OECD

OECD Health Statistics 2025

Definitions, Sources and Methods

Nursing graduates

Number of students who have obtained a recognised qualification in nursing in a given year.

Inclusion

- Graduates from an education programme required to become:

> ☐ **a professional nurse, including general care and specialist nurse (see definition for professional nurses)**
> ☐ **an associate professional nurse (see definition for associate professional nurses)**

Exclusion

- Graduates from other fields of studies which do not provide a recognised foundation for the practice of nursing
- Graduates from a midwifery programme

Note: If ISCED-2011 code 723 is used for the calculation of this indicator, then graduates from a midwifery programme should be subtracted.

Sources and Methods

Australia

Source of data:
- **Australian Department of Education**. Award course completions (unpublished data).
- **National Centre for Vocational Education Research**, unpublished data. The data represents awarded course completions for Certificate IV, Diploma or Advanced Diploma in Nursing (Enrolled/Division 2 nursing). The HLT07 training package was only ratified in late 2007, and there was slow implementation of the training package qualifications in 2008. The number of course completions is provided as of 2009.
Coverage:
- Total nursing graduates includes professional nursing graduates and associate professional nursing graduates (from 2008).
- Data are based on universities in Australia - this may exclude overseas campuses of Australian-based universities.

Austria

Source of data: **Statistics Austria**, School Statistics, University Statistics.
Reference period: Nursing graduates from non-academic schools are reported for the examination year (e.g. 20xx), nursing graduates from universities of applied sciences are reported for the year of study (e.g. 20xx/yy).
Coverage: Included are domestic and foreign graduates who have obtained a recognised qualification in nursing.
Deviation from the definition:

Estimation method: Since the non-academic degrees are only available at time t+3, the number of these graduates is extrapolated along the development of pupil numbers.
Break in time series:
Note: Since 2008, education for professional nursing has been undergoing a transition from non-academic to academic education. This means that non-academic nursing schools are gradually being transformed into academic universities of applied sciences. The statutory requirement profile for training as a qualified health and care professional (ISCO 2221) has remained unchanged. Figures up to 2010 include only non-academic degrees; since 2011, both academic and non-academic degrees are included. The change in nurses' qualifications from non-academic to academic may lead to inhomogeneous developments in the time series.

Belgium

Source of data: **SPF Santé publique, sécurité de la chaine alimentaire et de l'environnement**, DG2 Soins de Santé primaires et gestion de crises - FOD Volksgezondheid, Veiligheid van de Voedselketen en Leefmilieu DG2 Basisgezondheidszorg en Crisisbeheer. Cellule Planification des professionnels de santé - Cel planning Gezondheidsberoepen. Base de données fédérale des professionnels de soins de santé - Federale databank van de beoefenaars van de gezondheidszorgberoepen.
- Data on graduates are based on regional statistics of which the sources are **Communauté française et Vlaamse Gemeenschap**.
Reference period: 31st December.
Coverage: Complete.
- Data refer to graduates for the whole country in health care sciences at superior schools, students with Belgian nationality and foreign students.
- Graduates with Master's and PhD degrees in nursing are also included.
Deviation from the definition:
Estimation method:
Break in time series: 2019. The decrease in the number of nursing graduates in 2019 is due to the extension of the studies.

Canada

Source of data:
- Prior to 2005: **Canadian Nurses Association** and **Canadian Association of Schools of Nursing**, The National Student and Faculty Survey of Canadian Schools of Nursing, except for Quebec. **L'Ordre des infirmières et infirmiers du Québec**, Rapports Annuels, for Québec data.
- From 2005: data from **Health Workforce Database** at **Canadian Institute for Health Information**.
Coverage: Includes LPN, RN, and RPN graduates.
- 2014 data are not shown since data on LPN graduates are not available for these two years.
- Data is unavailable after 2017..

Chile

Source of data: **National Council of Education** (Consejo Nacional de Educación, CNED), https://datosabiertos.mineduc.cl/titulados-en-educacion-superior/ and **Ministry of Education** Data Bases System (SIES): www.mineduc.cl. The Ministry of Health, through the Department of Health Human Resources Planning, collects data from the Ministry of Education. Data is reported from "Índice" which is a database held by the National Education Council, available since 2005, and SIES (Superior Education Information System: www.mifuturo.cl/sies/) held by the Ministry of Education since 2007. The Universities, Professional Institutes and Technician's Training Centers feed these databases.
Reference period:
- Annual periodicity.
- The figure provided for a given year refers to those who graduated during the previous year, because the calendar of studies in the south hemisphere is from March to January. The graduation takes place most of the time in March or June. The inclusion in the CNED and SIES Registers takes place the following year of the graduation.

Coverage:
- The high level of Graduate Professional Nurses reached since 2013 is explained by the important increase in the number of in-take in Universities since 2008, mainly due to the number of Universities which offer Professional Nurses career growth. The training of Professional Nurses goes on for five years in Chile.
Break in time series: In 2021-22, there has been a change in the trend of graduates. Due to the COVID-19 pandemic, the graduation of many students, which should have occurred in 2021, was delayed to 2022. This explains the low number of graduates in 2021, and the high number in 2022.

Colombia

Source of data: Calculations by the Direction of Human Talent Development in Health, **Ministry of Health, and Social Protection**, from the information published by the **Ministry of National Education**.
Coverage: National.

Costa Rica

Data not available.

Czechia

Source of data: **Ministry of education, youth, and sports**.
Reference period:
Coverage:
- Until 1999: Graduates in auxiliary nurse, dietician, general nurse, paediatric nurse, intensive care nurse, psychiatric nurse and midwife educational programmes from upper secondary paramedical schools and tertiary paramedical schools are included. Graduates from universities are not included.
- Since 2000: Graduates in general nurse educational programmes from upper secondary paramedical schools and tertiary paramedical schools, graduates in the nursing bachelor programme of study (excluding midwifery field of study) and graduates in the nursing bachelor field of study (included in other programmes of study) from universities are included.
- Foreign graduates are included.
- In 2000, there were only 1602 nursing graduates, due to a preceding change in mandatory (basic/elementary) education from 8 to 9 years. As a result, there was only small number of graduates from basic school in 1996 followed by small number of graduates from the secondary/high schools (paramedical schools) in 2000.
- In 2004, new legislation concerning non-medical health professions came into force (Act no. 96/2004 Coll.) and influenced the data on graduates with a 2–4-year time delay. Medical assistants (first graduated in 2007 and classified under the code 3256 - Medical assistants in the new International Standard Classification of Occupations - ISCO-08), who were not included in the data on nursing graduates, have partly replaced nursing graduates.
- In 2017, amendment of the legislation concerning non-medical health professions came into force. It defined new category of practical nurse (formerly called medical assistant), which is considered and reported as associate professional nurse. Therefore, data also comprise graduates in practical nurse educational programmes from upper secondary paramedical schools since 2017.
Deviation from the definition:
Estimation method:
Break in time series: 2000, 2007, 2017.

Denmark

Source of data:
- 1980-2021 **The Danish Health Data Authority**, Labour Register for Health Personnel
- 2022-2023 **The Danish Health Data Authority**, Educational Statistic, STIL Educational Statistic, STIL.
Reference period: 31st December
Coverage: The number of nurse graduates from Danish schools. 1980-2021

Deviation from the definition:
Estimation method:
Break in time series: In 2022, there is a break in time series, as we have changed Labour Register for Health Personnel to Educational Statistics.

Estonia

Source of data:
- **Statistical Office**, annual reporting.
- **Ministry of Education and Research**.
Reference period: Given academic year.
Coverage:
Deviation from the definition:
Estimation method:
Break in time series: 1999.
- In 1999, the length of time of the educational programme of nursing specialists was extended.

Finland

Source of data: The students and qualifications of educational institutions statistics kept by **Statistics Finland.** The statistics cover the students and attained qualifications in education leading to a qualification or degree and are part of the StatFin database maintained by Statistics Finland. The classification of education is based on the International Standard Classification of Education 2011 (ISCED 2011). (https://statfin.stat.fi/PxWeb/pxweb/en/StatFin/StatFin__opiskt/statfin_opiskt_pxt_11c3.px/)
Reference period: Calendar year.
Coverage: Classification of nurses consists of the 2011 ISCED codes 671101 (Bachelor of Health Care (UAS), Registered Nurse), 671103 (Bachelor of Health Care (UAS), Public Health Nurse
Estimation method:
Break in time series:

France

Source of data: **Ministère des Solidarités et de la Santé - Direction de la Recherche, des Etudes, de l'Evaluation et des Statistiques** (DREES). Sous-Direction de l'Observation de la Santé et de l'Assurance maladie, Bureau des Professions de santé. **Enquête "Ecoles de formation aux professions de la santé."** For further information: https://data.drees.solidarites-sante.gouv.fr/explore/dataset/491_la-formation-aux-professions-de-sante/information/.
Reference period: yearly data.
Coverage:
- Data come from statistics compiled from a survey carried out in training institutions for health professionals which estimates the number of degrees valid at the national level, in metropolitan France and overseas departments and territories.
-Nurses include state-licensed nurses ("infirmiers diplômés d'État", IDE) and psychiatric nurses (ISP). In 1992, a law ended the separate courses for psychiatric nurses who have to do a 3-month internship to obtain the common single degree ("diplôme unique", IDE). In 1994, a decree granted a nursing degree (DEI) without any conditions to all psychiatric nurses (ISP) requesting it.
In 2025 the time series were filled back to 1980.
Deviation from the definition:
Professional nurses include anaesthetist nurses, operating block nurses, nursery nurses and health executive of all specialities, as it is not possible to distinguish precisely which graduates are health executive nurses. According to the most recent data available on students training to become health executive, around 80% of them had trained as nurses.
Estimation method:
Break in time series:
In 2024, some corrections were made to the old series.

Germany

Source of data: **Federal Statistical Office**, Statistics on vocational training 2023/2024; Statistisches Bundesamt 2024, *Statistischer Bericht: Berufliche Schulen und Schulen des Gesundheitswesens - Berufsbezeichnungen, Schuljahr 2023/2024*, table 21121-20; http://www.destatis.de.
Reference period: school year 2023/2024.
Coverage:
- Passed examinations in nursing care.
- Professional nurses with a 3-year education (nurses, paediatric nurses and nurses for the elderly) who passed their examinations are included.
- Professional nurses who have completed training as a nursing supervisor at a professional school are also included.
- Midwives and nurses with a 1-year education are excluded.
- Data are available from 1996 onwards.
Deviation from the definition:
Estimation method:
Break in time series: As of reporting year 2012 a new classification of occupation (KldB-2010) has been introduced. Therefore, the data are comparable only in a restricted manner to previous years.

Greece

Source of data: **Hellenic Statistical Authority (EL.STAT.)**. **Survey on Tertiary Education (Universities and Technological Institutions)** https:www.statistics.gr/en/statistics/-/publication/SED33/-
Reference period: 31st December.
Coverage:
- The data on associate professional nurses graduates include graduates from the vocational senior high schools since 2007 and the vocational training institutes since 2011.
Deviation from the definition: Data collected for the academic year t/t+1 including students that graduated in year t+1 but the whole time series are classified in year t.
Estimation method:
Break in time series:
- Until 2011, there are no data for the vocational training institutes as they were under construction and not in full function.
- The drop in the number of associate nurses graduates in 2014-15 was due to no entries of students in preceding years because of the temporary abolishment of the relative specialization of assistant nurses in higher vocational education. Also concerning the ISCED 4 graduates from 2014/15 an extra semester of apprenticeship has been added, therefore, the students that would graduate in 2014/15 did not (some graduated the following year while others graduated later due to the inability to find a place for their apprenticeship).
Note:
- In 2020, the data on the associate professional nursing graduates have been revised upwards since 2011. That is because the previous data did not include the graduates from the post-secondary non tertiary education (ISC4). Therefore, the revised data include both graduates of the upper secondary level (ISC3) and the post-secondary non tertiary level (ISC4). Also, it should be noted that at this level, associate nursing and associate midwifery graduates are counted together because of the common specialization.

Hungary

Source of data:
- Up to 2012: **Hungarian Central Statistical Office** (KSH in Hungarian) www.ksh.hu on the basis of the data collection of the Ministry of Human Resources.
- From 2013 until 2014: **Office of Health Care Authorisation and Administrative Procedures** (EEKH in Hungarian) www.eekh.hu. Basic register.
- From 2015 to 2016, **Health Registration and Training Center** (ENKK in Hungarian) www.enkk.hu. Basic register.
- From 2017, **National Healthcare Service Center** (ÁEEK in Hungarian) www.enkk.hu. Basic register.

- From 2021, **National Directorate General for Hospitals** (OKFŐ in Hungarian) www.okfo.gov.hu, Basic register.
<u>Reference period</u>: 31st December.
<u>Coverage</u>:
- From 1990, data are provided for graduates in secondary vocational school and professional nursing education, in addition to college and bachelor level graduates in health care.
- Data on the professions of optometrists, dental technicians, pharmacy assistants, orthopaedic mechanics, medicinal gymnastics, medicinal massage, sports massage therapists and infant and child attendants are not included.
-       From 2017, ambulance nurses are not included.
<u>Deviation from the definition</u>:
<u>Estimation method</u>:
<u>Break in time series</u>:

    2017: The system of the Hungarian vocational training had been transformed in 2010 and, as a part of it, the access to the nursing profession became a multi-stage process. In order to enter the professional nurse training, graduates have to obtain a practice nurse qualification, which falls under the category of associate nurse. As a result, these professionals can appear in the series of multiple years, at first under the category of the associate nurses and later - after an additional one-year-long training - in the category of professional nurses. Practising nurse training was phased out in the fall of 2022.

-       From reference year 2017: With regards to the training requirements laid down in Directive 2005/36/EC, nursing graduates were regrouped:

    ☐   professional nursing graduates: 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

    ☐   nursing graduates 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 Nursing graduates.

Note: Between 2021 and 2022, the total number of nursing graduates decreased by 34%. The transformation of the vocational training system from the 2020/2021 academic year may play a role in the decrease. As a result of the transformation, some training courses (e.g. practical nurse, practical infant and child nurse) had been discontinued, causing a gradual decrease in the number of graduates. Also, there are certain trainings (e.g.: infant and child nurse), which were cancelled and then returned to the training palette.

Iceland

<u>Source of data</u>: **Statistics Iceland**, Register of graduations.
<u>Reference period</u>: The calendar year.
<u>Coverage</u>: Students who have obtained a recognised qualification in nursing with education at the university level (professional nurses) and recognised qualification as associate nurse/practical nurse with education at the upper- secondary level (non-university).
<u>Deviation from the definition</u>:
<u>Estimation method</u>:
<u>Break in time series</u>:

Ireland

<u>Source of data</u>:
- Up to 1998: **Nursing and Midwifery Board of Ireland – An Bord Altranais**
(https://www.nmbi.ie/Home).
- From 1999 onwards: **Higher Education Authority** (https://hea.ie/).
<u>Reference period</u>: Calendar year.
<u>Coverage</u>: Universities, Institutes of Technology, and designated institutions.

- From 2021, figures are rounded to the nearest 5 due to the source's disclosure control policy.
- The figures from 1999 relate to the number of graduates in a given year.
Deviation from the definition:
Estimation method:
Break in time series:
- From 2021: Due to change in coding structure by the HEA, data refers to all graduate students form the ISCED field/discipline code 0913 (Nursing & Midwifery), excluding courses relating to midwifery. Therefore, data pre-2021 is not directly comparable due to potential impacting changes in classification in the relevant field of study and/or level.
- The figures from 1999 relate to the number of graduates in a given year.

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.
Coverage: Data are for new licensed nurses who graduated in Israel.
- The policy of the Ministry of Health changed to reduce the number of associate professional nurses by not training new ones and re-training old ones as registered nurses.
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: **Ministry of Education**; "National Register of Graduates" (http://dati.ustat.miur.it/organization/ace58834-5a0b-40f6-9b0e-ed6c34ea8de0?tags=Universit%C3%A0&tags=Laureati&tags=Studenti).
Reference period: Year.
Coverage: All graduated in Italy.
Deviation from the definition: None.
Estimation method: None.
Break in time series: None.

Japan

Source of data: **Ministry of Health, Labour and Welfare**, Survey on enrolment and graduates from nursing schools.

Korea

Source of data:
Professional nursing graduates
- From 2019: **Korean Education Development Institute**, Educational Statistics.
- Until 2018: **Ministry of Education**, Statistical Yearbook on Education.
Associate professional nursing graduates
- High schools for associate nurses: **Ministry of Education**, unpublished data.
- Educational institutions for associate nurses: **Registration data from local government**

Latvia

Source of data:
- Until 2022 - **Central Statistical Bureau (CSB)**.
- From 2023 - National information system for education, owner and manager **Ministry of Education and Science of Latvia**.
- Source of data prior to 2008 not clear.

Reference period: Nursing graduates are reported for the academic year (e.g., 2022/2023).
Coverage: Information includes data from all universities and colleges listed in the Register of Education institutions providing accredited programmes.
- Until the academic year 2020/2021 the data include graduates from college, bachelor, and master programmes. Whereas starting from the academic year 2021/2022 due to the educational reform (transitioning from a college-level education to bachelor-level education) college graduates are not included anymore.
- In accordance with the concept of nursing profession development approved by the Latvian government on 29 October 2019, an educational reform, introducing the profession of general nurse and transitioning from a college-level education (3 years) to bachelor-level education, was implemented. Consequently, as of 31 December 2021, the first-level professional higher education programme Nursing implemented in medical colleges will no longer be implemented and, as of 1 January 2022, students will continue their studies in the second-level professional higher education study programme offering qualification Nurse (general care nurse). The introduction of the reform has caused fluctuations in the graduate statistics, as nurses who after 3 years in medical college were due to graduate in 2022 continued their studies at university for another year.
- Fluctuations in the nursing programme graduate statistics in 2024 were still caused by the educational reform implemented in 2019.
- Without graduates from "doctor's assistants" programmes. In 2024 there are 459 graduates in this programme.
Deviation from the definition:
Estimation method:
Break in time series:
- 2008: Change in data source.
- 2010-2014: The significant increase in nursing graduates is due to the fact that nurses have taken the opportunity to raise professional qualifications by completing bachelor's degree in nursing programme. This programme was financed by the European Social Fund (ESF) and was free for the students. ESF programme was started in September 2009 and ended in 2014. The aim of this project was to provide nurses with the educational programme following the basic education. After graduation from this programme, nurses acquired specialization. The programme did not stipulate a definite number of new entrants; therefore, the large variation in the number of graduates in years 2010-2013.
- 2023: Change in data source.

Lithuania

Source of data: **Statistics Lithuania,** data of entire annual survey of education institutions. Report "Health Statistics of Lithuania" available from https://www.hi.lt/sveikatos-statistikos-leidiniai/#--lietuvos-sveikatos-statistika Available on Official Statistics Portal of Statistics Lithuania http://osp.stat.gov.lt/en.
Reference period:
Coverage: The number of graduates includes graduates with university and college education, not include rehabilitation graduates.
Deviation from the definition:
Estimation method:
Break in time series:

Luxembourg

Source of data: Ecole nationale de santé du Luxembourg (ENSA) (previous name: **Lycée technique pour professions de santé (LTPS)**).
Reference period: data as of December 31.
Coverage:
Deviation from the definition:
Estimation method:
Break in time series:

Mexico

Source of data:
- 2000 to 2017: **Ministry of Education, General Directorate of Professions**.
- From 2018 onwards: **National Association of Universities and Institutions of Higher Education** (ANUIES).
Coverage: Includes persons who have graduated and have obtained the professional license.
Deviation from the definition: Data include professional nursing graduates only.
Note: In 2020, the COVID pandemic delayed the graduation process, the number of graduates being regularized in subsequent years.

Netherlands

Source of data: **Statistics Netherlands**, Statistics of education. Primary source: Dienst Uitvoering Onderwijs of the Ministry of Education, Culture and Science. Integral data of funded educational institutions. Participants' higher education:
https://duo.nl/open_onderwijsdata/databestanden/ho/ingeschreven/. Participants MBO (for associate professional nurses): https://duo.nl/open_onderwijsdata/databestanden/mbo/onderwijsdeelnemers/.
Reference period:
Coverage: The number includes nursing graduates in higher education (HBO (university of applied sciences, vocational college)) and nursing graduates in senior vocational secondary education (in Dutch: MBO). The number of nursing graduates in higher education (in this case vocational colleges) is based on the "integrated higher education project". In this project, Statistics Netherlands is working together with the Information Management Group (IBG), Higher Professional Education Council (HBO-Raad), Association of Dutch Universities (VSNU) and the Ministry of Education, Culture and Science (OCW). The number of nursing graduates in senior vocational secondary education is based on data from the Ministry of Education, Culture and Science (OCW).
Deviation from the definition:
Estimation method:
Break in time series: - As from 2011, data have been rounded to multiples of ten.

New Zealand

Source of data: **Nursing Council of New Zealand**, Annual Reports.
Reference period: Year ending 31st March, e.g. 2019 data refer to all candidates from 1st April 2018 to 31st March 2019.
Coverage:
- Figures are for numbers of graduates of accredited Bachelor degree in nursing or Diploma in Enrolled Nursing who sat the state final examination. (The purpose of the examination ensures that all graduates entering the New Zealand Register of Nursing have achieved certain standards of knowledge and competency).
- All figures for 'Professional Nursing Graduates' from 1999 to 2015 are from the NZ Nursing Council Annual Reports.
- Figures provided for 'Professional Nursing Graduates' are for registered nurse candidates for state examinations.
- Figures for NZ midwifery graduates are excluded.
- Enrolled nurses in New Zealand are regulated and their programme is 18 months. These figures are reported under 'Associate Professional Nursing Graduates. The programme for nurse assistants (previously enrolled nurses) was re-established in 2003.
- The scope of practice for enrolled nurses and nurse assistants changed on 31st May 2010. The new enrolled nurse scope of practice enables enrolled nurses to make a broader contribution to health services and give greater support to registered nurses.

Norway

Source of data: **Statistics Norway**.

- Statistics Norway collects student data from the administrative systems of the various tertiary institutions. The administrative systems in tertiary institutions create data files in the format specified by Statistics Norway. Information on completed doctoral degrees is collected from NIFU (http://www.nifustep.no/English/Pages/default.aspx).
- Tertiary graduation statistics include all individuals who have completed a degree of 2 years or longer from an educational institution classified by the Standard Industrial Classification as a tertiary institution. Registration of completed educational activities occurs during the period 1 October in year x, 30 September in year x+1.
- See http://www.ssb.no/english/subjects/04/02/40/eksuvh_en/ and then 'About the statistics'.
Reference period:
Coverage: Complete coverage as statistics are based on enumeration of graduates in tertiary education. Sampling errors and non-response errors do not exist.
Deviation from the definition:
Estimation method:
Break in time series: Individually based data on completed education have been published annually since they were first collected in 1973/74 (academic year). Most variables are comparable, but some have changed. The revised Norwegian Standard Classification of Education (http://www.ssb.no/english/subjects/04/90/nos_c751_en/) recoded education courses to enable comparison of newer and older data (also including a recoding to ISCED-97). While education courses are reasonably comparable over time, other variables are not (e.g. coding of institution types).

Poland

Source of data:
- Until 1990: publication of **Ministry of National Education**, "Higher education, basic data".
- From 1990: **Statistics Poland,** reports S-10.
Reference period:
Coverage:
Includes the number of graduates with first university level and master's degree from nursing programme, including foreigners graduated in Poland.
Deviation from the definition:
Estimation method:
Break in time series: 1990 due to change of data source.

Note:
- The education of nurses has been in a process of transformation, which means that traditional nursing schools were closed down and a new licence and master degree-based system was established. This allowed the number of personnel with higher education to increase in these two occupational groups.
- Since 2003, Medical Universities have provided two types of studies for nurses: a 3-year licensing program and complementary studies for those who do not have the license. After graduating from these studies there is a possibility of a 2-year master's degree.
- Since the academic year 2004/2005, many nurses and midwives educated in the old system (before Poland's accession to the EU) have completed their education at the Bachelor's level through bridging studies, in order to have their qualifications recognised in other EU countries. There were at least 40,000 (approximately) nurses and midwives who graduated from these bridging studies in the period 2007-2013, explaining the large numbers of nursing and midwifery graduates. The number of people still willing to follow these studies decreased strongly in academic year 2015/16 and the number of universities conducting bridging studies also dropped (15 only, against 57 universities in 2014/15). This explains the dramatic decrease in the number of nursing and midwifery graduates in 2016.There is a concern about double counting of graduates in cases where a person first completes a bachelor's degree and then a master's degree. Each year universities give information about the number of graduates without identifying the people who continue their education in the second degree. As a result, these graduates are registered again two years later upon completion of their second degree.

Portugal

Source of data:
- Since 2011: **Directorate General of Statistics of Education and Science, Ministry of Education and Science**.
- Between 2006 and 2010: **Ministry of Science, Technology and Higher Education**.
- Up to 2005: **Ministry of Education**.
Reference period: End of academic year.
Coverage: Data represent the total number of graduates.
Deviation from the definition:
Estimation method:
Break in time series: Break in 2002 due to change in Nursing Education in the end of the 1990's.

Slovak Republic

Source of data:
- Until the year 2009: **National Health Information Center** (submitted data are from the Institute of Information and Prognosis of Education.).
- From the year 2010: directly the Institute of Information and Prognosis of Education, from the year 2014 under the new name the **Slovak Centre of Scientific and Technical Information** (www.cvtisr.sk).
Reference period:
Coverage:
- For the year 2005, the data for "Nursing graduates" were collected using the number of nursing graduates with a bachelor's degree and the number of nursing graduates in higher specialised study, such as a diploma in nursing (i.e., post general certificate of education (GCE) study with qualification). Data were collected according to the OECD definition and according to the Slovak Act No.742/2004 on qualification for health care professions.
- Lower and higher-level nursing professionals are included: nurses, medical rescuers, medical assistants. Excluded are nursing aids / hospital attendants. They do not have any recognized qualification in nursing.
- Data from the year 2010 cover in addition of nursing graduates with high (university) education also certified general nurses (from lower level of nursing graduates).
- There is no distinction between professional and associate professional nurses in the Slovak Republic. All nurses are considered professional nurses.
Deviation from the definition:
Estimation method:
Break in time series: 2005, 2010.
- There is a break in 2005 because of changes within Slovak health education and training system. No nurse could graduate at paramedical schools (i.e., at secondary health care schools) in 2005. Students of paramedical schools could graduate as medical assistants in 2005. 1,103 medical assistants graduated in 2005.

Slovenia

Source of data: **Ministry of Education.**
Reference period: 31st December.
Coverage: graduates in Slovenian institutions (schools).
Deviation from the definition:
Estimation method:
Break in time series:

Spain

Source of data:
- Since 2011: **Ministry of Universities** from **the Statistics of University Students**:
http://estadisticas.mecd.gob.es/EducaDynPx/educabase/index.htm?type=pcaxis&path=/Universitaria/Alumnado/EEU_2022/GradoCiclo/Egresados/&file=pcaxis&l=s0
- Up to 2010: **National Statistics Institute** (INE). University Education Statistic.

https://www.ine.es/dyngs/INEbase/es/operacion.htm?c=Estadistica_C&cid=1254736176744&menu=result ados&idp=1254735573113

Reference period: Academic Year: the data for 2021 corresponds to the graduates of the 2020-21 academic year.

Coverage:

- In 2011 there are the last students who completed studies for (old) three-year Diploma in Nursing [9.731 graduates] and the first ones who completed studies for (new) four-year Degree in Nursing (new degrees according to Bologna Plan) [1.923 graduates].

- In 2012 there are 4.550 graduates from the old Diploma in Nursing, and 3.644 graduates from the new Degree in Nursing.

- In 2008 the new university degrees in nursing (within the framework of Bologna process) began to be implemented. These new degrees have replaced the old diploma in nursing. The duration of the new degrees is four academic years (instead of three years for the former diploma). The increment of one academic year has implied the reduction of nursing graduates in 2012 because of those nurses that should have been graduated through the old diploma.

Deviation from the definition: Data include midwife graduates.

Estimation method:

Break in time series:

Sweden

Source of data:
- Until 1995: **National Board of Health and Welfare**. LOVA-register.
- From 1996: **Swedish Higher Education Authority (UKÄ)**.

Reference period:
- Until 1995: 1st November.
- From 1996: 31st December.

Coverage:
- Full coverage. In 1993, the training for nurses increased from two to three years. This meant that almost no students graduated in 1995. In 1985, the training for nurses was expanded to more universities.

Deviation from the definition:

Estimation method:

Break in time series:

Switzerland

Source of data:
- From 2007 onwards: **Federal Statistical Office (FSO)**, Neuchâtel; Students and Degrees of Higher Education Institutions (SHIS-studex); Statistics on Certificates; yearly census.
- Up to 2006: **Swiss Red Cross**, Bern.

Reference period: Annual census.

Coverage:
- Full coverage based on population data (full-survey).
- Since 2007, data cover professional and associate professional nursing graduates.
- Before 2007, the data did not include all "associate nurses" graduates.

Deviation from the definition:

Estimation method:

Break in time series:
- 2007: change in data source and coverage (inclusion of all associate nurses).
- 2009: inclusion of the graduates of Universities of applied sciences.

Türkiye

Source of data:
- Up to 2013: **General Directorate for Health Services, Ministry of Health** and **ESPC Higher Education Statistics**.

- From 2013 onwards: **General Directorate for Health Services, Ministry of Health** and **Council of Higher Education**, Higher Education Statistics.
Reference period: End of the academic year.
Coverage:
- Data refer to total number of nursing graduates of vocational high schools of health and universities.
- Nursing departments in vocational health high schools accepted an increasing number of nursing students until the mid-1990s in response to domestic needs. In the late 1990s, vocational health high schools started not to enrol any students in nursing section. However, in the early 2000s, a growing need for nurses came to the agenda again, and these vocational schools begun accepting more nursing students again, explaining the rise in the number of graduates since 2004. In 2005, the vocational health schools again started not to enrol any new students. However, in 2007, the vocational health schools accepted huge numbers of nursing students and gave huge number of graduates from 2010.
- From 2014 onwards, Vocational High Schools of Health have not accepted new admission for nursing. After this time, all nurses must graduate from universities. (2016 was the last year with nursing graduates from vocational high schools, explaining the high number of graduates in this year. In 2017, the number of nursing graduates dramatically decreased, with graduates from universities only.)
Deviation from the definition:
Estimation method:
Break in time series: From 2017 onwards, the numbers of nursing graduates include only graduates from universities.

United Kingdom

Source of data:
- Up to 2014: **Nursing and Midwifery Council**.
- From 2015 onwards: **Higher Education Statistics Agency** (HESA).
Reference period:
- Up to 2014: Data from 2008 are for financial years, e.g. year 2009 data cover the period 1st April 2009 to 31st March 2010.
- From 2015 onwards: Data are for academic years, e.g. data for academic year 2020/21 is reported as 2021 figure.
Coverage:
- From 2015 onwards: Data correspond to nursing graduates at the undergraduate level. They include graduates in adult nursing, children's nursing, community nursing, dental nursing, mental health nursing, learning disabilities nursing, nursing (non-specific) and others in nursing. Data include foreign students.
Estimation method:
- Up to 2014: Data provided at UK level by the NMC. Data covers the number of newly registered Nurses, which is the number of nurses made available for registration by HEI and who went on to register and is the best possible approximation of nursing graduates available held by the NMC.
Break in time series: 2015 (change in data source and methodology).

United States

Source of data:
- 2001-2011: **Health Resources and Services Administration** (HRSA). National Center for Health Workforce Analysis. The U.S. Nursing Workforce: Trends in Supply and Education, 2001-2011. See at: http://www.hrsa.gov/index.html and
http://bhpr.hrsa.gov/healthworkforce/reports/nursingworkforce/nursingworkforcefullreport.pdf.
- 1997- 2000; 2012-2019: **National Council of State Boards of Nursing** (NCSBN). Nurse License Volume and NCLEX® Examination Statistics. Chicago. See at: https://www.ncsbn.org/1237.htm. Credit: "Portions copyrighted by the National Council of State Boards of Nursing, Inc. All rights reserved."
Coverage:
- National estimates. Excludes U.S. territories.
- In the U.S., professional nurses are designated as registered nurses (R.N.). Associate professional nurses are designated as licensed practical/vocational nurses (LPN).

- Data exclude unlicensed professionals, such as certified nurse assistants (CAN's). CAN's includes orderlies, psychiatric aides, medical assistants, and certified nurse's assistances/aides.
- Recognized qualification to practice as a nurse in the U.S. is given to individuals who successfully graduated and passed the licensure examination: the National Council Licensure Examination for Registered Nurses (NCLEX-RN) and the National Council Licensure Examination for Practical Nurses (NCLEX-PN). Due to the content and extent of the NCLEX-RN examination, the majority of the nurses are more likely to take such examination shortly after graduation. The data represent the number of NCLEX-RN and NCLEX-PN passers, first-timers and repeats.
- Data exclude internationally educated candidates passing the examination.
Break in time series: No breaks in time series.

NON-OECD ECONOMIES

Bulgaria

Source of data: **National Statistical Institute**,
https://infostat.nsi.bg/infostat/pages/module.jsf?x_2=164
https://nsi.bg/en/node/3388
Until 2022:
Report on tertiary education for educational-qualification degrees 'Master', 'Bachelor' and 'Professional bachelor' as of 15 November - exhaustive annual survey.
From 2023:
An administrative register of the Ministry of Education and Science.
Reference period:
Until 2022:
From 16.11 of the previous year (t-1) to 15.11 of the index year (t). E.g., data for year 2010 contains number of graduates from 16.11.2009 to 15.11.2010.
From 2023:
Calendar year.
Coverage: Full coverage.
The survey covers all authorized higher schools (colleges, universities, and equivalent higher schools) under the regulation of Higher Education Act.
The specialties for medical doctors, dentists, pharmacists, midwives, and nursing are taught in public higher schools. Ministry of Education and Science is determining annually plan scheme (limits for new entrants) for each specialty in public higher schools, which varies at different years.
Deviation from the definition:
Estimation method:
Break in time series: - 2007: According to the national legislation in 2007 the length of training of nurses was increased by a year.
        -2023 - Break in the time series due to a change of the data source.

Croatia

Source of data: Ministry of Science and Education of the Republic of Croatia.
Reference period: From the year 2008, data are provided by the Ministry of Science, Education and Sports. Data refers not on calendar, but on academic years. For example, registered data for the year 2008, refers to the 2007/2008 academic year (01.10.2007 – 30.09.2008).
Coverage:
Deviation from the definition:
Estimation method:
Break in time series:

Cyprus

Source of data: Annual survey conducted from the **Statistical Service of Cyprus, "Education Statistics"**.

Reference period: Year (n+1) refers to the school period: year (n)/year (n+1).
Coverage:

- Included are the graduates of the nursing school (at least 3 years are demanded for diploma acquisition) of the Public Sector (tertiary non-university level).
- Included are the nursing graduates of university level institutions both from the Public and Private Sectors (only from 2007 onwards the university level nursing schools have been established).
- The total number of nursing graduates is available only from 2007 onwards; for previous years 2-year programmes existed (public sector: up to 1985, private sector: up to 2006) but no data on the number of graduates is available.

Deviation from the definition:
Estimation method:
Break in time series:

Romania

Source of data: **National Institute of Statistics**,
Activity of Education Units (Statistical data on tertiary education) – annual survey performed by NIS.
Reference period: academic year.
Coverage:
Deviation from the definition: Since 2015, data on nursing graduates included, also, the number of midwives graduates.
Estimation method:
Break in time series: 1996 (Since 1996 including private sector) and 2015.
Romania collects data on education as per the new ISCED Fields of Education and Training classification (ISCED-F 2013) adopted following the UNESCO's ISCED 2011 revision. Hence, from 2015 until 2021, statistical data were collected for the field of study 0913 'Nursing and midwifery'. The data were not collected distinctively for "Nursing", and "Midwifery", respectively and, as such, data on graduates from a midwifery programme could not be subtracted. Beginning with 2021 the data on nursing graduates does not include midwives graduates

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