

Graduates

Definitions

Updated: September 2021

Medical graduates	<p>Number of students who have graduated in medicine from medical faculties or similar institutions, i.e., who have completed basic medical education in a given year.</p> <p>Exclusion</p> <ul style="list-style-type: none">- Graduates in pharmacy, dentistry / stomatology, public health and epidemiology- Individuals who have completed post-graduate studies or training in medicine <p>Note: In the European Union, a Directive has defined basic medical training as comprising a total of at least five years of study or 5,500 hours of theoretical and practical training provided by, or under the supervision of, a university (article 24, Directive 2005/36/EC of the European Parliament and of the Council, updated with Directive 2013/55/EC).</p>
Dentists graduates	<p>Number of students who have obtained a recognised qualification in dentistry in a given year.</p>
Pharmacists graduates	<p>Number of students who have obtained a recognised qualification in pharmacy in a given year.</p>
Midwives graduates	<p>Number of students who have obtained a recognised qualification in midwifery in a given year.</p>
Nursing graduates	<p>Number of students who have obtained a recognised qualification in nursing in a given year.</p> <p>Inclusion</p> <ul style="list-style-type: none">- Graduates from an education programme required to become:<ul style="list-style-type: none">• a professional nurse, including general care and specialist nurse (see definition for professional nurses)• an associate professional nurse (see definition for associate professional nurses) <p>Exclusion</p> <ul style="list-style-type: none">- Graduates from other fields of studies which do not provide a recognised foundation for the practice of nursing- Graduates from a midwifery programme <p>Note: If ISCED 2011 code 723 is used for the calculation of this indicator, then graduates from a midwifery programme should be subtracted.</p>

- Professional nursing graduates	<p>Number of students who have obtained a recognised qualification as a professional nurse in a given year (see definition for "professional nurses").</p> <p><u>Exclusion</u></p> <ul style="list-style-type: none"> - Graduates from a midwifery programme - Graduates from an associate professional nurse programme <p>Note: In the European Union, a Directive has defined the training of nurses responsible for general care as comprising at least three years of study or 4600 hours of theoretical and clinical training, the duration of the theoretical training representing at least one-third and the duration of the clinical training at least one half of the minimum duration of the training. Member States may grant partial exemptions to persons who have received part of their training on courses which are of at least an equivalent level (article 31, Directive 2005/36/EC of the European Parliament and of the Council, updated with Directive 2013/55/EC).</p>
- Associate professional nursing graduates	<p>Number of students who have obtained a recognised qualification as an associate professional nurse in a given year (see definition for "practising associate professional nurses").</p> <p><u>Exclusion</u></p> <ul style="list-style-type: none"> - Graduates from a professional nurse programme.

In the context of comparing health care services across Member States, Eurostat gives preference to the concept 'practising', as it best describes the availability of health care resources. The detailed definitions are available in [CIRCABC](#).

Country specific notes

[Belgium](#), [Bulgaria](#), [Czechia](#), [Denmark](#), [Germany](#), [Estonia](#), [Ireland](#), [Greece](#), [Spain](#), [France](#), [Croatia](#), [Italy](#), [Cyprus](#), [Latvia](#), [Lithuania](#), [Luxembourg](#), [Hungary](#), [Malta](#), [Netherlands](#), [Austria](#), [Poland](#), [Portugal](#), [Romania](#), [Slovenia](#), [Slovakia](#), [Finland](#), [Sweden](#), [Iceland](#), [Liechtenstein](#), [Norway](#), [Switzerland](#), [Montenegro](#), [North Macedonia](#), [Albania](#), [Serbia](#), [Turkey](#), [United Kingdom](#)

Belgium

Medical graduates

Source of data: **Communauté française et Vlaamse Gemeenschap.**

Coverage:

- The number of students graduating every year from medical faculties include those graduating in stomatology.

Dentists graduates

Source of data: **Communauté française et Vlaamse Gemeenschap.**

Pharmacists graduates

Source of data: **Communauté française et Vlaamse Gemeenschap.**

Midwives graduates

Source of data: **Communauté française et Vlaamse Gemeenschap.**

Nursing graduates

Source of data: **Communauté française et Vlaamse Gemeenschap.**

Coverage:

- Data refer to graduates for the whole country in health care sciences at superior schools, students with Belgian nationality and foreign students.

- Graduates with Masters and PhD degrees in nursing are also included.

Break in time series: 2019-2020. The decrease in the number of nursing graduates in 2019 is due to the extension of the studies.

Professional nursing graduates

Data not available.

Associate professional nursing graduates

Data not available.

Bulgaria

Medical graduates

Source of data: **National Statistical Institute,**

Report on tertiary education for educational-qualification degrees 'Master', 'Bachelor' and 'Professional bachelor' as of 15 November - exhaustive annual survey

https://infostat.nsi.bg/infostat/pages/module.jsf?x_2=164

Reference period: 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.

Note: 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.

Dentists graduates

Source of data: **National Statistical Institute,**

Report on tertiary education for educational-qualification degrees 'Master', 'Bachelor' and 'Professional bachelor' as of 15 November - exhaustive annual survey

https://infostat.nsi.bg/infostat/pages/module.jsf?x_2=164

Reference period: 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.

Note: 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.

Pharmacists graduates

Source of data: **National Statistical Institute,**

Report on tertiary education for educational-qualification degrees 'Master', 'Bachelor' and 'Professional bachelor' as of 15 November - exhaustive annual survey

https://infostat.nsi.bg/infostat/pages/module.jsf?x_2=164

Reference period: 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.

Note: 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.

Midwives graduates

Source of data: **National Statistical Institute,**

Report on tertiary education for educational-qualification degrees 'Master', 'Bachelor' and 'Professional bachelor' as of 15 November - exhaustive annual survey

https://infostat.nsi.bg/infostat/pages/module.jsf?x_2=164

Reference period: 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.

Note: 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.

Break in time series: - 2007: According to the national legislation in 2007, the length of training of midwives was increased by a year.

Nursing graduates

Source of data: **National Statistical Institute,** Report on tertiary education for educational-qualification degrees 'Master', 'Bachelor' and 'Professional bachelor' as of 15 November - exhaustive annual survey https://infostat.nsi.bg/infostat/pages/module.jsf?x_2=164

Reference period: 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.

Note: 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.

Break in time series: - 2007: According to the national legislation in 2007 the length of training of nurses was increased by a year.

Professional nursing graduates

Source of data: **National Statistical Institute,**

Report on tertiary education for educational-qualification degrees 'Master', 'Bachelor' and 'Professional bachelor' as of 15 November - exhaustive annual survey

https://infostat.nsi.bg/infostat/pages/module.jsf?x_2=164

Reference period: 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.

Note: 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.

Break in time series: 2007: According to the national legislation in 2007, the length of training of nurses was increased by a year.

Associate professional nursing graduates

This category doesn't exist.

Czechia

Medical graduates

Source of data: **Ministry of education, youth and sports.**

Coverage: Foreigners who graduated in the Czech Republic are included since 2001. . Study programmes in English are included.

Dentists graduates

Source of data: **Ministry of education, youth and sports.**

Coverage: Foreigners who graduated in the Czech Republic are included since 2001. . Study programmes in English are included.

Note: The increase in 2009 is due to an overlap of graduates graduating in old study programme and new study programme.

Pharmacists graduates

Source of data: **Ministry of education, youth and sports.**

Coverage: Foreigners who graduated in the Czech Republic are included since 2001. . Study programmes in English are included.

Midwives graduates

Source of data: **Ministry of education, youth and sports.**

Coverage:

- No midwives graduated in 1998 because of changes in educational programmes.

- Till 2006, data relate to the number of graduates from paramedical schools in the qualified midwife

field of study (bachelor graduates from universities in the midwifery field of study are included in **Nursing graduates**).

- Data relate to number of graduates from paramedical schools in the qualified midwife field of study (graduating till 2006) and bachelor graduates from universities in the midwifery field of study (graduating since 2004).

Nursing graduates

Source of data: **Ministry of education, youth and sports.**

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,

Break in time series: 2000, 2007, 2017.

Professional nursing graduates

Source of data: **Ministry of education, youth and sports.**

Coverage:

- Graduates in general and pediatric nurse educational programmes from 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.

Associate professional nursing graduates

Source of data: **Ministry of education, youth and sports.**

Coverage:

- Graduates in practical nurse educational programmes from upper secondary paramedical schools.

Denmark

Medical graduates

Source of data: **The Danish Health Authority**, Register of Authorised Health Personnel.
Coverage: The number of medical graduates from Danish schools.

Dentists graduates

Source of data: **The Danish Health Authority**, Register of Authorised Health Personnel.
Coverage: The number of medical graduates from Danish schools.

Pharmacists graduates

Source of data: **The Danish Health Authority**, Labour Register for Health Personnel.
Coverage: The number of medical graduates from Danish schools.

Midwives graduates

Source of data: **The Danish Health Authority**, Authorisation Register.
Coverage: The number of medical graduates from Danish schools.

Nursing graduates

Source of data: **The Danish Health Authority**, Register of Authorised Health Personnel.
Coverage: The number of medical graduates from Danish schools.

Professional nursing graduates

Source of data: **The Danish Health Authority**, Register of Authorised Health Personnel.
Coverage: The number of medical graduates from Danish schools.

Associate professional nursing graduates

Note: This category does not exist in Denmark.

Germany

Medical graduates

Source of data: **Federal Statistical Office**, Statistics of higher education 2018 (college/university exams); Statistisches Bundesamt 2019, *Fachserie 11, Reihe 4.2*, table ZUS-04, <http://www.destatis.de> or <http://www.gbe-bund.de>.

Coverage:

- Data refer to passed university examinations. Bachelors' degree and masters' degree in human medicine are excluded.
- Graduates in pharmacy and dentistry are excluded.

Dentists graduates

Source of data: **Federal Dental Authority and Approbation Agencies of the Laender**; Kassenzahnärztliche Bundesvereinigung (KZBV) 2019, *Jahrbuch 2019 - Statistische Basisdaten zur vertragszahnärztlichen Versorgung*, table 6.4, p.150; <http://www.kzbv.de>.

Coverage:

- Data contain the number of newly dental licenses in given year.

Pharmacists graduates

Source of data: **Federal Union of German Associations of Pharmacists**, Pharmacy and staff statistics 2018; special calculation by the Federal Union of German Associations of Pharmacists on the basis of information by the Authorised Approval Agencies of the Laender; <http://www.abda.de>.

Coverage:

- Data contain the number of officially authorised pharmacists in given year.

Midwives graduates

Source of data: **Federal Statistical Office**, Statistics on vocational training 2018; Statistisches Bundesamt 2019, *Fachserie 11, Reihe 2*, Tab. 4.4-S+G-Berufe; <http://www.destatis.de>.

Coverage:

- Professional midwives with a 3-year education who passed their examinations are included.
- Data for the regional state of Hesse are estimated.
- Data are available from 1996 onwards.

Nursing graduates

Source of data: **Federal Statistical Office**, Statistics on vocational training 2018; Statistisches Bundesamt 2019, *Fachserie 11, Reihe 2*, table Tab. 4.4-S+G-Berufe; <http://www.destatis.de>.

Coverage:

- Passed examinations in nursing care.
- Professional nurses with a 3-year education and associate professional nurses with a 1-year education who passed their examinations are included (nurses, paediatric nurses and nurses for the elderly).
- Professional nurses who have completed training as a nursing supervisor at a professional school are also included.
- Midwives are excluded.
- Data for the regional state of Hesse are estimated.
- Data are available from 1996 onwards.

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.

Professional nursing graduates

Source of data: **Federal Statistical Office**, Statistics on vocational training 2018; Statistisches Bundesamt 2019, *Fachserie 11, Reihe 2*, table Tab. 4.4-S+G-Berufe; <http://www.destatis.de>.

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.
- Associate professional nurses with a 1-year education and midwives are excluded.
- Data for the regional state of Hesse are estimated.
- Data are available from 1996 onwards.

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.

Associate professional nursing graduates

Source of data: **Federal Statistical Office**, Statistics on vocational training 2018; Statistisches Bundesamt 2019, *Fachserie 11, Reihe 2*, table Tab. 4.4-S+G-Berufe; <http://www.destatis.de>.

Coverage:

- Passed examinations in nursing care.
- Associate professional nurses with a 1-year education (auxiliary nurses and auxiliary nurses for the elderly) who passed their examinations are included.
- Professional nurses with a 3-year education, midwives and emergency medical assistants are excluded.
- Data for the regional state of Hesse are estimated.
- Data are available from 1996 onwards.

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.

Estonia

Medical graduates

Source of data:

- Until 2004: **State Statistical Office**, annual reporting.
- Since 2005: **Ministry of Education and Research**, Estonian Education Information System (EHIS).

Reference period: Given year.

Note: Data series for "**Medical graduates**" 2012-2015 was updated in 2018 after data correction (Ph.D-s were mistakenly included).

Dentists graduates

Source of data:

- **State Statistical Office**, annual reporting.
- **Ministry of Education and Research**.

Reference period: Given year.

Pharmacists graduates

Source of data:

- **State Statistical Office**, annual reporting.
- **Ministry of Education and Research**.

Reference period: Given year.

Note: Data series for "**Pharmacists graduates**" 2008-2015 was updated in 2018 after data correction (Ph.D-s were mistakenly included).

Midwives graduates

Source of data:

- **State Statistical Office**, annual reporting.
- **Ministry of Education and Research**.

Reference period: Given year.

Break in time series: 2000 and 2001.

- In 1999, the length of time of the educational programme of nursing specialists was extended.

Nursing graduates

Source of data:

- **State Statistical Office**, annual reporting.
- **Ministry of Education and Research**.

Reference period: Given year.

Break in time series: 1999.

- In 1999, the length of time of the educational programme of nursing specialists was extended.

Note: Data series for "**Nursing graduates**" 2008-2015 was updated in 2018 after data correction (M.Sc.-s were mistakenly included; until 2011 also midwives were mistakenly included).

Professional nursing graduates

Source of data:

- **State Statistical Office**, annual reporting.
- **Ministry of Education and Research**.

Reference period: Given year.

Break in time series: 1999.

- In 1999, the length of time of the educational programme of nursing specialists was extended.

Note: Data series for "**Professional nursing graduates**" 2008-2015 was updated in 2018 after data correction (M.Sc.-s were mistakenly included; until 2011 also midwives were mistakenly included).

Associate professional nursing graduates

The category "associate nurses" does not exist in Estonia.

Ireland

Medical graduates

Source of data: **Higher Education Authority**.

Reference period: Calendar year.

Coverage: Universities, Institutes of Technology and Designated Institutions.

Data for 2018 is provisional and should be considered an estimate.

Dentists graduates

Source of data: **Higher Education Authority**.

Reference period: Calendar year.

Coverage: Universities, Institutes of Technology and Designated Institutions.

Data for 2018 is provisional and should be considered an estimate.

Pharmacists graduates

Source of data: **Higher Education Authority**.

Reference period: Calendar year.

Coverage: Universities, Institutes of Technology and Designated Institutions.

Break in time series: Postgraduates in Pharmaceutical Technologies have been included since 2006.

Data for 2018 is provisional and should be considered an estimate.

Midwives graduates

Source of data:

- Up to 1998: **An Bord Altranais** (Nursing Board).
- From 1999 onwards: **Higher Education Authority**.

Reference period: Calendar year.

Break in time series: The figures up to 1998 relate to the number of newly registered midwifery qualifications in a given year. The figures from 1999 relate to the number of graduates in a given year. A 2-year training programme was introduced in 1982.

Coverage: Universities, Institutes of Technology and Designated Institutions. Midwifery prescribing qualifications are excluded.

Data for 2018 is provisional and should be considered an estimate.

Nursing graduates

Source of data:

- 1999 onwards: **Higher Education Authority**.
- Up to 1998: **An Bord Altranais** (Nursing Board).

Reference period: Calendar year.

Coverage: Universities, Institutes of Technology and Designated Institutions.

Data for 2018 is provisional and should be considered an estimate.

Professional nursing graduates

Source of data:

- 1999 onwards: **Higher Education Authority**.
- Up to 1998: **An Bord Altranais** (Nursing Board).

Reference period: Calendar year.

Coverage: Universities, Institutes of Technology and Designated Institutions.

Data for 2018 is provisional and should be considered an estimate.

Associate professional nursing graduates

Associate professional nurses do not feature in the Irish Health Service (Source: HSE, Nursing Services Directorate).

Greece

Medical graduates

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

Coverage: All the data refer to graduates from Greek universities. Data for 1986-1992 are not available as figures cannot be retrieved from publications. Data for 2000 and 2002-2004 are not available, as the number of graduates from some medical schools is missing.

Dentists graduates

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

Coverage: All the data refer to graduates from Greek universities. Data for 1986-1992 not available as figures cannot be retrieved from publications.

Pharmacists graduates

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

Coverage: All the data refer to graduates from Greek universities. Data for 1986-1992 not available as figures cannot be retrieved from publications.

Midwives graduates

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

Coverage: All the data refer to graduates from Greek universities. (The 1980-1982, 1986, 1987, 1989, 1990 figures cannot be retrieved from publications).

Note: The remarkably low number of graduates from 1983 and 1984 is due to the fact that there was a serious change in the education system. The Technological Educational Institutions have replaced the higher technical and vocational educational institutions (KATEE).

Nursing graduates

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

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.

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.

Professional nursing graduates

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

Coverage: All the data refer to graduates from Greek universities. The 1980-1982, 1986, 1987, 1989, 1990 figures cannot be retrieved from publications.

Associate professional nursing graduates

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

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.

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.

Spain

Medical graduates

Source of data:

- Since 2011: **Ministry of Education y Formación Profesional** from **University Education Statistic**.
[https://estadisticas.mecd.gob.es/EducaJaxiPx/Tabla.htm?path=/Universitaria/Alumnado/Nueva_Estructura/GradoCiclo/Egresados//I0/&file=Egr_GradCiclo_Sex_Edad\(2\)_Campo_Tot.px&type=pcaxis&L=0](https://estadisticas.mecd.gob.es/EducaJaxiPx/Tabla.htm?path=/Universitaria/Alumnado/Nueva_Estructura/GradoCiclo/Egresados//I0/&file=Egr_GradCiclo_Sex_Edad(2)_Campo_Tot.px&type=pcaxis&L=0).
- Up to 2010: **National Statistics Institute** (INE). University Education Statistic.
<http://www.ine.es/jaxi/menu.do?type=pcaxis&path=%2Ft13%2Fp405&file=inebase&L=0>.

Dentists graduates

Source of data:

- Since 2011: **Ministry of Education y Formación Profesional** from **University Education Statistic**.
[https://estadisticas.mecd.gob.es/EducaJaxiPx/Tabla.htm?path=/Universitaria/Alumnado/Nueva_Estructura/GradoCiclo/Egresados//I0/&file=Egr_GradCiclo_Sex_Edad\(2\)_Campo_Tot.px&type=pcaxis&L=0](https://estadisticas.mecd.gob.es/EducaJaxiPx/Tabla.htm?path=/Universitaria/Alumnado/Nueva_Estructura/GradoCiclo/Egresados//I0/&file=Egr_GradCiclo_Sex_Edad(2)_Campo_Tot.px&type=pcaxis&L=0).
- Up to 2010: **National Statistics Institute** (INE). University Education Statistic.
<http://www.ine.es/jaxi/menu.do?type=pcaxis&path=%2Ft13%2Fp405&file=inebase&L=0>.

Pharmacists graduates

Source of data:

- Since 2011: **Ministry of Education y Formación Profesional** from **University Education Statistic**.
[https://estadisticas.mecd.gob.es/EducaJaxiPx/Tabla.htm?path=/Universitaria/Alumnado/Nueva_Estructura/GradoCiclo/Egresados//I0/&file=Egr_GradCiclo_Sex_Edad\(2\)_Campo_Tot.px&type=pcaxis&L=0](https://estadisticas.mecd.gob.es/EducaJaxiPx/Tabla.htm?path=/Universitaria/Alumnado/Nueva_Estructura/GradoCiclo/Egresados//I0/&file=Egr_GradCiclo_Sex_Edad(2)_Campo_Tot.px&type=pcaxis&L=0).
- Up to 2010: **National Statistics Institute** (INE). University Education Statistic.
<http://www.ine.es/jaxi/menu.do?type=pcaxis&path=%2Ft13%2Fp405&file=inebase&L=0>.

Midwives graduates

Source of data: **Ministerio de Sanidad (Ministry of Health)** from the Register of Specialists in Training Information System (SIREF).

Reference period: Data on December 31st.

Note: In Spain, the midwifery graduation is a specialized training programme after nursing diploma.

Nursing graduates

Source of data:

- Since 2011: **Ministry of Education y Formación Profesional** from **University Education Statistic**.

[https://estadisticas.mecd.gob.es/EducaJaxiPx/Tabla.htm?path=/Universitaria/Alumnado/Nueva_Estructura/GradoCiclo/Egresados//I0/&file=Egr_GradCiclo_Sex_Edad\(2\)_Campo_Tot.px&type=pcaxis&L=0](https://estadisticas.mecd.gob.es/EducaJaxiPx/Tabla.htm?path=/Universitaria/Alumnado/Nueva_Estructura/GradoCiclo/Egresados//I0/&file=Egr_GradCiclo_Sex_Edad(2)_Campo_Tot.px&type=pcaxis&L=0).

- Up to 2010: **National Statistics Institute (INE)**. University Education Statistic.

<http://www.ine.es/jaxi/menu.do?type=pcaxis&path=%2Ft13%2Fp405&file=inebase&L=0>.

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.

Deviation from the definition: Data include midwife graduates.

Note: 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.

Professional nursing graduates

Source of data:

- Since 2011: **Ministry of Education y Formación Profesional** from **University Education Statistic**.

[https://estadisticas.mecd.gob.es/EducaJaxiPx/Tabla.htm?path=/Universitaria/Alumnado/Nueva_Estructura/GradoCiclo/Egresados//I0/&file=Egr_GradCiclo_Sex_Edad\(2\)_Campo_Tot.px&type=pcaxis&L=0](https://estadisticas.mecd.gob.es/EducaJaxiPx/Tabla.htm?path=/Universitaria/Alumnado/Nueva_Estructura/GradoCiclo/Egresados//I0/&file=Egr_GradCiclo_Sex_Edad(2)_Campo_Tot.px&type=pcaxis&L=0).

- Up to 2010: **National Statistics Institute (INE)**. University Education Statistic.

<http://www.ine.es/jaxi/menu.do?type=pcaxis&path=%2Ft13%2Fp405&file=inebase&L=0>.

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.

Deviation from the definition: Data include midwife graduates.

Note: 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.

Associate professional nursing graduates

Source of data:

- Since 2011: **Ministry of Education y Formación Profesional** from **University Education Statistic**.

[https://estadisticas.mecd.gob.es/EducaJaxiPx/Tabla.htm?path=/Universitaria/Alumnado/Nueva Estructura/GradoCiclo/Egresados//I0/&file=Egr_GradCiclo_Sex_Edad\(2\)_Campo_Tot.px&type=pcaxis&L=0](https://estadisticas.mecd.gob.es/EducaJaxiPx/Tabla.htm?path=/Universitaria/Alumnado/Nueva_Estructura/GradoCiclo/Egresados//I0/&file=Egr_GradCiclo_Sex_Edad(2)_Campo_Tot.px&type=pcaxis&L=0).

- Up to 2010: **National Statistics Institute** (INE). University Education Statistic.

<http://www.ine.es/jaxi/menu.do?type=pcaxis&path=%2Ft13%2Fp405&file=inebase&L=0>.

Coverage: The category 'associate professional nurses' (ISCO code 3221) does not exist in Spain.

France

Medical graduates

Source of data: **Ministère de l'enseignement supérieur et de la recherche**, Sous-direction des systèmes d'information et des études statistiques.

For further information: <http://www.enseignementsup-recherche.gouv.fr/pid24777/les-publications-du-m.e.s.r.html>.

Coverage: Data are given for metropolitan France and overseas departments and territories.

Dentists graduates

Source of data: **Ministère de l'enseignement supérieur et de la recherche**, Sous-direction des systèmes d'information et des études statistiques.

For further information: <http://www.enseignementsup-recherche.gouv.fr/pid24777/les-publications-du-m.e.s.r.html>.

Coverage: Data are given for metropolitan France and overseas departments and territories.

Pharmacists graduates

Source of data: **Ministère de l'enseignement supérieur et de la recherche**, Sous-direction des systèmes d'information et des études statistiques.

For further information: <http://www.enseignementsup-recherche.gouv.fr/pid24777/les-publications-du-m.e.s.r.html>.

Coverage: Data are given for metropolitan France and overseas departments and territories.

Midwives graduates

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: <http://www.sante-sports.gouv.fr/IMG/pdf/seriestat178.pdf>.

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.

Nursing graduates

Source of data: **Ministère des Solidarités et de la Santé - Direction de la Recherche, des Etudes, de**

I'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: <http://www.sante-sports.gouv.fr/IMG/pdf/seriestat178.pdf>.

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.

Professional nursing graduates

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: <http://www.sante-sports.gouv.fr/IMG/pdf/seriestat178.pdf>.

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.

Associate professional nursing graduates

Data not available.

Croatia

Medical graduates

Source of data: **Croatian Bureau of Statistics**, Statistical Yearbook of the Republic of Croatia.

Ministry of Science, Education and Sports 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).

Dentists graduates

Source of data: **Croatian Bureau of Statistics**, Statistical Yearbook of the Republic of Croatia

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).

Pharmacists graduates

Source of data: **Croatian Bureau of Statistics**, Statistical Yearbook of the Republic of Croatia.

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).

Midwives graduates

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).

Nursing graduates

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).

Professional nursing graduates

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).

Associate professional nursing graduates

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).

Italy

Medical graduates

Source of data: **Ministry of Education**; “National Register of Graduates”

(<https://www.miur.gov.it/anagrafe-nazionale-degli-studenti-e-dei-laureati>).

Dentists graduates

Source of data: **Ministry of Education**; “National Register of Graduates”

(<https://www.miur.gov.it/anagrafe-nazionale-degli-studenti-e-dei-laureati>).

Note on 2014 data: the number of graduates in dentistry has decreased from 841 in 2013 to 345 in 2014 because in the academic year 2009-2010 the duration of the degree course was increased from five to six years. Therefore, in 2014 there are less graduates than in previous years.

Pharmacists graduates

Source of data:

- Until 1999: **Federazione ordini Farmacisti Italiani**.
- From 2000: **Ministry of Education**; “National Register of Graduates” (<https://www.miur.gov.it/anagrafe-nazionale-degli-studenti-e-dei-laureati>).

Midwives graduates

Source of data: **Ministry of Education**; “National Register of Graduates” (<https://www.miur.gov.it/anagrafe-nazionale-degli-studenti-e-dei-laureati>).

Break in time series:

- From 2000: Midwives graduated. Data from 2000 onwards refer to the new education system of midwives (to become a midwife it is necessary to get a 3-year university degree).
- 1999: Midwives with university diploma. Data refer to the previous education system of midwives (to become a midwife it was necessary to get a diploma at university level).
- 1996-1998: Midwives with diploma. Data refer to the previous education system of midwives (to become a midwife it was necessary to get a two-year diploma).

Nursing graduates

Source of data: **Ministry of Education**; “National Register of Graduates” (<https://www.miur.gov.it/anagrafe-nazionale-degli-studenti-e-dei-laureati>).

Reference period: Annual.

Break in time series:

- From 2002: Nurses graduated. Data from 2002 onwards refer to the new education system of nurses (to become a nurse it is necessary to get at least a 3-year university degree).
- 1997-2001: Nurses with university diploma. Data refer to the old education system of nurses (to become a nurse it was necessary to get a diploma at university level).

Professional nursing graduates

Source of data: **Ministry of Education**; “National Register of Graduates” (<https://www.miur.gov.it/anagrafe-nazionale-degli-studenti-e-dei-laureati>).

Reference period: Annual.

Coverage: From 2002, Nurses graduated. Data from 2002 onwards refer to the new education system of nurses (to become a nurse it is necessary to get at least a 3-year university degree).

Associate professional nursing graduates

Data not applicable.

Cyprus

Medical graduates

It should be mentioned that up to 2018, all the physicians practising in Cyprus have been trained abroad, since no medical faculties existed in Cyprus Universities. **The first physicians graduated from universities in Cyprus in 2019.**

Dentists graduates

No Universities Graduates on dentistry up to the academic year 2018-2019.

Pharmacists graduates

Up to the academic year 2015-2016, no graduates on pharmacy existed in Cyprus. Only postgraduates existed but their numbers were not reported according to the guidelines. From the academic year 2016-2017, the first graduates on pharmacy exist in Cyprus.

Midwives graduates

No Universities offering basic studies on midwifery existed in Cyprus up to the academic year 2018-2019.

Nursing graduates

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)
- Graduates of postgraduate level are excluded, since they already own the nursing diploma and they acquire additional specialization through a master's degree, i.e. specialization in midwifery, etc.
- 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.

Professional nursing graduates

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)
- Graduates of postgraduate level are excluded, since they already own the nursing diploma and they acquire additional specialization through a master's degree, i.e. specialization in midwifery, etc.

Associate professional nursing graduates

From 2007 onwards: No such graduates, since all graduates refer to professional nursing programs.
Up to 2006: Such graduates existed but no data is available.

Latvia

Medical graduates

Source of data: **Central Statistical Bureau (CSB)** since 2008.

Coverage: The annual surveys collected and compiled by the Central Statistical Bureau (CSB) are as follows:

- on higher education institutions and colleges.

Break in time series: 2008: Change in data source.

Note:

- The increase in the number of medical graduates in 2018 is mainly due to the number of foreign students (86%).
- Source of data prior to 2008 not clear.

Dentists graduates

Source of data: **Central Statistical Bureau (CSB)** since 2008.

Coverage: The annual surveys collected and compiled by the Central Statistical Bureau (CSB) are as follows:

- on higher education institutions and colleges.

Break in time series: 2008: Change in data source.

Note: Source of data prior to 2008 not clear.

Pharmacists graduates

Source of data: **Central Statistical Bureau (CSB)** since 2008.

Coverage: The annual surveys collected and compiled by the Central Statistical Bureau (CSB) are as follows:

- on higher education institutions and colleges.

Break in time series: 2008: Change in data source.

Note: Source of data prior to 2008 not clear.

Midwives graduates

Source of data: **Central Statistical Bureau (CSB)** since 2008.

Coverage: The annual surveys collected and compiled by the Central Statistical Bureau (CSB) are as follows:

- on higher education institutions and colleges.

Break in time series: 2008: Change in data source.

Note: Source of data prior to 2008 not clear.

Nursing graduates

Source of data: **Central Statistical Bureau (CSB)** since 2008.

Coverage: The annual surveys collected and compiled by the Central Statistical Bureau (CSB) are as follows:

- On higher education institutions and colleges.

- Graduates from college, bachelor and master programmes are included into the provided data (hence probability of double counting).
- Distinction between professional and associate nurses not possible in Latvia.
- Without graduates from “doctor’s assistants” programmes.

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.

Note: Source of data prior to 2008 not clear.

Professional nursing graduates

Data not available (Distinction between professional and associate nurses not possible in Latvia.)

Associate professional nursing graduates

Data not available (Distinction between professional and associate nurses not possible in Latvia.)

Lithuania

Medical graduates

Source of data: **Statistics Lithuania**, data of entire annual survey of education institutions. Report “Health Statistics of Lithuania”, available from <http://www.hi.lt/health-statistic-of-lithuania.html>.

Coverage: The number of graduates fluctuates starting from 1992 due to political and economical changes in the country, changes in the status of medical institutes (to universities) and medical schools (to colleges) and changes in studying programmes. Therefore, every year different number of groups of students of medical specialties is starting the education (and after some years graduating).

Dentists graduates

Source of data: **Statistics Lithuania**, data of entire annual survey of education institutions. Report “Health Statistics of Lithuania”, available from <http://www.hi.lt/health-statistic-of-lithuania.html>.

Coverage: The number of graduates fluctuates starting from 1992 due to political and economical changes in the country, changes in the status of medical institutes (to universities) and medical schools (to colleges) and changes in studying programmes. Therefore, every year different number of groups of students of medical specialties is starting the education (and after some years graduating).

Pharmacists graduates

Source of data: **Statistics Lithuania**, data of entire annual survey of education institutions. Report “Health Statistics of Lithuania”, available from <http://www.hi.lt/health-statistic-of-lithuania.html>.

Coverage: The number of graduates fluctuates starting from 1992 due to political and economical changes in the country, changes in the status of medical institutes (to universities) and medical schools (to colleges) and changes in studying programmes. Therefore, every year different number of groups of students of medical specialties is starting the education (and after some years graduating).

Midwives graduates

Source of data: **Statistics Lithuania**, data of entire annual survey of education institutions. Report "Health Statistics of Lithuania", available from <http://www.hi.lt/health-statistic-of-lithuania.html>.

Coverage: The number of graduates includes graduates with university and college education.

- The number of graduates fluctuates starting from 1992 due to political and economical changes in the country, changes in the status of medical institutes (to universities) and medical schools (to colleges) and changes in studying programmes. Therefore, every year different number of groups of students of medical specialties is starting the education (and after some years graduating).

- In 1999 the duration of education was extended from 3 to 3.5 years.

- In some years the number of **Midwives graduates** is 0. Not every year midwife education is offered to new students, due to estimated low number of needed midwives. Therefore, after a couple of years, there are 0 graduates.

Nursing graduates

Source of data: **Statistics Lithuania**, data of entire annual survey of education institutions. Report "Health Statistics of Lithuania", available from <http://www.hi.lt/health-statistic-of-lithuania.html>.

Coverage: The number of graduates includes graduates with university and college education, not include rehabilitation graduates.

Professional nursing graduates

Source of data: **Statistics Lithuania**, data of entire annual survey of education institutions. Report "Health Statistics of Lithuania", available from <http://www.hi.lt/health-statistic-of-lithuania.html>.

Coverage: The number of graduates includes graduates with university and college education, not include rehabilitation graduates.

Associate professional nursing graduates

There is no such category in Lithuania.

Luxembourg

Medical graduates

The University of Luxembourg does not offer full training in medicine.

Dentists graduates

The University of Luxembourg does not offer full training for dentists.

Pharmacists graduates

The University of Luxembourg does not offer full training for pharmacists.

Midwives graduates

Source of data: **Lycée technique** of health professions.

Nursing graduates

Source of data: **Lycée technique** of health professions.

Coverage: General care nurses, nurses anaesthetists, paediatric nurses and psychiatric nurses graduates are included.

Professional nursing graduates

Source of data: Lycée technique of health professions.

Coverage: General care nurses, nurses anaesthetists, paediatric nurses and psychiatric nurses graduates are included.

Associate professional nursing graduates

This category doesn't exist in Luxembourg.

Hungary

Source of data:

- Up to 2012: **Hungarian Central Statistical Office** (KSH in Hungarian), Statistical Yearbook.

<http://www.ksh.hu>.

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

- From 2015 to 2016, **Health Registration and Training Center** (ENKK in Hungarian) www.enkk.hu.

Full title of the database: Basic register.

- From 2017, **National Healthcare Service Center** (ÁEEK in Hungarian) www.enkk.hu. Basic register.

Reference period: 31st December.

Coverage: From 1990 onwards, the data are derived from the "Report on the number of physicians, dentists, pharmacists and specialised clinical psychologists with granted diploma" collection.

Dentists graduates

Source of data:

- Up to 2012: **Hungarian Central Statistical Office** (KSH in Hungarian), Statistical Yearbook.

<http://www.ksh.hu>.

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

- From 2015 to 2016, **Health Registration and Training Center** (ENKK in Hungarian) www.enkk.hu.

Full title of the database: Basic register.

- From 2017, **National Healthcare Service Center** (ÁEEK in Hungarian) www.enkk.hu. Basic register.

Reference period: 31st December.

Coverage: From 1990 onwards, the data are derived from the "Report on the number of physicians, dentists, pharmacists and specialised clinical psychologists with granted diploma" collection.

Pharmacists graduates

Source of data:

- Up to 2012: **Hungarian Central Statistical Office** (KSH in Hungarian), Statistical Yearbook.

<http://www.ksh.hu>.

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

- From 2015 to 2016, **Health Registration and Training Center** (ENKK in Hungarian) www.enkk.hu.

Full title of the database: Basic register.

- From 2017, **National Healthcare Service Center** (ÁEEK in Hungarian) www.enkk.hu. Basic register.

Reference period: 31st December.

Coverage: From 1990 onwards, the data are derived from the “Report on the number of physicians, dentists, pharmacists and specialised clinical psychologists with granted diploma” collection.

Note: Increase in year 2012 (40% increase from 279 graduates in year 2011) is due to increased number of educational places offered at Hungarian universities.

Midwives graduates

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. Full title of the database: Basic register.

- From 2015 to 2016, **Health Registration and Training Center** (ENKK in Hungarian) www.enkk.hu. Full title of the database: Basic register.

- From 2017, **National Healthcare Service Center** (ÁEEK in Hungarian) www.enkk.hu. Basic register. Reference period: 31st December.

Coverage: Since 1990, data are provided for graduates in secondary vocational schools and professional nursing education, in addition to university level graduates in health care. The data have been recalculated from 1990 and harmonized with the definitions of OECD and EUROSTAT. From 2011 data are provided for graduates in bachelor level.

Estimation method: Data for 2000 are estimated. The response rate of data collection in 2000 was only 98%. Therefore, these data were corrected according to the grounds of data collection in 2001.

Break in time series: There is a temporary break in the numbers of midwives graduating in 2003, because the length of the vocational training of this field was increased from 2 to 3 years.

Note: The increase in number of midwife graduates in 2014 is due to the increased number of educational places offered at Hungarian universities.

Nursing graduates

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. Full title of the database: Basic register.

- From 2015 to 2016, **Health Registration and Training Center** (ENKK in Hungarian) www.enkk.hu. Full title of the database: Basic register.

- From 2017, **National Healthcare Service Center** (ÁEEK in Hungarian) www.enkk.hu. Basic register. Reference period: 31st December.

Coverage:

- 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.

Note: The system of the Hungarian vocational training had been transformed in 2012 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 in the category of professional nurses. This explains at least partly the increase in nursing graduates in 2017.

Professional nursing graduates

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.
 - From 2015 to 2016, **Health Registration and Training Center** (ENKK in Hungarian) www.enkk.hu. Full title of the database: Basic register.
 - From 2017, **National Healthcare Service Center** (ÁEEK in Hungarian) www.enkk.hu. Basic register.
- Reference period: 31st December.

Coverage:

- Up to 2012: Data are provided for college and bachelor level graduates in health care.
- From 2013: Besides the college and bachelor level graduates in health care the data contains graduates from other training of nurses responsible for general care as comprising at least three years of study or 4600 hours of theoretical and clinical training.
- Data on the professions of optometrists, dental technicians, pharmacy assistants, orthopaedic mechanics, medicinal gymnastics, medicinal massage therapists, sports massage therapists and infant and child attendants are not included.

Note: The system of the Hungarian vocational training had been transformed in 2012 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 in the category of professional nurses. This explains at least partly the increase in nursing graduates in 2017.

Associate professional nursing graduates

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. Full title of the database: Basic register.
 - From 2015 to 2016, **Health Registration and Training Center** (ENKK in Hungarian) www.enkk.hu. Full title of the database: Basic register.
 - From 2017, **National Healthcare Service Center** (ÁEEK in Hungarian) www.enkk.hu. Basic register.
- Reference period: 31st December.

Coverage:

- Up to 2012: Data are provided for graduates in secondary vocational school.
- Up to 2013: Nurses, by the year of registration in the Basic Register excluding graduates from professional nurse programme.
- Data on the professions of optometrists, dental technicians, pharmacy assistants, orthopaedic mechanics, medicinal gymnastics, medicinal massage therapists, sports massage therapists and infant and child attendants are not included.

Malta

Medical graduates

Source of data: **University of Malta.**

Dentists graduates

Source of data: **University of Malta**

Pharmacists graduates

Source of data: **University of Malta/Pharmacy Council.**

Midwives graduates

Source of data: **University of Malta**

Nursing graduates

Source of data: **University of Malta.**

70% increase in number of **Nursing graduates** in 2011 is a result of an increase in the intake of students for the nursing programme in the 2007 academic year.

2011 data was edited to include Mental Health **Nursing graduates**.

An increase in 2012, **Nursing graduates** is a result of 2 cohorts graduating within the same year, since the nursing course was reduced from a 4 year course to a 3 year course.

Professional nursing graduates

Source of data: **University of Malta.**

2011 data was edited to include Mental Health **Nursing graduates**

An increase in 2012, **Nursing graduates** is a result of 2 cohorts graduating within the same year, since the nursing course was reduced from a 4 year course to a 3 year course.

Associate professional nursing graduates

This category does not exist in Malta.

Netherlands

Medical graduates

Source of data: **Statistics of Netherlands**, Statistics of university 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/

Coverage: Graduates with a master of medicine, plus (post)master clinical researchers medicine. The number of medical graduates in universities 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).

Break in time series: From 2016 onwards, the number of graduates refer to students who have finished the master of medicine and may register as generalist medical practitioners (not as general practitioner).

As from 2011, data have been rounded to multiples of ten.

Dentists graduates

Source of data: **Statistics Netherlands**, Statistics of university 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/

As from 2011, data have been rounded to multiples of ten.

Pharmacists graduates

Source of data: **Statistics Netherlands**, Statistics of university 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/

Break in time series: From

As from 2011, data have been rounded to multiples of ten.

Midwives graduates

Source of data: 2011 and later: **Statistics Netherlands**, Statistics of higher 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/

- Until 2011: **Netherlands Institute for Research of Primary Health Care (NIVEL)**.

As from 2011, data have been rounded to multiples of ten.

Nursing graduates

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/

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).

As from 2011, data have been rounded to multiples of ten.

Professional nursing graduates

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/

Coverage:

- The number includes nursing graduates in higher education (HBO). The number in is the sum of bachelor and master graduates; the majority of bachelor graduates do not enter a master program but enter the workforce. 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).
 - Professional nursing graduates refer to higher education (ISCED 2011 level "6" or higher).
- As from 2011, data have been rounded to multiples of ten.

Associate professional nursing graduates

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 MBO (for associate professional nurses):

https://duo.nl/open_onderwijsdata/databestanden/mbo/onderwijsdeelnemers/

Coverage:

- The number includes nursing graduates in senior vocational secondary education (in Dutch: MBO).
- Associate professional nursing graduates refer to nursing graduates in senior vocational secondary education (ISCED 2011 level "354 or "454").

As from 2011, data have been rounded to multiples of ten.

Austria

Medical graduates

Source of data: **Statistics Austria**, Higher education statistics.

Reference period: Medical graduates are reported for the year of study (e.g. 20xx/yy). Up to 2016 the number of graduates was reported in 20xx. Since 2017 the data have been postponed to 20yy (t+1) according to Eurostat regulations.

Coverage:

- Included are domestic and foreign graduates who have completed basic medical education.
- Included are medical graduates from public and private universities.
- Only a “primary graduation” is included, which is defined as the first degree in a particular discipline. “Subsequent graduations” in the same discipline are excluded (Master studies, Doctorates).
- Excluded are dentist graduates.
- Excluded are Bachelor degrees.

Break in time series:

- Dentist graduates are excluded since 1999.

Note:

- Data inconsistencies over time may result from the establishment of new (private) training institutions (graduates for the first time in 2008 and 2017 respectively).
- Due to the introduction of access restrictions and admission procedures at medical universities in Austria in 2006, the number of graduates has decreased.

Dentists graduates

Source of data: **Statistics Austria**, University Statistics.

Reference period: Dentists graduates are reported for the year of study (e.g. 20xx/yy). Up to 2016 the number of graduates was reported in 20xx. Since 2017 the data have been postponed to 20yy (t+1) according to Eurostat regulations.

Coverage:

- Included are domestic and foreign graduates who have obtained a recognised qualification in dentistry.
- Excluded are Bachelor degrees.

Break in time series: Up to 1998, dentists were included in "Medical graduates". Before October 1998, there was no separate university degree for dentists; it was just an additional training for medical graduates. Since October 1998, a new regulation for the professional training of dentists came into force which constituted a specific university degree for dentists.

Note: Data inconsistencies over time may result from the establishment of new (private) training institutions (i.e 2014).

Pharmacists graduates

Source of data: **Statistics Austria**, University Statistics.

Reference period: Pharmacists graduates are reported for the year of study (e.g. 20xx/yy). Up to 2016 the number of graduates was reported in 20xx. Since 2017 the data have been postponed to 20yy (t+1) according to Eurostat regulations.

Coverage:

- Included are domestic and foreign pharmacist graduates who have obtained a recognised qualification in pharmacy.
- Excluded are Bachelor degrees.

Midwives graduates

Source of data: **Statistics Austria**, University Statistics.

Reference period: Midwives graduates are reported for the year of study (e.g. 20xx/yy). Up to 2016 the number of graduates was reported in 20xx. Since 2017 the data have been postponed to 20yy (t+1) according to Eurostat regulations.

Coverage: Included are domestic and foreign graduates who have obtained a recognised qualification in midwifery.

Note: The change of the graduation of midwives from a college to a university degree can lead to inhomogeneous developments in the time series (figures up to 2008 include only college degrees, from 2009 to 2011 both college and university degrees are included and the figures since 2012 are only for university degrees).

Nursing graduates

Source of data: **Statistics Austria**, School Statistics, University Statistics.

Coverage:

- Included are domestic and foreign graduates who have obtained a recognised qualification in nursing.
- Excluded is specific training in nursing.
- Excluded is further education.

Note: Training as an associate professional nurse was introduced in Austria in September 2016 and lasts two years.

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.

Professional nursing graduates

Source of data: **Statistics Austria**, School Statistics, University Statistics.

Reference period: While non-academic nursing graduates are reported for the examination year (e.g. 20xx), academic qualifications are reported for the year of study (e.g. 20xx/yy). Up to 2016 the number of all graduates was reported in 20xx. Since 2017 the data on academic qualifications have been postponed to 20yy (t+1) according to Eurostat regulations. Since the education in nursing currently is in a transition phase from non-academic to academic training the reference periods for the two training settings (academic, non-academic) are different. For this reason, full reporting of the graduates is only possible for the year (t-1) as the most current year.

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.

Coverage:

- Included are domestic and foreign graduates who have obtained a recognised qualification in professional nursing.
- Excluded is specific training.
- Excluded is further education.

Note: The change of the graduation of nurses from a college to a university degree can lead to inhomogeneous developments in the time series (figures up to 2010 include only college degrees; since 2011, both college and university degrees are included).

Associate professional nursing graduates

Source of data: **Statistics Austria**, School Statistics.

Reference period: year of examination.

Coverage:

- Included are domestic and foreign graduates who have obtained a recognised qualification in associate professional nursing.
- Excluded is specific training.
- Excluded is further education.

Note: Training as an associate professional nurse was introduced in Austria in September 2016 and lasts two years.

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.

Poland

Medical graduates

Source of data:

- Until 1990: publication of the **Ministry of National Education**, "Higher education, basic data".
- From 1990: **Central Statistical Office**, reports S-10.

Break in time series: 1990 due to change of data source.

Dentists graduates

Source of data:

- Until 1990: publication of the **Ministry of National Education**, "Higher education, basic data".
- From 1990: **Central Statistical Office**, reports S-10.

Break in time series: 1990 due to change of data source.

Pharmacists graduates

Source of data:

- Until 1990: publication of the **Ministry of National Education**, "Higher education, basic data".
- From 1990: **Central Statistical Office**, reports S-10.

Break in time series: 1990 due to change of data source.

Midwives graduates

Source of data:

- Until 1990: publication of **Ministry of National Education**, "Higher education, basic data".
- From 1990: **Central Statistical Office**, reports S-10.

Break in time series: 1990 due to change of data source.

Coverage: Number of graduates with first university level and master's degree from midwifery programme, including foreigners who graduated in Poland.

Note:

- The education of midwives has been in a process of transformation, which means that traditional nursing schools were closed down and a new license and masters 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 midwives: a 3-year licensing degree and complementary studies for those who do not have the licence. After graduation, there is the 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 decrease in the number of nursing and midwifery graduates in 2016.
- Deviation from the definition: 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.

Nursing graduates

Source of data:

- Until 1990: publication of **Ministry of National Education**, "Higher education, basic data".
- From 1990: **Central Statistical Office**, reports S-10.

Break in time series: 1990 due to change of data source.

Coverage: Includes the number of graduates with first university level and master's degree from nursing programme, including foreigners graduated in Poland.

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.

Deviation from the definition: 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.

Professional nursing graduates

Source of data:

- Until 1990: publication of **Ministry of National Education**, "Higher education, basic data".
- From 1990: **Central Statistical Office**, reports S-10.

Break in time series: 1990 due to change of data source.

Coverage: Number of graduates with first university level or a master's degree from a nursing programme, including foreigners graduated in Poland.

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.

Deviation from the definition: 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.

Associate professional nursing graduates

The category "Associate professional nurses" does not exist in Poland.

Portugal

Medical graduates

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.**

Coverage:

- Data represent the total number of graduates.

Dentists graduates

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.**

Coverage:

- Data represent the total number of graduates.

Pharmacists graduates

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.**

Coverage:

- Data represent the total number of graduates.

Midwives graduates

Data not available.

Nursing graduates

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.**

Coverage: Data represent the total number of graduates.

Break in time series: Break in 2002 due to change in Nursing Education in the end of the 1990's.

Professional nursing graduates

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.**

Coverage: Data represent the total number of graduates.

Break in time series: Break in 2002 due to change in Nursing Education in the end of the 1990's.

Associate professional nursing graduates

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

Romania

Medical graduates

Source of data: **Ministry of Education** for the period 1990-1997 data on graduates and **National Institute of Statistics** since 1998, Activity of Education Units (Statistical data on tertiary education) – annual survey performed by NIS.

Reference period: academic year.

Break in the series: 1996 (Since 1996 including private sector).

Dentists graduates

Source of data: **Ministry of Education** for the period 1990-1997 data on graduates and **National Institute of Statistics** since 1998, Activity of Education Units (Statistical data on tertiary education) – annual survey performed by NIS.

Reference period: academic year.

Break in the series: 1996 (Since 1996 including private sector).

Pharmacists graduates

Source of data: **Ministry of Education** for the period 1990-1997 data on graduates and **National Institute of Statistics** since 1998 till now Activity of Education Units (Statistical data on tertiary education) – annual survey performed by NIS.

Reference period: academic year.

Break in the series: 1996 (Since 1996 including private sector).

Midwives graduates

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: The data cover public and private sector.

Since 2015, data on midwives are not available. The number of graduates midwives is included in **professional nursing graduates.**

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, as of 2015, statistical data are collected for the field of study 0913 'Nursing and midwifery'. The data are not collected distinctively for "Nursing", and "Midwifery", respectively and, as such, data on graduates from a midwifery programme cannot be subtracted.

Nursing graduates

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.

Break in the series: 1996 (Since 1996 including private sector) and 2015.

Since 2015, data on **Nursing graduates** included, also, the number of **Midwives graduates**.

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, as of 2015, statistical data are collected for the field of study 0913 'Nursing and midwifery'. The data are not collected distinctively for "Nursing", and "Midwifery", respectively and, as such, data on graduates from a midwifery programme cannot be subtracted.

Professional nursing graduates

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.

Break in the series: 1996 (Since 1996 including private sector) and 2015.

Since 2015, data on **Professional nursing graduates** included, also, the number of **Midwives graduates**.

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, as of 2015, statistical data are collected for the field of study 0913 'Nursing and midwifery'. The data are not collected distinctively for "Nursing", and "Midwifery", respectively and, as such, data on graduates from a midwifery programme cannot be subtracted.

Associate professional nursing graduates

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.

Break in the series: 1996 (Since 1996 including private sector).

Explanation:

The data series for "**Associate professional nursing graduates**" is oscillating. The explanations are the following:

- in 1991 and 1992 the graduates refer only to high school education (only medical high school graduates became nurses),
- in 1993 and 1992 only the students in the last two years of medical care education were present in the medical high schools because these institutions were projected to be abolished (dissolved) but in parallel, post-secondary schools were established with respective graduates. Thus, for these two years, 1993 and 1994 there are secondary and post-secondary graduates with nurse certificate.
- from 1995 there are only post-secondary graduates.
- since 1996 including private sector.

Slovenia

Medical graduates

Source of data: **National Institute of Public Health, Slovenia, Health Statistics Yearbook.**
Reference period: 31st December.

Dentists graduates

Source of data: **National Institute of Public Health, Slovenia, Health Statistics Yearbook.**
Reference period: 31st December.

Pharmacists graduates

Source of data: **National Institute of Public Health, Slovenia, Health Statistics Yearbook.**
Reference period: 31st December.

Midwives graduates

Source of data: **National Institute of Public Health, Slovenia, Health Statistics Yearbook.**
Reference period: 31st December.

Nursing graduates

Source of data: **National Institute of Public Health, Slovenia, Health Statistics Yearbook.**
Reference period: 31st December.

Professional nursing graduates

Source of data: **National Institute of Public Health, Slovenia, Health Statistics Yearbook.**
Reference period: 31st December.

Note: During the 1990s', nursing schools were gradually responding to increased needs for nursing professionals which resulted in higher numbers of graduates.

Associate professional nursing graduates

Source of data: **National Institute of Public Health, Slovenia, Health Statistics Yearbook.**
Reference period: 31st December.

Slovakia

Medical graduates

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).
- In 2019, data from the year 2010 were revised.

Dentists graduates

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).

Coverage:

- The fields dental hygiene and dental technique are excluded.
- In 2019, data from the year 2010 were revised.

Pharmacists graduates

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).
- In 2019, data from the year 2010 were revised.

Midwives graduates

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).
- In 2019, data from the year 2010 were revised.

Break in time series: In 1994, the number of midwives who graduated dropped from 184 to 0 because of changes within the Slovak health education and training system.

Nursing graduates

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).

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.

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.

- In 2019, data from the year 2010 were revised. Revised data are based on different methodology, previous data contained also other categories of graduates, e.g. medical rescuers, medical assistants, etc.

Professional nursing graduates

Data not available.

Associate professional nursing graduates

Data not available.

Finland

Medical graduates

Source of data:

- Up to 2013: VALVIRA. **National Supervisory Authority for Welfare and Health**. Register on Qualified Health Care Personnel, number of persons who have received their qualification in the calendar year.

- From 2014: Statistics Finland's Classification of Education maintains and publishes national classification recommendations based on international standards confirmed by EU directives.

Classification of physicians consists of the 2011 ISCED code 772101. (See:

http://www.stat.fi/meta/luokitukset/koulutus/001-2014/index_en.html).

Reference period: Calendar year.

Break in time series: 2014 (change in data source).

Dentists graduates

Source of data:

- Up to 2013: VALVIRA. **National Supervisory Authority for Welfare and Health**. Register on Qualified Health Care Personnel, number of persons who have received their qualification in the calendar year.

- From 2014: Statistics Finland's Classification of Education maintains and publishes national classification recommendations based on international standards confirmed by EU directives.

Classification of dentists consists of the 2011 ISCED code 772201. (See:

http://www.stat.fi/meta/luokitukset/koulutus/001-2014/index_en.html).

Reference period: Calendar year.

Break in time series:

- Breaks are caused by significant changes in education curriculum and the number of universities providing education in dentistry.

- 2014 (change in data source).

Pharmacists graduates

Source of data:

- Up to 2013: VALVIRA. **National Supervisory Authority for Welfare and Health**. Register on Qualified Health Care Personnel, number of persons who have received their qualification in the calendar year.
- From 2014: Statistics Finland's Classification Services maintain and publish national classification recommendations. Classification of Education is based on international standards confirmed by EU directives. Classification of pharmacists consists of the 2011 ISCED codes 672401 and 771206. (See: http://www.stat.fi/meta/luokitukset/koulutus/001-2014/index_en.html).
Reference period: Calendar year.
Break in time series: 2014 (change in data source).

Midwives graduates

Source of data:

- Up to 2013: VALVIRA. **National Supervisory Authority for Welfare and Health**. Register on Qualified Health Care Personnel, number of persons who have received their qualification in the calendar year.
- From 2014: Statistics Finland's Classification Services maintain and publish national classification recommendations. Classification of Education is based on international standards confirmed by EU directives. Classification of midwives consists of the 2011 ISCED codes 671106 and 771206. (See: http://www.stat.fi/meta/luokitukset/koulutus/001-2014/index_en.html).
Reference period: Calendar year.

Break in time series:

- The two-year curriculum was discontinued in 1971. Specialist nurse-based midwife education was run 1968-1986, and the last midwives graduated in 1994. The new midwife education on secondary level was started in 1985. The length of education was 3.5 years or 4.5 years, and it was lengthened with obligatory training in 1993. Since 1995, midwife education has followed the EU regulation. Additionally, all graduates with the new secondary level health care professional education have been authorised to nurse since 1 August 1996. The first graduates completed their studies in 2000.
- 2014 (change in data source).

Nursing graduates

Source of data:

- Up to 2013: VALVIRA; **National Supervisory Authority for Welfare and Health**. Registrar on Qualified Health Care Personnel, number of persons who have received their qualification in the calendar year.
- From 2014: Statistics Finland's Classification Services maintain and publish national classification recommendations. Classification of Education is based on international standards confirmed by EU directives. Classification of nurses consists of the 2011 ISCED codes 671101, 771201 and 772501. (See: http://www.stat.fi/meta/luokitukset/koulutus/001-2014/index_en.html).
Reference period: Calendar year.

Reference period: Calendar year.

Break in time series: 2014 (change in data source).

Professional nursing graduates

Data not available.

Associate professional nursing graduates

Data not available.

Sweden

Medical graduates

Source of data:

- Until 1995: **National Board of Health and Welfare**. LOVA-register (change of register-name from former NPS-register).
- From 1996: **Swedish Higher Education Authority (UKÄ)**.

Reference period:

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

Coverage: Data refers to medical graduates in Sweden in a given year.

- Full coverage.

Dentists graduates

Source of data:

- Until 1995: **NBHW**, Yearbook of Health and Medical Care.
- From 1996: **Swedish Higher Education Authority (UKÄ)**.

Reference period:

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

Coverage:

- Data refer to dentists graduates in Sweden in a given year.
- Full coverage.

Pharmacists graduates

Source of data:

- Until 1995: **NBHW**, Yearbook of Health and Medical Care.
- From 1996: **Swedish Higher Education Authority (UKÄ)**.

Reference period:

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

Coverage:

- Data refer to prescriptionist and pharmacist graduates in Sweden in a given year.
- Full coverage.

Midwives graduates

Source of data:

- Until 1995: **NBHW**, Yearbook of Health and Medical Care.
- From 1996: **Swedish Higher Education Authority (UKÄ)**. Reference period:
- Until 1995: 1st November.
- From 1996: 31st December.

Coverage:

- Data refer to midwives graduates in Sweden in a given year.
- Full coverage.

Nursing graduates

Data not available.

Professional nursing graduates

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

- From 1996: **Swedish Higher Education Authority (UKÄ)**.

Reference period:

- Until 1995: 1st November.

- From 1996: 31st December.

Coverage:

- Full coverage.

Note: 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.

Associate professional nursing graduates

Data not available.

Iceland

Medical graduates

Source of data:

- As of 1996: **Statistics Iceland**, Register of graduations.

- 1980-1995: **Directorate of Health**.

Reference period: As of 1996, the calendar year.

Coverage:

- Students who graduated in medicine (who have completed basic medical education) from the medical faculty of the University of Iceland (the only one in Iceland) in a given year.

- Data exclude: graduates in pharmacy, dentistry/stomatology, public health and epidemiology, and individuals who have completed post-graduate studies or training in medicine.

Dentists graduates

Source of data:

- As of 1996: **Statistics Iceland**, Register of graduations.

- 1980-1995: **Directorate of Health**.

Reference period: As of 1996, the calendar year.

Coverage: Students who have graduated in dentistry from the faculty of dentistry in Iceland (UI) in a given year.

Pharmacists graduates

Source of data:

- As of 1996: **Statistics Iceland**, Register of graduations.

- 1980-1995: **Directorate of Health**.

Reference period: As of 1996, the calendar year.

Coverage: Students who have obtained Cand. pharm/Master degree in pharmacy in Iceland (UI) in a given year.

Midwives graduates

Source of data:

- As of 1996: **Statistics Iceland**, Register of graduations.
- 1980-1995: **Directorate of Health**.

Reference period: As of 1996, the calendar year.

Coverage: Students who have obtained a recognised qualification in midwifery in Iceland (UI) in a given year.

Nursing graduates

Source of data: **Statistics Iceland**, Register of graduations.

Reference period: The calendar year.

Coverage: 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).

Professional nursing graduates

Source of data:

- As of 1996: **Statistics Iceland**, Register of graduations.
- 1980-1995: **Directorate of Health**.

Reference period: As of 1996, the calendar year.

Coverage:

- Includes: nursing graduates (BS 120 credits-units) and nursing graduates - specially organised BS in nursing (45 credits-units). These refer to those who had already graduated as nurses when the education was at a lower level.

- Excludes: Graduates from midwifery programme and practical/associate nurse graduates whose education is at an upper-secondary level.

Break in time series: 1996.

Associate professional nursing graduates

Source of data: **Statistics Iceland**, Register of graduations.

Reference period: The calendar year.

Coverage:

- Includes associate professional nursing graduates who have six semesters of education (towards becoming an associate professional nurse) in secondary school (non-university) and 16 weeks of practical training in health institutions.

- As of 2006, graduates from a new so-called “associate nurse bridge” programme are also included. This programme is for health assistants with at least five years working experience as caring assistants and 4 semesters of education towards becoming an associate professional nurse in secondary school (non-university). In 2008, 107 (2007:8; 2006:3) graduated from this programme, and 115 from the general programme for associate professional nursing. In 2009, nine graduated from the “associate nurse bridge” programme and 94 from the general programme.

- Graduates from the professional nurse programme are excluded.

Liechtenstein

Medical graduates

There is one university where you can get a medical PhD (post-doc programme).

Dentists graduates

There is no medical university in Liechtenstein.

Pharmacists graduates

Source of data: Private University of Liechtenstein

Coverage: There is one small University in Liechtenstein which has an interdisciplinary pharmaceutical-medical education (doctorate). As the curriculum is mixed, all figures are reported with the graduates in pharmacy.

Midwives graduates

There is no midwife graduated in Liechtenstein.

Nursing graduates

There is no nurse graduated in Liechtenstein.

Professional nursing graduates

There is no nurse graduated in Liechtenstein.

Associate professional nursing graduates

There is no nurse graduated in Liechtenstein.

Norway

Medical graduates

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'.

Coverage: Complete coverage as statistics are based on enumeration of graduates in tertiary education. Sampling errors and non-response errors do not exist.

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).

Dentists graduates

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'.

Coverage: Complete coverage as statistics are based on enumeration of graduates in tertiary education. Sampling errors and non-response errors do not exist.

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).

Pharmacists graduates

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'.

Coverage: Complete coverage as statistics are based on enumeration of graduates in tertiary education. Sampling errors and non-response errors do not exist.

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).

The decrease in Cand.pharm degrees in 2010 is mainly explained by a pronounced increase in 2008 and 2009, as many students graduated according to the previous degree structure, before six year tertiary graduate degrees (Cand.pharm) became five year master degrees and before the full implementation of the bachelor-master structure.

Midwives graduates

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'.

Coverage: Complete coverage as statistics are based on enumeration of graduates in tertiary education. Sampling errors and non-response errors do not exist.

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).

Nursing graduates

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'.

Coverage: Complete coverage as statistics are based on enumeration of graduates in tertiary education. Sampling errors and non-response errors do not exist.

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).

Professional nursing graduates

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'.

Coverage: Complete coverage as statistics are based on enumeration of graduates in tertiary education. Sampling errors and non-response errors do not exist.

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).

Associate professional nursing graduates

There are no associate professional nurses in Norway.

Switzerland

Medical graduates

Source of data: FSO Federal Statistical Office, Neuchâtel; hospital statistics, statistics of high-level schools, human medicine degree; yearly census.

Dentists graduates

Source of data: FSO Federal Statistical Office, Neuchâtel; hospital statistics, statistics of high-level schools, human medicine degree; yearly census.

Pharmacists graduates

Source of data: FSO Federal Statistical Office, Neuchâtel; hospital statistics, statistics of high-level schools, pharmacist degree; yearly census.

Midwives graduates

Source of data: Swiss Red Cross, Bern, Directorate, Health and Integration, Professional Education.

Nursing graduates

Source of data:

- From 2007 onwards: FSO Federal Statistical Office, Neuchâtel; graduation statistics; yearly census.
- Up to 2006: Swiss Red Cross, Bern.

Coverage: Since 2007, data cover professional and associate professional nursing graduates.

Before 2007, the data did not include all "associate nurses" graduates.

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.

Professional nursing graduates

Source of data: FSO Federal Statistical Office, Neuchâtel; graduation statistics; yearly census.

Break in time series: 2009, inclusion of the graduates of Universities of applied science.

Associate professional nursing graduates

Source of data: FSO Federal Statistical Office, Neuchâtel; graduation statistics; yearly census.

Montenegro

Medical graduates

Source of data: Faculty of medicine, University of Montenegro.

Dentists graduates

Source of data: Faculty of medicine, University of Montenegro.

Pharmacists graduates

Source of data: Faculty of medicine, University of Montenegro.

Midwives graduates

Data not available.

Nursing graduates

Source of data: Faculty of medicine, University of Montenegro.

Coverage: Nursing graduates: only graduates from Higher Medical School (Faculty of medicine, University of Montenegro).

Professional nursing graduates

Source of data: Faculty of medicine, University of Montenegro.

Coverage: Nursing graduates: only graduates from Higher Medical School (Faculty of medicine, University of Montenegro).

Associate professional nursing graduates

Data not available.

North Macedonia

Medical graduates

Source of data: **State Statistical Office (SSO)**, Statistical Yearbook of the Republic of Macedonia.

Reference period: 31st December.

Dentists graduates

Source of data: **State Statistical Office (SSO)**, Statistical Yearbook of the Republic of Macedonia.

Reference period: 31st December.

Pharmacists graduates

Source of data: **State Statistical Office (SSO)**, Statistical Yearbook of the Republic of Macedonia.

Reference period: 31st December.

Midwives graduates

Source of data: **State Statistical Office (SSO)**, Statistical Yearbook of the Republic of Macedonia

Reference period: 31st December

Note: Starting from 2008, midwifery education becomes university-level education (instead of secondary school level).

For 2011, the number of **Midwives graduates** is from academic school year 2010/2011 and 2012 from academic school year 2011/2012.

Break in time series: 2008.

Nursing graduates

Source of data: **State Statistical Office (SSO)**, Statistical Yearbook of the Republic of Macedonia

Reference period: 31st December

Note: significant increases in time series between 2005-2006 and 2007-2008 are due to commencing of new generations of graduated (university level) nurses from newly opened nursing programs and an introduction of a legal obligation requiring all employed nurses to complete their university education, thus increasing the number of students enrolling and graduating.

Professional nursing graduates

Source of data: **State Statistical Office (SSO)**, Statistical Yearbook of the Republic of Macedonia

Reference period: 31st December

Note: significant increases in time series between 2005-2006 and 2007-2008 are due to commencing of new generations of graduated (university level) nurses from newly opened nursing programs and an introduction of a legal obligation requiring all employed nurses to complete their university education, thus increasing the number of students enrolling and graduating.

Associate professional nursing graduates

The category “Associated professional nurse” does not exist.

Albania

Medical graduates

Source of data: Ministry of Health and Ministry of Education and Sports

Dentists graduates

Source of data: Ministry of Health and Ministry of Education and Sports

Pharmacists graduates

Source of data: Ministry of Health and Ministry of Education and Sports

Midwives graduates

Data not available.

Nursing graduates

Source of data: Ministry of Health and Ministry of Education and Sports

Deviation from the definition: Number of total nursing graduates and midwifing graduates.

Professional nursing graduates

Data not available.

Associate professional nursing graduates

Data not available.

Serbia

Medical graduates

Source of data: Statistical Office of the Republic of Serbia.

Coverage: Data for Kosovo-Metohija province are not included in the coverage of data for the Republic of Serbia.

Dentists graduates

Source of data: Statistical Office of the Republic of Serbia.

Coverage: Data for Kosovo-Metohija province are not included in the coverage of data for the Republic of Serbia.

Pharmacists graduates

Source of data: Statistical Office of the Republic of Serbia.

Coverage: Data for Kosovo-Metohija province are not included in the coverage of data for the Republic of Serbia.

Midwives graduates

Source of data: Statistical Office of the Republic of Serbia.

Coverage: Data for Kosovo-Metohija province are not included in the coverage of data for the Republic of Serbia.

Nursing graduates

Source of data: Statistical Office of the Republic of Serbia.

Coverage: Data for Kosovo-Metohija province are not included in the coverage of data for the Republic of Serbia.

Professional nursing graduates

Source of data: Statistical Office of the Republic of Serbia.

Coverage: Data include nurses with ISCED level 4 and level 5 education. Data for Kosovo-Metohija province are not included in the coverage of data for the Republic of Serbia.

Associate professional nursing graduates

Source of data: Statistical Office of the Republic of Serbia.

Coverage: Data include nurses with ISCED level 3. Data for Kosovo-Metohija province are not included in the coverage of data for the Republic of Serbia.

Turkey

Medical graduates

Source of data:

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

- From 2013 onwards: **Council of Higher Education, Higher Education Statistics (main source).**

Reference period: End of the academic year.

Coverage: Data refer to medical school graduates having graduated after a 6-year basic medical education at university.

- The rise in the number of **Medical graduates** in 2015-16 is due to a new faculty of medicine and to the increase in quotas in universities.

Dentists graduates

Source of data:

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

- From 2013 onwards: **Council of Higher Education**, Higher Education Statistics (main source).

Reference period: End of the academic year.

Coverage: Data refer to dentistry school graduates having graduated from a 5-year basic dentistry education at university.

Pharmacists graduates

Source of data:

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

- From 2013 onwards: **Council of Higher Education**, Higher Education Statistics (main source).

Reference period: End of the academic year.

Coverage: Data refer to pharmacy school graduates having graduated from a 5-year pharmacy education at university.

Midwives graduates

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.

Coverage:

- Data refer to total number of midwifery graduates of vocational high schools of health and universities.

- Midwifery departments in vocational health high schools accepted an increasing number of midwifery students until the mid-1990s in response to domestic needs. In the late 1990s, vocational health high schools started not to enroll any students in midwifery section. However, in the early 2000s, a growing need for midwives came to the agenda again, and these vocational schools begun accepting more midwifery students again, explaining the rise in the number of graduates since 2004. In 2005, the vocational health schools again started not to enroll any new students so there have been no midwifery section graduates since 2008 in these vocational schools.

Nursing graduates

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.

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 enroll 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 enroll 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.)

Break in time series: From 2017 onwards, the number of nursing graduates include only graduates from universities.

Professional nursing graduates

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.**

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 enroll 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 enroll 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.)

Break in time series: From 2017 onwards, the number of nursing graduates include only graduates from universities.

Associate professional nursing graduates

There are no associate professional nurses in Turkey.

United Kingdom

Medical graduates

Source of data:

- 2002-onwards: **Higher Education Statistics Agency (HESA)**, <https://www.hesa.ac.uk/data-and-analysis>. In 2020, data have been revised for the academic years 2014/15 through to 2016/17.

- 1992-2001: **Higher Education Funding Council for England (HEFCE)**, 'UK Graduate Output 1991/92 to 2012/13'.

Reference period: Period covers 1st August to 31st July. From 2002 onwards, the reference period covers the financial year. The academic year x/y is reported in year y (e.g. the academic year 2017/18 is reported under 2018).

Coverage: UK.

- Medical qualifiers have been defined as qualifiers from the following principal subjects:
Medicine - (A1) Pre-clinical medicine and (A3) Clinical medicine.

Methodology: Data are restricted to only include those who qualified.

Dentists graduates

Source of data: **Higher Education Statistics Agency (HESA)**, <https://www.hesa.ac.uk/data-and-analysis>. In 2020, data have been revised for the academic years 2014/15 through to 2016/17.

Reference period: From 2009 onwards, the reference period covers the financial year. The academic year x/y is reported in year y (e.g. the academic year 2017/18 is reported under 2018).

Coverage: UK.

- Dentist qualifiers have been defined as qualifiers from the following principal subjects:
(A2) Pre-clinical dentistry
(A4) Clinical dentistry

Methodology: Data are restricted to only include those who qualified.

Pharmacists graduates

Source of data: **Higher Education Statistics Agency (HESA)**. In 2020, data have been revised for the academic years 2014/15 through to 2016/17.

Reference period: From 2009 onwards, the reference period covers the financial year. The academic year x/y is reported in year y (e.g. the academic year 2017/18 is reported under 2018).

Coverage: UK.

- Pharmacy qualifiers have been defined as qualifiers from the following 4-digit JACS codes:
(B200) Pharmacology, toxicology & pharmacy
(B230) Pharmacy

Methodology: Data are restricted to only include those who qualified.

Midwives graduates

Source of data: **Nursing and Midwifery Council**.

Reference period: Data are for financial years, e.g. year 2009 data cover the period 1st April 2009 to 31st March 2010.

Estimation method: Data provided at UK level by the Nursing and Midwifery Council (the NMC). Data provided is the number of newly registered Midwives, which is the number of midwives made available for registration by HEI and who went on to register and is the best possible approximation of midwifery graduates available held by the NMC.

Nursing graduates

Source of data: **Nursing and Midwifery Council.**

Reference period: Data from 2008 are for financial years, e.g. year 2009 data cover the period 1st April 2009 to 31st March 2010.

Estimation method: 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.

Professional nursing graduates

Data not available. (Registration of Associate Professional nurses by the NMC was only approved by the NMC Council on 25th January 2017 so figures for professional nursing graduates as distinguished from graduates associate professional nursing graduates are not held by the NMC at present but will be available in the future.)

Associate professional nursing graduates

Data not available. (Registration of Associate Professional nurses by the NMC was only approved by the NMC Council on 25th January 2017 so figures for Associate Professional nursing graduates are not held by the NMC at present but will be available in the future.)