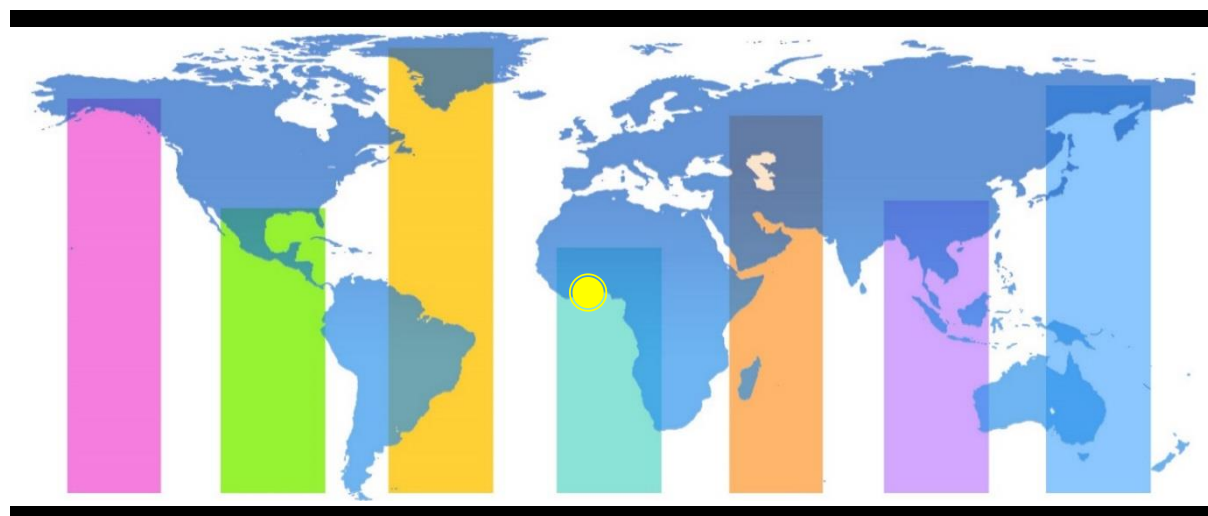


# Ghana

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**Demographic and  
Health Survey**

**2022**

**Key Indicators Report**





# Ghana Demographic and Health Survey 2022

## Key Indicators Report

Ghana Statistical Service  
Accra, Ghana

The DHS Program  
ICF  
Rockville, Maryland, USA

May 2023



The 2022 Ghana Demographic and Health Survey (2022 GDHS) was implemented by the Ghana Statistical Services (GSS). The funding for the GDHS was provided by the Government of Ghana, the United States Agency for International Development (USAID), the U.S. President's Malaria Initiative (PMI), 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. ICF provided technical assistance through The DHS Program, a USAID-funded project providing support and technical assistance in the implementation of population and health surveys in countries worldwide.

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## ACRONYMS AND ABBREVIATIONS

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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	<i>Haemophilus influenzae</i> 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

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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



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The Ghana Statistical Service (GSS) expresses its gratitude to the Ghana Health Service Ethical Review Committee for the ethical clearance that allowed the performance of the anaemia and malaria testing. The Service is also grateful to the Development Partners, including the United Nation Population Fund, World Health Organization, Foreign Commonwealth and Development Office, United Nations Children’s Fund, Korea International Cooperation Agency, Global Fund, United States Agency for International Development, and the Government of Ghana, for funding the survey. The Statistical Service is grateful to the Ministry of Health, the Ghana Health Service, and the National Malaria Control Programme for their valuable partnership and especially for providing artemisinin-based combination therapy (ACT) and for the personal protective equipment for COVID-19 used in both training and fieldwork. The GSS extends its appreciation to the National Public Health Reference Laboratory for its contribution during the training of field personnel, field supervision, and microscopy reading of the malaria slides to determine malaria parasite infections, and to the Noguchi Memorial Institute for Medical Research for conducting the external quality assurance. The Service appreciates the technical support provided by ICF through The Demographic and Health Survey Program throughout the survey period. We extend our appreciation to all who participated in this survey—the field officers and other survey personnel. We appreciate the co-operation of all respondents during the data collection.



# 1 INTRODUCTION

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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

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### 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.<sup>1</sup> 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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<sup>1</sup> 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<sup>2</sup>), 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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<sup>2</sup> 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 CPro. The CPro 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 practice 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%.

Result	Residence		
	Urban	Rural	Total
<b>Table 1 Results of the household and individual interviews</b>			
Number of households, number of interviews, and response rates, according to residence (unweighted), Ghana DHS 2022			
<b>Household interviews</b>			
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 <sup>1</sup>	99.2	99.4	99.3
<b>Interviews with women age 15–49</b>			
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 <sup>2</sup>	98.1	97.9	98.0
<b>Household interviews in subsample</b>			
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 <sup>1</sup>	99.1	99.4	99.2
<b>Interviews with men age 15–59</b>			
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 <sup>2</sup>	96.5	97.4	97.0
<sup>1</sup> Households interviewed/households occupied.			
<sup>2</sup> 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
<b>Age</b>						
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
<b>Self-reported health status</b>						
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
<b>Religion</b>						
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
<b>Ethnic group</b>						
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
<b>Marital status</b>						
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
<b>Residence</b>						
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
<b>Region</b>						
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
<b>Education</b>						
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
<b>Wealth quintile</b>						
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.

**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

Age group	Residence		Total
	Urban	Rural	
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

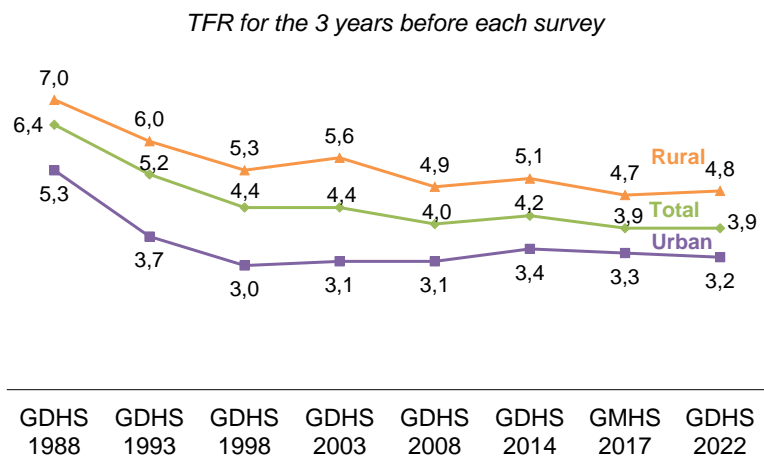
Note: Age-specific fertility rates are per 1,000 women. Estimates in brackets are truncated. Rates are for the period 1–36 months preceding the interview. Rates for the 10–14 age group are based on retrospective data from women age 15–17.

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**

### 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

Background characteristic	Percentage of women age 15–19 who:				Number of women
	Have ever had a live birth	Have ever had a pregnancy loss <sup>1</sup>	Are currently pregnant	Have ever been pregnant	
<b>Age</b>					
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
<b>Residence</b>					
Urban	8.0	4.2	1.1	11.4	1,458
Rural	14.4	3.5	2.8	19.7	1,223
<b>Region</b>					
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
<b>Education</b>					
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
<b>Wealth quintile</b>					
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.

<sup>1</sup> 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

Desire for children	Number of living children <sup>1</sup>							Total
	0	1	2	3	4	5	6+	
Have another soon <sup>2</sup>	76.5	39.7	33.2	22.9	17.2	13.3	10.7	27.2
Have another later <sup>3</sup>	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 <sup>4</sup>	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

<sup>1</sup> The number of living children includes a woman's current pregnancy.

<sup>2</sup> Wants next birth within 2 years

<sup>3</sup> Wants to delay next birth for 2 or more years

<sup>4</sup> 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	Modern method													Traditional method			Not currently using	Total	Number of women	
	Any method	Any modern method	Female sterilisation	Male sterilisation	IUD	Injectables	Implants	Pill	Male condom	Emergency contraception	SDM	LAM	Other	Any traditional method	Rhythm	Withdrawal				Other
<b>CURRENTLY MARRIED WOMEN</b>																				
<b>Number of living children</b>																				
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
<b>Age</b>																				
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
<b>Residence</b>																				
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
<b>Region</b>																				
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
<b>Education</b>																				
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...)

**Table 6—Continued**

Background characteristic	Modern method													Traditional method				Total	Number of women	
	Any method	Any modern method	Female sterilisation	Male sterilisation	IUD	Injectables	Implants	Pill	Male condom	Emergency contraception	SDM	LAM	Other	Any traditional method	Rhythm	Withdrawal	Other			Not currently using
<b>Wealth quintile</b>																				
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
<b>SEXUALLY ACTIVE UNMARRIED WOMEN<sup>1</sup></b>																				
<b>Residence</b>																				
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

<sup>1</sup> 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

<b>Unmet need for family planning</b>	
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.	
<b>Met need for family planning</b>	
Current contraceptive use (any method).	
<b>Sample:</b> Currently married women age 15–49 and sexually active unmarried women age 15–49	
<b>Demand for family planning:</b>	Unmet need for family planning + met need (current contraceptive use (any method))
<b>Proportion of demand satisfied:</b>	$\frac{\text{Current contraceptive use (any method)}}{\text{Unmet need + current contraceptive use (any method)}}$
<b>Proportion of demand satisfied by modern methods:</b>	$\frac{\text{Current contraceptive use (any modern method)}}{\text{Unmet need + current contraceptive use (any method)}}$

**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 <sup>3</sup>	Number of women	Percentage of demand satisfied <sup>1</sup>	
		All methods	Modern methods <sup>2</sup>			All methods	Modern methods <sup>2</sup>
<b>CURRENTLY MARRIED WOMEN</b>							
<b>Age</b>							
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
<b>Residence</b>							
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
<b>Region</b>							
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
<b>Education</b>							
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
<b>Wealth quintile</b>							
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
<b>SEXUALLY ACTIVE UNMARRIED WOMEN<sup>4</sup></b>							
<b>Residence</b>							
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).

<sup>1</sup> Percentage of demand satisfied is met need divided by total demand.

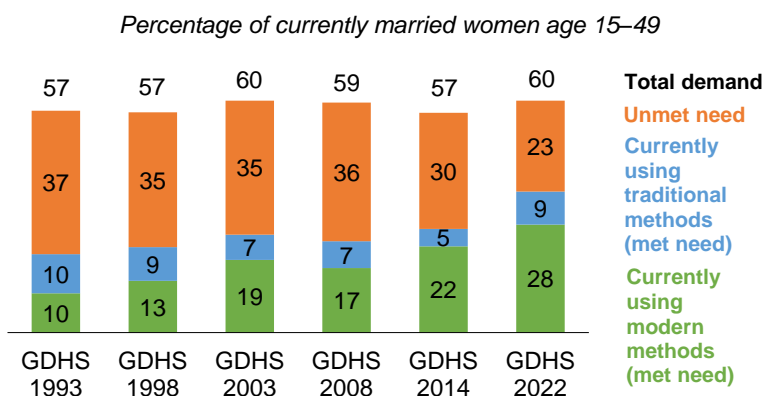
<sup>2</sup> Modern methods include female sterilisation, male sterilisation, IUD, injectables, implants, pill, male condom, female condom, emergency contraception, standard days method (SDM), lactational amenorrhoea method (LAM) and other modern methods.

<sup>3</sup> Total demand is the sum of unmet need and met need.

<sup>4</sup> 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**



### 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**

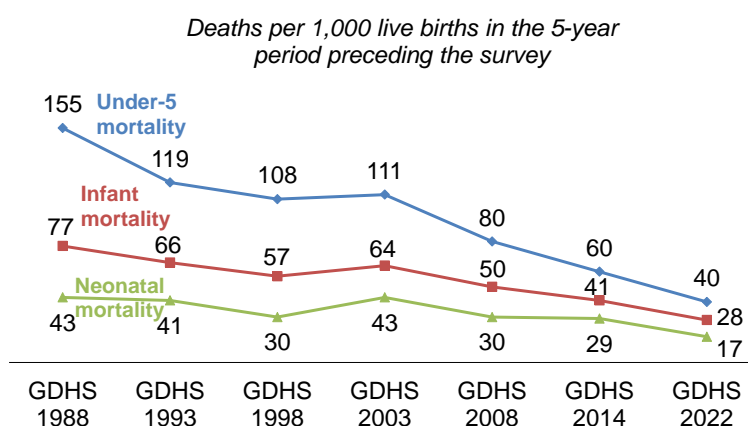
Neonatal, post-neonatal, infant, child, and under-5 mortality rates for 5-year periods preceding the survey, Ghana DHS 2022

	Neonatal mortality (NN)	Post-neonatal mortality (PNN) <sup>1</sup>	Infant mortality ( <sub>1</sub> q <sub>0</sub> )	Child mortality ( <sub>4</sub> q <sub>1</sub> )	Under-5 mortality ( <sub>5</sub> q <sub>0</sub> )
<b>Years preceding the survey</b>					
0–4	17	11	28	12	40
5–9	20	11	32	16	47
10–14	27	11	38	16	53

<sup>1</sup> 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.

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



### 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.

**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	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 <sup>1</sup>	Percentage with 4+ ANC visits	Percentage who took any iron-containing supplements during pregnancy <sup>2</sup>	Percentage whose most recent live birth was protected against neonatal tetanus <sup>3</sup>	Number of women	Percentage delivered by a skilled provider <sup>1</sup>	Percentage delivered in a health facility	Number of births	Percentage of women with a postnatal check during the first 2 days after birth <sup>4</sup>	Number of women
<b>LIVE BIRTHS</b>										
<b>Mother's age at birth</b>										
<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
<b>Residence</b>										
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
<b>Region</b>										
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
<b>Mother's education</b>										
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...)

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	
	Percent- age receiving antenatal care from a skilled provider <sup>1</sup>	Percent- age with 4+ ANC visits	Percent- age who took any iron- containing supplements during pregnancy <sup>2</sup>	Percent- age whose most recent live birth was protected against neonatal tetanus <sup>3</sup>	Number of women	Percent- age delivered by a skilled provider <sup>1</sup>	Percent- age delivered in a health facility	Number of births	Percent- age of women with a postnatal check during the first 2 days after birth <sup>4</sup>	Number of women
LIVE BIRTHS										
<b>Wealth quintile</b>										
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 <sup>5</sup>										
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

<sup>1</sup> Skilled provider includes doctor, midwife/nurse (CHN/CHO/EN/PHN/GN).

<sup>2</sup> Iron tablets and iron syrup

<sup>3</sup> 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.

<sup>4</sup> Includes women who received a check from a doctor, midwife, nurse, community health worker, or traditional birth attendant.

<sup>5</sup> 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)

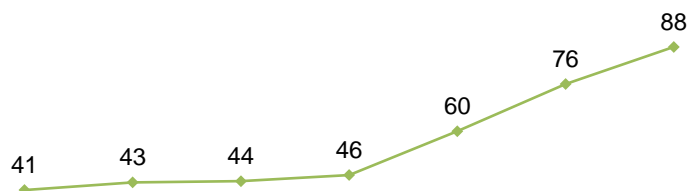
**Sample:** All live births and/or stillbirths in the 2 years before the survey

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	GDHS	GDHS	GDHS	GDHS	GDHS	GDHS
1988	1993	1998	2003	2008	2014	2022

**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**).



### 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)

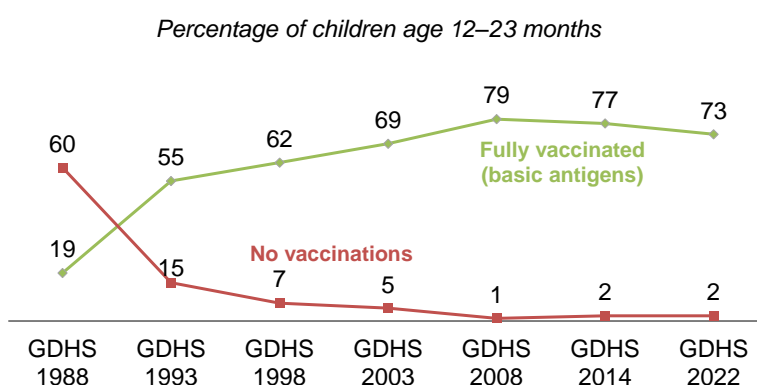
**Sample:** Children age 12–23 months

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 DTP-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**



### 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	DPT-HepB-Hib			OPV <sup>2</sup>			Pneumococcal			Rotavirus			Children age 24–35 months:												
	BCG	HepB (birth dose) <sup>1</sup>		0 (birth dose)			IPV			1	2	3	1	2	MR 1	Yellow fever	Fully vaccinated (basic anti-gens) <sup>3</sup>	Fully vaccinated (according to national schedule) <sup>4</sup>	No vaccinations	Number of children	MR 2	Menin-gitis	Fully vaccinated (according to national schedule) <sup>5</sup>	Number of children	
<b>Sex</b>																									
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
<b>Birth order</b>																									
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
<b>Vaccination card<sup>6</sup></b>																									
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
<b>Residence</b>																									
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
<b>Region</b>																									
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	89.4	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	DPT-HepB-Hib			OPV <sup>2</sup>			Pneumococcal			Rotavirus			Children age 24–35 months:														
	BCG	HepB (birth dose) <sup>1</sup>		1	2	3	0 (birth dose)	1	2	3	IPV	1	2	3	1	2	MR 1	Yellow fever	Fully vaccinated (basic anti-gens) <sup>3</sup>	Fully vaccinated (ac-cording to national sched-ule) <sup>4</sup>	No vaccina-tions	Num-ber of children	MR 2	Menin-gitis	Fully vaccinat-ed (ac-cording to national sched-ule) <sup>5</sup>	Num-ber of children	
<b>Education</b>																											
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		
<b>Wealth quintile</b>																											
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

<sup>1</sup> Children are considered to have received HepB (birth dose) if it was recorded on their card or reported by their mother, regardless of timing.

<sup>2</sup> OPV 0 is the polio vaccination given at birth.

<sup>3</sup> 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

<sup>4</sup> 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

<sup>5</sup> 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

<sup>6</sup> 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 <sup>1</sup>		Children with fever		Children with diarrhoea					
	Percentage for whom advice or treatment was sought <sup>2</sup>	Number of children	Percentage for whom advice or treatment was sought <sup>2</sup>	Number of children	Percentage for whom advice or treatment was sought <sup>2</sup>	Percentage given fluid from ORS packet or pre-packaged	Percentage given zinc	Percentage given ORS and zinc	Percentage given ORS, zinc, and continued feeding <sup>3</sup>	Number of children
<b>Age in months</b>										
<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
<b>Sex</b>										
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
<b>Residence</b>										
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
<b>Region</b>										
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
<b>Mother's education</b>										
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
<b>Wealth quintile</b>										
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
<b>Total</b>	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.

<sup>1</sup> Symptoms of ARI include short, rapid breathing which was chest-related and/or difficult breathing which was chest-related.

<sup>2</sup> 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

<sup>3</sup> 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 <sup>1</sup>				Weight-for-height				Weight-for-age				
	Percent-age below -3 SD	Percent-age below -2 SD <sup>2</sup>	Mean z score (SD)	Number of children	Percent-age below -3 SD	Percent-age below -2 SD <sup>2</sup>	Percent-age above +2 SD	Mean z score (SD)	Number of children	Percent-age below -3 SD	Percent-age below -2 SD <sup>2</sup>	Mean z score (SD)	Number of children
<b>Age in months</b>													
<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
<b>Sex</b>													
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
<b>Mother's interview status</b>													
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 <sup>3</sup>	3.1	21.1	-1.0	347	0.7	3.6	0.3	-0.3	346	1.8	13.1	-0.8	347
<b>Residence</b>													
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
<b>Region</b>													
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
<b>Mother's education<sup>4</sup></b>													
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
<b>Wealth quintile</b>													
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.

<sup>1</sup> Recumbent length is measured for children under age 2; standing height is measured for all other children.

<sup>2</sup> Includes children who are below -3 SD from the WHO Growth Standards population median

<sup>3</sup> Includes children whose mothers are deceased

<sup>4</sup> For women who are not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire.

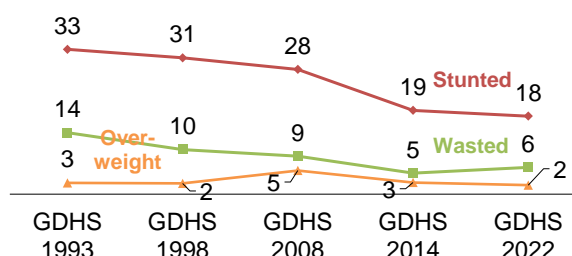
**Trends:** A comparison of anthropometric measurements from previous GDHS surveys shows that the prevalence of stunting has declined from 33% in 1993 to 18% in 2022 (**Figure 6**). The percentage of children who are wasted has followed a similar trend.

### 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 breastfed.



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

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

Indicator	Value
<b>Indicator numerator and denominator</b>	
Percentage of children born in the last 2 years who were put to the breast within 1 hour of birth <sup>1</sup>	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

<sup>1</sup> 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.

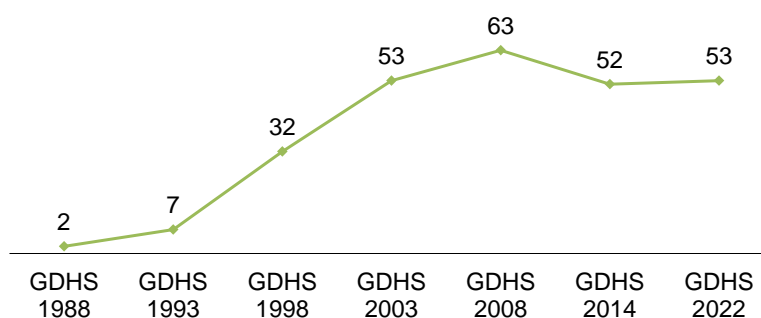
**Sample:** Youngest children age 6–23 months living with the mother

- 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**).

**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)	
<b>Age in months</b>					
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
<b>Sex</b>					
Male	51.7	29.1	21.8	0.7	1,947
Female	46.2	26.6	18.7	0.9	1,889
<b>Residence</b>					
Urban	41.4	26.0	14.9	0.5	1,881
Rural	56.2	29.7	25.4	1.1	1,956
<b>Region</b>					
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
<b>Wealth quintile</b>					
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)	
<b>Age</b>					
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
<b>Number of living children</b>					
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
<b>Maternity status</b>					
Pregnant	51.4	28.6	22.6	0.2	514
Not pregnant <sup>1</sup>	40.4	22.2	17.0	1.2	7,141
<b>Residence</b>					
Urban	39.4	22.4	15.5	1.5	4,377
Rural	43.4	23.0	19.8	0.7	3,278
<b>Region</b>					
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
<b>Education</b>					
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
<b>Wealth quintile</b>					
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
<b>Total</b>	<b>41.1</b>	<b>22.6</b>	<b>17.3</b>	<b>1.1</b>	<b>7,655</b>

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.

<sup>1</sup> 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.

<b>Table 16 Household possession of insecticide-treated nets</b>					
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 <sup>1</sup>	Average number of ITNs <sup>1</sup> per household	Number of households	Percentage of households with at least one ITN <sup>1</sup> for every two persons who stayed in the household last night <sup>2</sup>	Number of households with at least one person who stayed in the household last night
<b>Residence</b>					
Urban	58.2	1.3	10,320	41.5	10,256
Rural	78.1	2.0	7,613	55.4	7,562
<b>Region</b>					
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
<b>Wealth quintile</b>					
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

<sup>1</sup> 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).

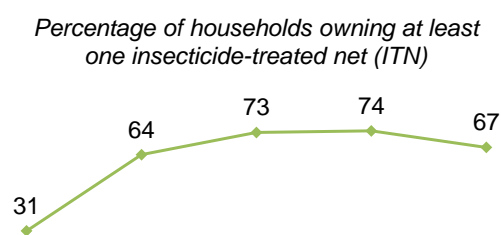
<sup>2</sup> De facto household members

**Trends:** The percentage of households that own at least one ITN increased from 47% in 2008 to 74% in 2019, before dropping 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**



GDHS 2008	GDHS 2014	GMIS 2016	GMIS 2019	GDHS 2022
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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).

**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 <sup>1</sup>		Pregnant women age 15–49 in all households		Pregnant women age 15–49 in households with at least one ITN <sup>1</sup>	
	Percentage who slept under an ITN <sup>1</sup> last night	Number of children	Percentage who slept under an ITN <sup>1</sup> last night	Number of children	Percentage who slept under an ITN <sup>1</sup> last night	Number of pregnant women	Percentage who slept under an ITN <sup>1</sup> last night	Number of pregnant women
<b>Residence</b>								
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
<b>Region</b>								
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
<b>Wealth quintile</b>								
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
<b>Total</b>	<b>49.0</b>	<b>8,580</b>	<b>62.0</b>	<b>6,772</b>	<b>47.6</b>	<b>984</b>	<b>59.4</b>	<b>788</b>

Note: Table is based on children and pregnant women who stayed in the household the night before the interview.

<sup>1</sup> 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
<b>LIVE BIRTHS</b>				
<b>Residence</b>				
Urban	90.0	78.7	62.8	1,623
Rural	90.0	76.4	58.0	1,868
<b>Region</b>				
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
<b>Wealth quintile</b>				
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
<b>Total</b>	<b>90.0</b>	<b>77.5</b>	<b>60.2</b>	<b>3,491</b>
<b>STILLBIRTHS</b>				
<b>Total</b>	<b>79.3</b>	<b>57.6</b>	<b>41.6</b>	<b>57</b>
<b>LIVE BIRTHS AND STILLBIRTHS</b>				
<b>Total</b>	<b>89.9</b>	<b>77.3</b>	<b>60.0</b>	<b>3,534</b>

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.

<sup>1</sup> 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**).



**Table 19 Children with fever and careseeking, diagnosis, and treatment of fever**

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

Background characteristic	Children under age 5		Children under age 5 with fever			Children under age 5 with fever who took any antimalarial drug	
	Percentage with fever in the 2 weeks preceding the survey	Number of children	Percentage for whom advice or treatment was sought <sup>1</sup>	Percentage who had blood taken from a finger or heel for testing	Number of children	Percentage who took any ACT	Number of children
<b>Residence</b>							
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
<b>Region</b>							
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
<b>Wealth quintile</b>							
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
<b>Total</b>	<b>15.1</b>	<b>8,315</b>	<b>66.0</b>	<b>40.0</b>	<b>1,252</b>	<b>78.3</b>	<b>560</b>

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.

<sup>1</sup> 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
<b>Residence</b>				
Urban	7.5	1,881	4.3	1,881
Rural	25.2	1,957	12.8	1,957
<b>Region</b>				
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
<b>Wealth quintile</b>				
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.

**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 <sup>1</sup>	Limiting sexual intercourse to one uninfected partner <sup>2</sup>	Percentage with knowledge about HIV prevention <sup>3</sup>	Number of women	Using condoms <sup>1</sup>	Limiting sexual intercourse to one uninfected partner <sup>2</sup>	Percentage with knowledge about HIV prevention <sup>3</sup>	Number of men
<b>Age</b>								
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
<b>Marital status</b>								
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
<b>Residence</b>								
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
<b>Region</b>								
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
<b>Education</b>								
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
<b>Wealth quintile</b>								
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
<b>Total 15–24</b>	<b>78.5</b>	<b>81.3</b>	<b>36.2</b>	<b>5,376</b>	<b>85.5</b>	<b>84.8</b>	<b>37.1</b>	<b>2,458</b>

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 <sup>1</sup>		
	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
<b>Age</b>									
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
<b>Marital status</b>									
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
<b>Residence</b>									
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
<b>Region</b>									
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
<b>Education</b>									
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
<b>Wealth quintile</b>									
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
<b>Total</b>	<b>2.2</b>	<b>23.0</b>	<b>15,014</b>	<b>11.8</b>	<b>326</b>	<b>10.6</b>	<b>3,458</b>	<b>2.6</b>	<b>12,848</b>

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.

<sup>1</sup> 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 <sup>1</sup>	
	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
<b>Age</b>									
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
<b>Marital status</b>									
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
<b>Type of union</b>									
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
<b>Residence</b>									
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
<b>Region</b>									
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
<b>Education</b>									
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
<b>Wealth quintile</b>									
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.

<sup>1</sup> 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			Total	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 <sup>1</sup>				
<b>Age</b>							
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
<b>Marital status</b>							
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
<b>Residence</b>							
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
<b>Region</b>							
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
<b>Education</b>							
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
<b>Wealth quintile</b>							
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

<sup>1</sup> 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			Total	Percentage ever tested	Percentage 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 <sup>1</sup>				
<b>Age</b>							
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
<b>Marital status</b>							
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
<b>Residence</b>							
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
<b>Region</b>							
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
<b>Education</b>							
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
<b>Wealth quintile</b>							
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

<sup>1</sup> Includes respondents who have not heard of HIV or who refused to answer questions on testing



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