

# OECD Health Statistics 2023

## Definitions, Sources and Methods

### Practising nurses

**Practising nurses** provide services directly to patients.

#### Inclusion

- Professional nurses (see definition below)
- Associate professional nurses (see definition below)
- Foreign nurses licensed to practice and actively practising in the country

#### Exclusion

- Students who have not yet graduated
- Nursing aids/assistants and personal care workers who do not have any recognised qualification/certification in nursing
- Midwives (unless they work most of the time as nurses)
- Nurses working in administration, management, research and in other posts that exclude direct contact with patients
- Unemployed nurses and retired nurses no longer practising
- Nurses working abroad

**Note:** The number should be at the end of the calendar year.

### Sources and Methods

#### Australia

##### Source of data:

- 2013 onwards: **Department of Health (DoH)**. NHWDS Nursing and Midwifery Practitioners Data. Data request. Also available at <http://hwd.health.gov.au/>. Data are as at the end of the re-registration period for the profession in the reference year.
- 2012: **Australian Institute of Health and Welfare 2013**. Nursing and midwifery workforce 2012. National health workforce series no. 6. Cat. No. HWL 52. Canberra: AIHW. Also available [at www.aihw.gov.au](http://www.aihw.gov.au).
- 2011: **Australian Institute of Health and Welfare (AIHW) 2012**. Nursing and midwifery workforce 2011. National health workforce series no. 2. Cat No HWL 48. Canberra: AIHW. Also available [at www.aihw.gov.au](http://www.aihw.gov.au).
- 1993-2009: **Australian Institute of Health and Welfare (AIHW) 2011**. Nursing and Midwifery Labour Force 2009. Bulletin no. 90. Cat No AUS 139. Canberra: AIHW (and previous issues). Also available at <http://www.aihw.gov.au>.
- 1980-1992: **Australian Bureau of Statistics Labour Force Survey**. August estimate 1966-1981, average of four annual surveys for all other years.

##### Coverage:

- 1980-1992: Data for 1980-1985 include trainees, exclude nursing aides and assistant nurses. Data for all other years (1986-1992) include registered and enrolled nurses.
- 1993-2009: Data report registered and enrolled nurses currently working as clinicians. Include registered nurses working as midwives. Data exclude administrators, teachers/educators, researchers & others. Data also exclude nurses on extended leave and overseas.
- From 2011, data regarding practising nurses include those nurses in a clinical role, namely, a practitioner who spends the majority of his or her time working in the area of clinical practice.
- From 2013, data exclude nurses with non-practising registration.
- A registered nurse requires a minimum 3-year degree from a tertiary institution or equivalent from a recognised hospital-based program. Enrolled nurses must have completed an appropriate vocational education and training

course or equivalent, usually of 1-year duration.

Deviation from the definition:

- Data for nurses include midwives (in Australia, a large proportion of midwives hold dual registrations as both a nurse and a midwife).

Break in time series:

- From 2011, data are based on information from the National Health Workforce Data Set (NHWDS). The NHWDS combines data from the National Registration and Accreditation Scheme (NRAS) with health workforce survey data collected at the time of annual registration renewal. Registration data prior to 2011 was based on data from the now superseded state and territory nursing and midwifery boards and councils. For more information see Appendix A of *Nursing and midwifery workforce 2011* at <http://www.aihw.gov.au/publication-detail/?id=10737422167>.

Comparison of 2011 and later data with 2009 and earlier data should be made with caution.

- From 2013 the NHWDS is held by the Department of Health and the data has minor differences from the previous AIHW holdings due to the method of imputation for survey non-response and enhanced geocoding methods.

- For 2013 onwards, nurses who selected 'Other' as their role were manually recoded to the relevant role (based on information provided in a text field), where possible. This contributed to the increase in practising nurses from 2012 to 2013.

- For 1997-2011, clinicians are based on those who provide direct patient care.

## Austria

Source of data:

- Up to 2018: **Austrian Federal Ministry of Social Affairs, Health, Care and Consumer Protection**, Hospital Statistics.

- From 2019 onwards: **Statistics Austria** (Austrian National Public Health Institute (GÖG), Health Professions Registry).

Reference period: 31<sup>st</sup> December.

Coverage:

- Up to 2018: Included are nurses employed in hospitals. Excluded are midwives.

- From 2019 onwards:

\* Included are registered nurses working in hospitals, convalescent homes, rehabilitation facilities, extramural care centres, doctors' practices, long-term care facilities, mobile care or care for the disabled.

\* Excluded are:

- non-registered nurses
- registered nurses, who are not yet employed after training
- as a nurse registered jobseekers
- as a nurse registered volunteers
- as a nurse registered pensioners
- registered nurses working in research or educational institutions, tissue banks, industrial companies or other non-healthcare institutions

Deviation from the definition: nurses working in other settings than hospitals are not included until 2018.

Break in time series:

- 2019: Change in data source and methodology in 2019.

## Belgium

Source of data:

- Data come from **PlanCad infirmier** (SPF Santé Publique, INAMI and Datawarehouse *Marché du travail et Protection sociale*), under the supervision of **SPF Santé Publique**.

- **PlanKad Nurses** 2018, Planning Cell for the Supply of Healthcare Professions, Directorate-General for Healthcare, FPS Public Health, Food Chain Safety and Environment, February 2021. (PlanKad Verpleegkundigen 2018, Cel Planning van het Aanbod van de Gezondheidszorgberoepen, Dienst Gezondheidszorgberoepen en Beroepsuitoefening, Directoraat-generaal Gezondheidszorg, FOD Volksgezondheid, Veiligheid van de Voedselketen en Leefmilieu).

Coverage: country.

Estimation method:

- The 2004-2008 data and 2010-2015 data have been estimated by using the 2009 share of practising nurses among all professionally active nurses.

### Break in time series:

- Since 2016, data come from PlanCad infirmier and are real distribution and no more estimation

Note: Data are not available for 2019 and subsequent years as the study above was not re-conducted.

## **Canada**

Source of data: Health Workforce Database at **Canadian Institute for Health Information.**

### Coverage:

#### **All Nursing Data:**

- 2003-present includes registered nurses (RNs), Nurse practitioners (NPs), licensed practical nurses (LPNs); registered psychiatric nurses (RPNs) in direct care.

#### Data include:

- Only nurses with active-practising registration;
- Only nurses employed in nursing at the time of annual registration;
- Nurses employed in public and/or private sectors;
- Nurses employed in hospitals, clinics or other facilities (including self-employed);
- Nurses employed in direct patient care only.
- Foreign-trained and/or foreign-born nurses living and working in Canada.

#### Data exclude:

- Midwives registered as RNs working full-time as midwives.
- Secondary registrations. When one nurse simultaneously registers in more than one Canadian province/territory, only the primary registration is retained in the analysis; secondary registrations are removed;
- Canadian-born and/or Canadian-trained nurses living outside of Canada;
- Nurses not in the workforce at the time of annual registration;
- Nurses failing to state their employment status at the time of annual registration;
- Unregulated nurse aides and orderlies.

### Notes:

- To better ensure timeliness, CIHI collects data prior to the end of the 12-month registration period in each jurisdiction. Therefore, the population of reference for the nursing data is all regulated nurses who submit an active practising registration in a Canadian province or territory in the first 6 months of the registration year. The 12-month registration period varies among the provinces and territories, as each jurisdiction is responsible for setting the start and end dates of its own registration period.
- Data prior to 2003 was deleted in 2017, at the recommendation of OECD, in order to avoid any unnecessary confusion or misunderstanding of the trends.
- Due to voluntary reporting to CIHI of employment status in Manitoba, RN employment numbers may be understated. Please use with caution.

#### **- Professional nurses:**

- 2019 and 2020 counts of practising nurse practitioners and practising registered nurses were unavailable for Manitoba and the 2019 and 2020 counts of practising registered psychiatric nurses was unavailable for British Columbia. 2018 counts were used as estimates of the 2019 and 2020 counts for these occupational categories and provinces.
- 2021 counts of practicing nurse practitioners and practicing registered nurses were not available for Manitoba; the 2018 counts were used as estimates.
- 2021 count for practicing nurse practitioners and practicing registered nurses were not available for Prince Edward Island; the 2020 counts were used as estimates.
- 2021 count for practicing registered psychiatric nurses for Yukon was not included as the data was not available.

#### **- Associate professional nurses:**

- 2019 count of practising licensed practical nurses was unavailable for New Brunswick. The 2018 count was used as an estimate of the 2019 count for that province.
- 2021 count for practising licensed practical nurses count was not available for Northwest Territories; the 2020 count was used as an estimate.
- 2021 count for practising licensed practical nurses count was not available for Yukon; the 2016 count was used as an estimate.

- 2021 count for practicing licensed psychiatric nurses for Nunavut was not included as the data was not available.

## Chile

Data not available. These data exist only for the public sector (not reported in *OECD Health Statistics*). At the national level (public and private), data are available only for "Nurses licensed to practice".

## Colombia

Data not available.

## Costa Rica

Data not available.

## Czech Republic

Source of data: **Institute of Health Information and Statistics of the Czech Republic**; National Health Information System (Annual report on health personnel).

Reference period: 31<sup>st</sup> December.

### Coverage:

- Until 1999, nurses working in other central organs not included. Since the year 2000, data cover nurses in total health services.
- Since 2004 data collected on basis of new legislation on non-medical professions.
- Double counting of nurses working in more than one health establishment.
- Data relate to nurses working in health establishments. Those working in social care sector are not included.
- In 2014, complete data are not available. Estimate is calculated from available data for 2014 and data from 2013.
- Till 2016, data comprise general and paediatric nurses.
- Since 2017, data also include practical nurses

Break in time series: 2000, 2004, 2017.

- The break in 2000 is related to the fact that the data for the entire healthcare sector included other central authorities that were not included until 1999. This is a hospital facility, the founder of which is not the Ministry of Health, but the Ministry of Defence (Military Hospital) or the Ministry of Justice (Prison Service Hospital of the Czech Republic).
- The break in 2004 is related to the introduction of Act No. 96/2004 Coll. Act on non-medical health professions.
- 2017: Due to change in legislation, new category of practical nurse (formerly called medical assistant) is considered and reported as associate professional nurse.

## Denmark

Source of data: **The Danish Health Data Authority**, Labour Register for Health Personnel.

Reference period: 31<sup>st</sup> December.

## Estonia

Source of data:

- Annual reports, **National Institute for Health Development**, Department of Health Statistics.  
[https://statistika.tai.ee/pxweb/en/Andmebaas/Andmebaas\\_04THressursid\\_05Tootajad/?tablelist=true](https://statistika.tai.ee/pxweb/en/Andmebaas/Andmebaas_04THressursid_05Tootajad/?tablelist=true).
- 1980-2003 nurses and assistant doctors, data published by **Statistics Estonia**  
([https://andmed.stat.ee/en/stat/Lepetatud\\_tabelid\\_Sotsiaalelu.%20Arhiiv\\_Tervis.%20%20Arhiiv\\_tervishoiuasutused/TH05](https://andmed.stat.ee/en/stat/Lepetatud_tabelid_Sotsiaalelu.%20Arhiiv_Tervis.%20%20Arhiiv_tervishoiuasutused/TH05)).

Reference period:

- 1980-2012: 31<sup>st</sup> of December.
- Since 2013: November.

Coverage:

- Presents practising nurses who provide services directly to patients.

Break in time series: 1992, 2005, 2012 and 2013.

- The types of institutions included have changed over the period in question. Until 1991 data correspond more to professionally active nurses (practising + working in health sector).
- Since 1992, medical staff working in military, research or other areas have not been included.
- Until 2004, the source was an annual report on practising healthcare personnel based on their educational last or main qualification.
- From 2005, the head count distribution is made according to their main occupational activity.
- From 2012, the number of practising nurses does not include radiology nurses. Radiology nurses (by job specification - same as radiology technicians) are classified in the category of other health service providers.

Notes:

- The decrease after 1991 was the result of the first reorganisation wave of healthcare system of the independent country. A large-scale legislative reform took place in the early 1990s. In 1991 the provider licensing system was enhanced, which was an important precondition for decreasing hospital network capacity to enable more efficient use of resources and to ensure quality. In 1994, after a detailed review of all providers, substandard providers were closed.
- The data collection methodology was changed in 2013. Aggregated data collection was replaced with data collection on a personal basis. From 2013, the predominant (main) area of practice is based on an occupation with the highest workload.

## Finland

Source of data: THL Health Personnel Statistics; **Finnish Institute for Health and Welfare**. The data are based on the Employment Register kept by Statistics Finland.

Reference period: At the end of the calendar year.

Coverage: All individuals employed as nurses or associate professional nurses in the healthcare field in Finland – this includes all nurses working as temporary staffers as well. All nurses and associate professional nurses are required to have a license to practice as a nurse or associate nurse in Finland.

Estimation method: For the years 2004-2014, the numbers are provisional and values are not accurate due to possible inconsistencies in how occupations are classified in our database.

Break in time series: The occupational classifications used in the Employment Register was updated in 2010 and this causes a break in the data series in 2010 for associate professional nurses.

## France

Source of data: **Ministère des Solidarités et de la Santé - Direction de la Recherche, des Études, de l'Évaluation et des Statistiques** (DREES), Sous-Direction de l'Observation de la Santé et de l'Assurance maladie, Bureau des Professions de santé.

- For independent workers: **Système national des données de santé (SNDS)**.
- For employees of the public hospital: **Système d'information des agents du service public (SIASP)**.
- For employees in other sectors: **Répertoire Adeli**.

Reference period: 31<sup>st</sup> December for independent workers and employees of the public hospital. January 1<sup>st</sup> year N+1 for employees in other sectors.

Coverage:

- Data refer to metropolitan France and D.R.O.M. (overseas departments and regions).
- For salaried nurses working in other sectors than the public hospital, due to weaknesses in the administrative source, nurses aged 62 or above are here excluded. Nurses tend indeed not to declare when they cease their activity, which leads to an overestimation of practising nurses if not corrected. In addition, for this source, nurse managers cannot be excluded.
- Nursing assistants (“aide-soignantes”) are not included.

## Germany

Source of data: **Federal Statistical Office**, Health Labour Accounts January 2023; special calculation by the Federal Statistical Office, <http://www.destatis.de> or <http://www.gbe-bund.de>.

Reference period: 31<sup>st</sup> December.

Coverage:

- Data include professional nurses with a 3-year education (nurses, paediatric nurses and nurses for the elderly).

- Data (head-counts rounded to the nearest thousand) contain the number of nurses actively practising in public or private hospitals, primary healthcare and other health facilities including self-employed. They provide services directly to patients.
- Excluded are midwives, nurses working in administration, research and in other posts excluding direct contact with patients, nurses working abroad, unemployed and retired nurses and students who have not yet graduated.
- From 2000 onwards data from Health Labour Accounts have been completely revised. Therefore comparable data before 2000 are not available.

## Greece

Source of data: **Hellenic Statistical Authority (EL.STAT)-Annual Hospital Census.**

Reference period: 31<sup>st</sup> December.

Coverage: public and private hospitals.

- According to our survey in hospitals, even if nurses have administrative or teaching duties they still continue to provide services to patients. Therefore, the number of nurses working in Greek hospitals is represented under the “practising nurses” category and not under the “professionally active” one.

Deviation from the definition: Data refer to nurses working in hospitals only.

## Hungary

Source of data:

- Until 2016, **Hungarian Central Statistical Office** (KSH in Hungarian) [www.ksh.hu](http://www.ksh.hu), Report on personnel of health service.

- From 2017 to 2020, **National Healthcare Service Center** (ÁEEK in Hungarian) [www.enkk.hu](http://www.enkk.hu), Operational register.

- From 2021, **National Directorate General for Hospitals** (OKFŐ in Hungarian) [www.enkk.hu](http://www.enkk.hu), Operational register.

Reference period: 31st December.

Break in time series:

- In 2000, health and social services were separated. Nurses working in social services have not been included in the data since 2000. In the same year a new international methodology was introduced which caused an increase in the number of associate nurses.

- In 2017: the Operational register is the source of the data.

- 2021: With regards to the training requirements laid down in Directive 2005/36/EC, nurses were regrouped:

- Professional nurses: only nurses which have an education in compliance with the EC Directive on professional qualifications (eg minimum 3 years for a general nurse) and specialist nurses with an equivalent education (or longer) and
- Nurses who do not meet the requirements of the Directive 2005/36/EC were moved to the Associate professional nurse category.
- Ambulance nursing graduates are excluded from the group of Nurses.

Note: Based on former methodology, in 2021 the numbers of professional nurses and associate professional nurses would be 48260 and 16418 respectively. The total number of practising nurses would be 64678.

## Iceland

Source of data: **Directorate of Health, Association of Icelandic Nurses and the Icelandic Union of Practical Nurses.**

Reference period: 31st December.

Coverage:

- Professional nurses: Four years of university education leading to a B.Sc. degree.
- Associate/Licensed practical nurses: Three years of education in secondary school (non-university) and 16 weeks of practical training in health institutions.
- Figures refer to nurses who are members of The Association of Icelandic Nurses and associate practical nurses who are members of the Icelandic Union of Practical Nurses.

## Ireland

Source of data:

- From 2021: **Nursing and Midwifery Board of Ireland - An Bord Altranais** (<https://www.nmbi.ie/Home>).

Reference period: Figures refer to as at end of December.

Coverage:

- Data includes new registrants, and those renewing their registration who have self-declared as ‘practising’ (i.e. as providing direct patient care).

Deviation from the definition:

- Data includes midwives. It is not possible to distinguish between nurses and midwives as all registered midwives also hold registered nursing qualifications.

## Israel

Source of data: The data are based on the Labour Force Survey which is conducted routinely by the **Central Bureau of Statistics** and includes persons who had worked for at least one hour during the week before the survey, for pay, profit or other consideration. Occupation is determined by the type of work performed by the interviewed person at his place of work, without regard to what he studied if his work is not in that field. The classification of occupations is based on the classification of the International Labour Office (ILO): *International Standard Classification of Occupations ISCO 88*.

Coverage:

- The data are for all nurses.

- The sample of practising nurses is relatively small and therefore the data are subject to large variations due to sample errors and wide confidence intervals. Any data analysis should be carried out with caution.

Estimation method: Moving average of three years (numbers for previous, current and next years) was made in order to diminish the fluctuations in the numbers. For example, the number of practicing nurses in 1996 is an average of 1995-1997. The number for 2011 is an average of 2010-2012.

Break in time series:

- From January 2012, the **Central Bureau of Statistics** has made a transition from a quarterly system of measuring labour force characteristics to a new and improved system that better suits the latest international recommendations on employment and unemployment - Monthly Labour Force Survey. Therefore the 2012 (original) data refer to the entire labour force (including the military service) and not to the civilian labour force, as it was before.

- In addition to the transition to a monthly survey, in 2012 a new Standard Industrial Classification of Economic Activities based on ISIC was implemented as well as a new Standard Classification of Occupations based on ISCO-08. The (original) numbers for 2012 are still reported according to the previous classifications, but the (original) numbers for 2013 are based on the new classifications.

Further information:

[http://www.cbs.gov.il/publications/labour\\_survey04/labour\\_force\\_survey/answer\\_question\\_e\\_2012.pdf](http://www.cbs.gov.il/publications/labour_survey04/labour_force_survey/answer_question_e_2012.pdf).

[http://www.cbs.gov.il/publications12/economic\\_activities11/pdf/e\\_print.pdf](http://www.cbs.gov.il/publications12/economic_activities11/pdf/e_print.pdf).

Note: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

## Italy

Source of data: **COGEAPS**. <http://wp.cogeaps.it/>.

Reference period: 31<sup>st</sup> December.

Coverage: Practising professional nurses.

Deviation from the definition: None

Estimation method:

- Data on the “Continuing Medical Training program” have been used to estimate the practicing personnel. In Italy health professionals have to be recorded in the professional register to be licensed to practice and to acquire “training credits” while practicing. These credits are registered in the Continuing Training Education database. The estimate of practicing personnel was done by counting, among all registered professionals, those who acquired at least one credit in the last three years.

- The numbers of practising nurses were estimated backwards up to 2003. The estimation is based on the proportion between nurses employed in hospitals and practising nurses. This proportion was almost stable overtime and on average it was 85%.

Break in time series: None



## Japan

Source of data: **Ministry of Health, Labour and Welfare**. Report on Public Health Administration and Services.

Coverage:

- The survey for the number of practising nurses which consists of certified public health nurses, nurses and assistant nurses (also certified) is conducted every 2 years.
- More than 1 year of study and a national examination in addition to a qualification as a nurse is required to qualify as a public health nurse.
- More than 3 years of study and a national examination are required to qualify as a nurse.
- 2 years of study and a prefectural examination are required to qualify as an assistant nurse.
- Data consist of public health nurses, nurses and assistant nurses working at hospitals, clinics, maternity homes, home-visit nursing care stations, institutions covered by long-term care insurance, social welfare institutions and other establishments.

## Korea

Source of data: **Health Insurance Review & Assessment Service**, Healthcare resources by provider.

Coverage:

- Includes practitioners working in medical institutions.
- Excludes midwives, retired nurses and those working abroad.
- Foreign nurses working in Korea are included.
- Several reasons explain the significant increase in 2016: 1) Expansion of a comprehensive nursing care service system; 2) an increase in the entrance quota for the nursing department at colleges and universities; 3) a new reporting system for health employment.

Break in time series: 2016. There is a break in the time series because of a new reporting system for health employment as of 2016. Practising midwives and practising nurses have been changed to distinguish them by their main tasks since 2016.

## Latvia

Source of data:

- Since 2005: **Health Inspectorate of Latvia**; Register of Medical Practitioners and Medical Support Staff.
- 2004 and earlier: **Health Statistics and Medical Technologies State Agency**; Statistical Report No.17 "Report About Medical Staff".

Reference period: 31 December.

Coverage:

- Within the Latvian Statistical System data on nurses are not completely comparable and compatible with requirements (practising nurses/professionally active nurses/nurses licensed to practise). Health statistics data from The Centre for Disease Prevention and Control and the Health Inspectorate include information on nurses in the main job distinguishing between nurses with secondary medical education and nurses with higher education. Latvia has no practice in publication of information about nurses according to the ISCO-88 classification for all nurses authorised to carry out professional activity regardless the level of education. Thus, nursing care staff breakdown in Professional and Associate professional nurses in tables is not possible.
- "Feldschers" or "doctor's assistants" are not included in the numbers of nurses.
- Decrease in the number of nurses in year 2009 is due to restructuring of healthcare institutions.

Break in time series: 2005, 2020.

- 2005: Change in data source.
- 2020: Starting from 2020, dental nurses are registered in the profession of dental assistant.

## Lithuania

Source of data: **Health Information Centre of Institute of Hygiene**, data of entire annual survey of health establishments. Report "Health Statistics of Lithuania", available from <http://www.hi.lt/health-statistic-of-lithuania.html>. Available on Official Statistics Portal of Statistics Lithuania <http://osp.stat.gov.lt/en>.

Reference period: 31<sup>st</sup> December.



Coverage: The number of practising nurses at the end of the year includes all professionally active nurses excluding those working in administration, health education and research.

## Luxembourg

Source of data: **Ministère de la Santé**. Register of doctors and health professionals.

Coverage:

- Head counts.
- Since 2010: Nurses working in administration and research have been excluded.
- Data should be considered with care due to methodological issues encountered during census series concerning midwives, nurses and pharmacists.

Break in time series: 2003, 2005 and 2010.

- 2003 and 2005 due to adjustments to the methodology.

## Mexico

Source of data: **Ministry of Health**. Bulletin of Health Information and Statistics. National Health System, Vol. 1, "Human and material health resources" 1990 to 2002. For 2003 to 2021, data are taken from the National Health Information System (SINAIS). In the case of the private sector, for 2002 to 2021 the data are taken from the **National Institute of Statistics and Geography (INEGI)**. National Survey on Medical units with Inpatient Hospital Services.

Coverage:

- The information includes general and specialist nurses, as well as auxiliary nurses in direct contact with the patient.
- Midwives are not included.
- The data presented include human resources in the public and private health sectors.
- There may be double counting as nurses can work in both the public and private sectors simultaneously.
- In 2003 and 2004, there was a 10% decrease in the number of assistants and auxiliary nurses in direct contact with the patient in the IMSS and Ministry of Health.

## Netherlands

Source of data:

- From 2014 data based on **BIG register** (register of (para) medical professions) and **SSB database** (micro-integrated database of **Statistics Netherlands** with data from municipal register, tax register, social security, business register).
- Until 2008 estimates, see coverage.

Reference period: The last Friday before Christmas.

Coverage:

- From 2014 onwards: Data refer to nurses who are licensed to practice; and live and work in the Netherlands. Their license requires that they have been practising in the past five years.
- From 2009 to 2013 it was not possible to give a good estimate and the registry was not yet clean enough to meet the definition of practising nurses.
- Until 2008: Practising nurses are estimated by calculating all registered nurses who are economically active in ISIC / NACE 86, 87, 88 or 7820 (working for temporary employment agencies) (85 and 7450 in ISIC 3 or NACE 1) multiplied by a factor (number of nurses in a function as nurse / number of employees with education as a nurse). That factor is derived from the Report Regiomarge on the labour market in Health Care, Social Care and Welfare by Prismant. The same report provides the shares of professional and associate professional nurses.

Break in time series: 2014, 2019.

- 2019: Re-registration effect. Since 2014, midwives, nurses and physiotherapists are obliged to re-register. The requirement is that they have been practising in the past 5 years.
- As of 2014, midwives, nurses and physiotherapists are obliged to re-register. The requirement is that they have been practising in the past 5 years. This means that from 2014 onwards the figures are in line with the definition of practising nurses.

## New Zealand

Source of data: **Nursing Council of New Zealand: Workforce Survey**, based on survey data from the New Zealand Nursing Council's workforce survey.

Reference period: Data relate to nurses issued with an Annual Practising Certificate until the 31<sup>st</sup> March of the year indicated in the series, i.e. 2010 data refer to all certificates from 1<sup>st</sup> April 2009 to 31<sup>st</sup> March 2010, etc.

Coverage:

- Head count data.
- Data refer to actively enrolled and registered nurses according to the Annual Practising Certificate data.
- Registered Nurses and Enrolled Nurses figures have been used to provide the breakdown into Professional Nurses and Associate Professional Nurses.
- Nurse Practitioners are included in the Registered Nurse category (the term “nurse practitioner” refers to expert nurses who work within a specific area of practice incorporating advanced knowledge and skills and are registered in that scope of practice).
- Registered nurses include all nurses who are listed on the Nursing Register. Nurses can be included if they are NZ graduates or if they graduated overseas and meet the requirements of the Nursing Council of NZ.
- Three years of study are required to qualify as a registered nurse.
- Enrolled nurses in New Zealand are regulated and their programme is 18 months. - Nursing Practice Code exclusions are: Non-nursing health related management or administration, Not in paid employment, Other non-nursing paid employment, Working in another health profession, Nursing administration and management, Nursing education, Nursing professional advice/policy development and Nursing research.
- Overseas domiciled nurses are excluded.

Break in time series: 2011.

- Data up to and including 2010 are based on the number of practising certificates issued (a nurse can have more than one in a year). Data from 2011 onwards are sourced from the Nursing Council of New Zealand: data are still sourced from the workforce survey but are based on Nursing Council data definitions. The 2011 figures (2010/11 year ending 31 March 2011) and onwards are based on the number of practising nurses holding an annual practising certificate.

## Norway

Source of data: **Statistics Norway**; Statistics on health-care personnel. Administrative registers. See

[http://www.ssb.no/hesospers\\_en/](http://www.ssb.no/hesospers_en/).

Reference period: 3<sup>rd</sup> week of November.

Coverage:

- The figures provided give the number of practising nursing within HP1-HP3. There is no guarantee that these professionals actually work in patient care as data refer to the education the nurses have rather than the job they hold within HP 1-3.
- From 2009, data include all personnel within HP1-HP4.

Break in time series: 2009, 2015.

- Up to 2008, data include all personnel within HP1-HP3. From 2009, it also includes HP4.
- As from 2015, the register-based employment statistics will be based on a new data source for employees. Until the end of 2014, the main data source was The Central Register on Employers and Employees (EE register), produced by the Norwegian Labour and Welfare Organisation (NAV). In 2015, this reporting to NAV was coordinated with the reporting of earnings and personnel data to the Tax Administration and Statistics Norway. This common reporting system is called “a-ordningen” (the a-system).

## Poland

Source of data: **Ministry of Health, Ministry of Interior and Administration, Ministry of National Defence and Statistics Poland.**

- Until 2018: survey of medical personnel based on reports provided by healthcare units and doctor's practices.
- From 2019 onwards: estimates based on administrative sources, i.e. register of licensed physicians (Polish Chamber of Physicians), files provided by Social Insurance Institution and registers of healthcare establishments including practices of nurses and midwives.

Reference period: 31<sup>st</sup> December.

Coverage: Data regarding nurses are based on head counts. Nurses are counted in the main workplace. Nurses working in nurseries do not include midwives. Nurses working in prisons are excluded.

Break in time series:

- Since 2004: Nurses working in private medical offices as a main workplace are included, as well as nurses working in the Ministries of National Defence and Interior and Administration.
- Since 2005: Nurses working in facilities of stationary social welfare and in nurseries are included.
- 2019: The data until 2018 are underestimated due to high non-response rates in the survey.

## Portugal

Data are available for “professionally active” nurses (including nurses in administrative, academic or research functions who are not providing direct care to patients).

## Slovak Republic

Data not available. Suitable data source for providing “practising” concept is under development.

Data are available for "professionally active" nurses (including nurses in administrative, academic or research functions who are not providing direct care to patients).

## Slovenia

Source of data: **National Institute of Public Health, Slovenia**; National Health Care Providers Database.

Reference period: 31<sup>st</sup> December.

Coverage:

- Practising nurses are those working in the health-care sector (primary and secondary care), including public health institutes and the health insurance institute.
- The National Health Care Providers Database is a registry with total (100 %) coverage of health workers.

## Spain

Source of data: **National Statistics Institute (INE)**, based on the **Labour Force Survey**.

[https://www.ine.es/dyngs/INEbase/es/operacion.htm?c=Estadistica\\_C&cid=1254736176918&menu=ultiDatos&idp=1254735976595](https://www.ine.es/dyngs/INEbase/es/operacion.htm?c=Estadistica_C&cid=1254736176918&menu=ultiDatos&idp=1254735976595).

Reference period: Annual average. Three-year moving averages (e.g. data reported in 1996 is an average of 1995-1997).

Coverage:

- A significant revision of the numbers of nurses in previous years has been made in 2010 due to a clarification of definitions. The Spanish Working Group for the adaptation of ISCO-08 to our own classifications (CNO-11) determined that Spanish health professionals fit as follows:

A) The category 'associate professional nurses' (ISCO-08 code 3221) does not exist in Spain, so these series have been completely corrected.

B) The nursing aides working in Spain correspond entirely to the group 5 of the ISCO classification (ISCO-08 codes 5321, 5322) based on the tasks and functions they perform.

Therefore, based on these criteria, the series for practising nurses, professionally active nurses, associate professional nurses and caring personnel have been updated in 2010 for the period 1995-2008.

- The data exclusively include professional nurses (midwives included) who are actively practising nursing in the health sector. The number of practising nurses was obtained by calculating the number of nurses employed in the health sector according to NACE rev.2 (chapter Q) since 2009, and similarly with NACE Rev.1 and NACE Rev.1.1 before 2009.

- Data analysis over time should be carried out with caution. Data are obtained from a survey and fluctuations in the data can occur for a number of reasons, one of them being the sampling errors. These variations can lead to false assumptions about trends. We advise users of time series data to carefully explore the relevant issues before drawing any conclusions about the reasons for year-on-year changes.

- Up to 2010, the data by occupation are classified according to the National Occupations Classification (CNO-94 Spain code 272), the Spanish equivalence of ISCO-88, code 2230.

- From 2011 onwards data are classified according to CNO-11 Spain, code 212. The CNO-11 code 212 is the Spanish equivalence of ISCO-08 code 222 (nursing and midwifery professionals).

- During the **first quarter of 2005** various changes have been introduced into the **Economically Active Population Survey**:

1. New variables have been included in accordance with Eurostat (Statistical Office of the European Communities) requirements, set forth in Regulation 2257/2003.
  2. A centralised procedure has been implemented for the process of the telephone interviews.
  3. With the goal of further standardising the survey process, the questions of the questionnaire have been reformulated.
- In **2021** various changes have been introduced into the **Economically Active Population Survey**:
    1. New variables have been included in accordance with Eurostat (Statistical Office of the European Communities) requirements, set forth in Regulation (EU) 2019/1700 of the European Parliament and of the Council of 10 October 2019.
    2. The data referring to CNO-11 codes at 4-digit level are available
    3. The target population is extended to people aged 15 years and older.
    4. Introduction of the CAWI (web interviews) for second and subsequent interviews.
  - The figures of practising midwives are not available, and it is not possible to subtract them from the total number of practising professional nurses.
  - A university degree of 3 years is required to qualify as a nurse.
- Deviation from the definition: Data include midwives.
- Estimation method: In 2014, data series have been updated with Spanish population figures imported from Census 2011 and recalculated by using three-year moving averages in order to reduce the large year-to-year fluctuations in data derived from the LFS. The number reported in 1996 is an average of 1995-1997; the number for 2012 is an average of 2011-2013.

## Sweden

Source of data: From 1995: **National Board of Health and Welfare**, LOVA-register (change of register-name from former NPS-register).

Reference period: 1<sup>st</sup> November.

Coverage:

- Practising nurses are defined as licensed nurses registered in NACE-codes that are considered to be within the health-care sector.
- 100% coverage for practising nurses until 2020.
- The entire time series has been revised in 2023.

## Switzerland

Source of data: **Federal Statistical Office (FSO)**, Neuchâtel; Hospital Statistics, Statistics of Medical-social Institutions, Community Nursing Statistics; yearly census.

Reference period: Data as of December 31.

Coverage:

- Employment in hospitals, nursing homes and community nursing home services. The ambulatory healthcare sector is not yet covered.
- The category Professional nurses corresponds to the International Standard Classification of Occupations (ISCO-08) code 2221.
- The category Associate professional nurses corresponds to the ISCO-08 code 3221.

Estimation method:

- Hospital data: Until 2009, estimations were made with data on professions from 75% of hospitals. Hospitals giving valid information on professions are reasonably assumed to be representative of the whole category (university hospitals, acute hospitals, psychiatric hospitals, rehabilitation hospitals, and other specialised hospitals).
- Nursing homes data: In 2018, for the whole series (from 2007 to 2016), the method to identify nurses from medical-social institutions has been revised. The estimation of total nurses has been retrospectively adapted.

Break in time series: Since 2010, Hospital Statistics have been revised; no estimation needed.

## Türkiye

Data not available. Data are available for "professionally active" nurses (including nurses in administrative, academic or research functions who are not providing direct care to patients).

## United Kingdom

#### Source of data:

##### **- England:**

\* HCHS Nurses. 2000-2008: Non Medical Workforce Census; 2009 onwards: NHS Hospital & Community Health Service (HCHS) workforce statistics. (Data as at 30 September each year). The 2000-2008 data have been revised to exclude bank staff. The data from 2009 are headcount. HCHS Nurses are a component of Total, Professional and Associate Professional Nurses so the HCHS revisions as detailed above affect all three columns.

\* General Practice - Practice Nurses. 2000-2014: General & Personal Medical Services Statistics; 2015 onwards: Primary Care Workforce Tool. (Data as at 30 September each year).

- **Wales:** Welsh Government: <http://gov.wales/statistics-and-research/?topic=Health+and+social+care&lang=en>.

- **Scotland:** Information Services Division, Scottish Workforce Information Standard System. From 2021, NHS Education for Scotland: Scottish Workforce Information Standard System.

- **Northern Ireland:** Department for Health, Social Services and Public Safety:

[http://www.dhsspsni.gov.uk/index/stats\\_research](http://www.dhsspsni.gov.uk/index/stats_research).

#### Coverage:

- Does not include private sector.

- Data for professional and associate professional nurses available for England, Scotland and Northern Ireland only.

- **Scotland:** From 2007 onwards, Professional nurses are categorised as those with Agenda for Change bands 5-9 and Associate professional nurses those with Agenda for Change bands 1-4. For 2000 to 2006 (pre Agenda for Change), professional nurses are categorised as registered nurses and associate professional nurses as unregistered nurses. Data exclude bank and agency staff.

- **Northern Ireland:** 'Total nurses' includes qualified and nurse support staff, 'Professional nurses' includes qualified nurses only (Band 5+) and 'Associate Professional nurses' include nurse support staff (nursing auxiliary roles Band 1-4). Data in general exclude bank and agency staff as well as staff on career breaks. Nurses are qualified following either a 3 year programme leading to registration as a nurse with the Nursing & Midwifery Council or a Diploma/Degree in Nursing Sciences in one of the following areas: adult, mental health, learning disability or children's nursing. There are no national minimum qualifications for nurse support staff, but some will have a National Vocational Qualification.

- **England:** Data exclude bank staff.

- **Wales:** Data exclude bank staff.

#### Estimation method:

- **Wales:** Data prior to 2008 are estimates. Between 2007 and 2008, there was a large reduction in headcount numbers for non-medical staff in Wales, as records with whole-time equivalent (WTE) equal to 0 had been revised. This decrease was due to improvements in data quality, not a reduction in staff numbers, and 2008 headcounts are more accurate than previous figures. Therefore, the ratio between headcounts and WTE numbers for the affected staff categories in 2008 were calculated. These ratios were then applied to WTE figures for years prior to 2008 to produce estimates for those years.

Deviation from the definition: The numbers of practising nurses are underestimated, e.g. Scotland, Wales and NI exclude at least partially nurses in primary care settings; the four nations exclude at least partially nurses in social services, Third-sector, private sector nursing and residential homes.

#### Break in time series:

- **England:** There are breaks in the time series in 2009 and 2015 which relate to changes in the collection methodology: 2009 - HCHS data changed from an annual census collection to monthly workforce statistics from the Electronic Staff Record (ESR); 2015 - GP Practice Nurse data changed from an annual census collection to a quarterly collection from the Primary Care Workforce Tool (PCWT). 2009 onwards: Total Nurses do not equal sum of component parts due to HCHS staff working in more than one role.

- **England:** Up to 2008, data are based on rolecount; since 2009, they are based on headcount.

- **Scotland:** In 2014, figures for nurses have been added from 2000 to 2006. The methodology differs from the later years, since 2000-2006 figures are for employment rather than true headcount, and may double count nurses holding more than one post.

- **Northern Ireland:** In 2014 we have been able to properly identify all trainees and they have now been excluded, hence the decrease in the number provided for qualified midwives.

- **England:** The increase in the number of associate professional nurses in 2018 might be caused by the introduction in England of an Associate Professional Nursing qualification, which may have led to double counting. This is being investigated further.

#### Note:

- From 2007 onwards, the sum of professional nurses and associate professional nurses is slightly different from the

total number of nurses. This is due to double counting. Professional nurses are categorised as AfC Bands 5-9 and Associate professional nurses AfC Bands 1-4, and it is possible for someone to work two positions on different bands.

## United States

Data not available. Data are available for "professionally active" nurses (including nurses in administrative, academic or research functions who are not providing direct care to patients).

## NON-OECD ECONOMIES

### Argentina

**Source:** The World Health Organization (WHO), Global Health Observatory (GHO), Indicator "Nursing personnel (number)." [https://apps.who.int/gho/data/node.main.HWFGRP\\_0040?lang=en](https://apps.who.int/gho/data/node.main.HWFGRP_0040?lang=en) (accessed 29 June 2023).  
**Further information:** <https://www.who.int/data/gho>.

### Brazil

**Source of data:** Ministério da Saúde, Cadastro Nacional de Estabelecimentos de Saúde (CNES).

**Coverage:** The entire national territory.

**Methodology:** Nursing technicians and auxiliaries are not included, only graduate nursing professionals were considered.

**Further information:** <http://tabnet.datasus.gov.br/cgi/deftohtm.exe?cnes/cnv/prid02br.def>.

### Bulgaria

**Source of data:** National Statistical Institute, Exhaustive annual survey.

**Reference period:** 31<sup>st</sup> December.

**Coverage:** All nurses (head counts) who worked on a basic labour contract in outpatient and inpatient establishments, as well as those who practice in other health establishments - centres for emergency medical care, centres for transfusion haematology, homes for medical and social care for children, Hygiene-epidemiological inspections and others.

On 01.07.2000 Bulgaria started Healthcare Reform: a new institution in the outpatient care was build - the General Practitioner (GP), financing of curative medical care by the National Health Insurance Fund came into force. Specialists working in individual and group practices for specialized medical care, who have not signed contracts with the National Health Insurance Fund, are not covered in the exhaustive annual survey carried out by the BNSI, and neither nurses appointed by these physicians.

**Break in time series:** 2000.

### China

**Source:** Ministry of Health. China Statistical Yearbook, various years.

Public Health and Social Services > 22-2 Statistics on Health Personnel.

**Deviation from the definition:** Data refer to registered nurses.

**Further information:** <http://www.stats.gov.cn/sj/ndsj/2022/indexeh.htm>.

### Croatia

**Source of data:** Croatian Institute of Public Health, National Register of Health Care Providers.

**Reference period:** Status on December 31<sup>st</sup>.

**Coverage:** Public and private health sectors included.

**Break in time series:** Private nurses have been included since 1993.


### India

**Sources:**



2004-2018: **Ministry of Health and Family Welfare**, Directorate General of Health Services, Central Bureau of Health Intelligence. *National Health Profile 2020* (and previous editions) - Table 5.1.5. *State/UT Wise Number of Registered Nurses & Pharmacists In India*, page 351.

1999-2003: **Ministry of Health and Family Welfare**, Directorate General of Health Services, Central Bureau of Health Intelligence. Health information of India 2000-2001, 2002, 2003, 2004 and 2005. Table 7.05: *Number of registered general nursing midwifery, auxiliary nurse-midwives and health visitors*.

 **Deviation from the definition:** Data refer to the number of nurses and midwives registered with the relevant professional council.

**Further information:** <http://www.cbhidghs.nic.in/showfile.php?lid=1147>.

## Indonesia

**Source:** The World Health Organization (WHO), Global Health Observatory (GHO), Indicator “Nursing personnel (number).” [https://apps.who.int/gho/data/node.main.HWFGRP\\_0040?lang=en](https://apps.who.int/gho/data/node.main.HWFGRP_0040?lang=en) (accessed 29 June 2023).

**Further information:** <https://www.who.int/data/gho>.

## Peru

**Source:** The World Health Organization (WHO), Global Health Observatory (GHO), Indicator “Nursing personnel (number).” [https://apps.who.int/gho/data/node.main.HWFGRP\\_0040?lang=en](https://apps.who.int/gho/data/node.main.HWFGRP_0040?lang=en) (accessed 29 June 2023).

**Further information:** <https://www.who.int/data/gho>.

## Romania

Source of data: **National Institute of Statistics**, The activity of the sanitary and healthcare network – annual survey performed by NIS.

Reference period: data as of 31<sup>st</sup> December.

Coverage:


- The data cover public and private sector.
  - Data from 2000 till 2009 include ancillary medical staff. Since 2010, the data refer only to nurses.
  - The ancillary medical staff includes: medical assistants, pharmacy assistants, nurses, infant care personnel, sanitary technicians, laboratory assistants, registering clerks, masseur, autopsy assistant and statistician specialised in health statistics, medical physical trainer, ergo therapy trainer and other categories of medical staff with equivalent upper secondary level of education.
  - The data include also associated nurses from dentists units and pharmaceutical units (level of education ISCED 3 or 4 and ISCO code 3221). The number of practising nurses does not include midwives and physiotherapists
- Until 2007, ancillary medical staff working in administration, research and in other posts that exclude direct contact with patients could not be totally excluded.


Break in time series: 2010. Number of nurses decreased in 2010 because in the period 2000-2009 data include ancillary medical staff (see definition above).

## Russian Federation

**Source:** **Federal State Statistics Service (ROSSTAT)**, Forms of Federal Statistical Survey № 1-zdrav (1.5.1.) “Information on the quantity of medical personnel by specialties”.

**Coverage:** Data include practicing nurses working in all healthcare institutions, belonging to different administrative entities (state, ministries and large private companies), nonmedical institutions with medical units, excluding small health companies (with working staff of less than 15 persons).

 **Break in time series in 2014:** Since 2014, the Russian Federation includes Crime Federal Okrug (Crimea).

 **Break in time series in 2011:**

- Since 2011: Number of practicing nurses by the end of the calendar year, excluding midwives, laboratory technicians and dentists, and including ‘feldshers’, X-Ray laborants and nurses without specialisation.
- Until 2010: Number of practicing nurses by the end of the calendar year, excluding midwives, laboratory technicians and dentists.

**Note:** This document, as well as any data and any map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.



## South Africa

**Source: South African Nursing Council.**

**i Deviation from the definition:** Number of enrolled nurses registered. Number of this category of health professional registered with the relevant professional council.

- Data include those working in the public or private sector as well as those registered but not working or overseas.
- An enrolled nurse (EN) or sometimes called a staff nurse, is an individual who has completed a two year programme, usually at a nursing college or exited after completing two years of the university four year programme. This person is educated and competent to practice basic nursing.

**Further information:**

[https://indicators.hst.org.za/Human%20Resources/Health%20Personnel/sahr\\_279/IND?start=start](https://indicators.hst.org.za/Human%20Resources/Health%20Personnel/sahr_279/IND?start=start).

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<http://www.oecd.org/health/health-data.htm>