 96.7 | 87.3 | 96.0 | 98.2 | 97.4 | 92.3 | 97.9 | 97.0 | 95.4 | 91.0 | 84.0 | 72.9 | 1.3 | 314 | 77.6 | 81.7 | 59.2 | 267 |
| Total | 95.3 | 17.5 | 97.1 | 94.6 | 89.0 | 76.2 | 95.5 | 91.5 | 84.1 | 92.4 | 96.7 | 94.0 | 88.2 | 95.8 | 92.5 | 87.0 | 84.0 | 74.6 | 56.4 | 2.0 | 1,823 | 72.5 | 74.3 | 44.4 | 1,546 |

Note: Children are considered to have received the vaccine if it was either written on the child's vaccination card or reported by the mother. For children whose vaccination information is based on the mother's report, date of vaccination is not collected. The proportions of vaccinations given during the first and second years of life are assumed to be the same as for children with a written record of vaccination.
BCG = Bacille Calmette-Guérin
DPT = Diphtheria-pertussis-tetanus
HepB = Hepatitis B
Hib = Haemophilus influenzae type b
MR = Measles-rubella vaccine
OPV = Oral polio vaccine
IPV = Inactivated polio vaccine
[1] Children are considered to have received HepB (birth dose) if it was recorded on their card or reported by their mother, regardless of timing.
[2] OPV 0 is the polio vaccination given at birth.
[3] BCG, three doses of DPT-Hep B-Hib, three doses of polio vaccine (excluding polio vaccine given at birth), and one dose of measles-rubella vaccine
[4] BCG, three doses of DPT-Hep B-Hib, four doses of OPV (including OPV given at birth), one dose of IPV, one dose of yellow fever vaccine, three doses of pneumococcal vaccine, two doses of rotavirus vaccine, and one dose of measles-rubella vaccine
[5] BCG, three doses of DPT-Hep B-Hib], four doses of OPV (including OPV given at birth), one dose of IPV, one dose of yellow fever vaccine, three doses of pneumococcal vaccine, two doses of rotavirus vaccine, two doses of measles-rubella vaccine, and one dose of meningococcal A vaccine
[6] Vaccination card, booklet, or other home-based record

## 3.10 CARESEEKING AND TREATMENT OF CHILD ILLNESS

Acute respiratory infection (ARI), fever, and dehydration from diarrhoea are important contributing causes of childhood morbidity and mortality in developing countries (WHO 2003). Prompt medical attention when a child has the symptoms of these illnesses is, therefore, crucial in reducing child deaths. **Table 11** presents information on careseeking for ill children in Ghana. Overall, 2% of children under age 5 showed symptoms of an ARI, 15% exhibited fever, and 13% experienced diarrhoea in the 2 weeks preceding the survey.

### Table 11  Treatment for acute respiratory infection, fever, and diarrhoea

Among children under age 5 who had symptoms of acute respiratory infection (ARI) or had fever during the 2 weeks preceding the survey, percentage for whom advice or treatment was sought; and among children under age 5 who had diarrhoea during the 2 weeks preceding the survey, percentage for whom advice or treatment was sought, percentage given a fluid made from oral rehydration salt (ORS) packets or given pre-packaged ORS fluid, percentage given zinc, percentage given ORS and zinc, and percentage given ORS, zinc, and continued feeding, according to background characteristics, Ghana DHS 2022

| Background characteristic | Children with symptoms of ARI[1] | | Children with fever | | Children with diarrhoea | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Percentage for whom advice or treatment was sought[2] | Number of children | Percentage for whom advice or treatment was sought[2] | Number of children | Percentage for whom advice or treatment was sought[2] | Percentage given fluid from ORS packet or pre-packaged | Percentage given zinc | Percentage given ORS and zinc | Percentage given ORS, zinc, and continued feeding[3] | Number of children |
| **Age in months** | | | | | | | | | | |
| <6 | * | 12 | 47.4 | 49 | 32.7 | 5.9 | 18.3 | 3.6 | 3.0 | 79 |
| 6–11 | * | 14 | 62.3 | 129 | 60.7 | 39.5 | 32.6 | 21.9 | 13.6 | 146 |
| 12–23 | 61.9 | 50 | 60.2 | 327 | 54.1 | 43.1 | 35.9 | 25.3 | 16.6 | 349 |
| 24–35 | 68.3 | 40 | 69.6 | 260 | 61.9 | 43.7 | 41.2 | 31.0 | 19.0 | 203 |
| 36–47 | (63.4) | 31 | 66.9 | 263 | 53.0 | 43.7 | 36.7 | 24.6 | 14.7 | 152 |
| 48–59 | (59.0) | 34 | 75.6 | 225 | 68.0 | 41.7 | 34.2 | 26.1 | 15.4 | 125 |
| **Sex** | | | | | | | | | | |
| Male | 64.8 | 100 | 68.2 | 627 | 57.3 | 42.5 | 36.9 | 26.1 | 17.1 | 560 |
| Female | 61.0 | 81 | 63.9 | 628 | 55.4 | 36.9 | 33.0 | 22.3 | 13.0 | 493 |
| **Residence** | | | | | | | | | | |
| Urban | 57.7 | 62 | 64.3 | 492 | 52.7 | 33.2 | 34.8 | 21.3 | 12.0 | 443 |
| Rural | 65.9 | 119 | 67.2 | 763 | 59.1 | 44.7 | 35.2 | 26.5 | 17.5 | 611 |
| **Region** | | | | | | | | | | |
| Western | * | 10 | 70.7 | 63 | * | * | * | * | * | 25 |
| Central | * | 26 | 57.1 | 153 | 48.4 | 29.7 | 27.8 | 18.3 | 14.8 | 128 |
| Greater Accra | * | 9 | (55.2) | 92 | (15.6) | (16.7) | (18.9) | (12.8) | (8.2) | 74 |
| Volta | * | 14 | 79.0 | 46 | (78.0) | (52.2) | (56.9) | (45.0) | (22.2) | 29 |
| Eastern | * | 6 | (86.2) | 38 | (59.3) | (45.6) | (39.0) | (24.7) | (10.7) | 56 |
| Ashanti | * | 21 | 65.9 | 255 | 51.8 | 41.9 | 31.0 | 20.3 | 14.6 | 240 |
| Western north | * | 5 | 51.4 | 32 | 44.6 | 47.9 | 43.4 | 36.2 | 14.2 | 26 |
| Ahafo | * | 6 | 72.1 | 22 | 59.6 | 42.7 | 49.0 | 38.8 | 30.6 | 18 |
| Bono | * | 3 | (69.6) | 26 | (45.8) | (36.0) | (46.6) | (22.9) | (13.6) | 23 |
| Bono east | * | 12 | 58.8 | 59 | 49.3 | 39.9 | 44.2 | 30.8 | 14.6 | 67 |
| Oti | * | 5 | 76.8 | 75 | 69.1 | 40.0 | 37.2 | 26.8 | 13.8 | 40 |
| Northern | (81.7) | 38 | 62.5 | 199 | 76.8 | 48.1 | 37.8 | 30.8 | 24.1 | 173 |
| Savannah | * | 6 | 69.2 | 43 | 64.7 | 32.7 | 15.0 | 9.1 | 4.7 | 54 |
| North East | (57.0) | 14 | 71.9 | 59 | 61.0 | 32.8 | 42.4 | 21.3 | 10.6 | 48 |
| Upper East | * | 5 | 74.8 | 70 | 59.0 | 56.6 | 53.4 | 37.2 | 7.6 | 37 |
| Upper West | * | 2 | 76.2 | 21 | (69.9) | (47.4) | (56.2) | (34.9) | (19.5) | 16 |
| **Mother's education** | | | | | | | | | | |
| No education | 75.6 | 69 | 63.1 | 367 | 63.3 | 37.6 | 31.8 | 20.5 | 13.8 | 304 |
| Primary | (62.9) | 33 | 64.8 | 213 | 57.7 | 46.5 | 30.9 | 24.5 | 14.8 | 184 |
| Secondary | 49.4 | 74 | 66.3 | 597 | 51.8 | 39.4 | 37.4 | 26.6 | 15.8 | 512 |
| More than secondary | * | 5 | 81.9 | 77 | 56.6 | 34.8 | 44.9 | 23.9 | 18.6 | 54 |
| **Wealth quintile** | | | | | | | | | | |
| Lowest | 62.4 | 62 | 62.7 | 407 | 60.5 | 41.6 | 32.9 | 24.6 | 14.7 | 294 |
| Second | 77.7 | 50 | 72.9 | 263 | 66.2 | 42.1 | 31.5 | 23.7 | 15.1 | 239 |
| Middle | * | 19 | 67.7 | 237 | 48.5 | 38.9 | 33.9 | 21.2 | 12.8 | 215 |
| Fourth | (55.5) | 33 | 57.6 | 202 | 45.7 | 37.2 | 35.8 | 23.9 | 15.3 | 191 |
| Highest | * | 17 | 72.2 | 146 | 58.6 | 36.7 | 48.9 | 31.8 | 21.4 | 114 |
| Total | 63.1 | 181 | 66.0 | 1,252 | 60.5 | 39.8 | 35.0 | 24.3 | 15.2 | 1,054 |

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Symptoms of ARI include short, rapid breathing which was chest-related and/or difficult breathing which was chest-related.
[2] Includes advice or treatment from the following sources: public sector, private medical sector, NGO medical sector, shop, market, and medicine peddler. Excludes advice or treatment from a traditional practitioner
[3] Continued feeding includes children who were given more, same as usual, or somewhat less food during the diarrhoea episode.

- Advice or treatment was sought for 63% of children with symptoms of ARI in the 2 weeks before the survey.

- Advice or treatment was sought for 66% of children with fever in the 2 weeks before the survey.

- Advice or treatment was sought for 61% of children with diarrhoea in the 2 weeks before the survey.

- Forty percent of children with diarrhoea received oral rehydration salts (ORS), 35% received zinc supplements, 24% received ORS and zinc supplements, and 15% received ORS, zinc supplements, and continued feeding.

## 3.11 CHILD NUTRITIONAL STATUS

Anthropometry is commonly used to measure child nutritional status. Anthropometric measurements are used to report on child growth indicators. The distribution of height and weight for children under age 5 is compared with the World Health Organization (WHO) growth standard reference population (WHO 2006b). The distribution of a well-nourished population will be similar to the reference population, while the distribution of a poorly nourished population will not. The indices height-for-age, weight-for-height, and weight-for-age can be expressed in standard deviation units ($z$ scores) from the median of the reference population. Values that are greater than two standard deviations below the median of the WHO child growth standards are used to define malnutrition.

**Stunting (assessed via height-for-age)**

Height-for-age is a measure of growth faltering. Children whose height-for-age $z$ score is below minus two standard deviations (−2 SD) from the median of the reference population are considered short for their age (stunted). Children who are below minus three standard deviations (−3 SD) are considered severely stunted.

*Sample:* Children under age 5

**Wasting (assessed via weight-for-height)**

The weight-for-height index measures body mass in relation to body height (or length) and describes acute undernutrition. Children whose $z$ score is below minus two standard deviations (−2 SD) from the median of the reference population are considered thin (wasted). Children whose weight-for-height $z$ score is below minus three standard deviations (−3 SD) from the median of the reference population are considered severely wasted.

*Sample:* Children under age 5

**Underweight (assessed via weight-for-age)**

Weight-for-age is a composite index of height-for-age and weight-for-height that takes into account both wasting and stunting. Children whose weight-for-age $z$ score is below minus two standard deviations (−2 SD) from the median of the reference population are classified as underweight. Children whose weight-for-age $z$ score is below minus three standard deviations (−3 SD) from the median are considered severely underweight.

*Sample:* Children under age 5

**Overweight (assessed via weight-for-height)**

Children whose weight-for-height $z$ score is more than two standard deviations (+2 SD) above the median of the reference population are considered overweight.

*Sample:* Children under age 5

The 2022 GDHS identified a total of 5,046 children under age 5 eligible for height and weight measurement. The percentages with valid data for height-for-age, weight-for-height, and weight-for-age were 98%, 98%, and 99%, respectively.

- **Table 12** shows the nutritional status for children under age 5, according to the three anthropometric indices: 18% of children under age 5 are stunted, 6% are wasted, and 12% are underweight. Two percent of children under 5 are overweight.

**Table 12  Nutritional status of children**

Percentage of children under age 5 classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, according to background characteristics, Ghana DHS 2022

| Background characteristic | Height-for-age[1] | | | | Weight-for-height | | | | | Weight-for-age | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Percent-age below −3 SD | Percent-age below −2 SD[2] | Mean z score (SD) | Number of children | Percent-age below −3 SD | Percent-age below −2 SD[2] | Percent-age above +2 SD | Mean z score (SD) | Number of children | Percent-age below −3 SD | Percent-age below −2 SD[2] | Mean z score (SD) | Number of children |
| **Age in months** | | | | | | | | | | | | | |
| <6 | 5.8 | 13.4 | -0.6 | 424 | 2.6 | 4.6 | 8.3 | 0.2 | 416 | 2.2 | 7.6 | -0.3 | 430 |
| 6–11 | 4.3 | 12.2 | -0.7 | 434 | 2.3 | 10.3 | 2.1 | -0.5 | 434 | 2.6 | 14.3 | -0.8 | 430 |
| 12–23 | 4.5 | 17.2 | -1.0 | 920 | 1.7 | 9.0 | 1.6 | -0.6 | 921 | 3.6 | 15.9 | -0.9 | 920 |
| 24–35 | 5.4 | 24.6 | -1.2 | 812 | 1.0 | 6.3 | 1.3 | -0.4 | 816 | 3.2 | 14.0 | -0.9 | 815 |
| 36–47 | 3.6 | 18.9 | -1.0 | 870 | 0.3 | 2.2 | 1.1 | -0.4 | 870 | 1.6 | 10.5 | -0.9 | 870 |
| 48–59 | 2.5 | 14.2 | -0.8 | 833 | 0.6 | 4.5 | 0.6 | -0.4 | 833 | 1.1 | 9.9 | -0.8 | 833 |
| | | | | | | | | | | | | | |
| 0–23 | 4.8 | 15.1 | -0.8 | 1,778 | 2.1 | 8.3 | 3.3 | -0.4 | 1,771 | 3.0 | 13.5 | -0.7 | 1,781 |
| 24–59 | 3.8 | 19.2 | -1.0 | 2,515 | 0.6 | 4.3 | 1.0 | -0.4 | 2,520 | 2.0 | 11.4 | -0.9 | 2,518 |
| **Sex** | | | | | | | | | | | | | |
| Male | 5.2 | 19.6 | -1.0 | 2,192 | 1.5 | 6.7 | 2.0 | -0.4 | 2,197 | 2.5 | 14.1 | -0.8 | 2,198 |
| Female | 3.2 | 15.3 | -0.9 | 2,101 | 0.9 | 5.2 | 1.9 | -0.4 | 2,094 | 2.3 | 10.4 | -0.8 | 2,100 |
| **Mother's interview status** | | | | | | | | | | | | | |
| Interviewed | 4.3 | 17.1 | -0.9 | 3,870 | 1.3 | 6.2 | 2.1 | -0.4 | 3,868 | 2.5 | 12.2 | -0.8 | 3,876 |
| Not interviewed, but in household | 1.7 | 21.4 | -1.1 | 76 | 0.7 | 3.1 | 0.3 | -0.3 | 76 | 1.5 | 12.2 | -0.8 | 76 |
| Not interviewed, not in household[3] | 3.1 | 21.1 | -1.0 | 347 | 0.7 | 3.6 | 0.3 | -0.3 | 346 | 1.8 | 13.1 | -0.8 | 347 |
| **Residence** | | | | | | | | | | | | | |
| Urban | 3.4 | 15.2 | -0.8 | 2,096 | 0.8 | 5.8 | 2.3 | -0.4 | 2,092 | 2.0 | 11.2 | -0.7 | 2,101 |
| Rural | 5.0 | 19.6 | -1.1 | 2,197 | 1.6 | 6.1 | 1.7 | -0.4 | 2,199 | 2.8 | 13.3 | -0.9 | 2,198 |
| **Region** | | | | | | | | | | | | | |
| Western | 3.1 | 13.5 | -0.9 | 262 | 0.0 | 5.3 | 2.1 | -0.4 | 264 | 1.2 | 9.9 | -0.8 | 264 |
| Central | 4.5 | 16.5 | -0.9 | 440 | 0.4 | 6.8 | 2.7 | -0.5 | 440 | 2.3 | 12.0 | -0.8 | 440 |
| Greater Accra | 1.6 | 12.0 | -0.7 | 528 | 0.8 | 4.7 | 1.8 | -0.3 | 525 | 1.0 | 8.5 | -0.5 | 530 |
| Volta | 1.8 | 14.4 | -0.9 | 165 | 1.2 | 7.4 | 2.5 | -0.5 | 165 | 1.8 | 13.1 | -0.8 | 165 |
| Eastern | 3.0 | 10.4 | -0.7 | 334 | 0.5 | 4.3 | 2.3 | -0.3 | 334 | 1.5 | 11.0 | -0.7 | 334 |
| Ashanti | 4.2 | 17.2 | -0.8 | 784 | 3.2 | 7.7 | 2.4 | -0.4 | 782 | 3.7 | 10.9 | -0.7 | 784 |
| Western north | 1.7 | 10.6 | -0.8 | 102 | 0.4 | 1.8 | 1.8 | -0.3 | 103 | 0.9 | 7.5 | -0.6 | 102 |
| Ahafo | 4.7 | 16.5 | -1.0 | 98 | 1.0 | 4.2 | 4.3 | -0.2 | 98 | 2.3 | 8.0 | -0.7 | 98 |
| Bono | 5.2 | 17.0 | -0.9 | 136 | 0.0 | 4.0 | 3.9 | -0.3 | 135 | 1.7 | 11.0 | -0.8 | 136 |
| Bono east | 2.6 | 13.9 | -0.8 | 208 | 0.2 | 5.1 | 0.9 | -0.4 | 207 | 0.6 | 11.1 | -0.7 | 208 |
| Oti | 3.3 | 20.3 | -1.2 | 134 | 0.7 | 7.3 | 0.3 | -0.5 | 134 | 3.0 | 15.5 | -1.0 | 134 |
| Northern | 8.8 | 29.6 | -1.4 | 477 | 1.5 | 7.8 | 0.7 | -0.6 | 480 | 3.7 | 19.9 | -1.2 | 477 |
| Savannah | 4.4 | 21.0 | -1.2 | 128 | 0.9 | 4.4 | 2.1 | -0.3 | 128 | 1.2 | 14.0 | -0.9 | 128 |
| North East | 8.8 | 29.3 | -1.4 | 148 | 1.9 | 6.8 | 0.8 | -0.5 | 148 | 4.7 | 20.4 | -1.2 | 148 |
| Upper East | 4.9 | 21.1 | -1.2 | 212 | 0.3 | 3.2 | 2.3 | -0.3 | 213 | 3.1 | 12.7 | -0.9 | 213 |
| Upper West | 2.7 | 16.5 | -1.0 | 137 | 2.0 | 6.4 | 1.2 | -0.4 | 137 | 3.6 | 11.4 | -0.8 | 137 |
| **Mother's education[4]** | | | | | | | | | | | | | |
| No education | 4.9 | 24.4 | -1.2 | 948 | 1.1 | 7.1 | 1.2 | -0.5 | 953 | 3.2 | 16.1 | -1.0 | 951 |
| Primary | 4.5 | 18.5 | -1.1 | 581 | 1.6 | 8.5 | 1.3 | -0.5 | 582 | 2.2 | 13.5 | -1.0 | 582 |
| Secondary | 4.4 | 15.4 | -0.9 | 2,058 | 1.4 | 5.2 | 2.4 | -0.4 | 2,054 | 2.6 | 11.0 | -0.8 | 2,060 |
| More than secondary | 1.5 | 5.7 | -0.4 | 359 | 0.3 | 5.5 | 3.8 | -0.2 | 355 | 0.3 | 6.5 | -0.3 | 359 |
| **Wealth quintile** | | | | | | | | | | | | | |
| Lowest | 6.1 | 23.5 | -1.3 | 1,010 | 1.6 | 5.9 | 1.4 | -0.4 | 1,011 | 3.2 | 14.9 | -1.0 | 1,002 |
| Second | 5.4 | 21.6 | -1.2 | 879 | 1.2 | 6.9 | 1.3 | -0.5 | 878 | 2.9 | 15.7 | -1.0 | 891 |
| Middle | 4.3 | 16.0 | -1.0 | 815 | 0.9 | 5.6 | 2.2 | -0.4 | 815 | 1.7 | 11.3 | -0.8 | 812 |
| Fourth | 2.8 | 16.5 | -0.8 | 841 | 1.6 | 6.4 | 1.9 | -0.5 | 840 | 2.9 | 12.2 | -0.8 | 835 |
| Highest | 1.7 | 7.3 | -0.4 | 748 | 0.7 | 4.7 | 3.3 | -0.2 | 746 | 0.9 | 5.9 | -0.4 | 758 |
| Total | 4.2 | 17.5 | -0.9 | 4,293 | 1.2 | 6.0 | 2.0 | -0.4 | 4,291 | 2.4 | 12.3 | -0.8 | 4,299 |

Note: Each of the indices is expressed in standard deviation units (SD) from the median of the WHO Child Growth Standards.
[1] Recumbent length is measured for children under age 2; standing height is measured for all other children.
[2] Includes children who are below -3 SD from the WHO Growth Standards population median
[3] Includes children whose mothers are deceased
[4] For women who are not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire.

**Trends:** A comparison of anthropometric measurements from previous GDHS surveys shows that the prevalence of stunting has declined from 33% in 1993 to 18% in 2022 (**Figure 6**). The percentage of children who are wasted has followed a similar trend.

### 3.12 INFANT AND YOUNG CHILD FEEDING

Optimal infant and young child feeding (IYCF) practices are critical to the health and survival of young children. Recommended IYCF practices include early initiation of breastfeeding within the first hour of life, exclusively breastfeeding for the first 6 months of life, and feeding children a diet that meets a minimum diversity (WHO and UNICEF 2021).

*Figure 6* **Trends in nutritional status of children**

*Percentage of children under age 5 who are malnourished*
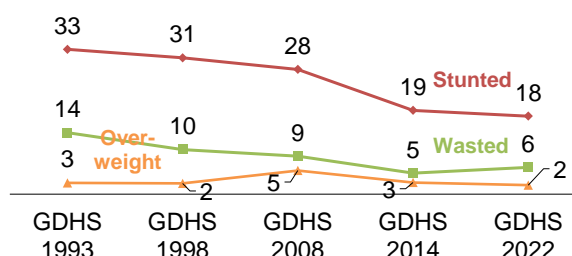


**Early initiation of breastfeeding**
Percentage of children born in the last 2 years who were put to the breast within 1 hour of birth.
*Sample:* Children born in the last 2 years

**Exclusive breastfeeding under 6 months**
Percentage of children age 0–5 months who are fed exclusively with breast milk during the previous day.
*Sample:* Youngest children age 0–5 months living with the mother

**Minimum dietary diversity 6–23 months**
Percentage of children age 6–23 months who are fed a minimum of 5 out of 8 defined food groups during the previous day. The 8 food groups are: breast milk; grains, roots, and tubers; legumes and nuts; dairy products (milk yogurt, cheese); flesh foods (meat, fish, poultry, and organ meat); eggs; vitamin A-rich fruits and vegetables; and other fruits and vegetables.
*Sample:* Youngest children age 6–23 months living with the mother

Key IYCF indicators are presented in **Table 13**.

- Overall, 58% of children age 0–23 months engaged in early initiation of breastfeeding.

- Forty-one percent of children age 6–23 months met the minimum dietary diversity requirement.

- Fifty-three percent of children under 6 months were exclusively breastfeed.

**Table 13  Infant and young child feeding (IYCF) indicators**

Percentage of children fed according to various IYCF practices, Ghana DHS 2022

| Indicator | Value |
|---|---|
| **Indicator numerator and denominator** | |
| Percentage of children born in the last 2 years who were put to the breast within 1 hour of birth[1] | 58.2 |
| Number of children born in the last 2 years | 3,638 |
| Percentage of children age 0–5 months who were fed exclusively with breastmilk during the previous day | 53.1 |
| Number of youngest children age 0–5 months living with the mother | 826 |
| Percentage of children age 6–23 months who were fed foods and beverages from at least 5 out of 8 defined food groups during the previous day | 41.4 |
| Number of youngest children age 6–23 months living with the mother | 2,562 |
| Percentage of children age 6–23 months who were given a sweet beverage during the previous day | 31.6 |
| Number of youngest children age 6–23 months living with the mother | 2,562 |
| Percentage of children age 6–23 months fed unhealthy foods during the previous day | 32.9 |
| Number of youngest children age 6–23 months living with the mother | 2,562 |

[1] Includes children born in the 2 years preceding the survey regardless of whether children are living or dead

Unhealthy infant and young child feeding practices should be avoided because they can promote unhealthy weight gain and replace nutritious foods that provide important nutrients for children. For infants and young children, the consumption of sweet foods and beverages increases the risk of dental caries and childhood obesity. The indicator definition below for unhealthy food consumption describes sentinel unhealthy foods—foods that are high in sugar, salt, or unhealthy fats—that are commonly consumed by infants and young children (WHO and UNICEF 2021).

> **Sweet beverage consumption 6–23 months**
> Percentage of children age 6–23 months who are given a sweet beverage during the previous day.
> **Unhealthy food consumption 6–23 months**
> Percentage of children age 6–23 months who are fed sentinel unhealthy foods during the previous day.
> *Sample:* Youngest children age 6–23 months living with the mother

- Thirty-two percent of children age 6–23 months were fed a sweet beverage.

- Thirty-three percent of children age 6–23 months consumed unhealthy foods.

**Trends:** Exclusive breastfeeding among children age 0−5 months rose from 2% in 1988 to a peak of 63% in 2008, then declined to 52% in 2014, and increased slightly to 53% in 2022 (**Figure 7**).

*Figure 7* **Trends in exclusive breastfeeding**

*Percentage of children age 0–5 months*
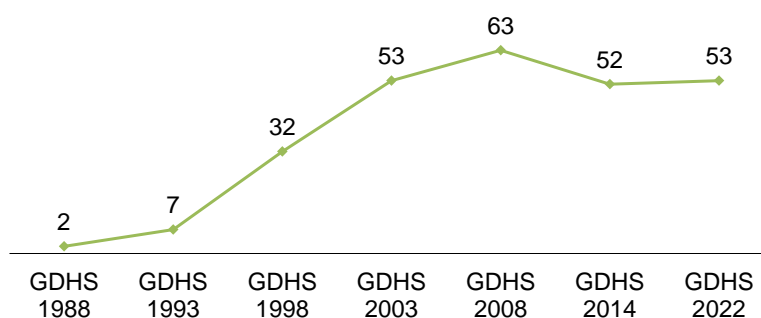


## 3.13    ANAEMIA

### 3.13.1  Prevalence of Anaemia in Children

Anaemia is a condition marked by low levels of haemoglobin in the blood. Causes of anaemia include iron deficiency and other nutritional deficiencies, malaria, infection with hookworm or other helminths, chronic infections, and genetic conditions such as sickle cell disease. Anaemia is a serious concern for children because it can impair cognitive development and is associated with long-term health problems. Severe anaemia leads to increased mortality (Chaparro and Suchdev 2019).

**Anaemia in children**

| Anaemia status | Haemoglobin level in grams/decilitre* |
|---|---|
| Anaemic | <11.0 |
|   Mildly anaemic | 10.0–10.9 |
|   Moderately anaemic | 7.0–9.9 |
|   Severely anaemic | <7.0 |
| Not anaemic | ≥11.0 |

\* Haemoglobin levels are adjusted for altitude in enumeration areas above 1,000 meters.

***Sample:*** Children age 6–59 months

Of the 4,522 children age 6–59 months eligible for anaemia testing in the survey, 97% were tested.

▪ Overall, 49% of children age 6–59 months are anaemic, including 28% who are mildly anaemic, 20% who are moderately anaemic, and 1% who are severely anaemic (**Table 14**).

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**Table 14  Prevalence of anaemia in children**

Percentage of children age 6–59 months classified as having anaemia, according to background characteristics, Ghana DHS 2022

| Background characteristic | Anaemia status by haemoglobin level | | | | Number of children age 6–59 months |
| | Any (<11.0 g/dl) | Mild (10.0–10.9 g/dl) | Moderate (7.0–9.9 g/dl) | Severe (<7.0 g/dl) | |
|---|---|---|---|---|---|
| **Age in months** | | | | | |
| 6–11 | 60.5 | 34.2 | 26.2 | 0.0 | 422 |
| 12–23 | 60.0 | 28.7 | 29.7 | 1.7 | 918 |
| 24–35 | 48.9 | 29.6 | 18.2 | 1.1 | 811 |
| 36–47 | 44.0 | 26.4 | 17.1 | 0.5 | 860 |
| 48–59 | 35.9 | 23.6 | 12.0 | 0.2 | 826 |
| | | | | | |
| 6–23 | 60.2 | 30.4 | 28.6 | 1.2 | 1,340 |
| 24–59 | 42.9 | 26.5 | 15.8 | 0.6 | 2,497 |
| **Sex** | | | | | |
| Male | 51.7 | 29.1 | 21.8 | 0.7 | 1,947 |
| Female | 46.2 | 26.6 | 18.7 | 0.9 | 1,889 |
| **Residence** | | | | | |
| Urban | 41.4 | 26.0 | 14.9 | 0.5 | 1,881 |
| Rural | 56.2 | 29.7 | 25.4 | 1.1 | 1,956 |
| **Region** | | | | | |
| Western | 46.1 | 28.5 | 16.5 | 1.1 | 241 |
| Central | 44.7 | 27.9 | 16.4 | 0.3 | 397 |
| Greater Accra | 36.2 | 24.2 | 11.5 | 0.6 | 462 |
| Volta | 51.3 | 32.8 | 17.6 | 0.9 | 154 |
| Eastern | 38.3 | 22.8 | 15.1 | 0.4 | 294 |
| Ashanti | 40.6 | 27.9 | 12.7 | 0.0 | 705 |
| Western north | 45.1 | 33.5 | 11.6 | 0.0 | 90 |
| Ahafo | 35.4 | 25.2 | 9.8 | 0.4 | 87 |
| Bono | 40.1 | 23.1 | 17.0 | 0.0 | 124 |
| Bono east | 51.4 | 27.1 | 23.7 | 0.7 | 185 |
| Oti | 60.6 | 35.2 | 25.4 | 0.0 | 119 |
| Northern | 69.4 | 32.2 | 35.0 | 2.2 | 430 |
| Savannah | 62.8 | 28.5 | 32.6 | 1.6 | 113 |
| North East | 64.9 | 28.0 | 34.7 | 2.2 | 130 |
| Upper East | 69.3 | 27.0 | 40.6 | 1.8 | 184 |
| Upper West | 61.2 | 29.0 | 30.5 | 1.7 | 122 |
| **Wealth quintile** | | | | | |
| Lowest | 64.1 | 29.8 | 32.8 | 1.6 | 900 |
| Second | 52.6 | 29.0 | 22.6 | 1.0 | 789 |
| Middle | 48.7 | 30.1 | 18.1 | 0.5 | 742 |
| Fourth | 42.7 | 27.0 | 15.0 | 0.6 | 730 |
| Highest | 31.2 | 22.4 | 8.7 | 0.1 | 676 |
| Total | 48.9 | 27.9 | 20.3 | 0.8 | 3,837 |

Note: The table is based on children who stayed in the household on the night before the interview and who were tested for anaemia. The prevalence of anaemia, based on haemoglobin levels, is adjusted for altitude using CDC formulas (CDC 1998) and cut-offs defined by WHO (WHO 2011). Haemoglobin is measured in grams per decilitre (g/dl) using the HemoCue 201+ device.

### 3.13.2  Prevalence of Anaemia in Women

Anaemia in adults can cause fatigue, lethargy, reduced physical productivity, and poor work performance (Chaparro and Suchdev 2019). Anaemia is a major concern among pregnant women because it can lead to increased maternal mortality and poor birth outcomes (Haider et al. 2013).

**Haemoglobin levels below which women are considered anaemic**

| Respondents | Haemoglobin level in grams/decilitre* |
|---|---|
| Non-pregnant women age 15–49 | Less than 12.0 |
| Pregnant women age 15–49 | Less than 11.0 |

\* Haemoglobin levels are adjusted for cigarette smoking and for altitude in enumeration areas above 1,000 meters.

*Sample:* Women age 15–49

Of the 7,676 women age 15–49 eligible for anaemia testing in the survey, 98% were tested.

As shown in **Table 15**, 41% of women are anaemic, include 23% who are mildly anaemic, 17% who are moderately anaemic, and 1% who are severely anaemic.

▪ Anaemia is more common in pregnant women (51%) women who are not pregnant (40%).

**Table 15  Prevalence of anaemia in women**

Percentage of women age 15–49 with anaemia, according to background characteristics, Ghana DHS 2022

| Background characteristic | Anaemia status by haemoglobin level | | | | Number of women |
|---|---|---|---|---|---|
| | Any (NP <12.0 g/dl / P <11.0 g/dl) | Mild (NP 11.0–11.9 g/dl / P 10.0–10.9 g/dl) | Moderate (NP 8.0–10.9 g/dl / P 7.0–9.9 g/dl) | Severe (NP <8.0 g/dl / P <7.0 g/dl) | |
| **Age** | | | | | |
| 5–19 | 43.8 | 22.6 | 19.7 | 1.6 | 1,365 |
| 20–29 | 39.2 | 22.7 | 16.2 | 0.3 | 2,564 |
| 30–39 | 38.9 | 22.1 | 15.7 | 1.2 | 2,205 |
| 40–49 | 45.0 | 23.3 | 19.5 | 2.2 | 1,521 |
| **Number of living children** | | | | | |
| 0 | 41.3 | 21.9 | 18.0 | 1.3 | 2,453 |
| 1 | 39.7 | 23.5 | 15.5 | 0.7 | 1,262 |
| 2–3 | 38.9 | 22.9 | 14.9 | 1.1 | 1,917 |
| 4–5 | 42.9 | 22.3 | 19.6 | 1.0 | 1,312 |
| 6+ | 46.0 | 23.5 | 20.8 | 1.8 | 711 |
| **Maternity status** | | | | | |
| Pregnant | 51.4 | 28.6 | 22.6 | 0.2 | 514 |
| Not pregnant[1] | 40.4 | 22.2 | 17.0 | 1.2 | 7,141 |
| **Residence** | | | | | |
| Urban | 39.4 | 22.4 | 15.5 | 1.5 | 4,377 |
| Rural | 43.4 | 23.0 | 19.8 | 0.7 | 3,278 |
| **Region** | | | | | |
| Western | 45.9 | 23.8 | 21.2 | 1.0 | 487 |
| Central | 44.4 | 23.6 | 19.5 | 1.2 | 894 |
| Greater Accra | 38.8 | 21.7 | 14.7 | 2.4 | 1,246 |
| Volta | 43.0 | 21.0 | 20.1 | 1.9 | 337 |
| Eastern | 37.5 | 22.9 | 13.2 | 1.5 | 630 |
| Ashanti | 37.5 | 22.0 | 14.7 | 0.8 | 1,486 |
| Western north | 36.3 | 20.0 | 15.8 | 0.5 | 189 |
| Ahafo | 35.6 | 22.0 | 13.3 | 0.3 | 160 |
| Bono | 30.1 | 17.8 | 11.9 | 0.4 | 297 |
| Bono east | 40.3 | 20.4 | 19.0 | 0.9 | 327 |
| Oti | 51.8 | 27.3 | 24.0 | 0.5 | 194 |
| Northern | 48.4 | 25.6 | 22.2 | 0.6 | 568 |
| Savannah | 43.2 | 24.6 | 17.9 | 0.6 | 169 |
| North East | 45.0 | 23.7 | 20.4 | 0.9 | 139 |
| Upper East | 47.0 | 23.5 | 22.9 | 0.6 | 331 |
| Upper West | 46.3 | 25.3 | 21.0 | 0.0 | 200 |
| **Education** | | | | | |
| No education | 45.4 | 22.3 | 21.7 | 1.5 | 1,214 |
| Primary | 42.6 | 22.8 | 18.9 | 0.9 | 1,072 |
| Secondary | 40.3 | 22.9 | 16.3 | 1.2 | 4,619 |
| More than secondary | 36.8 | 21.4 | 14.6 | 0.8 | 751 |
| **Wealth quintile** | | | | | |
| Lowest | 46.6 | 23.5 | 22.2 | 1.0 | 1,224 |
| Second | 41.5 | 22.9 | 17.6 | 1.0 | 1,366 |
| Middle | 40.0 | 20.9 | 18.0 | 1.2 | 1,563 |
| Fourth | 40.0 | 22.5 | 16.3 | 1.2 | 1,788 |
| Highest | 39.0 | 23.6 | 14.0 | 1.3 | 1,714 |
| Total | 41.1 | 22.6 | 17.3 | 1.1 | 7,655 |

Note: The prevalence of anaemia, based on haemoglobin levels, is adjusted for altitude and for cigarette smoking, if known, using the CDC formulas (CDC 1998) and cut-offs defined by WHO (WHO 2017). Haemoglobin is measured in grams per decilitre (g/dl) using the HemoCue 201+ device.
[1] Includes women who do not know if they are pregnant

## 3.14   MALARIA

### 3.14.1 Ownership and Use of Insecticide-Treated Nets

Insecticide-treated nets (ITNs) repel and kill mosquitoes, thus providing protection against mosquito bites and reducing the transmission of malaria parasites. When high coverage of ITNs is achieved, it helps to

decrease the risk of malaria at the individual level as well as at the community level, by reducing the overall vector population. The distribution and use of ITNs is one of the core interventions for preventing malaria infection in Ghana.

**Ownership of insecticide-treated nets**
Households that have at least one insecticide-treated net (ITN). An ITN is a factory-treated net that does not require any further treatment.
*Sample:* Households

**Full household ITN coverage**
Percentage of households with at least one ITN for every two people.
*Sample:* Households (with at least one person who stayed in the household the night before the survey)

**Table 16** presents information on household ownership of ITNs.

- A total of 67% of households in Ghana own at least one ITN.

- Forty-seven percent of households have full ITN coverage.

**Table 16  Household possession of insecticide-treated nets**

Percentage of households with at least one insecticide-treated net (ITN); average number of ITNs per household; and percentage of households with at least one ITN per two persons who stayed in the household last night, according to background characteristics, Ghana DHS 2022

| Background Characteristic | Percentage of households with at least one ITN[1] | Average number of ITNs[1] per household | Number of households | Percentage of households with at least one ITN[1] for every two persons who stayed in the household last night[2] | Number of households with at least one person who stayed in the household last night |
|---|---|---|---|---|---|
| **Residence** | | | | | |
| Urban | 58.2 | 1.3 | 10,320 | 41.5 | 10,256 |
| Rural | 78.1 | 2.0 | 7,613 | 55.4 | 7,562 |
| **Region** | | | | | |
| Western | 63.9 | 1.5 | 1,282 | 49.3 | 1,265 |
| Central | 67.3 | 1.7 | 1,950 | 49.0 | 1,929 |
| Greater Accra | 48.8 | 1.0 | 3,183 | 34.1 | 3,168 |
| Volta | 81.8 | 2.0 | 888 | 64.6 | 885 |
| Eastern | 70.2 | 1.6 | 1,701 | 53.3 | 1,698 |
| Ashanti | 66.0 | 1.6 | 3,469 | 48.7 | 3,429 |
| Western north | 77.0 | 1.9 | 521 | 58.6 | 517 |
| Ahafo | 79.8 | 2.1 | 388 | 61.5 | 384 |
| Bono | 72.6 | 1.7 | 668 | 52.2 | 666 |
| Bono east | 75.2 | 1.8 | 693 | 50.7 | 691 |
| Oti | 85.1 | 2.3 | 444 | 60.1 | 441 |
| Northern | 67.6 | 1.6 | 1,064 | 37.1 | 1,061 |
| Savannah | 79.1 | 2.2 | 316 | 51.0 | 315 |
| North East | 62.6 | 1.3 | 287 | 26.2 | 287 |
| Upper East | 79.5 | 2.0 | 654 | 54.2 | 653 |
| Upper West | 69.5 | 1.4 | 427 | 37.8 | 427 |
| **Wealth quintile** | | | | | |
| Lowest | 81.1 | 2.1 | 2,785 | 54.3 | 2,790 |
| Second | 79.0 | 2.0 | 3,158 | 55.4 | 3,130 |
| Middle | 68.7 | 1.6 | 3,746 | 49.4 | 3,739 |
| Fourth | 58.9 | 1.3 | 4,222 | 43.8 | 4,166 |
| Highest | 53.1 | 1.2 | 4,023 | 38.2 | 3,992 |
| Total | 66.6 | 1.6 | 17,933 | 47.4 | 17,818 |

[1] An insecticide-treated net (ITN) is a factory-treated net that does not require any further treatment. In the GDHS 2008, GDHS 2014, and GMIS 2016 this was known as a long-lasting insecticidal net (LLIN).
[2] De facto household members

**Trends:** The percentage of households that own at least one ITN increased from 47% in 2008 to 74% in 2019, before dropped to 67% in the 2022 (**Figure 8**).

ITNs act as both a physical and a chemical barrier against mosquitoes. By reducing the vector population, ITNs can help reduce malaria risk at the community level, as well as reduce the risk to the individuals who use them. **Table 17** shows the use of ITNs by children under age 5 and by pregnant women.

- Forty-nine percent of children under age 5 in all households slept under an ITN the night before the survey and 62% of children under age 5 in households that have at least one ITN slept under an ITN the night before the survey.

- Forty-eight percent of pregnant women age 15–49 in all households slept under an ITN the night before the survey and 59% of pregnant women age 15–49 in households that have at least 1 ITN slept under an ITN the night before the survey.

### Figure 8 Trends in household ownership of ITNs

*Percentage of households owning at least one insecticide-treated net (ITN)*
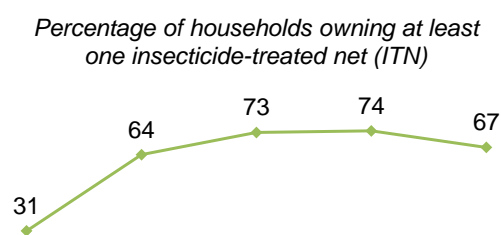


| GDHS 2008 | GDHS 2014 | GMIS 2016 | GMIS 2019 | GDHS 2022 |
|---|---|---|---|---|
| 31 | 64 | 73 | 74 | 67 |

Note: An insecticide-treated net (ITN) is a factory-treated net that does not require any further treatment. In the GDHS 2008, GDHS 2014, and GMIS 2016 this was known as a long-lasting insecticidal net (LLIN).

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**Table 17  Use of insecticide-treated nets by children and pregnant women**

Percentage of children under age 5 who slept under an insecticide-treated net (ITN) the night before the survey; among children under age 5 in households with at least one ITN, percentage who slept under an ITN the night before the survey; percentage of pregnant women age 15–49 who slept under an ITN the night before the survey; and among pregnant women age 15–49 in households with at least one ITN, percentage who slept under an ITN the night before the survey, according to background characteristics, Ghana DHS 2022

| Background characteristic | Children under age 5 in all households | | Children under age 5 in households with at least one ITN[1] | | Pregnant women age 15–49 in all households | | Pregnant women age 15–49 in households with at least one ITN[1] | |
|---|---|---|---|---|---|---|---|---|
| | Percentage who slept under an ITN[1] last night | Number of children | Percentage who slept under an ITN[1] last night | Number of children | Percentage who slept under an ITN[1] last night | Number of pregnant women | Percentage who slept under an ITN[1] last night | Number of pregnant women |
| **Residence** | | | | | | | | |
| Urban | 35.9 | 4,146 | 50.2 | 2,968 | 32.6 | 505 | 44.5 | 370 |
| Rural | 61.1 | 4,439 | 71.2 | 3,809 | 63.3 | 479 | 72.7 | 418 |
| **Region** | | | | | | | | |
| Western | 45.9 | 534 | 58.2 | 421 | 45.4 | 66 | (55.2) | 54 |
| Central | 48.9 | 903 | 61.3 | 720 | 48.2 | 101 | (59.4) | 82 |
| Greater Accra | 30.6 | 1,068 | 47.0 | 697 | 23.5 | 136 | (34.6) | 92 |
| Volta | 57.8 | 325 | 65.7 | 286 | 56.7 | 43 | (69.1) | 35 |
| Eastern | 44.7 | 639 | 53.3 | 536 | 47.6 | 91 | 52.0 | 84 |
| Ashanti | 44.5 | 1,523 | 55.5 | 1,221 | 36.9 | 163 | 47.3 | 127 |
| Western north | 58.4 | 228 | 69.1 | 193 | 54.4 | 26 | (66.5) | 21 |
| Ahafo | 68.3 | 188 | 78.2 | 164 | 71.7 | 20 | 80.9 | 17 |
| Bono | 59.5 | 282 | 68.2 | 246 | 56.1 | 37 | 61.8 | 33 |
| Bono east | 62.9 | 429 | 74.7 | 361 | 63.4 | 40 | 75.0 | 34 |
| Oti | 70.1 | 280 | 76.1 | 258 | 65.9 | 33 | 75.4 | 28 |
| Northern | 43.9 | 956 | 60.1 | 698 | 53.3 | 106 | 72.3 | 78 |
| Savannah | 63.5 | 257 | 76.8 | 213 | 69.4 | 30 | 81.3 | 26 |
| North East | 50.7 | 297 | 75.4 | 200 | 56.3 | 28 | 82.3 | 19 |
| Upper East | 63.1 | 424 | 74.6 | 359 | 66.4 | 41 | 75.9 | 36 |
| Upper West | 56.1 | 254 | 69.2 | 205 | 55.8 | 25 | 65.5 | 21 |
| **Wealth quintile** | | | | | | | | |
| Lowest | 66.5 | 2,055 | 78.5 | 1,736 | 70.2 | 195 | 83.7 | 162 |
| Second | 57.7 | 1,768 | 68.1 | 1,498 | 72.4 | 178 | 82.3 | 157 |
| Middle | 49.3 | 1,681 | 61.7 | 1,341 | 51.4 | 181 | 62.6 | 152 |
| Fourth | 36.9 | 1,594 | 50.5 | 1,164 | 31.4 | 249 | 41.5 | 183 |
| Highest | 27.2 | 1,491 | 39.0 | 1,039 | 17.2 | 181 | 23.9 | 133 |
| Total | 49.0 | 8,580 | 62.0 | 6,772 | 47.6 | 984 | 59.4 | 788 |

Note: Table is based on children and pregnant women who stayed in the household the night before the interview.
[1] An insecticide-treated net (ITN) is a factory-treated net that does not require any further treatment. In the GDHS 2008, GDHS 2014, and GMIS 2016 this was known as a long-lasting insecticidal net (LLIN).

### 3.14.2 Malaria in Pregnancy

**Intermittent preventive treatment (IPTp) during pregnancy**
Percentage of women who took at least 3 doses of SP/Fansidar during their last pregnancy.
*Sample:* Women age 15–49 with a live birth or a stillbirth in the 2 years before the survey

Malaria infection during pregnancy is a major public health problem in Ghana, with substantial risks for the mother, her foetus, and the neonate. Intermittent preventive treatment of malaria in pregnancy (IPTp) is a full therapeutic course of antimalarial medicine given to pregnant women at routine antenatal care visits to prevent malaria. IPTp helps prevent maternal malaria episodes, maternal and foetal anaemia, placental parasitaemia, low birth weight, and neonatal mortality.

▪ Overall, 60% of women age 15–49 with a live birth in the 2 years preceding the survey received three or more doses of IPTp (**Table 18**).

**Table 18 Use of intermittent preventive treatment (IPTp) by women during pregnancy**

Percentage of women age 15–49 with a live birth and/or a stillbirth in the 2 years preceding the survey who received one or more doses of SP/Fansidar, received two or more doses of SP/Fansidar, and received three or more doses of SP/Fansidar during the pregnancy that resulted in the last live birth or stillbirth, according to background characteristics, Ghana DHS 2022

| Background characteristic | Percentage who received one or more doses of SP/Fansidar | Percentage who received two or more doses of SP/Fansidar | Percentage who received three or more doses of SP/Fansidar | Number of women with a live birth and/or a stillbirth in the 2 years preceding the survey |
|---|---|---|---|---|
| LIVE BIRTHS | | | | |
| **Residence** | | | | |
| Urban | 90.0 | 78.7 | 62.8 | 1,623 |
| Rural | 90.0 | 76.4 | 58.0 | 1,868 |
| **Region** | | | | |
| Western | 90.0 | 82.2 | 61.9 | 208 |
| Central | 92.6 | 80.2 | 65.6 | 357 |
| Greater Accra | 87.7 | 79.8 | 64.8 | 410 |
| Volta | 92.6 | 88.5 | 70.7 | 130 |
| Eastern | 92.5 | 82.9 | 73.1 | 246 |
| Ashanti | 90.6 | 72.9 | 49.9 | 631 |
| Western north | 89.9 | 74.8 | 51.8 | 96 |
| Ahafo | 85.5 | 74.3 | 58.3 | 77 |
| Bono | 89.9 | 81.0 | 66.6 | 113 |
| Bono east | 91.1 | 77.2 | 65.1 | 191 |
| Oti | 91.0 | 72.0 | 51.9 | 123 |
| Northern | 84.4 | 64.3 | 44.4 | 395 |
| Savannah | 83.9 | 68.2 | 51.7 | 105 |
| North East | 90.5 | 79.1 | 60.0 | 112 |
| Upper East | 95.3 | 91.7 | 78.8 | 191 |
| Upper West | 95.4 | 90.8 | 77.9 | 105 |
| **Wealth quintile** | | | | |
| Lowest | 87.9 | 73.4 | 54.0 | 853 |
| Second | 89.7 | 76.4 | 55.5 | 723 |
| Middle | 91.1 | 77.3 | 62.1 | 705 |
| Fourth | 91.2 | 78.1 | 64.7 | 631 |
| Highest | 90.8 | 84.4 | 68.0 | 579 |
| Total | 90.0 | 77.5 | 60.2 | 3,491 |
| STILLBIRTHS | | | | |
| Total | 79.3 | 57.6 | 41.6 | 57 |
| LIVE BIRTHS AND STILLBIRTHS | | | | |
| Total | 89.9 | 77.3 | 60.0 | 3,534 |

Note: Stillbirths are foetal deaths in pregnancies lasting 28 or more weeks. When pregnancy duration is reported in months, stillbirths are foetal deaths in pregnancies lasting 7 or more months.
[1] For women who had both a live birth and a stillbirth in the 2 years preceding the survey, data are tabulated for the most recent birth only.

*3.14.3 Case Management of Malaria in Children*

**Careseeking for children under 5 with fever**

Percentage of children under 5 with a fever in the 2 weeks before the survey for whom advice or treatment was sought from a health provider, a health facility, or a pharmacy.

*Sample:* Children under age 5 with a fever in the 2 weeks before the survey

**Diagnosis of malaria in children under 5 with fever**

Percentage of children under 5 with a fever in the 2 weeks before the survey who had blood taken from a finger or heel for testing. This is a proxy measure of diagnostic testing for malaria.

*Sample:* Children under age 5 with a fever in the 2 weeks before the survey

**Artemisinin-based combination therapy (ACT) for children under 5 with fever**

Percentage of children under age 5 with a fever in the 2 weeks before the survey who took an ACT.

*Sample:* Children under age 5 with a fever in the 2 weeks before the survey who took any antimalarial drug

- Fifteen percent of children under age 5 had a fever in the 2 weeks before the survey.

- Among children with a fever, 66% were taken for advice or treatment and 40% had blood taken for testing.

- Among children with a fever who took any antimalarial drug, 76% of children took an ACT (**Table 19**).

Percentage of children under age 5 with fever in the 2 weeks preceding the survey; among children under age 5 with fever, percentage for whom advice or treatment was sought, percentage who had blood taken from a finger or heel; and among children under age 5 with fever who took any antimalarial drug, percentage who took any artemisinin-based combination therapy (ACT), according to background characteristics, Ghana DHS 2022

| | Children under age 5 | | Children under age 5 with fever | | | Children under age 5 with fever who took any antimalarial drug | |
|---|---|---|---|---|---|---|---|
| Background characteristic | Percentage with fever in the 2 weeks preceding the survey | Number of children | Percentage for whom advice or treatment was sought[1] | Percentage who had blood taken from a finger or heel for testing | Number of children | Percentage who took any ACT | Number of children |
| **Residence** | | | | | | | |
| Urban | 12.1 | 4,051 | 64.3 | 34.1 | 492 | 72.7 | 190 |
| Rural | 17.9 | 4,267 | 67.2 | 43.9 | 763 | 77.0 | 370 |
| **Region** | | | | | | | |
| Western | 12.3 | 515 | 70.7 | 37.3 | 63 | * | 25 |
| Central | 18.2 | 843 | 57.1 | 34.5 | 153 | (88.7) | 54 |
| Greater Accra | 8.7 | 1,057 | (55.2) | (12.0) | 92 | * | 21 |
| Volta | 14.6 | 313 | 79.0 | 54.6 | 46 | (75.9) | 25 |
| Eastern | 6.3 | 611 | (86.2) | (64.2) | 38 | * | 22 |
| Ashanti | 17.1 | 1,495 | 65.9 | 33.9 | 255 | (75.0) | 117 |
| Western north | 14.3 | 222 | 51.4 | 40.1 | 32 | * | 11 |
| Ahafo | 12.1 | 186 | 72.1 | 53.6 | 22 | (71.3) | 11 |
| Bono | 9.3 | 277 | (69.6) | (57.2) | 26 | (80.2) | 17 |
| Bono east | 13.6 | 437 | 58.8 | 53.4 | 59 | (86.9) | 32 |
| Oti | 27.2 | 276 | 76.8 | 35.9 | 75 | 73.0 | 40 |
| Northern | 21.5 | 924 | 62.5 | 33.0 | 199 | 77.5 | 76 |
| Savannah | 17.2 | 247 | 69.2 | 34.6 | 43 | 82.1 | 22 |
| North East | 22.1 | 267 | 71.9 | 63.0 | 59 | 67.5 | 39 |
| Upper East | 17.3 | 406 | 74.8 | 72.8 | 70 | 63.7 | 41 |
| Upper West | 8.5 | 243 | 76.2 | 57.1 | 21 | * | 7 |
| **Wealth quintile** | | | | | | | |
| Lowest | 20.7 | 1,967 | 62.7 | 42.8 | 407 | 76.4 | 185 |
| Second | 15.6 | 1,689 | 72.9 | 44.9 | 263 | 75.3 | 138 |
| Middle | 14.6 | 1,626 | 67.7 | 39.8 | 237 | 75.9 | 101 |
| Fourth | 12.7 | 1,582 | 57.6 | 30.9 | 202 | 83.1 | 80 |
| Highest | 10.0 | 1,456 | 72.2 | 36.8 | 146 | (89.0) | 56 |
| Total | 15.1 | 8,315 | 66.0 | 40.0 | 1,252 | 78.3 | 560 |

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Includes advice or treatment from the following sources: public sector, private medical sector, NGO medical sector, shop, market, and medicine peddler. Excludes advice or treatment from a traditional practitioner.

### 3.14.4  Malaria Prevalence in Children

Children age 6–59 months were eligible for malaria testing using a rapid diagnostic test (RDT), specifically, Abbott Bioline; 97% of eligible children were tested by microscopy and by RDT, respectively.

▪ By microscopy, the prevalence of malaria in children age 6–59 months is 9% (**Table 20**).

**Table 20  Prevalence of malaria in children**

Percentage of children age 6–59 months classified in two tests as having malaria, according to background characteristics, Ghana DHS 2022

| Background characteristic | Malaria prevalence according to RDT | | Malaria prevalence according to microscopy | |
|---|---|---|---|---|
| | RDT positive | Number of children | Microscopy positive | Number of children |
| **Residence** | | | | |
| Urban | 7.5 | 1,881 | 4.3 | 1,881 |
| Rural | 25.2 | 1,957 | 12.8 | 1,957 |
| **Region** | | | | |
| Western | 22.5 | 241 | 9.7 | 241 |
| Central | 16.1 | 397 | 9.6 | 397 |
| Greater Accra | 3.4 | 462 | 2.0 | 462 |
| Volta | 11.5 | 154 | 6.4 | 154 |
| Eastern | 14.8 | 294 | 6.7 | 294 |
| Ashanti | 11.1 | 705 | 7.5 | 705 |
| Western north | 11.4 | 91 | 4.4 | 91 |
| Ahafo | 21.4 | 87 | 11.8 | 87 |
| Bono | 15.1 | 124 | 9.9 | 124 |
| Bono east | 22.1 | 185 | 12.1 | 185 |
| Oti | 22.6 | 119 | 15.0 | 119 |
| Northern | 18.8 | 430 | 10.6 | 430 |
| Savannah | 26.6 | 113 | 12.1 | 113 |
| North East | 26.9 | 130 | 10.3 | 130 |
| Upper East | 33.6 | 184 | 12.2 | 184 |
| Upper West | 30.2 | 122 | 13.4 | 122 |
| **Wealth quintile** | | | | |
| Lowest | 31.6 | 910 | 16.3 | 901 |
| Second | 20.8 | 783 | 10.6 | 789 |
| Middle | 14.8 | 746 | 8.0 | 743 |
| Fourth | 7.9 | 734 | 4.7 | 730 |
| Highest | 2.2 | 665 | 0.8 | 676 |
| Total | 16.5 | 3,838 | 8.6 | 3,838 |

RDT = Rapid Diagnostic Test (Abbot Bioline)

## 3.15  HIV

### 3.15.1 Prevention Knowledge Among Young People

> **Knowledge about HIV prevention**
> Knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chance of contracting HIV, knowing that a healthy-looking person can have HIV, and rejecting two major misconceptions about HIV transmission: HIV can be transmitted by mosquito bites and a person can become infected by sharing food with a person who has HIV.
> *Sample:* Women and men age 15–24

Knowledge of how HIV is transmitted is crucial to enabling people to avoid HIV infection. This is especially true for young people, who are often at greater risk because they may have shorter relationships with more partners or engage in other risky behaviours.

- Overall, 79% of young women and 86% of young men know that consistent use of condoms can reduce the risk of getting HIV (**Table 21**).

- Eighty-one percent of young women and 85% of young men know that having just one uninfected partner can reduce the chance of getting HIV.

- Only 36% of young women and 37% of young men have a thorough knowledge of HIV prevention methods that includes, in addition to knowing about consistent use of condoms and limiting sexual intercourse to one uninfected partner, knowing that a healthy looking person can be infected with HIV, and rejecting the two most common misconceptions about transmission of HIV.

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**Table 21  Knowledge about HIV prevention methods among young people**

Percentage of young women and young men age 15–24 who, in response to prompted questions, say that people can reduce the risk of getting HIV by using condoms every time they have sexual intercourse, and by having one sex partner who is not infected and has no other partners, and percentage who correctly identify both ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission, according to background characteristics, Ghana DHS 2022

| Background characteristic | Women age 15–24 | | | | Men age 15–24 | | | |
|---|---|---|---|---|---|---|---|---|
| | Using condoms[1] | Limiting sexual intercourse to one uninfected partner[2] | Percentage with knowledge about HIV prevention[3] | Number of women | Using condoms[1] | Limiting sexual intercourse to one uninfected partner[2] | Percentage with knowledge about HIV prevention[3] | Number of men |
| **Age** | | | | | | | | |
| 15–19 | 74.6 | 78.5 | 30.4 | 2,682 | 82.1 | 80.3 | 31.2 | 1,424 |
| 15–17 | 72.3 | 75.1 | 28.6 | 1,729 | 80.0 | 75.9 | 28.5 | 915 |
| 18–19 | 78.9 | 84.7 | 33.5 | 953 | 85.9 | 88.1 | 36.2 | 510 |
| 20–24 | 82.4 | 84.1 | 42.0 | 2,695 | 90.1 | 90.9 | 45.1 | 1,033 |
| 20–22 | 81.4 | 84.3 | 41.2 | 1,624 | 89.6 | 90.0 | 43.8 | 640 |
| 23–24 | 84.0 | 83.8 | 43.3 | 1,071 | 91.0 | 92.5 | 47.2 | 394 |
| **Marital status** | | | | | | | | |
| Never married | 79.0 | 82.3 | 37.4 | 4,034 | 85.5 | 84.7 | 37.2 | 2,295 |
| Ever had sex | 83.0 | 86.0 | 40.4 | 2,025 | 89.7 | 89.9 | 41.9 | 1,083 |
| Never had sex | 75.0 | 78.5 | 34.4 | 2,010 | 81.8 | 80.1 | 33.0 | 1,212 |
| Ever married | 77.1 | 78.5 | 32.7 | 1,342 | 85.3 | 85.7 | 35.3 | 163 |
| **Residence** | | | | | | | | |
| Urban | 82.0 | 84.1 | 41.1 | 3,009 | 89.2 | 89.1 | 43.8 | 1,286 |
| Rural | 74.1 | 77.8 | 30.0 | 2,367 | 81.4 | 80.0 | 29.7 | 1,172 |
| **Region** | | | | | | | | |
| Western | 86.8 | 88.7 | 48.6 | 351 | 81.3 | 90.6 | 25.4 | 172 |
| Central | 85.5 | 82.9 | 38.1 | 675 | 80.3 | 75.6 | 31.7 | 316 |
| Greater Accra | 82.3 | 79.2 | 41.0 | 752 | 94.1 | 91.6 | 48.9 | 318 |
| Volta | 79.4 | 86.3 | 35.4 | 257 | 90.3 | 88.8 | 44.4 | 91 |
| Eastern | 76.0 | 83.6 | 46.7 | 398 | 94.4 | 98.5 | 38.3 | 189 |
| Ashanti | 84.8 | 92.9 | 44.2 | 1,039 | 94.7 | 93.5 | 48.4 | 524 |
| Western north | 86.4 | 92.9 | 31.6 | 141 | 80.0 | 79.6 | 37.7 | 73 |
| Ahafo | 87.2 | 88.1 | 29.2 | 118 | 87.6 | 92.6 | 39.3 | 47 |
| Bono | 77.0 | 82.0 | 34.0 | 214 | 83.0 | 83.1 | 32.1 | 85 |
| Bono east | 72.2 | 75.9 | 32.7 | 246 | 80.2 | 78.9 | 48.5 | 110 |
| Oti | 75.3 | 82.3 | 20.5 | 153 | 89.6 | 92.2 | 20.8 | 81 |
| Northern | 52.5 | 55.8 | 13.0 | 385 | 61.2 | 61.0 | 15.2 | 175 |
| Savannah | 52.7 | 63.6 | 15.6 | 124 | 62.7 | 63.1 | 18.7 | 62 |
| North East | 55.3 | 59.3 | 12.8 | 112 | 79.0 | 76.7 | 10.9 | 47 |
| Upper East | 81.4 | 72.2 | 35.5 | 251 | 84.5 | 77.2 | 41.7 | 109 |
| Upper West | 74.1 | 75.7 | 23.5 | 158 | 76.7 | 69.4 | 21.0 | 58 |
| **Education** | | | | | | | | |
| No education | 41.0 | 44.6 | 5.9 | 293 | 49.5 | 54.1 | 11.1 | 111 |
| Primary | 64.2 | 71.1 | 17.9 | 653 | 72.5 | 67.4 | 19.1 | 319 |
| Secondary | 83.0 | 84.9 | 39.4 | 4,118 | 89.1 | 89.0 | 39.3 | 1,835 |
| More than secondary | 85.1 | 89.5 | 60.3 | 313 | 93.3 | 90.9 | 60.0 | 194 |
| **Wealth quintile** | | | | | | | | |
| Lowest | 61.1 | 65.7 | 17.4 | 910 | 72.0 | 69.4 | 27.5 | 475 |
| Second | 75.3 | 80.1 | 27.5 | 1,059 | 84.5 | 83.0 | 29.2 | 501 |
| Middle | 84.4 | 84.7 | 38.3 | 1,227 | 89.1 | 87.9 | 35.1 | 515 |
| Fourth | 84.1 | 86.0 | 45.8 | 1,181 | 89.5 | 90.3 | 41.0 | 521 |
| Highest | 84.1 | 87.2 | 48.7 | 998 | 92.1 | 93.2 | 53.6 | 446 |
| Total 15–24 | 78.5 | 81.3 | 36.2 | 5,376 | 85.5 | 84.8 | 37.1 | 2,458 |

1 Using condoms every time they have sexual intercourse 2 Partner who has no other partners 3 Knowledge about HIV prevention means knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting HIV, knowing that a healthy-looking person can have HIV, and rejecting two common misconceptions about transmission or prevention of HIV: HIV can be transmitted by mosquito bites and a person can become infected by sharing food with a person who has HIV.

## 3.15.2 Sexual Behaviour

Information on sexual behaviour is important in designing and monitoring intervention programmes to control the spread of HIV.

- Among women age 15–49, 2% had two or more partners in the last 12 months, and among those who did, 12% reported using a condom during the last sexual intercourse (**Table 22.1**).

- Among women age 15–49, 23% had sexual intercourse with a person who was neither their husband nor lived with them, and among those who did, 11% reported using a condom during the last sexual intercourse with this person.

- Among women age 15–49 who ever had sexual intercourse, the mean number of lifetime sexual partners was 2.6.

- Among men age 15–49, 15% had two or more partners in the last 12 months, and among those who had two or more partners, 18% reported using a condom during the last sexual intercourse (**Table 22.2**).

- Among men age 15–49, 35% had sexual intercourse with a person who was neither their wife nor lived with them, and among those who did, 28% reported using a condom during the last sexual intercourse with this person.

- Among men age 15–49 who ever had sexual intercourse, the mean number of lifetime sexual partners was 7.0.

**Table 22.1 Multiple sexual partners and higher-risk sexual intercourse in the last 12 months: Women**

Among all women age 15–49, percentage who had sexual intercourse with more than one sexual partner in the last 12 months, and percentage who had intercourse in the last 12 months with a person who was neither their husband nor lived with them; among those having more than one partner in the last 12 months, percentage reporting that a condom was used during last intercourse; among women age 15–49 who had sexual intercourse in the last 12 months with a person who was neither their husband nor lived with them, percentage who used a condom during last sexual intercourse with such a partner; and among women who ever had sexual intercourse, mean number of sexual partners during their lifetime, according to background characteristics, Ghana DHS 2022

| Background characteristic | All women | | | Women who had 2+ partners in the last 12 months | | Women who had intercourse in the last 12 months with a person who was neither their husband nor lived with them | | Women who ever had sexual intercourse[1] | |
|---|---|---|---|---|---|---|---|---|---|
| | Percentage who had 2+ partners in the last 12 months | Percentage who had intercourse in the last 12 months with a person who was neither their husband nor lived with them | Number of women | Percentage who reported using a condom during last sexual intercourse | Number of women | Percentage who reported using a condom during last sexual intercourse with such a partner | Number of women | Mean number of sexual partners in lifetime | Number of women |
| **Age** | | | | | | | | | |
| 15–24 | 3.0 | 34.2 | 5,376 | 17.1 | 161 | 13.7 | 1,841 | 2.2 | 3,363 |
| 15–19 | 2.6 | 26.8 | 2,682 | 17.3 | 70 | 17.2 | 719 | 1.9 | 1,047 |
| 20–24 | 3.4 | 41.6 | 2,695 | 16.9 | 91 | 11.5 | 1,122 | 2.3 | 2,317 |
| 25–29 | 3.3 | 28.1 | 2,340 | 8.7 | 77 | 10.5 | 657 | 2.6 | 2,244 |
| 30–39 | 1.5 | 14.4 | 4,311 | 6.5 | 64 | 6.6 | 620 | 2.8 | 4,268 |
| 40–49 | 0.8 | 11.4 | 2,987 | * | 24 | 0.9 | 341 | 2.8 | 2,972 |
| **Marital status** | | | | | | | | | |
| Never married | 3.5 | 46.1 | 5,268 | 15.7 | 186 | 12.6 | 2,428 | 2.6 | 3,131 |
| Married/living together | 0.9 | 3.8 | 8,205 | 6.7 | 78 | 9.9 | 311 | 2.4 | 8,178 |
| Divorced/separated/widowed | 4.0 | 46.6 | 1,542 | 6.3 | 62 | 4.2 | 719 | 3.7 | 1,538 |
| **Residence** | | | | | | | | | |
| Urban | 2.2 | 25.2 | 8,557 | 14.3 | 185 | 11.7 | 2,159 | 2.8 | 7,179 |
| Rural | 2.2 | 20.1 | 6,457 | 8.4 | 141 | 8.7 | 1,300 | 2.4 | 5,669 |
| **Region** | | | | | | | | | |
| Western | 3.5 | 25.5 | 955 | (10.7) | 33 | 9.1 | 244 | 3.2 | 818 |
| Central | 4.8 | 28.3 | 1,703 | (13.3) | 82 | 11.4 | 482 | 3.3 | 1,445 |
| Greater Accra | 1.3 | 24.0 | 2,327 | * | 31 | 9.7 | 559 | 3.1 | 1,922 |
| Volta | 2.1 | 22.5 | 713 | * | 15 | 17.5 | 160 | 2.6 | 591 |
| Eastern | 1.2 | 25.5 | 1,220 | * | 15 | 10.0 | 311 | 2.9 | 1,034 |
| Ashanti | 1.7 | 27.3 | 2,928 | * | 48 | 8.1 | 800 | 2.7 | 2,539 |
| Western north | 2.0 | 26.4 | 411 | * | 8 | 10.7 | 108 | 2.7 | 366 |
| Ahafo | 3.1 | 22.4 | 317 | (10.0) | 10 | 8.8 | 71 | 2.6 | 278 |
| Bono | 2.8 | 28.1 | 567 | (5.3) | 16 | 8.8 | 159 | 2.6 | 476 |
| Bono east | 2.1 | 23.1 | 676 | * | 14 | 10.4 | 156 | 2.1 | 597 |
| Oti | 1.1 | 20.8 | 403 | * | 4 | 5.8 | 84 | 2.2 | 355 |
| Northern | 2.1 | 10.8 | 1,149 | * | 24 | 15.6 | 124 | 1.7 | 1,016 |
| Savannah | 0.9 | 12.8 | 319 | * | 3 | 10.0 | 41 | 1.7 | 279 |
| North East | 1.7 | 8.6 | 290 | * | 5 | 26.0 | 25 | 1.5 | 256 |
| Upper East | 1.6 | 13.2 | 640 | * | 10 | 26.6 | 84 | 1.7 | 544 |
| Upper West | 1.7 | 12.2 | 398 | * | 7 | 10.5 | 48 | 1.9 | 332 |
| **Education** | | | | | | | | | |
| No education | 1.0 | 6.9 | 2,411 | (5.8) | 25 | 6.4 | 165 | 1.9 | 2,356 |
| Primary | 2.8 | 21.5 | 2,071 | 3.5 | 58 | 4.2 | 446 | 2.8 | 1,833 |
| Secondary | 2.4 | 27.3 | 8,999 | 14.1 | 220 | 10.7 | 2,460 | 2.8 | 7,331 |
| More than secondary | 1.5 | 25.2 | 1,533 | * | 23 | 19.1 | 387 | 2.6 | 1,328 |
| **Wealth quintile** | | | | | | | | | |
| Lowest | 1.7 | 14.3 | 2,447 | 5.1 | 43 | 9.4 | 351 | 1.8 | 2,166 |
| Second | 2.2 | 23.4 | 2,712 | 9.1 | 61 | 5.5 | 634 | 2.4 | 2,357 |
| Middle | 2.4 | 27.8 | 3,121 | 11.2 | 75 | 11.3 | 871 | 2.8 | 2,704 |
| Fourth | 2.2 | 27.1 | 3,379 | 8.8 | 74 | 10.5 | 906 | 2.9 | 2,892 |
| Highest | 2.2 | 20.7 | 3,355 | 21.5 | 72 | 15.1 | 696 | 3.0 | 2,730 |
| Total | 2.2 | 23.0 | 15,014 | 11.8 | 326 | 10.6 | 3,458 | 2.6 | 12,848 |

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Means are calculated excluding respondents who gave non-numeric responses.

**Table 22.2  Multiple sexual partners and higher-risk sexual intercourse in the last 12 months: Men**

Among all men age 15–49, percentage who had sexual intercourse with more than one sexual partner in the last 12 months, and percentage who had intercourse in the last 12 months with a person who was neither their wife nor lived with them; among those having more than one partner in the last 12 months, percentage reporting that a condom was used during last intercourse; among men age 15–49 who had sexual intercourse in the last 12 months with a person who was neither their wife nor lived with them, percentage who used a condom during last sexual intercourse with such a partner; and among men who ever had sexual intercourse, mean number of sexual partners during their lifetime, according to background characteristics, Ghana DHS 2022

| Background characteristic | All men | | | Men who had 2+ partners in the last 12 months | | Men who had intercourse in the last 12 months with a person who was neither their wife nor lived with them | | Men who ever had sexual intercourse[1] | |
|---|---|---|---|---|---|---|---|---|---|
| | Percentage who had 2+ partners in the last 12 months | Percentage who had intercourse in the last 12 months with a person who was neither their wife nor lived with them | Number of men | Percentage who reported using a condom during last sexual intercourse | Number of men | Percentage who reported using a condom during last sexual intercourse with such a partner | Number of men | Mean number of sexual partners in lifetime | Number of men |
| **Age** | | | | | | | | | |
| 15–24 | 9.9 | 35.2 | 2,458 | 24.7 | 242 | 28.2 | 866 | 4.0 | 1,244 |
| 15–19 | 5.0 | 20.7 | 1,424 | 12.2 | 72 | 21.7 | 295 | 2.8 | 438 |
| 20–24 | 16.5 | 55.2 | 1,033 | 30.0 | 171 | 31.6 | 570 | 4.6 | 806 |
| 25–29 | 23.6 | 55.6 | 888 | 23.4 | 210 | 31.8 | 493 | 6.0 | 845 |
| 30–39 | 18.8 | 33.6 | 1,662 | 15.9 | 312 | 27.1 | 558 | 8.8 | 1,618 |
| 40–49 | 14.3 | 19.4 | 1,270 | 7.3 | 182 | 22.1 | 247 | 8.3 | 1,241 |
| **Marital status** | | | | | | | | | |
| Never married | 12.7 | 46.0 | 3,208 | 31.4 | 406 | 30.2 | 1,476 | 5.5 | 1,913 |
| Married/living together | 17.5 | 18.4 | 2,828 | 6.8 | 494 | 25.3 | 519 | 7.6 | 2,795 |
| Divorced/separated/widowed | 18.7 | 69.9 | 242 | (23.3) | 45 | 18.3 | 169 | 10.6 | 240 |
| **Type of union** | | | | | | | | | |
| In polygynous union | 46.8 | 15.1 | 242 | 5.3 | 113 | (32.4) | 37 | 7.7 | 240 |
| Not in polygynous union | 14.7 | 18.7 | 2,585 | 7.3 | 381 | 24.7 | 482 | 7.6 | 2,555 |
| Not currently in union | 13.1 | 47.7 | 3,449 | 30.5 | 452 | 28.9 | 1,645 | 6.1 | 2,153 |
| **Residence** | | | | | | | | | |
| Urban | 16.2 | 37.4 | 3,442 | 22.3 | 556 | 33.2 | 1,286 | 7.8 | 2,754 |
| Rural | 13.7 | 31.0 | 2,835 | 12.3 | 390 | 20.6 | 878 | 5.9 | 2,194 |
| **Region** | | | | | | | | | |
| Western | 19.2 | 41.2 | 414 | 23.1 | 79 | 30.5 | 171 | 8.0 | 331 |
| Central | 14.0 | 39.7 | 686 | 20.3 | 96 | 29.3 | 273 | 7.7 | 525 |
| Greater Accra | 20.5 | 38.5 | 1,076 | 23.9 | 221 | 39.9 | 414 | 10.3 | 895 |
| Volta | 19.4 | 41.6 | 235 | 24.1 | 46 | 38.0 | 98 | 6.8 | 187 |
| Eastern | 14.7 | 33.9 | 466 | (15.6) | 68 | 26.0 | 158 | 6.9 | 378 |
| Ashanti | 10.1 | 36.4 | 1,179 | (14.0) | 120 | 13.6 | 429 | 6.0 | 906 |
| Western north | 21.5 | 42.1 | 181 | 11.1 | 39 | 20.2 | 76 | 8.9 | 145 |
| Ahafo | 14.5 | 31.3 | 133 | 22.4 | 19 | 29.7 | 42 | 8.6 | 106 |
| Bono | 16.5 | 39.2 | 222 | 12.6 | 37 | 26.0 | 87 | 6.9 | 176 |
| Bono east | 13.6 | 33.7 | 316 | 21.1 | 43 | 26.0 | 106 | 4.4 | 262 |
| Oti | 10.8 | 35.1 | 187 | 4.3 | 20 | 16.4 | 65 | 6.1 | 152 |
| Northern | 13.6 | 19.1 | 484 | 8.6 | 66 | 22.8 | 93 | 4.5 | 374 |
| Savannah | 10.7 | 20.3 | 155 | 12.1 | 17 | 31.4 | 31 | 3.8 | 114 |
| North East | 19.3 | 19.2 | 119 | 9.7 | 23 | 38.8 | 23 | 3.2 | 89 |
| Upper East | 13.8 | 27.6 | 267 | 22.3 | 37 | 47.8 | 74 | 4.5 | 199 |
| Upper West | 10.0 | 15.5 | 155 | (8.9) | 15 | 38.3 | 24 | 3.5 | 110 |
| **Education** | | | | | | | | | |
| No education | 14.5 | 18.6 | 628 | 2.8 | 91 | 8.6 | 117 | 5.1 | 561 |
| Primary | 14.9 | 29.9 | 725 | 14.8 | 108 | 20.8 | 216 | 6.8 | 546 |
| Secondary | 15.1 | 36.1 | 3,990 | 17.6 | 604 | 25.6 | 1,440 | 7.3 | 2,993 |
| More than secondary | 15.4 | 41.8 | 935 | 32.7 | 144 | 47.1 | 391 | 7.1 | 849 |
| **Wealth quintile** | | | | | | | | | |
| Lowest | 13.5 | 22.9 | 1,089 | 11.6 | 149 | 19.8 | 253 | 5.3 | 800 |
| Second | 10.2 | 28.7 | 1,133 | 12.1 | 114 | 17.4 | 321 | 5.9 | 833 |
| Middle | 16.0 | 39.1 | 1,137 | 16.2 | 182 | 25.2 | 444 | 6.2 | 908 |
| Fourth | 19.7 | 41.3 | 1,466 | 19.5 | 290 | 28.2 | 609 | 8.1 | 1,232 |
| Highest | 14.6 | 37.1 | 1,453 | 25.9 | 212 | 40.4 | 537 | 8.2 | 1,175 |
| Total 15–49 | 15.1 | 34.5 | 6,277 | 18.2 | 946 | 28.1 | 2,164 | 7.0 | 4,948 |
| 50–59 | 13.5 | 16.5 | 767 | 8.6 | 104 | 16.2 | 127 | 10.1 | 751 |
| Total 15–59 | 14.9 | 32.5 | 7,044 | 17.2 | 1,050 | 27.4 | 2,291 | 7.4 | 5,699 |

Note: Figures in parentheses are based on 25–49 unweighted cases.
[1] Means are calculated excluding respondents who gave non-numeric responses.

## 3.15.3 Prior HIV Testing

HIV testing programmes diagnose people living with HIV so that they can be linked to care and access antiretroviral therapy (ART). Knowledge of HIV status helps HIV negative individuals reduce risk and remain negative.

- Overall, 57% of women and 26% of men age 15–49 have ever been tested for HIV (**Table 23.1** and **Table 23.2**, respectively). Nearly all of those who were ever tested received the test results.

- Only 15% percent of women and 7% of men age 15–49 were tested in the 12-month period preceding the survey and received the results of the last test they took.

**Table 23.1  Coverage of prior HIV testing: Women**

Percent distribution of women age 15–49 by HIV testing status and by whether they received the results of the last test, percentage of women ever tested, and percentage of women who were tested in the last 12 months and received the results of the last test, according to background characteristics, Ghana DHS 2022

| Background characteristic | Percent distribution of women by testing status and by whether they received the results of the last test | | | | Percent-age ever tested | Percent-age who have been tested for HIV in the last 12 months and received the results of the last test | Number of women |
| | Ever tested and received results | Ever tested, did not receive results | Never tested[1] | Total | | | |
|---|---|---|---|---|---|---|---|
| **Age** | | | | | | | |
| 15–24 | 27.8 | 2.4 | 69.8 | 100.0 | 30.2 | 10.5 | 5,376 |
| 15–19 | 10.7 | 1.6 | 87.7 | 100.0 | 12.3 | 4.2 | 2,682 |
| 20–24 | 44.7 | 3.2 | 52.0 | 100.0 | 48.0 | 16.8 | 2,695 |
| 25–29 | 67.7 | 4.7 | 27.6 | 100.0 | 72.4 | 25.5 | 2,340 |
| 30–39 | 73.1 | 4.1 | 22.8 | 100.0 | 77.2 | 19.1 | 4,311 |
| 40–49 | 61.7 | 4.0 | 34.3 | 100.0 | 65.7 | 9.1 | 2,987 |
| **Marital status** | | | | | | | |
| Never married | 27.7 | 1.9 | 70.4 | 100.0 | 29.6 | 9.7 | 5,268 |
| Ever had sex | 42.4 | 2.7 | 54.9 | 100.0 | 45.1 | 14.5 | 3,134 |
| Never had sex | 6.1 | 0.6 | 93.3 | 100.0 | 6.7 | 2.7 | 2,134 |
| Married or living together | 68.1 | 4.5 | 27.4 | 100.0 | 72.6 | 18.9 | 8,205 |
| Divorced/separated/widowed | 66.8 | 4.3 | 28.9 | 100.0 | 71.1 | 12.6 | 1,542 |
| **Residence** | | | | | | | |
| Urban | 57.9 | 2.7 | 39.4 | 100.0 | 60.6 | 15.7 | 8,557 |
| Rural | 48.3 | 4.7 | 47.0 | 100.0 | 53.0 | 14.2 | 6,457 |
| **Region** | | | | | | | |
| Western | 58.8 | 2.3 | 38.9 | 100.0 | 61.1 | 16.4 | 955 |
| Central | 53.1 | 4.3 | 42.6 | 100.0 | 57.4 | 16.0 | 1,703 |
| Greater Accra | 61.4 | 0.7 | 37.9 | 100.0 | 62.1 | 16.8 | 2,327 |
| Volta | 55.4 | 6.0 | 38.6 | 100.0 | 61.4 | 15.1 | 713 |
| Eastern | 64.3 | 1.9 | 33.8 | 100.0 | 66.2 | 17.6 | 1,220 |
| Ashanti | 59.7 | 3.2 | 37.1 | 100.0 | 62.9 | 16.4 | 2,928 |
| Western north | 56.1 | 2.4 | 41.5 | 100.0 | 58.5 | 14.3 | 411 |
| Ahafo | 44.4 | 13.0 | 42.6 | 100.0 | 57.4 | 13.3 | 317 |
| Bono | 52.3 | 2.2 | 45.5 | 100.0 | 54.5 | 15.8 | 567 |
| Bono east | 45.6 | 7.5 | 46.9 | 100.0 | 53.1 | 12.2 | 676 |
| Oti | 52.8 | 4.7 | 42.5 | 100.0 | 57.5 | 16.4 | 403 |
| Northern | 32.5 | 7.2 | 60.4 | 100.0 | 39.6 | 7.9 | 1,149 |
| Savannah | 26.6 | 4.6 | 68.7 | 100.0 | 31.3 | 6.0 | 319 |
| North East | 34.2 | 4.6 | 61.1 | 100.0 | 38.9 | 12.2 | 290 |
| Upper East | 49.9 | 1.5 | 48.5 | 100.0 | 51.5 | 15.7 | 640 |
| Upper West | 46.9 | 2.6 | 50.4 | 100.0 | 49.6 | 13.1 | 398 |
| **Education** | | | | | | | |
| No education | 41.9 | 5.3 | 52.8 | 100.0 | 47.2 | 7.9 | 2,411 |
| Primary | 53.6 | 4.0 | 42.4 | 100.0 | 57.6 | 14.3 | 2,071 |
| Secondary | 52.9 | 3.3 | 43.8 | 100.0 | 56.2 | 14.5 | 8,999 |
| More than secondary | 77.8 | 1.5 | 20.6 | 100.0 | 79.4 | 30.4 | 1,533 |
| **Wealth quintile** | | | | | | | |
| Lowest | 36.9 | 5.1 | 58.0 | 100.0 | 42.0 | 9.4 | 2,447 |
| Second | 46.8 | 5.3 | 47.9 | 100.0 | 52.1 | 11.5 | 2,712 |
| Middle | 53.0 | 3.9 | 43.0 | 100.0 | 57.0 | 13.4 | 3,121 |
| Fourth | 60.5 | 3.0 | 36.5 | 100.0 | 63.5 | 18.4 | 3,379 |
| Highest | 65.8 | 1.3 | 32.9 | 100.0 | 67.1 | 20.2 | 3,355 |
| Total | 53.8 | 3.6 | 42.6 | 100.0 | 57.4 | 15.0 | 15,014 |

[1] Includes respondents who have not heard of HIV or who refused to answer questions on testing

**Table 23.2 Coverage of prior HIV testing: Men**

Percent distribution of men age 15–49 by HIV testing status and by whether they received the results of the last test, percentage of men ever tested, and percentage of men who were tested in the last 12 months and received the results of the last test, according to background characteristics, Ghana DHS 2022

| Background characteristic | Percent distribution of men by testing status and by whether they received the results of the last test | | | | Percent-age ever tested | Percent-age who have been tested for HIV in the last 12 months and received the results of the last test | Number of men |
|---|---|---|---|---|---|---|---|
| | Ever tested and received results | Ever tested, did not receive results | Never tested[1] | Total | | | |
| **Age** | | | | | | | |
| 15–24 | 8.3 | 1.3 | 90.5 | 100.0 | 9.5 | 2.8 | 2,458 |
| 15–19 | 3.0 | 0.7 | 96.3 | 100.0 | 3.7 | 1.1 | 1,424 |
| 20–24 | 15.5 | 2.1 | 82.4 | 100.0 | 17.6 | 5.0 | 1,033 |
| 25–29 | 29.5 | 1.3 | 69.2 | 100.0 | 30.8 | 10.6 | 888 |
| 30–39 | 36.4 | 2.8 | 60.8 | 100.0 | 39.2 | 9.7 | 1,662 |
| 40–49 | 35.8 | 2.1 | 62.1 | 100.0 | 37.9 | 7.9 | 1,270 |
| **Marital status** | | | | | | | |
| Never married | 16.0 | 1.2 | 82.8 | 100.0 | 17.2 | 5.2 | 3,208 |
| Ever had sex | 24.2 | 1.4 | 74.4 | 100.0 | 25.6 | 7.8 | 1,922 |
| Never had sex | 3.7 | 1.0 | 95.3 | 100.0 | 4.7 | 1.5 | 1,286 |
| Married or living together | 33.3 | 2.6 | 64.0 | 100.0 | 36.0 | 8.5 | 2,828 |
| Divorced/separated/widowed | 29.0 | 0.8 | 70.2 | 100.0 | 29.8 | 6.2 | 242 |
| **Residence** | | | | | | | |
| Urban | 30.4 | 1.9 | 67.7 | 100.0 | 32.3 | 8.5 | 3,442 |
| Rural | 16.9 | 1.8 | 81.3 | 100.0 | 18.7 | 4.6 | 2,835 |
| **Region** | | | | | | | |
| Western | 25.9 | 2.4 | 71.7 | 100.0 | 28.3 | 9.7 | 414 |
| Central | 19.4 | 1.5 | 79.1 | 100.0 | 20.9 | 4.6 | 686 |
| Greater Accra | 37.1 | 2.1 | 60.9 | 100.0 | 39.1 | 9.1 | 1,076 |
| Volta | 30.9 | 1.4 | 67.7 | 100.0 | 32.3 | 9.4 | 235 |
| Eastern | 27.8 | 0.2 | 72.0 | 100.0 | 28.0 | 7.7 | 466 |
| Ashanti | 21.2 | 2.5 | 76.3 | 100.0 | 23.7 | 4.5 | 1,179 |
| Western north | 20.6 | 1.4 | 78.0 | 100.0 | 22.0 | 5.6 | 181 |
| Ahafo | 23.5 | 2.5 | 74.0 | 100.0 | 26.0 | 6.8 | 133 |
| Bono | 23.5 | 1.8 | 74.7 | 100.0 | 25.3 | 10.5 | 222 |
| Bono east | 19.8 | 1.0 | 79.2 | 100.0 | 20.8 | 9.2 | 316 |
| Oti | 20.3 | 0.8 | 78.9 | 100.0 | 21.1 | 5.8 | 187 |
| Northern | 13.4 | 2.0 | 84.7 | 100.0 | 15.3 | 3.1 | 484 |
| Savannah | 12.9 | 1.4 | 85.6 | 100.0 | 14.4 | 3.1 | 155 |
| North East | 12.6 | 1.0 | 86.5 | 100.0 | 13.5 | 5.0 | 119 |
| Upper East | 29.2 | 3.2 | 67.6 | 100.0 | 32.4 | 9.3 | 267 |
| Upper West | 22.0 | 2.6 | 75.4 | 100.0 | 24.6 | 5.3 | 155 |
| **Education** | | | | | | | |
| No education | 8.0 | 1.3 | 90.7 | 100.0 | 9.3 | 1.6 | 628 |
| Primary | 13.4 | 1.0 | 85.6 | 100.0 | 14.4 | 3.6 | 725 |
| Secondary | 20.9 | 2.0 | 77.0 | 100.0 | 23.0 | 5.3 | 3,990 |
| More than secondary | 58.1 | 2.1 | 39.8 | 100.0 | 60.2 | 18.7 | 935 |
| **Wealth quintile** | | | | | | | |
| Lowest | 10.1 | 1.5 | 88.5 | 100.0 | 11.5 | 2.0 | 1,089 |
| Second | 14.3 | 1.5 | 84.2 | 100.0 | 15.8 | 4.1 | 1,133 |
| Middle | 18.1 | 1.7 | 80.2 | 100.0 | 19.8 | 5.0 | 1,137 |
| Fourth | 26.4 | 2.8 | 70.8 | 100.0 | 29.2 | 7.2 | 1,466 |
| Highest | 45.6 | 1.6 | 52.9 | 100.0 | 47.1 | 13.3 | 1,453 |
| Total 15–49 | 24.3 | 1.9 | 73.8 | 100.0 | 26.2 | 6.7 | 6,277 |
| 50–59 | 31.4 | 1.8 | 66.8 | 100.0 | 33.2 | 7.2 | 767 |
| Total 15–59 | 25.1 | 1.9 | 73.1 | 100.0 | 26.9 | 6.8 | 7,044 |

[1] Includes respondents who have not heard of HIV or who refused to answer questions on testing

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