SDG Goal 3 Good health and well-being

SDG Target 3.c Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States

SDG Indicator 3.c.1 Health worker density and distribution

1. Name of data series
Health workers (practising concept)
Compliant with SDG metadata: yes (as long as metadata is in process)	**SDG Metadata**

2. Definition of indicator
The indicator "health workers" is defined as the number of persons working in health services, expressed per 10,000 inhabitants. According to the classification of occupations 2010 (KldB-2010) the following codes are included: 812 Laboratory occupations in medicine,   813 Occupations in nursing, emergency medical services and obstetrics,   814 Occupations in human medicine and dentistry,   818 Occupations in pharmacy and   821 Occupations in geriatric care.   The KldB-2010 is comparable with the present International Standard Classification of Occupations, the ISCO-08. The data have been provided according to the "practising concept", which comprises only health workers providing care directly to patients.
3. Comparison with SDG metadata (as of 04/02/2019)
Traditionally, the indicator has been estimated using two measurements: density of Medical doctors, and density of nursing and midwifery personnel. In the context of the SDG agenda, the dataset have been expanded to Medical doctors, nursing and midwifery personnel, dentists and pharmacists. The dataset is planned to progressively expand to cover all health cadres. As long as the international metadata description of the SDG indicator 3.c.1 is not completed, the indicator could not be considered as compliant.

4. Data description
The data on health workers by occupation have been retrieved from the health personnel accounts of the Federal Statistical Office. The health personnel accounts is a secondary statistical calculation system that combines different data sources on employment in health services, such as administrative data, sample surveys or annual reports. About 30 statistics are included in the health personnel accounts, like the hospital statistics and the Microcensus of the Federal Statistical Office as well as the employment statistics of the Federal Employment Agency and other statistics of various professional associations (e.g. German Medical Association, German Dental Association). Data gaps are closed by estimations and mathematical-statistical forecasting methods. In addition, consistency checks with results of the employment accounts (part of the National Accounts) are carried out.

With reference year 2015 the updated classification of the occupations, the KldB-2010, was implemented. The existing data were calculated backwards until 2012 (only some occupations further back).

Data on population are the results of the latest population census (currently: 2011 Census) rolled forward in a breakdown by sex, age, marital status and citizenship, using both statistics of population change (migration, births, deaths, entering into marriages or registered same-sex partnerships) and information on changes in citizenship and the dissolution of marriages or registered same-sex partnerships. Before 2011, updated census data from 1987 (Federal Republic of Germany) and the population register of October 1990 (German Democratic Republic) were used. For the years before 2011 the results for population were calculated backwards using the census 2011 and migration, birth and death statistics.

5. Calculation method

$$\text{Health workers} = \frac{\text{health personnel (number)} \times 10,000}{\text{population (number)}}$$

6. Unit of measure	Per 10,000 inhabitants

7. Timeliness	8. Frequency
t + 12 months	Annual
9. Last regular revision	10. Revised period
Not applicable	Not applicable

11. Accessibility of source data
Health personnel by occupations in healthcare: GENESIS online 23621-0002: Health personnel: Germany, years, facilities, sex, occupations in healthcare Census 2011 and intercensal population updates: GENESIS online 12411-0003: Population: Germany, reference date, sex
12. Metadata on source data
Quality report of health personnel accounts (Only available in German): https://www.destatis.de/DE/Methoden/Qualitaet/Qualitaetsberichte/Gesundheit/einfuehrung.html Quality report intercensal population updates: https://www.destatis.de/DE/Methoden/Qualitaet/Qualitaetsberichte/Bevoelkerung/einfuehrung.html
13. Related SDG data series (duplicate indicators or sub-indicators to same indicator)
3.c.1 Medical doctors (practising concept) 3.c.1 Dentists (practising concept) 3.c.1 Nursing and midwifery personnel (practising concept) 3.c.1 Pharmacists (practising concept)

For more information please contact:
https://www.destatis.de/EN/Service/Contact/Contact.html

SDG Goal 3 Good health and well-being

SDG Target 3.c Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States

SDG Indicator 3.c.1 Health worker density and distribution

1. Name of data series
Medical doctors (practising concept)
Compliant with SDG metadata: yes   **SDG Metadata**

2. Definition of indicator

The indicator "Medical doctors" is defined as the number of persons working as medical doctors in health services according to the definition of the Joint Questionnaire between OECD, Eurostat and WHO-Europe on non-monetary health care statistics, expressed per 10,000 inhabitants.

According to the classification of occupations 2010 (KldB-2010) the following codes are relevant:

- 81214 Technical laboratory occupations in medicine – highly complex tasks,
- 81234 Technical occupations in radiology – highly complex tasks,
- 81404 Medical doctors (without specialisation) – highly complex tasks,
- 81414 Medical doctors specialised in pediatrics and adolescent medicine – highly complex tasks,
- 81424 Medical doctors specialised in internal medicine – highly complex tasks,
- 81434 Medical doctors specialised in surgery – highly complex tasks,
- 81444 Medical doctors specialised in dermatology, otorhinolaryngology, ophthalmology, gynaecology, andrology and related medical fields – highly complex tasks,
- 81454 Medical doctors specialised in anaesthesiology – highly complex tasks,
- 81464 Medical doctors specialised in neurology, psychiatry, psychotherapy and psychosomatic medicine – highly complex tasks,
- 81484 Medical doctors (with specialisation, not elsewhere classified) – highly complex tasks,
- 81494 Managers in human medicine and dentistry, as well as
- 81814 Medical doctors specialised in pharmacology – highly complex tasks.

The codes of the KldB-2010 listed above are comparable with the codes 2211 and 2212 mentioned in the present International Standard Classification of Occupations, the ISCO-08.

The data have been provided according to the "practising concept", which comprises only health workers providing care directly to patients.

3. Comparison with SDG metadata (as of 04/02/2019)

The indicator is one of the sub-indicators listed in the international metadata description of the SDG indicator 3.c.1.

4.   Data description
The data on health workers by occupation have been retrieved from the health personnel accounts of the Federal Statistical Office. The health personnel accounts is a secondary statistical calculation system that combines different data sources on employment in health services, such as administrative data, sample surveys or annual reports. About 30 statistics are included in the health personnel accounts, like the hospital statistics and the Microcensus of the Federal Statistical Office as well as the employment statistics of the Federal Employment Agency and other statistics of various professional associations (e.g. German Medical Association, German Dental Association). Data gaps are closed by estimations and mathematical-statistical forecasting methods. In addition, consistency checks with results of the employment accounts (part of the National Accounts) are carried out.
With reference year 2015 the updated classification of the occupations, the KldB-2010, was implemented. The existing data were backcasted until 2012 (only some occupations further back).
Data on population are the results of the latest population census (currently: 2011 Census) rolled forward in a breakdown by sex, age, marital status and citizenship, using both statistics of population change (migration, births, deaths, entering into marriages or registered same-sex partnerships) and information on changes in citizenship and the dissolution of marriages or registered same-sex partnerships. Before 2011, updated census data from 1987 (Federal Republic of Germany) and the population register of October 1990 (German Democratic Republic) were used. For the years before 2011 the results for population were calculated backwards using the census 2011 and migration, birth and death statistics.

5. Calculation method	
$$\text{Medical doctors} = \frac{\text{Medical doctors (number) x 10,000}}{\text{population (number)}}$$	
6. Unit of measure	Per 10,000 inhabitants

7. Timeliness	8. Frequency
t + 12 months	Annual
9. Last regular revision	10. Revised period
Not applicable	Not applicable

11. Accessibility of source data
Health personnel by occupations in healthcare:
GENESIS online 23621-0002: Health personnel: Germany, years, facilities, sex, occupations in healthcare
Census 2011 and intercensal population updates:
GENESIS online 12411-0003: Population: Germany, reference date, sex
Population 2010 calculated backwards to Census 2011 (Only available in German): https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Bevoelkerungsstand/_inhalt.html
12. Metadata on source data
Quality report of health personnel accounts (Only available in German): https://www.destatis.de/DE/Methoden/Qualitaet/Qualitaetsberichte/Gesundheit/ein

fuehrung.html

Quality report intercensal population updates:
https://www.destatis.de/DE/Methoden/Qualitaet/Qualitaetsberichte/Bevoelkerung/einfuehrung.html

13. Related SDG data series (duplicate indicators or sub-indicators to same indicator)

3.c.1 Health workers (practising concept)

3.c.1 Dentists (practising concept)

3.c.1 Nursing and midwifery personnel (practising concept)

3.c.1 Pharmacists (practising concept)

For more information please contact:
https://www.destatis.de/EN/Service/Contact/Contact.html

SDG Goal 3 Good health and well-being

SDG Target 3.c Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States

SDG Indicator 3.c.1 Health worker density and distribution

1. Name of data series
Dentists (practising concept)
Compliant with SDG metadata: yes   **SDG Metadata**

2. Definition of indicator
The indicator dentists is defined as the number of dentists, expressed per 10,000 inhabitants. According to the classification of occupations 2010 (KldB-2010) the following codes are relevant: • 81474 Dentists and orthodontists – highly complex tasks, as well as • 81494 Managers in human medicine and dentistry. The codes 81474 and 81494of the KldB-2010 are comparable with the mentioned code 2261 in the present International Standard Classification of Occupations, the ISCO-08. The data have been provided according to the "practising concept", which comprises only health workers providing care directly to patients.
3. Comparison with SDG metadata (as of 04/02/2019)
The indicator is one of the sub-indicators listed in the international metadata description of the SDG indicator 3.c.1.

4. Data description
The data on health workers by occupation have been retrieved from the health personnel accounts of the Federal Statistical Office. The health personnel accounts is a secondary statistical calculation system that combines different data sources on employment in health services, such as administrative data, sample surveys or annual reports. About 30 statistics are included in the health personnel accounts, like the hospital statistics and the Microcensus of the Federal Statistical Office as well as the employment statistics of the Federal Employment Agency and other statistics of various professional associations (e.g. German Medical Association, German Dental Association). Data gaps are closed by estimations and mathematical-statistical forecasting methods. In addition, consistency checks with results of the employment accounts (part of the National Accounts) are carried out. With reference year 2015 the updated classification of the occupations, the KldB-2010, was implemented. The existing data were backwards until 2012 (only some occupations further back). Data on population are the results of the latest population census (currently: 2011 Census) rolled forward in a breakdown by sex, age, marital status and citizenship, using both statistics of population change (migration, births, deaths, entering into marriages or registered same-sex partnerships) and information on changes in citizenship and the dissolution of marriages or registered same-sex partnerships.

Before 2011, updated census data from 1987 (Federal Republic of Germany) and the population register of October 1990 (German Democratic Republic) were used. For the years before 2011 the results for population were calculated backwards using the census 2011 and migration, birth and death statistics.

5. Calculation method
$$\text{Dentists} = \frac{\text{dentists (number)} \times 10{,}000}{\text{population (number)}}$$

6. Unit of measure	Per 10,000 inhabitants

7. Timeliness	8. Frequency
t + 12 months	Annual
9. Last regular revision	10. Revised period
Not applicable	Not applicable

11. Accessibility of source data
Health personnel by occupations in healthcare:
GENESIS online 23621-0002: Health personnel: Germany, years, facilities, sex, occupations in healthcare
Census 2011 and intercensal population updates:
GENESIS online 12411-0003: Population: Germany, reference date, sex

12. Metadata on source data
Quality report of health personnel accounts (Only available in German): https://www.destatis.de/DE/Methoden/Qualitaet/Qualitaetsberichte/Gesundheit/einfuehrung.html
Quality report intercensal population updates: https://www.destatis.de/DE/Methoden/Qualitaet/Qualitaetsberichte/Bevoelkerung/einfuehrung.html

13. Related SDG data series (duplicate indicators or sub-indicators to same indicator)
3.c.1 Health workers (practising concept)
3.c.1 Medical doctors (practising concept)
3.c.1 Nursing and midwifery personnel (practising concept)
3.c.1 Pharmacists (practising concept)

For more information please contact:
https://www.destatis.de/EN/Service/Contact/Contact.html

SDG Goal 3 Good health and well-being

SDG Target 3.c Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States

SDG Indicator 3.c.1 Health worker density and distribution

1. Name of data series
Nursing and midwifery personnel (practising concept)
Compliant with SDG metadata: yes   **SDG Metadata**

2. Definition of indicator
The indicator "nursing and midwifery personnel" is defined as the number of persons working as nurse or midwifery in health services according to the definition of the Joint Questionnaire between OECD, Eurostat and WHO-Europe on non-monetary health care statistics, expressed per 10,000 inhabitants.

According to the classification of occupations 2010 (KldB-2010) the following codes are relevant:

- 81302 Occupations in nursing (without specialisation) – skilled tasks,
- 81313 Occupations in nursing specialized in a particular branch of nursing – complex tasks,
- 81323 Occupations in nursing specialised in paediatrics – complex tasks,
- 81352 Occupations in obstetrics and maternity care – skilled tasks
- 81353 Occupations in obstetrics and maternity care – complex tasks
- 81382 Occupations in nursing (with specialisation, not elsewhere classified) – skilled tasks
- 81383 Occupations nursing (with specialisation, not elsewhere classified) – complex tasks
- 81393 Supervisors in nursing, emergency medical services, obstetrics,
- 82102 Occupations in geriatric care (without specialisation) – skilled tasks,
- 82103 Occupations in geriatric care (without specialisation) – complex tasks,
- 82182 Occupations in geriatric care (with specialisation, not elsewhere classified) – skilled tasks, as well as
- 82183 Occupations in geriatric care (with specialisation, not elsewhere classified) – complex tasks.

The codes of the KldB-2010 listed above are in general comparable with the mentioned codes 2221, 2222, 3221 and 3222 in the present International Standard Classification of Occupations, the ISCO-08.

The data have been provided according to the "practising concept", which comprises only health workers providing care directly to patients.

3. Comparison with SDG metadata (as of 04/02/2019)
The indicator is one of the sub-indicators listed in the international metadata description of the SDG indicator 3.c.1.

4. Data description
The data on health workers by occupation have been retrieved from the health personnel accounts of the Federal Statistical Office. The health personnel accounts is a secondary statistical calculation system that combines different data sources on employment in health services, such as administrative data, sample surveys or annual reports. About 30 statistics are included in the health personnel accounts, like the hospital statistics and the Microcensus of the Federal Statistical Office as well as the employment statistics of the Federal Employment Agency and other statistics of various professional associations (e.g. German Medical Association, German Dental Association). Data gaps are closed by estimations and mathematical-statistical forecasting methods. In addition, consistency checks with results of the employment accounts (part of the National Accounts) are carried out. With reference year 2015 the updated classification of the occupations, the KldB-2010, was implemented. The existing data were calculated backwards until 2012 (only some occupations further back). Data on population are the results of the latest population census (currently: 2011 Census) rolled forward in a breakdown by sex, age, marital status and citizenship, using both statistics of population change (migration, births, deaths, entering into marriages or registered same-sex partnerships) and information on changes in citizenship and the dissolution of marriages or registered same-sex partnerships. Before 2011, updated census data from 1987 (Federal Republic of Germany) and the population register of October 1990 (German Democratic Republic) were used. For the years before 2011 the results for population were calculated backwards using the census 2011 and migration, birth and death statistics.

5. Calculation method

$$\text{Nursing and midwifery personnel} = \frac{\text{nursing and midwifery personnel (number) x 10,000}}{\text{population (number)}}$$

6. Unit of measure	Per 10,000 inhabitants

7. Timeliness	8. Frequency
t + 12 months	Annual
9. Last regular revision	10. Revised period
Not applicable	Not applicable

11. Accessibility of source data
Health personnel by occupations in healthcare: GENESIS online 23621-0002: Health personnel: Germany, years, facilities, sex, occupations in healthcare Census 2011 and intercensal population updates: GENESIS online 12411-0003: Population: Germany, reference date, sex Population 2010 calculated backwards to Census 2011 (Only available in German): https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Bevoelkerungsstand/_inhalt.html
12. Metadata on source data
Quality report of health personnel accounts (Only available in German): https://www.destatis.de/DE/Methoden/Qualitaet/Qualitaetsberichte/Gesundheit/ein

fuehrung.html
Quality report intercensal population updates: https://www.destatis.de/DE/Methoden/Qualitaet/Qualitaetsberichte/Bevoelkerung/einfuehrung.html

13. Related SDG data series (duplicate indicators or sub-indicators to same indicator)
3.c.1 Health workers (practising concept)
3.c.1 Medical doctors (practising concept)
3.c.1 Dentists (practising concept)
3.c.1 Pharmacists (practising concept)

For more information please contact:
https://www.destatis.de/EN/Service/Contact/Contact.html

SDG Goal 3 Good health and well-being

SDG Target 3.c Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States

SDG Indicator 3.c.1 Health worker density and distribution

1. Name of data series
Pharmacists (practising concept)
Compliant with SDG metadata: yes	**SDG Metadata**

2. Definition of indicator
The indicator "pharmacists" are defined as the number of pharmacists working in health services, expressed per 10,000 inhabitants.
According to the classification of occupations 2010 (KldB-2010) the following code is relevant:
81804 Pharmacists – highly complex tasks and   81884 Occupations in pharmacy (with specialisation, not elsewhere classified) – highly complex tasks.
The codes 81804 and 81884 of the KldB-2010 are comparable with the mentioned code 2262 in the present International Standard Classification of Occupations, the ISCO-08.
The data have been provided according to the "practising concept", which comprises only health workers providing care directly to patients.
3. Comparison with SDG metadata (as of 04/02/2019)
The indicator is one of the sub-indicators listed in the international metadata description of the SDG indicator 3.c.1.

4. Data description
The data on health workers by occupation have been retrieved from the health personnel accounts of the Federal Statistical Office. The health personnel accounts is a secondary statistical calculation system that combines different data sources on employment in health services, such as administrative data, sample surveys or annual reports. About 30 statistics are included in the health personnel accounts, like the hospital statistics and the Microcensus of the Federal Statistical Office as well as the employment statistics of the Federal Employment Agency and other statistics of various professional associations (e.g. German Medical Association, German Dental Association). Data gaps are closed by estimations and mathematical-statistical forecasting methods. In addition, consistency checks with results of the employment accounts (part of the National Accounts) are carried out.
With reference year 2015 the updated classification of the occupations, the KldB-2010, was implemented. The existing data were backcasted until 2012 (only some occupations further back).
Data on population are the results of the latest population census (currently: 2011 Census) rolled forward in a breakdown by sex, age, marital status and citizenship,

using both statistics of population change (migration, births, deaths, entering into marriages or registered same-sex partnerships) and information on changes in citizenship and the dissolution of marriages or registered same-sex partnerships. Before 2011, updated census data from 1987 (Federal Republic of Germany) and the population register of October 1990 (German Democratic Republic) were used. For the years before 2011 the results for population were calculated backwards using the census 2011 and migration, birth and death statistics.

5. Calculation method

$$\text{Pharmacists} = \frac{\text{pharmacists (number) x 10,000}}{\text{population (number)}}$$

6. Unit of measure	Per 10,000 inhabitants

7. Timeliness	8. Frequency
t + 12 months	Annual
9. Last regular revision	10. Revised period
Not applicable	Not applicable

11. Accessibility of source data
Health personnel by occupations in healthcare: GENESIS online 23621-0002: Health personnel: Germany, years, facilities, sex, occupations in healthcare Census 2011 and intercensal population updates: GENESIS online 12411-0003: Population: Germany, reference date, sex
12. Metadata on source data
Quality report of health personnel accounts (Only available in German): https://www.destatis.de/DE/Methoden/Qualitaet/Qualitaetsberichte/Gesundheit/einfuehrung.html Quality report intercensal population updates: https://www.destatis.de/DE/Methoden/Qualitaet/Qualitaetsberichte/Bevoelkerung/einfuehrung.html
13. Related SDG data series (duplicate indicators or sub-indicators to same indicator)
3.c.1 Health workers (practising concept) 3.c.1 Medical doctors (practising concept) 3.c.1 Dentists (practising concept) 3.c.1 Nursing and midwifery personnel (practising concept)

For more information please contact:
https://www.destatis.de/EN/Service/Contact/Contact.html