Methodology and Quality Report for Healthcare Establishments and Workforce Statistics

V-3.2

Quality Management

Table of Contents

1. Contact

1.1.	Contact organization	General Authority for Statistics
1.2.	Contact organization unit	Health and Education Statistics Department
1.3.	Contact person function	Director of Health and Education Statistics Department
1.4.	Contact mail address	P.O. Box: 3735 Riyadh, 11481 Kingdom of Saudi Arabia
1.5.	Contact email address	info@stats.gov.sa
1.6.	Contact phone number	199009

2. Methodology and Quality Update

2.1.	Latest Update on Methodology and Quality	20/02/2025

3. Statistical Presentation

3.1.   Data description

It presents statistics on healthcare establishments and workforce, providing data on healthcare establishments and workforce in the Kingdom of Saudi Arabia.

Healthcare Establishments and Workforce Statistics is a report conducted to collect data on the following key characteristics:

- Healthcare establishments and their distribution in the Kingdom of Saudi Arabia.

- Healthcare workforce and their distribution in the Kingdom of Saudi Arabia.

Data is also used to estimates:

- Number of hospitals in the Kingdom of Saudi Arabia by administrative region and sector.
- Number of hospital beds by administrative region and sector.
- Hospital beds in the public sector by administrative region and specialty.
- Hospital beds in the private sector by administrative region and specialty.
- Number of hospitals per 10,000 population.
- Number of hospital beds per 1,000 population.
- Number of hospital beds per 10,000 population.
- Number of Medical doctors by sex and nationality.
- Number of Dentists by sex and nationality.
- Number of Nurses by sex and nationality.
- Number of Midwife by sex and nationality
- Number of Pharmacists by sex and nationality.
- Number of Allied health professionals by sex and nationality.
- Number of Medical doctors (per 10,000 population) by sex and nationality for the year 2023.
- Number of Dentists (per 10,000 population) by sex and nationality for the year 2023.
- Number of Number of Nurses (per 10,000 population) by sex and nationality for 2023.
- Number of Nurses and midwives (per 10,000 population) by sex and nationality for 2023.
- Number of Midwives (per 10,000 population) by sex and nationality for 2023.
- Number of Pharmacists (per 10,000 population) by sex and nationality for 2023.
- Number of Allied health professionals (per 10,000 population) by sex and nationality for the year 2023.

3.2. Classification system

The following classifications are applied in the healthcare establishments and workforce statistics:

Saudi Standard Classification of Occupations(ISCO_08):

A statistical classification based on the International Classification (ISCO_08) that provides a system for the classification and compilation of professional information obtained through censuses, statistical surveys, and administrative records.

This classification is used in healthcare establishments and workforce statistics to classify workers based on their professions.

Saudi Classification of Specializations and Educational Levels:

An statistical classification based on the International Standard Classification of Education (ISCED_11) and (ISCED_13) for education and training, issued by the United Nations Educational, Scientific and Cultural Organization (UNESCO). It serves as the reference classification for organizing educational programs and qualifications according to their levels and fields of study. It comprehensively covers all educational programs, levels, and methods, spanning from early childhood education to higher education levels.

This classification is used in Healthcare Establishments and Workforce Statistics to classify individuals 15 years and older according to their majors and education levels.

National Code of Countries and Nationalities (3166 ISO – codes Country):

A statistical classification based on the international standard (ISO 3166_Country codes), which is a standard issued by the International Organization for Standardization (ISO of the UN), and this classification gives numeric and literal codes for the world's (248) countries, based on the classification of countries.

The classification is used in Healthcare Establishments and Workforce Statistics to classify Saudi or non-Saudi individuals .

The classifications are available on the GASTAT's website: www.stats.gov.sa

3.3. Sector coverage

Healthcare establishments and workforce statistics cover the following main healthcare sectors:

- Government.
- Private.

3.4. Statistical concepts and definitions

Terminologies and concepts for healthcare establishments and workforce statistics:
- Healthcare establishments:

Governmental or private healthcare facilities that provide healthcare services, including: (Hospital, primary healthcare centers, general medical complex, specialized medical complex, clinic, radiology center, medical laboratory, day surgery center, auxiliary health service center, and emergency medical transport service centers)

- Hospital:

It is a medical facility that provides comprehensive treatment and healthcare services around the clock. The hospital includes different departments such as emergency, intensive care, surgery, and other specialized departments.

- Hospitals and primary health care centers:

They are medical facilities that provide primary health services to the community, such as routine checkups, immunizations, and basic health care. They focus on prevention and treatment of minor illnesses.

- General Medical Complex:

It is a place where doctors of different specialties gather to provide a variety of health services to the patients, such as examinations and specialized treatment. It differs from a hospital in that it does not deal with emergencies.

- Specialized Medical Complex:

It is a complex that includes doctors and specialists in a particular field such as orthopedics or dermatology. It provides specialized treatment services not provided by public facilities.

- Clinic:

It is a small medical facility that provides treatment and medical care for minor illnesses and daily complaints. It may be an individual clinic, a medical complex or a hospital.

- Radiology Center:

It is a specialized facility for conducting medical examinations using radiological techniques such as X-ray, Magnetic Resonance Imaging (MRI), and Computed Tomography (CT).

- Medical Laboratory:

It is a place where laboratory tests and medical examinations are conducted, such as blood tests, urine tests, and other analyses that assist in diagnosing diseases.

- Same-Day Surgery Center:

It is a medical facility that provides minor surgical services where patients can undergo surgery and return home on the same day without the need for hospital admission.

- Supportive Health Services Center:

It is a center that provides auxiliary services to support primary healthcare, such as physical therapy, psychological care, or home care.

- Ambulance Transport Service Centers:

They are services that provide the transportation of patients or injured individuals to hospitals or medical centers via ambulances, often catering to emergency cases.

- Health Workforce:

It is a group of individuals specialized in providing health services and medical care, including a wide range of professions and roles working in various healthcare fields. The goal of this workforce is to maintain the health of the community, prevent diseases, and provide treatment.

The health workforce includes a variety of professions, such as:

- Doctors:

General practitioners and specialists who diagnose and treat diseases.

- Nurses:

They are responsible for providing nursing care to patients, such as monitoring health conditions, administering medications, and assisting patients in their recovery.

- Midwives:

A midwife is a person who has successfully completed a midwifery education program based on the essential competencies for midwifery practice and the international education standards set by the International Confederation of Midwives (ICM). The program is recognized in the country of qualification. A midwife has obtained the necessary licensing and classification from the Saudi Commission for Health Specialties (SCFHS) and has demonstrated competency in midwifery practice.

- Pharmacists:

They specialize in dispensing medications, checking for drug interactions, and providing advice on how to use them.

3.5.   Statistical unit

The statistical units in healthcare establishments and workforce statistics are the facility and the individual.

3.6.   Statistical population

The statistical population for healthcare establishment and workforce statistics consists of healthcare establishments and the healthcare workforce in the Kingdom of Saudi Arabia.

3.7.   Reference area

The healthcare establishment and workforce statistics publication cover 13 administrative regions in Saudi Arabia.

3.8. Time coverage
Data are available from 2023.
3.9. Base period
Not applicable.

4. Unit of measure

Most results are measured by numbers (such as: The number of healthcare workforce and the number of healthcare establishments)

5. Reference period

References period to the variables or dataset as following: Data from administrative records are based on the last day of each calendar year.

6. Confidentiality

6.1. Confidentiality - policy
According to the Royal Decree No. 23 dated 07-12-1397, data must always be kept confidential and must be used by GASTAT only for statistical purposes. Therefore, the data are protected in the data servers of the Authority.

6.2.	Confidentiality - data treatment

Data were displayed in appropriate tables to facilitate its summarization, comprehension, and results extraction. Also, to compare data with other data and extract statistical meanings for the study community. It is also easier to check tables without the need to see any sensitive or confidential data, which violates data confidentiality of statistical data.

7. Release policy

7.1.	Release calendar

Healthcare establishments and workforce statistics are included in the statistical calendar.

7.2.	Release calendar access

The release calendar is available at: https://www.stats.gov.sa/statistical-calendar-releases

7.3.	User access

One of GASTAT's objectives is to better meet its clients' needs, so it immediately provides them with the publication's results once the Healthcare establishments and workforce statistics publication is published.

It also receives questions and inquiries of the clients about the Publication and its results through various communication channels, such as:

- GASTAT official website: www.stats.gov.sa
- GASTAT official e-mail address: info@stats.gov.sa
- Client support e-mail: info@stats.gov.sa
- Official visits to GASTAT's official head office in Riyadh or one of its branches in Saudi Arabia.
- Official letters.
- Statistical telephone: (199009).

8. Frequency of dissemination

Annual.

9. Accessibility and clarity

9.1. News release

The announcements of each publication are available on release calendar as mentioned in 7.2. Release calendar access. The news release can be viewed on the website of GASTAT through the following link:

https://www.stats.gov.sa/en/news

9.2. Publications

GASTAT issues the healthcare establishments and workforce statistics regularly, following a pre-prepared dissemination plan, and publishes them on GASTAT's website. GASTAT is keen to publish its publications in a way that serves all users of different types, including publications in different formats that contain (publication tables, data graphs, indicators, metadata, methodology, and questionnaires) in both English and Arabic.

The results of GASTAT issues the healthcare establishments and workforce statistics regularly, following a pre-prepared dissemination plan, and publishes them on GASTAT's website. are available on:

https://www.stats.gov.sa/statistics

9.3. On-line database

Not available.

9.4. Micro-data access

Not available.

9.5. Other

Not available.

9.6. Documentation on methodology

Terminologies and concepts for healthcare establishments and workforce statistics:

The concepts, definitions, issues and classifications are based on international standards

- SDG 3. C.1
- physicians
- Midwives
- Nurses
- Dentists
- Pharmacists
- Hospital
- Hospital Beds

9.7. Quality documentation

Quality documentation covers documentation on methods and standards for assessing, measuring, and monitoring the quality of statistical process and output. It is based on standard quality criteria such as relevance, accuracy and reliability, timeliness and punctuality, accessibility and clarity, comparability, and coherence.

10. Quality management

10.1. Quality assurance

GASTAT declares that it considers the following principles: impartiality, user orientated, quality of processes and output, effectiveness of statistical processes, reducing the workload for respondents.

Quality controls and validation of data are actions carried out throughout the process in different stages such as the data input and data collection and other final controls.

10.2. Quality assessment

GASTAT performs all statistical activities according to a national model (Generic Statistical Business Process Model – GSBPM). According to the GSBPM, the final phase of statistical activities is overall evaluation using information gathered in each phase or sub-process. This information is used to prepare the evaluation report which outlines all the quality issues related to the specific statistical activity and serves as input for improvement actions.

11. Relevance

11.1. User needs

Internal users at the General Authority for healthcare establishments and workforce statistics data:

- Health and education statistics.
- Services statistics.

Some several external users and beneficiaries who greatly rely on healthcare establishments and workforce statistics data, including:

- Government entities.
- Regional and international organizations.
- Research institutions.
- Media.

- Individuals.

The disseminated key variables used by external users:

Ministry of Health	Survey variables and indicators.	

11.2. User satisfaction

Not available.

11.3. Completeness

The data for healthcare establishments and workforce statistics is based on two main sources to provide comprehensive information about healthcare establishments and the workforce, which are:

- Population estimates.
- From the record data.

Data status is complete.

12. Accuracy and reliability

12.1. Overall accuracy

- The data collected is improved through the researchers, that have been selected according to a set of practical and objective criteria and training program related to the field of work.
- Alert, prevention, and correction rules are applied during the data collection process on the electronic questionnaire for the Construction Cost Index Survey to improve data quality.
- Data is checked with previous years to identify any significant changes in the data.
- The internal consistency of the data is checked before it is finalized.
- The links between variables are checked and coherence between different data series is confirmed.

13. Timeliness and punctuality

13.1. Timeliness

The General Authority for Statistics is committed to applying internationally recognized standards regarding the announcement, clarification of the time of publishing statistics on its official website, as outlined in the statistical calendar, as well as adhering to the announced time of publication. In the event of any delay, updates will be provided accordingly.

13.2. Punctuality

The publication takes place according to the published release dates on the statistical calendar for healthcare establishments and workforce statistics on the website of the General Authority for Statistics.

The data are available at the expected time, as scheduled in the statistical release calendar, If the publication is delayed, reasons shall be provided.

14. Coherence and comparability

14.1. Comparability - geographical

The data is geographically comparable.

14.2. Comparability - over time

The healthcare establishments and workforce statistics publication began as an annual publication starting from the year 2023.

14.3. Coherence- cross domain

Not applicable.

14.3.1.   Coherence - sub annual and annual statistics

Not applicable.

14.3.2.	Coherence- National Accounts
Not applicable.	

14.4. Coherence - internal
The healthcare establishments and workforce statistics estimates have full internal coherence, as they are all based on the same corpus of microdata, and they are calculated using the same estimation methods.

15. Data revision

15.1. Data revision - policy
Not applicable, only final results will be published.

15.2. data revision- practice
Not applicable, only final results will be published.

16. Statistical processing

16.1. Source data
The healthcare establishments and workforce statistics data rely on two sources: **First source:** Estimates from the Saudi General Authority for Statistics for the population. **The main variables published:** • Sex.

- Nationality.
- Administrative region.

Second source: Data from administrative records:

- Ministry of Health:

The main variables published:

- The number of healthcare establishments and workforce.

16.2. Frequency of data collection

Annual.

16.3. Data collection

Data collection from administrative records:

In coordination with GASTAT's relevant departments involved in conducting the survey and managing data collection, the administrative data for the publication of healthcare establishments and workforce statistics is obtained from the Ministry of Health, which includes data on the number of healthcare establishments and the workforce.

The data is stored in the authority's databases after undergoing auditing and review processes following approved statistical methods and recognized quality standards. If errors or discrepancies are discovered, the data is cross-referenced with the data source for correction or clarification.

16.4. Data validation

Data are reviewed and matched to ensure their accuracy and precision in a way that suits their nature with the aim of giving the presented statistics quality and accuracy.

The data of the current year publication are compared with the data of the previous year to ensure their integrity and consistency in preparation for processing data and extracting and reviewing results.

In addition to the data processing and tabulation to check their accuracy, all the outputs are stored and uploaded to the database after being calculated by GASTAT to be reviewed and processed by specialists in Health and Education Statistics through modern technologies and software designed for this purpose.

16.5. Data compilation

Data Coding:

Interviewers in the healthcare establishments and workforce statistics collect from respondents, a detailed description of each field. This information is then coded in-house by an automated process, which is reviewed by a small-dedicated team of coding experts using a series of consistency checks.

Data editing:

Specialists at the department of health and education statistics have processed and analyzed data in this stage, and this step was based on the following measures:

- Sorting and arranging data in groups or different categories in a serial order.
- Summarizing detailed data into key points or data.
- Combining many data segments and ensuring their interconnection.
- Processing incomplete or missing data.
- Processing illogical data.
- Converting data into statistically significant data.
- Arranging, presenting and interpreting data.

Extrapolation and weighting:

After processing the data collected from respondents, survey weights were generated to produce indicator tables by following two main steps in creating survey weights:

- Adjustment of non-response.
- Calibration weight

Applied statistical estimation:

The General Authority for Statistics relied on the approved equations according to international standards to calculate the main indicators for healthcare establishments and workforce statistics as follows:

- SDG 3.C.1
- physicians
- Midwives
- Nurses
- Dentists
- Pharmacists

• [Hospital](#)
• [Hospital Beds](#)
16.6. Adjustment
Not applicable, only final results will be published.

17. Comment