

# OECD Health Statistics 2025

## Definitions, Sources and Methods

### Associate professional nurses (ISCO-08 code: 3221)

**Nursing associate professionals** generally work under the supervision of, and in support of implementation of healthcare, treatment and referrals plans established by medical, nursing and other health professionals.

#### Inclusion

- Assistant nurse
- Enrolled nurse
- Practical nurse

#### Exclusion

- Professional nurse
- Clinical nurse consultant
- Specialist nurse
- Midwife (unless they work most of the time as nurses)
- Associate professional midwife
- Nursing aide
- Medical assistant (ISCO-08 code: 3256)

**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).

- 2009 and earlier: **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>.

##### Coverage:

- All nurses in Australia must be either registered or enrolled with the appropriate state or territory nursing/midwifery board to practice, and from 2011 onward with the Australian Health Practitioner Regulation Agency (AHPRA). Associate professional nurses are equivalent to enrolled nurses in Australia. Enrolled nurses usually work with registered nurses to provide patients with basic nursing care, undertaking less complex procedures than registered nurses. Enrolled nurses must have completed an appropriate vocational education and training course or equivalent, usually of 1-year duration.

- From 2013, “practicing” and “professionally active” data exclude nurses with non-practising registration.
- 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.

## Austria

**Source of data:**

- Up to 2018: **Austrian Federal Ministry of Social Affairs, Health, Care and Consumer Protection**, Hospital statistics.
- From 2019 onwards: **Austrian National Public Health Institute (GÖG)**, Health Professions Registry.

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

**Coverage:** Included are (non-academic) nursing associate professionals (ISCO 3221). Two years of study are required to qualify as a nursing associate professional.

- 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 jobseeker
    - As a nurse registered volunteer
    - As a nurse registered pensioner
    - 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.

**Estimation method:**

**Break in time series:**

- 2019: Change in data source and methodology. Up to and including 2018 nurses working in other settings than hospitals are not included.

**Note:** Training as an associate professional nurse was introduced in Austria in September 2016. The training curriculum for nursing associate professionals does not meet the educational requirements for nurses (as defined by Directive 2005/36/EC).

## Belgium

Data not available

## Canada

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

**Coverage:**

- 1988-2001 data were from Health Workforce Database (previously Health Personnel Database). Data include all registrations, regardless of employment status.
- 2002-present were from Health Workforce Database (previously Nursing Database). Data include all registrations, regardless of employment status, except duplicates.

- Data include licensed practical nurses (LPNs).
- Data exclude unregulated nurse aides and orderlies.
- Starting in 2023, CIHI revised its methodology for imputing missing values in data for 2023 and subsequent years. This change may have an impact on the trends. As a result, comparisons with data for previous years should be made with caution.

Note: 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.

## Chile

This category does not exist. The Superior Level Technicians in nursing are considered, for the length of their formal training and their functions, as caring personnel.

## Colombia

Data not available.

## Costa Rica

Data not available.

## Czechia

Source of data: Institute of Health Information and Statistics of the Czech Republic, National Registry of Healthcare Workforce.

Reference period: 31st December.

Coverage:

- Since 2017, data refer to practical nurses. (Due to change in legislation, new category of practical nurse (formerly called medical assistant) is considered and reported as associate professional nurse as of 2017).
- Data relate to nurses working in health establishments. Those working in social care sector are not included.

- Double counting of nurses working in more than one health establishment.

Deviation from the definition:

Estimation method:

Break in time series:

- 2022: Change in data source to National Registry of Healthcare Workforce.

## Denmark

Data not available

## Estonia

Data not available

## Finland

Data not available

## 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.

Reference period:

Coverage:

Deviation from the definition:

Estimation method:

Break in time series:

## Germany

Data category does not exist in Germany.

## Greece

Source of data: **Hellenic Statistical Authority (EL.STAT)**.

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

Coverage: Associate nurses working in hospital sector (public and private) and associate nursing personnel working in Public Health Centers.

Deviation from the definition: Only practicing associate professional nurses working in hospitals are included.

Estimation method:

Break in time series:

## Hungary

Source of data:

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

- From 2013 until 2014: **Office of Health Care Authorisation and Administrative Procedures** (EEKH in Hungarian) [www.eekh.hu](http://www.eekh.hu),

- From 2015 onwards, **Health Registration and Training Center** (ENKK in Hungarian) [www.enkk.hu](http://www.enkk.hu),

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

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

The data source of practising nurses is the Operational register.

The data source of nurses licensed to practice is the Basic register

Reference period: 31st December.

Coverage:

- From 1990: The report was completed according to the 1990 account of the Central Statistical Office "Number of posts and the staff of ancillary workers by activity". Nurses following the definition ISCO 88 (code 323 – general nurses and nursing assistants) are included.

- From 2017:

\* Head count data from the Basic register (licensed to practice) or from the Operational register (practising nurses).

\* The classification of the professional nurses and associate professional nurses is based on the highest level of qualification obtained.

Deviation from the definition:

Estimation method:

Break in time series: 2000, 2017.

- 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.

- From reference year 2017: 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 (e.g. minimum 3 years for a general nurse) and specialist

nurses with an equivalent education (or longer) or nurses with a qualification (general nurse and general assistant) by which they can benefit from the acquired rights in compliance with the EC Directive 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.

## Iceland

Source of data: Directorate of Health, The Icelandic Union of Practical Nurses.

Reference period: 31st December.

Coverage:

- Associate/licensed practical nurses: Three years of education in secondary school (non-university) and 16 weeks of practical training in health institutions.
- As of 2006 a new “associate nurse bridge” programme of 4 semesters of education was offered for health assistants with at least five years working experience as caring assistants. In 2008, 107 (2007:8; 2006:3) graduated from this programme and 115 from the general programme for associate professional nursing. The big increase in the number of associate nurses between 2007 and 2008 is to some extent due to this new programme, as 107 associate nurses graduated from it in 2008 in addition to the 115 graduating from the ordinary programme in 2008. This is also reflected in the fact that The Directorate of Health gave licenses to 188 new associate nurses in 2008. The increase in 2008 may also be explained by a number of associate nurses returning to these jobs from work in different jobs prior to the economic collapse.

Deviation from the definition:

Estimation method:

Break in time series:

## Ireland

Data not available since all nurses must comply with the country’s nursing educational level.

## Israel

Source of data: The data are based on the Nurses License Registry maintained by the Nursing Division and the Health Information Division in the **Ministry of Health**, for which the demographic information is periodically updated from the Population Registry at the Ministry of Interior.

Reference period: End of the year.

Coverage:

- Data are for all associate nurses. Data refer to practical nurses. The number of midwives is not included in the number of nurses.
- The training of practical nurses in Israel ceased in 2005; since then, new licenses are granted only to new immigrants. The training of practical nurses was done in two-year nursing courses in professional high schools.
- Practical nurses work under the supervision of a registered nurse. They are employed mainly in geriatrics and psychiatrics and are allowed to give medicines orally and intramuscular injections. They are mainly involved in helping with daily activities, collecting tests, ADL, measuring blood pressure and temperature.
- Skilled auxiliary staff, hospital trained and working under the supervision of registered nurses, is not included in the data.

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

In the Italian regulatory system, the category “Associate professional nurses” does not exist.

## Japan

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

Coverage:

- The survey for the number of certified assistant nurses is conducted every 2 years.
- 2 years of study and a prefectural examination are required to qualify as an assistant nurse.

Note: Due to falls in the population aged 18 and the number of training schools for nursing assistants, the graduates and newly employed persons in hospitals may be decreasing.

## Korea

Source of data:

- Practising associate nurses: **Health Insurance Review & Assessment Service**, Health care resources by provider.

- Licensed associate nurses: Until 2013, **Registration data from local governments**, unpublished data. From 2014, **Ministry of Health and Welfare**, unpublished data.

Coverage: Nurses with:

- Educational level:

- high school graduates who earned at least 740 hours of course credits in the national nurse's assistant training schools or nurse's assistant training institutions and at least 780 hours of practice credits in the medical institution or community health centers.

- high school graduates in the fields of nursing in the vocational high schools or permitted equivalent educational level who have earned at least 740 hours of course credits and more than 780 hours practising credits with consigned practising education by the principals of schools.

- Task: nursing-assistants, medical treatment-assistants.

- The registration data on licensed associate nurses are cumulative number of registrations. It reflects disaccreditations only. Since it does not reflect deaths of qualification-holders, the number could be larger than actual licensed associate nurses.

Break in time series: 2016. There is a break in the time series on practising nurses because of a new reporting system for health employment as of 2016.

## Latvia

Source of data: **Health Inspectorate of Latvia**; Register of Medical Practitioners and Medical Support Staff.

Reference period:

Coverage:

Deviation from the definition:

Estimation method:

Break in time series:

## Lithuania

All nurses are treated as professional nurses in Lithuania.

## Luxembourg

Data not available

## 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 2023, data are taken from the National Health Information System (SINAIS). In the case of the private sector, for 2002 to 2023 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 assistants and 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: **Social Statistical Database of Statistics Netherlands, BIG register** (official register of health care professionals) plus estimates.

Reference period: The last Friday before Christmas.

Coverage:

- All registered nurses are professional nurses, we do not have associate professional nurses in the Netherlands.
- Registered nurses outside of ISCO-08 2221 (such as 3221) also fulfil the requirements of Directive 2005/36/EC on the recognition of professional qualifications (e.g., “MBO Verpleegkundige”) and are thus classified as professional nurse.

Deviation from the definition:

Estimation method:

Break in time series:

## Norway

Data not available

## Poland

The category “Associate professional nurses” does not exist in Poland.

## Portugal

This occupation does not exist in Portugal

## Slovak Republic

There is no distinction between professional and associate professional nurses in the Slovak Republic.

Note: Total professionally active nurses cannot be split into Professional Active Nurses and Associate Professional Active Nurses

## Slovenia

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

Reference period: 31st December.

Coverage: The National Health Care Providers Database is a registry with total (100 %) coverage of health workers.

Note: Associate professional nurses are defined as nurses with 4 years of secondary education in nursing.

Deviation from the definition:

Estimation method:

Break in time series:

## Spain

NOTE: The category of 'associate professional nurses' (ISCO-08 code 3221) does not exist in Spain

## Sweden

Data not available

## 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 health care sector is not yet covered.

- The category Associate professional nurses corresponds to the ISCO-08 code 3221.

Deviation from the definition:

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.

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

## Türkiye

Data not available

## United Kingdom

Source of data:

- **England:** (<https://www.health-ni.gov.uk/articles/staff-number>)

\* 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.

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

- **Wales:** Welsh Government: Staff directly employed by the NHS | GOV.WALES (<https://www.health-ni.gov.uk/articles/staff-number>)

- **Northern Ireland:** Department of Health Northern Ireland – <https://www.health-ni.gov.uk/articles/staff-numbers>

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

Reference period:

- **Wales:** data for 2018 onwards at 31 December.

Coverage:

- Does not include private sector.

- **Northern Ireland:** Includes nurse support staff (Band 1-4), i.e. nursing auxiliary type roles. There are no national minimum qualifications for nurse support staff, but some will have a National Vocational Qualification.

- **Scotland:** From 2007 onwards, data include nursing staff with Agenda for Change bands 1-4. For 2000 to 2006 (pre Agenda for Change), associate professional nurses are defined as unregistered nurses. Data excludes bank and agency staff.

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

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) / National Workforce Reporting Service (NWRS). 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.

- **England:** The increase in the number of practising 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.

**Northern Ireland:** A new method for calculating headcount has been introduced from 2023 onwards, hence the break in series note.

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

Source of data: **National Council of State Boards of Nursing (NCSBN)**. Copyright by the National Council of State Boards of Nursing, Inc. All rights reserved.

The full title of the database: Nurse Licensee Volume and NCLEX Examination Statistics (several years). 1987-2016: The National Nursing Database: A profile of nursing licensure in the U.S. (2019 to present) - <https://www.ncsbn.org/national-nursing-database.htm>.

Coverage:

- Nationwide.

- Number of licensed practical/vocational nurses (LPN/VNs) holding an active license within a US jurisdiction available for employment for as December for each respective year.

- Licensed Practical and Licensed Vocational Nurses (29-2061). Care for ill, injured, convalescent or disabled persons in hospitals, nursing homes, clinics, private homes, group homes and similar institutions. May work under the supervision of a registered nurse. Licensing required.

- Data include territories such as American Samoa. But exclude data from Puerto Rico.

Deviation from the definition: Exclude nurses working abroad.

Estimation method: Nurses with active licensure to perform nursing care in the United States.

Break in time series: No breaks in time series.

Further information:

- 1996 represents data for 1995-1996.

- Data is compiled by NCSBN Nursys, which is an electronic information system where nursing regulatory bodies enter licensure data on a frequent basis. Nursys is the only USA national database for verification of nurse licensure, discipline and practice privileges for RNs, LPN/VNs.

- NCSBN Nursys reports that due to an unknown number of individuals holding active licenses in more than one jurisdiction, the total number of active licenses nationwide may be higher than the total number of nurses. More information at <https://www.ncsbn.org/>.

## NON-OECD ECONOMIES

### Bulgaria

Data not available

### 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.

Deviation from the definition:

Estimation method:

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

## Cyprus

Source of data:

2000-2004: **Public medical institutions.**

From 2005: Nursing Services (Ministry of Health) as regards the Public Sector, **Inspectors of Private Medical Institutions** (Ministry of Health).

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

Deviation from the definition:

Assumed that in the Private Sector, there are no nurses holding administrative positions. All nurses have been considered as practising nurses.

For 2005, the number of associate professional nurses refers only to the public sector, no data available for the private sector.

In Cyprus, retired nurses usually do not renew their “licence to practice”, since in order to do so, they would need certificates for their participation in seminars, etc. Hence, it has been assumed that the retired nurses are not licensed to practice, so the number of “nurses licensed to practise” is equal to the number of “professionally active nurses”.

Estimation method: The figures referring to years 2000-2005 have been estimated since no actual data are available for this period for the private sector. From 2006 onwards the reported numbers are actual.

Numbers referring to Public Sector are actual for all years and have been obtained from administrative sources supplied from the public medical institutions, whereas the numbers referring to the private sector from 2006 onwards have been obtained from administrative sources of the Inspectors of Private Medical Institutions (Ministry of Health).

Break in time series:

2005: due change in the data source.

2020: up to 2019, health care personnel of the private sector without qualifications were also counted among the associate professional nurses.

## Romania

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

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

Coverage:

The data cover all sanitary personnel from public and private sector.

The data cover all public and private sector.

Data from 2007 till 2009 refer to ancillary medical staff.

Since 2010, the data refer 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 specialized 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 associated nurses from dentists units and pharmaceutical units. It would be specified that for nurses and midwives the level of education is ISCED 3 or 4 and ISCO codes are 3221 and 3222.

Number of nurses decreased in 2010 because in the period 2007-2009 data refer to ancillary medical staff (see definition above).

Deviation from the definition:

Estimation method:

Break in time series: 2010.

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<https://www.oecd.org/en/data/datasets/oecd-health-statistics.html>