

# ***OECD Health Statistics 2020***

## **Definitions, Sources and Methods**

### **Hospital employment**

#### **Total hospital employment**

Number of persons employed (head counts), and number of full-time equivalent (FTE) persons employed in general and specialty hospitals. Self-employed are included.

##### **Inclusion**

- Service contracts with non-employed health professionals on treatment of hospital patients (head counts).

#### **Physicians employed in hospitals**

Number of physicians directly employed by a hospital.

#### **Professional nurses and midwives employed in hospitals**

Number of professional nurses and midwives (see definition of professional nurses and midwives) directly employed by a hospital.

#### **Associate professional nurses employed in hospitals**

Number of associate professional nurses (see definition of associate professional nurses) directly employed by a hospital.

#### **Health care assistants employed in hospitals (ISCO-08 code: 5321)**

Number of health care assistants (see definition of health care assistants) directly employed by a hospital.

#### **Other health service providers employed in hospitals**

##### **Inclusion**

- Dentists
- Pharmacists
- Physiotherapists
- Psychologists
- Dieticians
- Audiologists and speech therapists
- Laboratory assistants
- Other health professionals and associate professionals

## Other staff employed in hospitals

### Other employees not elsewhere classified.

### Sources and Methods

#### Australia

##### Head counts data (up to 1991):

###### Source of data:

- **Australian Bureau of Statistics.** Characteristics of persons employed in health occupations, Australia. ABS Cat. No. 4346.0. Canberra: ABS.

##### FTE data:

###### Source of data:

2017:

- **Australian Institute of Health and Welfare.** Hospital resources: Australian hospital statistics. Canberra: AIHW (also at [www.aihw.gov.au](http://www.aihw.gov.au)).

2013-2016:

- **Australian Institute of Health and Welfare.** Hospital resources: Australian hospital statistics. Canberra: AIHW (also at [www.aihw.gov.au](http://www.aihw.gov.au)).

- **Australian Bureau of Statistics.** Private hospitals, Australia. ABS Cat. No. 4390.0. Canberra; ABS.

Prior to 2013:

- **Australian Institute of Health and Welfare.** Australian hospital statistics. Canberra: AIHW (also at [www.aihw.gov.au](http://www.aihw.gov.au)).

- **Australian Bureau of Statistics.** Private hospitals, Australia. ABS Cat. No. 4390.0. Canberra; ABS.

###### Method:

- 2017 – FTEs are only available for public hospitals.

- 2016 and earlier - FTEs are the sum of data from *Hospital resources: Australian hospital statistics* (for public hospitals) and *Private hospitals, Australia* (for private hospitals).

###### Coverage:

- Staff includes salaried medical officers, nurses, other personnel care staff, diagnostic and allied health professionals, administrative and clerical staff, domestic and other staff. For public hospitals there is some variation in data collection amongst the states and territories.

- Data represent full-time equivalents employed in ANZSIC 8611 Hospitals (except psychiatric hospitals) and 8612 Psychiatric hospitals.

- Years reported are financial years 1 July to 31 June (e.g. 2006-07 is reported as 2006).

- The AIHW's National Public Hospitals Establishments Database is based on the Public hospital establishments National Minimum Data Set (scope is establishment-level data for public acute and psychiatric hospitals, and alcohol and drug treatment centres) and the Local hospital network Data Set Specification (scope is local hospital networks and all public hospital services that are managed by a state or territory health authority and are included in the General list of In-scope Public Hospital Services developed under the 2011 National Health Reform Agreement).

- 2017 – FTEs are only available for public hospitals.

- 2016 and earlier: Staff FTEs are for staff in public and private, acute and psychiatric hospitals.

- The ABS' Private Hospitals Establishments Collection contains details about the facilities, activities, staffing and finances of all private hospitals, including both private acute and/or psychiatric hospitals and free-standing day hospital facilities.

###### Notes:

- Data for public health resources are sourced from the AIHW's National Public Hospitals Establishments Database; data for private health resources are sourced from the ABS' Private Health Establishments Collections. The two collections differ in methodology, therefore caution should be used when drawing comparisons.

###### Break in time series:

- 2017 – Data are only available for public hospitals so cannot be compared with earlier years

- For 2014–15 and 2015–16, staff employed in providing public hospital services at the local hospital network level or state health authority level were included for the first time (for 2014–15 excludes Queensland, for which the data

were not available). Therefore, the staff numbers reported for 2014–15 and 2015–16 are not comparable with earlier years, and are not comparable between 2014–15 and 2015–16.

Deviation from the definition: In 2017 data are only available for staff in public hospitals.

### ***Physicians***

Break in time series: 2005.

- Since 2005: Data are FTEs for salaried medical officers in public and private, acute and psychiatric hospitals.
- Up to 2004: Physician FTEs include salaried medical officers in public hospitals and salaried medical officers and diagnostic and other allied health professionals in private hospitals.

### ***Professional nurses and midwives, Associate professional nurses***

Deviation from the definition: In FTE data, the breakdown between professional nurses and associate professional nurses is not available; therefore all nurses are reported as 'Professional nurses and midwives' which deviates from the definition by including associate (enrolled) nurses.

### ***Health care assistants***

Data not available.

### ***Other health service providers***

Break in time series: 2005.

- Since 2005: Data are FTEs for diagnostic and other allied health professionals in public and private, acute and psychiatric hospitals.
- Up to 2004: FTEs for diagnostic and other allied health professionals in public hospitals (for private hospitals the FTEs for diagnostic and other allied health professionals are counted with physicians).

### ***Other staff***

Coverage:

- Data cover FTEs for administrative, clerical, domestic and other staff in public and private, acute and psychiatric hospitals. This category also includes 'Other personal care staff' except for jurisdictions that did not supply these counts separately (hence 'Other personal care staff' may have been counted in other categories).

Break in time series: 2010.

- From 2010, Other staff employed in hospitals includes 'clinical support staff' in private acute and psychiatric hospitals.

## **Austria**

Source of data: **Austrian Federal Ministry of Labour, Social Affairs, Health and Consumer Protection,** Hospital Statistics.

Reference period: 31<sup>st</sup> December (head count); period 1<sup>st</sup> January to 31<sup>st</sup> December (FTE).

Coverage:

- Head counts: Included are physicians, nurses, midwives, assistants, and selected other health service providers employed in hospitals (HP.1). Excluded is non-medical academic and non-medical staff employed in hospitals.
- FTE: Included are all employees in hospitals (HP.1).

Estimation method: Up to 2007, FTE are the sum of approx. 90% FTE (in publicly financed hospitals) and 10% head counts (in private for-profit hospitals). From 2008 onwards, all hospitals (publicly financed and private for-profit hospitals) have to report FTE.

### ***Physicians***

Coverage: Head counts/FTE of physicians employed in hospitals (HP.1), dentists included.

- Coverage of head counts is complete.

Estimation method: Up to 2007, FTE are the sum of approx. 90% FTE (in publicly financed hospitals) and 10% head counts (in private for-profit hospitals). From 2008 onwards, all hospitals (publicly financed and private for-profit hospitals) have to report FTE.

### ***Professional nurses and midwives***

Coverage: Head counts/FTE of professional nurses and midwives employed in hospitals (HP.1).

- Coverage of head counts is complete.

Estimation method: Up to 2007, FTE are the sum of approx. 85% FTE (in publicly financed hospitals) and 15% head counts (in private for-profit hospitals). From 2008 onwards, all hospitals (publicly financed and private for-profit hospitals) have to report FTE.

### ***Associate professional nurses***

Coverage: Head counts/FTE of health care assistants (ISCO 3221) employed in hospitals (HP.1).

- Coverage of head counts is complete.

Note: Until 2016, health care assistants (ISCO 5321) were reported in the column "associate professional nurses" (ISCO 3221), as the occupational classification "associate professional nurses" had not existed in Austria until then. In 2016, there was a change in the law on training for health and nursing care, which introduced the occupational group "associate professional nurses". Training as an associate professional nurse was introduced in Austria in September 2016. The first associate professional nurses have been employed in Austrian hospitals in 2017. In the course of this year's (2019) data delivery, a comprehensive correction was carried out in this respect. The health care assistants previously listed in the "associate professional nurses" column have now been moved to the "practising caring personnel" column.

### ***Health care assistants***

Coverage: Head counts/FTE of health care assistants (ISCO 5321) employed in hospitals (HP.1).

- Coverage of head counts is complete.

Note: Until 2016, health care assistants (ISCO 5321) were reported in the column "associate professional nurses" (ISCO 3221), as the occupational classification "associate professional nurses" had not existed in Austria until then. In 2016, there was a change in the law on training for health and nursing care, which introduced this occupational group (see also "Associate professional nurses"). In the course of this year's (2019) data delivery, a comprehensive correction was carried out in this respect. Health care assistants previously listed in the "associate professional nurses" column have now been moved to the "practising caring personnel" column.

### ***Other health service providers***

Coverage:

- Head counts: Included are physiotherapists, occupational therapists, dietitians, audiologists, speech therapists, laboratory assistants, and radiological assistants employed in hospitals (HP.1). All other health professionals are excluded.

- FTE: Complete coverage; included are the professions listed in "Head counts", plus all other health professionals (e.g. pharmacists) employed in hospitals (HP.1).

### ***Other staff***

Coverage:

- Head count: Data not available.

- FTE: Complete coverage; included is administration, office and operational personnel employed in hospitals (HP.1).

## **Belgium**

Source of data: **SPF Santé publique - Service comptabilité des hôpitaux.**

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

### ***Physicians***

Coverage: Concerns only physicians employed by the hospitals (labour contract). Therefore, coverage does not include those working on a self-employed basis within the infrastructure of the hospital.

## **Canada**

### ***Total hospital employment (Head Counts)***

Source of data:

- Up to 1994: **Statistics Canada**. Hospital Statistics Preliminary Annual Reports. Catalogue 83-217 Annual, until 1994/95.
- From 2005 onwards: **Statistics Canada**. Survey of Employment, Payrolls and Hours (SEPH).
- Statistics Canada. Table 14-10-0202-01 Employment by industry, annual  
<https://doi.org/10.25318/1410020201-eng>.

Coverage:

- From 2005 onwards: All employees in category 622 (Hospitals) of the North American Industry Classification System (NAICS).

Note: Employees by category are from different data sources and may not add up to total hospital employment obtained from Survey of Employment, Payrolls and Hours (SEPH).

**Physicians (Head Counts)**

Source of data: **Statistics Canada**. Census of Population 2006, National Household Survey (NHS) 2011 and Census of Population 2016. 2017 and 2018 estimates assuming the same share of Total hospital employment as in 2016.

Coverage: Category 3111 (Specialist physicians) and category 3112 (General practitioners and family physicians) of the National Occupational Classification (NOC) 2011 and category 622 (Hospitals) of the North American Industry Classification System (NAICS) 2007.

**Professional nurses and midwives, Associate professional nurses (Head Counts)**

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

Coverage:

- **Professional nurses and midwives:** Registered nurses (including nurse practitioners and RN midwives working full-time in direct care) and registered psychiatric nurses (RPNs) working in hospitals. Midwives other than RN midwives are excluded as information was not available.

- **Associate professional nurses:** Licensed practical nurses in hospitals.

Break in time series: 2003. RPNs were included starting in 2003.

**Health care assistants (Head Counts)**

Source of data: **Statistics Canada**. Census of Population 2006, National Household Survey (NHS) 2011 and Census of Population 2016. 2017 and 2018 estimates assuming the same share of Total hospital employment as in 2016.

Coverage: Category 3413 (Nurses' aides, orderlies and patient service associates) of the National Occupational Classification (NOC) 2011 and category 622 (Hospitals) of the North American Industry Classification System (NAICS) 2007.

**Other health service providers (Head Counts)**

Source of data: **Statistics Canada**. Census of Population 2006, National Household Survey (NHS) 2011 and Census of Population 2016 with the exception of the 2011 and 2016 data for pharmacists, physiotherapists and occupational therapists that originate from the Health Workforce Database at the **Canadian Institute for Health Information**. 2017 and 2018 estimates assuming the same share of Total hospital employment as in 2016.

Coverage: Selected categories of the National Occupational Classification (NOC) 2011 and category 622 (Hospitals) of the North American Industry Classification System (NAICS) 2007. Data include:

- 3113 Dentists;
- 312 Optometrists, chiropractors and other health diagnosing and treating professionals;
- 313 Pharmacists, dietitians and nutritionists;
- 314 Therapy and assessment professionals (3141 Audiologists and speech-language pathologists, 3142 Physiotherapists, 3143 Occupational therapists and 3144 Other professional occupations in therapy and assessment);
- 32 Technical occupations in health: 321 Medical technologists and technicians (except dental health), 322 Technical occupations in dental health care, 323 Other technical occupations in health care except subcategories 3213 (Animal health technologists and veterinary technicians) and 3233 (Licensed practical nurses);
- 4151 Psychologists

Break in time series: Starting in 2011, data for pharmacists, physiotherapists and occupational therapists are from the Health Workforce Database at the **Canadian Institute for Health Information**.

**Other staff employed in hospitals (Head Counts):**

- Calculated as a residual. Represents the difference between Total Hospital Employment and number of physicians, nurses and midwives, health care assistants and other health service providers employed in hospitals.

- Cross-tabulation of NOC and NAICS data from the 2011 National Household Survey available free for download at <http://www5.statcan.gc.ca/bsolc/olc-cel/olc-cel?catno=99-012-X2011060&lang=eng>.

### ***Total hospital employment (Full-Time Equivalents)***

Source of data: **Canadian Institute for Health Information**, Canadian MIS Database, 1995/96-2018/19.

#### Coverage:

- Includes all provinces and territories in all years, but starting in 2004/05 an estimate was made for Quebec. The estimation method changed in 2006/07.
- 1995/96-2003/04: Total employment in reporting hospitals in terms of full-time equivalents (one full-time equivalent = 1950 hours of work per year). No adjustment has been made for non-reporting hospitals. Hospital response rates for 1995/96 = 84%, 1996/97 = 83%, 1997/98 = 83%, 1998/99=84%, 1999/2000=91%, 2000/01=93%, 2001/02=95%, 2002/03=96%, 2003/04 = 98%. The response rate is based on the number of beds in hospitals that reported paid hours as a proportion of beds in all operating hospitals.
- Estimates for 2004/05 and 2005/06: For the first time, data submitted by Quebec for 2004/05 also included employment in nursing homes affiliated with hospitals. Employment in Quebec hospitals in 2004/05 and 2005/06, excluding affiliated nursing homes, was estimated based on 2003/04 data.
- Estimates for 2006/07-2018/19: Starting in 2006/07, it was assumed that the number of full-time equivalent persons per bed in Quebec was the same as in Ontario, for each type of bed separately (e.g., curative care beds, psychiatric care beds, etc.)
- The breakdown of FTE data by specific categories is not available.

## **Chile**

Source of data: **Ministry of Health**. The original source is the **National Health Human Resources Information System of the Public Sector** (hospitals).

Coverage: Nationwide: all Public Hospitals.

- Data include only the public sector hospitals. It is not yet possible to report data on hospital employment in the private sector. The public sector attends almost 80% of the Chilean population.
- Primary Health Care which belongs to the public health sector is excluded.
- From 2013, there is a systematic checking of the exact grade and profession of the Public Hospital Personnel, by crossing the Ministry of Health Databases with the National Register of Individual Health Providers from the Health Superintendence.

Estimation method: FTE is calculated on a weekly base of 44 hours (Chilean norm).

Deviation from definition: Despite the OECD definition, the service contracts with non-employed health professionals treating hospital patients are not included in these data. Data are available on these contracts, but should be improved in order to reach a higher level of validity and reliability. This concerns mainly physicians.

### ***Associate professional nurses***

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

## **Colombia**

Data not available.

## **Czech Republic**

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

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

#### Coverage:

- Providers: Hospitals and specialised therapeutic institutes (excluding balneologic institutes, convalescence homes for children, institutes for long-term patients and hospices).

- Measurement units: head counts (employees on payroll and employers), FTE (employees on payroll, employers and contractual workers).
  - Double counting of health workers working in more than one health establishment (applies only to head counts variable).
  - In 2014, complete data are not available. Estimate is calculated from available data for 2014 and data from 2013.
- Break in time series: 2016 (administrative change in the records of hospitals, some separate facilities have been integrated to hospital as a department. This explains the increase in hospital employment in 2016).

#### ***Professional nurses and midwives***

Coverage: Professional nurses, associate professional nurses and midwives.

Deviation from definition: These data include also associate professional nurses.

#### ***Associate professional nurses***

- Data not available (the number of associate professional nurses is included in the number of professional nurses).

#### ***Health care assistants***

Coverage: Auxiliary nurses.

#### ***Other health service providers***

Coverage: Dentists, pharmacists, paramedical workers with professional qualifications (excluding nurses and midwives), paramedical workers with professional and specialised qualifications, health care workers pursuing paramedical profession under professional supervision or direct guidance (excluding auxiliary nurses) and other professional workers in health care.

#### ***Other staff employed in hospitals***

Coverage: Teachers and schoolmasters, technical and economic personnel, manual workers and operational personnel.

## **Denmark**

Source of data:

- 1980-2000: **The Danish Health Data Authority**, Labour Register for Health Personnel.
- 2001-2016: **The Danish Health Data Authority**, Data from The joint municipal payroll data office (KRL).

Reference period:

- 1980-2000: 31<sup>st</sup> December. - 2001-2016: yearly average.

Coverage:

- 2001-2016: Only public section of hospital staff is included.
- Note: 2001-2016 figures are based on the employee's job description, while 1980-2000 figures are based on employee's education.

## **Estonia**

Source of data: Annual report, **National Institute for Health Development**, Department of Health Statistics.

Reference period:

- 2006-2012: 31<sup>st</sup> of December.
- Since 2013: November.

Coverage:

- For 2006-2012, the head count distribution is made according to the main occupational activity.
- The data collection methodology was changed in 2013. Aggregated data collection was replaced with data collection on a personal basis. From 2013, the predominant (main) area of practice is based on the occupation with the highest workload.
- In 2013, previous long-term care hospitals (HP.1) have been classified amongst long-term nursing care facilities HP.2, according to the SHA 2011. Therefore, the total number of hospitals decreased in 2013 as well as the numbers of hospital employment.
- Since 2013, the data include only persons providing health-care services and not the staff providing other support services in hospital.

Break in time series: 2013.



Note: All data series for “Hospital employment” 2013-2015 were updated in 2018 after data revision.

### ***Professional nurses and midwives***

Break in time series: 2012. From 2012, the number of practising nurses does not include radiology nurses.

Radiology nurses (by job specification - same as radiology technicians) are classified in the category of other health service providers.

### ***Associate professional nurses***

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

### ***Other health service providers***

Break in time series: 2012.

- From 2012, the number of practising nurses does not include radiology nurses. Radiology nurses (by job specification - same as radiology technicians) are classified in the category of other health service providers.

- From 2012, assistant physicians (students), assistant nurses (students), assistant midwives (students) and assistant radiology technicians (students) who have no medical speciality are included. Before 2012 these data were not collected.

### ***Other staff***

Break in time series: 2012, 2013.

- In 2012, the social workers employed in hospitals are included. Before 2012, these data were not collected.

- Since 2013, data about non-medical personnel are not anymore collected. The collected data include only persons providing health-care services and not the staff providing other support services in hospital.

## **Finland**

### ***Physicians***

Source of data:

- Until 2009: **Finnish Medical Association**. Register of the Finnish Medical Association which is updated by a yearly survey covering all physicians licensed to practice in Finland who are not retired.

- From 2010 to 2014: **Finnish Medical Association**. Data from an annual survey: "Physicians' Working Conditions and Health".

- In 2015: **Finnish Medical Association**. Data from “Finnish Medical Association Labour Market Survey 2016”.

Reference period: Mid-March.

Break in time series: 2010 (change in data source).

### ***Professional nurses and midwives, Associate professional nurses, Health care assistants, Other health service providers, Other staff***

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

Reference period: Data refer to information for the whole year.

Coverage: Professionals working in hospitals listed by their primary employment.

Break in time series: 2007 due to a change in the classification of economic activities.

## **France**

Source of data: **Ministère des Solidarités et de la Santé - Direction de la Recherche, des Études, de l'Évaluation et des Statistiques** (DREES). Data are from the “Statistique Annuelle des Établissements de santé (SAE)”.

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

Coverage:

- Data refer to metropolitan France and D.O.M. (overseas departments).

- Total hospital employment includes salaried personnel (medical and non-medical), interns/residents, “faisants fonction d'internes (FFI)” and “diplômés inter-universitaires de spécialité (DIS)” as well as self-employed medical personnel. Information on self-employed non-medical personnel is not available.

Estimation method:

- Until 2008, fixed-term contracts were not counted in the head count nor in the FTE. Only the paid monthly average



FTE is known. The FTE of fixed-term contracts are estimated by the paid monthly average FTE. Head counts cannot be estimated.

- FTE of self-employed medical personnel is not available, but we know the head count of the self-employed. The FTE are estimated from head counts by applying conventional calculating rules according to the working time of the self-employed.

Break in time series:

- From 2000 onwards, the “faisants fonction d’internes (FFI)” and “diplômés inter-universitaires de spécialité (DIS)” are not available by specialty. Therefore, the FFI-DIS data have been estimated based on their ratios in the total number of FFI-DIS over 1994-1999.

- From 2009 onwards, head counts of fixed-term contracts are also included for the non medical staff. Previously only head count of rolling contracts and holders and trainees of the public service were counted.

- From 2011 onwards, the number of persons employed in nursing structures or in nurses and midwives schools legally depending on hospitals are not counted.

- From 2013 onwards, the SAE survey has been recasted (review and update of the questionnaire, change of the unit surveyed [from legal entity to geographical establishment], improvement of the consistency between the survey and an administrative source of data on the activity of hospitals). Though the principles of the survey remain the same, some concepts and some questions have changed: this can lead to break in series for the year 2013. In this recast, the change of the unit surveyed results in a better quality of data collected in general (less double counting than before), so that the quality of data for the number of persons employed can be marginally improved.

### ***Physicians***

Coverage:

- Data include self-employed physicians.

- FTE of self-employed medical personnel is not available, but the head count of these self-employed is known. The FTE are estimated from head counts by applying conventional calculating rules according to the working time of the self-employed.

Break in time series: 2000, 2013 (see above).

### ***Professional nurses and midwives, Health care assistants, Other staff***

Estimation method: Until 2008, fixed-term contracts were not counted in the head count or in the FTE. Only the paid monthly average FTE is known. The FTE of fixed-term contracts are estimated by the paid monthly average FTE. Head counts cannot be estimated.

Break in time series: 2009, 2011, 2013 (see above).

### ***Associate professional nurses***

- The category "associate professional nurses" does not exist in France.

### ***Other health service providers***

Coverage:

- Data include the service contracts with non-employed medical staff.

Estimation method:

- From 2000 onwards, FFI-DIS pharmacists and odontologists have been estimated based on their ratios in total FFI-DIS over 1994-1999.

- Until 2008, fixed-term contracts were not counted in the head count nor in the FTE. Only the paid monthly average FTE is known. The FTE of fixed-term contracts are estimated by the paid monthly average FTE. Head counts cannot be estimated.

- FTE of self-employed medical personnel is not available, but the head count of the self-employed is known. The FTE are estimated from head counts by applying conventional calculating rules according to the working time of the self-employed.

Break in time series: 2000, 2009, 2011, 2013 (see above).

## **Germany**

Source of data: **Federal Statistical Office**, Health Labour Accounts 2018; special calculation by the Federal Statistical Office; <http://www.destatis.de> or <http://www.gbe-bund.de>.

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

Coverage:

- Hospital employment comprises employment in all types of hospitals (HP1.1, 1.2 and 1.3) in all sectors (public, not-for-profit and private).
  - Included are persons employed in general hospitals, mental health hospitals and prevention and rehabilitation facilities.
  - Data on total hospital employment exclude non-employed physicians and non-employed professional nurses and midwives with service-contracts on treatment of hospital patients.
  - From 2000 onwards data from Health Labour Accounts have been completely revised. Therefore comparable data before 2000 is not available. Data are rounded to the nearest thousand.
- Estimation method: The number of FTE is calculated by adding the full and appropriate proportion of part-time occupied employees. FTE are measured by the number of hours of a standard labour contract.

***Physicians***

Coverage:

- Data contain the number of physicians directly employed by a hospital.
- Excluded are physicians with specialty “dental, oral and maxillofacial surgery”.

***Professional nurses and midwives***

Coverage:

- Data contain the number of professional nurses and midwives directly employed by hospitals.
- Included are professional nurses and midwives with a 3-year education (nurses, paediatric nurses and nurses for the elderly).
- Excluded are associate professional nurses with a 1-year education and students who have not yet graduated.

***Associate professional nurses***

Coverage:

- Data contain the number of associate professional nurses directly employed by hospitals.
- Included are associate professional nurses with a 1-year education (auxiliary nurses and auxiliary nurses for the elderly).
- Excluded are professional nurses with a 3-year education, midwives, emergency medical assistants and students who have not yet graduated.

***Health care assistants***

- Data not available. (Health care assistants are part of the group "Other health service providers employed in hospital" and cannot be reported separately.)

***Other health service providers***

Coverage: Data contain the number of other health professionals (e.g. dentists, physiotherapist, laboratory assistants, emergency medical assistants, health care assistants) working in hospitals and students who have not yet graduated.

***Other staff***

Coverage: Data contain the number of other staff employed by hospitals (e.g. cleaning and kitchen staff, craftsmen, secretaries).

**Greece**

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

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

***Other health service providers***

Coverage: The number of other health professionals employed by hospital includes: pharmacists, physics and radiophysics, psychologists, laboratory assistants, physiotherapists, occupational therapists, and dieticians.

***Other staff***

Coverage: Administrative staff is included.

## Hungary

Source of data: **Hungarian Central Statistical Office** (KSH in Hungarian) [www.ksh.hu](http://www.ksh.hu), “Report on personnel of health service” per ICHA-HP categories: 1.1 (General hospitals); 1.2 (Mental health and substance abuse hospitals); 1.3 (Specialty hospitals).

Reference period: 31st December.

Coverage: Includes physicians, nurses, midwives, other health personnel (e.g. pharmacists), health care assistants and other staff.

Method used to calculate the number of full-time equivalents (FTE): FTE employment measured by the number of hours actually or usually worked divided by the average number of hours worked in full-time jobs.

## Iceland

Source of data: **The Ministry of Finance and Economic Affairs.**

Reference period: December each year.

Coverage:

- Data exclude service contracts with non-employed health professionals who treat hospital patients (head counts).
- Data refer to persons employed in hospitals referring to health care facilities with 24-hour access to a hospital physician.

### *Associate professional nurses*

Coverage: Associate professional nurses/practical nurses employed in hospitals.

### *Health care assistants*

- Data not available. Health care assistants are included in “Other staff employed in hospitals”.

### *Other staff*

Coverage: All others are included except physicians, professional nurses, midwives, associate nurses, and other health service providers employed in hospitals.

## Ireland

Source of data: **HR Management Information**, Health Service Executive.

Reference period: 31st December.

Coverage:

- In 2018, the time series have been revised to reflect the following definition: Number of persons employed (head counts), and number of full-time equivalent (FTE) persons employed in Acute Hospital Services.

- Data relates to direct public health service employment & does not include overtime, agency workers or private hospitals.
- All employees under the aegis of Acute Services (excluding Ambulance Services) are included.
- Where appropriate figures are presented as headcount (actual numbers of staff) or whole time equivalent (WTE/ FTE) which adjusts the figures to take account of part-time working.
- Some figures have been restated to reflect up-to-date organisation & grade structures.
- In addition, previous returns reflect a correction in terms of the mapping of post registration nursing students who were incorrectly mapped as they are qualified nursing professionals.
- Associate professional nurses do not feature in the Irish Health Service (Source: HSE, Nursing Services Directorate).

### **Staff are categorised as follows:**

#### Physicians

Consultant Anaesthesia

Consultant Dentistry

Consultant Emergency Medicine

Consultant Intensive Care Medicine

Consultant Medicine

Consultant Obstetrics & Gynaecology  
Consultant, Other  
Consultant Paediatrics  
Consultant Pathology  
Consultant Psychiatry  
Consultant Radiology  
Consultant Surgery  
Interns  
Other Medical  
Registrar  
Senior House Officer  
Senior Registrar  
Specialist Registrar  
Professional nurses  
Advanced Nurse/ Midwife Practitioner  
Clinical Nurse/ Midwife Manager  
Clinical Nurse/ Midwife Specialist  
Director Nursing/Midwifery, Assistant  
Director of Nursing/Midwifery  
Graduate Nursing/ Midwifery  
Nursing Bank  
Nursing Education/Clinical  
Other Nursing/ Midwifery  
Post-registration Nurse Students  
Public Health Nursing  
Staff Midwives  
Staff Nurse [Intellectual Disability]  
Staff Nurse [Psychiatric]  
Staff Nurses [General/ Children's]  
Health care assistants  
HCA, Nurse's Aide, etc.  
Home Helps  
Other health Service providers  
Ambulance Control  
Ambulance Officers  
Audiology  
Biochemists  
Clinical Engineering  
Clinical Measurement  
Counsellor Therapists  
Dental Hygienists  
Dentists  
Dietitians  
Dosimetrists  
Health & Social Care Assistants  
HSCP Trainees/Students  
Medical Laboratory  
Occupational Therapists  
Orthoptists  
Other Care Grades  
Other Health & Social Care  
Other Labs & Associated  
Perfusionists  
Pharmacy  
Phlebotomists  
Physicists

Physiotherapists  
Play Therapists/ Specialists  
Podiatrists & Chiropodists  
Pre-Hospital Care (Ambulance)  
Pre-registration Nurse Students  
Pre-registration Nursing/ Midwifery  
Psychologists  
Radiation Therapists  
Radiographers  
Social Care  
Social Workers  
Speech & Language Therapists  
Other hospital staff  
Catering  
Executive Management  
General Administrative (III & IV)  
Household Services  
Maintenance  
Middle Management (V-VII)  
Other Administrative  
Other Support  
Portering  
Senior Management (VIII & GM)  
Technical Services

## Israel

Source of data: The data are based on the Labour Force Survey which is conducted routinely by the **Central Bureau of Statistics** and includes persons who had worked for at least one hour during the week before the survey, for pay, profit or other consideration.

Estimation method:

- The data are subject to variations due to sample errors and wide confidence intervals.
- Full-time equivalents (FTE) was measured by the number of hours actually worked by health personnel divided by the average hours worked in full-time jobs in Israel.

Break in time series: 2012, 2013.

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

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

Further information:

[http://www.cbs.gov.il/publications/labour\\_survey04/labour\\_force\\_survey/answer\\_question\\_e\\_2012.pdf](http://www.cbs.gov.il/publications/labour_survey04/labour_force_survey/answer_question_e_2012.pdf) and  
[http://www.cbs.gov.il/publications12/economic\\_activities11/pdf/e\\_print.pdf](http://www.cbs.gov.il/publications12/economic_activities11/pdf/e_print.pdf).

### ***Health care assistants***

Break in time series: 2013. Sanitarians working in hospitals were included in "health care assistants" in the previous classification while according to the new classification they are included in "other health service providers" (explaining the strong decrease in the number of "health care assistants" in 2013).

### ***Other health service providers***

Coverage: "Other health service providers employed in hospital" includes dentists, pharmacists, other academic health professionals (as dieticians, physiotherapists, audiologists and speech therapists and other therapists), laboratory assistants, CAM therapists and other health professionals and associate professionals.

Break in time series: 2013. Sanitarians working in hospitals were included in "health care assistants" in the previous classification while according to the new classification they are included in "other health service providers" (explaining the strong increase in the number of "other health service providers" in 2013).

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

## Italy

Source of data: **Ministry of Health** – General Directorate of digitalisation, health information system and statistics – **Office of Statistics**. [www.salute.gov.it/statistiche](http://www.salute.gov.it/statistiche).

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

Coverage:

- Data available for head counts only.
- Since 2003 data refer to public and private hospitals, including private hospitals not accredited by the National Health Service.

### *Associate professional nurses*

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

### *Health care assistants*

- Data not available. (This category of workers is included in “Other staff employed in hospital”).

## Japan

Source of data:

From 2017: **Ministry of Health, Labour and Welfare**, *Survey of Medical Institution* (published every 3 years).

Until 2016: **Ministry of Health, Labour and Welfare**, *Hospital Report* (published annually).

Coverage:

- Persons employed (including self-employed) in hospitals that are medical institutions with 20 beds or more.
- Data for all health professionals are based on a head count until 1986. Data for part-time physicians and part-time dentists have been converted to full time equivalent starting in 1987, and data for other health professionals have been converted to full time equivalent starting in 2002.

### *Physicians*

Coverage: Physicians employed (including self-employed) in hospitals that are medical institutions with 20 beds or more.

### *Professional nurses and midwives*

Coverage: Public health nurses, midwives and nurses employed in hospitals that are medical institutions with 20 beds or more.

### *Associate professional nurses*

Coverage: Assistant nurses employed in hospitals that are medical institutions with 20 beds or more.

### *Health care assistants*

Coverage: Nursing aid personnel employed in hospitals that are medical institutions with 20 beds or more.

### *Other health service providers*

Coverage: Persons in the following categories who are employed in hospitals that are medical institutions with 20 beds or more: Dentist, Pharmacist, Physical therapist, Occupational therapist, Orthoptist, Speech therapist, Prosthetist, Dental hygienist, Dental technologist, Clinical radiologist, Clinical x-ray technologist, Clinical laboratory technologist, Health laboratory technician, Clinical engineer, Japanese traditional massage or Massage acupressure therapist, Judo therapist, Senior nutritionist, Nutritionist, Psychiatric social worker, Certified care worker, Nursery staff (from 2017), Other technicians and Medical social worker.

Break in time series: 2017. Nursery staff added from 2017 onwards.

#### ***Other staff***

Coverage: Persons in the following categories who are employed in hospitals that are medical institutions with 20 beds or more: Administrative staff, and Other staffs.

### **Korea**

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

Coverage:

- Medical institutions equipped with at least 30 beds.
- Hospital employees: all employees working in the hospitals (full time positions and contract employees).

#### ***Professional nurses and midwives, Associate professional nurses***

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

#### ***Other health service providers***

Coverage: Includes medical laboratory technologists, radiologists, technologists, dental technologists, dental hygienists, medical record administrators, isotope handlers, supervisors of radiation isotope, nutritionists, refrigerating handlers of hematopoietic stem cell, health insurance administrators, dentists, pharmacists, physical therapists, and occupational therapists.

Break in time series: 2012. Health insurance administrators are excluded from 2012.

#### ***Other staff***

Coverage: Includes cooks, hospital administrators, social workers, etc.

Break in time series: 2012. Hospital administrators are excluded from 2012.

### **Latvia**

Source of data: **Centre for Disease Prevention and Control**; Statistical Report.

Reference period: 31 December.

Note: Data for full-time equivalent (FTE) not available.

#### ***Associate professional nurses***

Data not available. (Within the Latvian Statistical System data on nurses are not completely comparable and compatible with requirements (practising nurses/professionally active nurses/nurses licensed to practise). Health statistics data from the Health Economic Center and the Health Inspectorate include information on nurses in the main job distinguishing between nurses with secondary medical education and nurses with higher education. Latvia has no practice in publication of information about nurses according to the ISCO-88 classification for all nurses authorised to carry out professional activity regardless of the level of education. Thus, nursing care staff breakdown in Professional and Associate professional nurses is not possible, and all nurses are included in group Professional nurses.)

#### ***Other health service providers***

Note: There is no specific explanation regarding the increase by 10% in the number of "other health service providers employed in hospital" in 2014, but it could be caused by data reporting problems.

### **Lithuania**

Source of data: **Health Information Centre of Institute of Hygiene**, data of entire annual survey of health establishments.

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

Coverage:

- Data for all hospitals excluding nursing hospitals. Service contracts with non-employed health professionals are excluded.



- The Annual survey collection includes data on physical persons and full time equivalents. For physical persons: a person is included only if this institution is the main job for this person. If a person is working in several institutions he/she will be presented as a physical person only once. But FTE will be presented for the person in every institution he works.
- For full time equivalents data on contractual working hours is presented in annual survey: an employee with a full-time employment contract is counted as 1 FTE; depending on the contractual hours an employee could work 0.25, 0.5, 0.75, 1.25, 1.5 FTE.
- Full time equivalents data is higher than head count data. Very often in Lithuania medical specialists (especially physicians) and some other employees are working more than 1 staff (1.25 or 1.5).

#### *Associate professional nurses*

- There is no such category in Lithuania.

## Luxembourg

### *Total hospital employment*

#### Source of data:

- Head Counts (2005-2006): Administrative database on social security registration, survey on physicians working in hospitals (**IGSS**), provider registration database (**National Health Insurance**).
- Full Time Equivalents (1999-2008): **National Health Insurance**.

#### Coverage:

#### **Head counts:**

- The definition of health employment is linked to the SHA provider classification of HP1.
- About half of the hospitals have subcontracting contracts for the cleaning and kitchen auxiliary services. People providing these services are not included.

#### **Full Time Equivalents:**

- Doctors are not included, since almost all doctors have private offices and it is very difficult to make the link with hospitals based on administrative sources.
- Approximately half of the hospitals have subcontracting contracts for the cleaning and kitchen auxiliary services. People providing these services are not included.
- The staff of the specialised institution 'Centre National de Rééducation Fonctionnelle et de Réadaptation de Hamm' is included in data from 2002.
- In 2003: The opening of a general hospital replaced two old private hospitals in July 2003.
- Data for 2008 are estimated.
- In 2008: There was no negotiated staff for some of the hospitals. The rate indicated for "total hospital staff" has been calculated with the staff negotiated for the previous year (for those hospitals only) and should be considered as provisional.

#### *Physicians, Other health service providers, Other staff*

- Data not available.

#### *Professional nurses and midwives, Associate professional nurses, Health care assistants*

Source of data: **Direction de la santé**, service des statistiques.

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

## Mexico

Source of data: **Ministry of Health**. 2012 to 2018, data are taken from the National Health Information System (SINAIS). In the case of the private sector, for 2012 to 2018 the data are taken from the **National Institute of Statistics and Geography** (INEGI). National Survey on Medical units with Inpatient Hospital Services.

#### Coverage:

- Head count data. Excludes non-practising physicians, retired professionals and professionals working abroad. Includes professionals who are foreigners. Includes interns and residents.
- The data presented include public and private human resources from the Hospitals health sector.
- In the case of private providers, personnel on the payroll and personnel in special agreement are included.
- Some double counting may occur as physicians can work in the public and private sector simultaneously.

## Netherlands

### Source of data: Statistics Netherlands.

- 2012 onwards: Data based on **BIG Register** (register of (para)medical professions); **SSB database** (micro-integrated database of Statistics Netherlands with data from the municipal register, tax register, social security, and business register).

- 2006-2011: **Annual reports social account.**

- 2002-2005: **Prismant survey.**

- 1980-2001: Survey.

Coverage: Does not include self-employed medical specialists who work in the hospital.

### Estimation method:

- Since 1999: The data have been distributed among 1) physicians (based on the BIG register) 2) nurses and midwives (based on the BIG register) 3) Health care assistants (based on LFS estimates for ISCO 5132) 4) other employees (up till 2009 further distribution was possible to other health service providers and other staff using the annual reports social account).

- Until 2005: The figures present persons employed (FTEs) in general, university and specialised hospitals, including mental hospitals. The data are based on an annual questionnaire among hospitals. All persons paid by the institution, both persons on the payroll and those who are paid by the institution in another way (temporary employees, employees of employment agencies), are included. This means that administrative staff, technicians, maintenance staff, etc., when paid directly by the institution, are included. On the other hand, medical specialists are not all included as these are often self-employed or organised in partnerships per specialty.

- The increase between 1997 and 1998 is due to the inclusion of (out-patient) mental health care institutions that have been merged with mental hospitals into integrated mental hospital institutions. Moreover, the data now comprise annual averages and are no longer data per 31 December.

### Break in time series:

- 2002, 2006 and 2012 due to changes in the source.

- 2014: due to obligatory reregistration the number of nurses and midwives (and physiotherapists) is lowered substantially.

### ***Professional nurses and midwives, Associate professional nurses***

Coverage: No distinction could be made between qualified nurses and associate nurses. Therefore, all nurses have been reported in the number of professional nurses and midwives.

Break in time series: In 2014, the number of nurses and midwives (and physiotherapists) was lowered substantially due to obligatory reregistration.

### ***Other health service providers, Other staff***

Coverage: "Other staff employed in hospitals" includes students in nursing and caring that work in the hospital. Since 2010, they are included in other health service providers.

Break in time series: Since 2010, the data previously reported under "Other staff employed in hospitals" are included under "Other health service providers employed in hospitals".

## New Zealand

### ***Total hospital employment***

- Data not available.

Note: The health system in New Zealand is characterised by universal healthcare. The health system is predominantly funded with an estimated 83.2% (2010) in health expenditure coming from public sources. A separate publically funded accident and compensation insurance scheme known as ACC funds accident related care, which accounts for an estimated 8.4% of expenditure. Twenty publically owned District Health Boards (DHBs) are funded to undertake planning for all publically funded health services for their geographic populations and to ensure their delivery. DHB own public hospitals, and they themselves deliver a wide range of services. Only data related to DHB employed personnel are available in the New Zealand. (Data have been provided for DHB employed personnel by category of personnel).

**Headcount data (from 2010 onwards): *Physicians, Professional nurses and midwives, Associate professional nurses, Health care assistants, Other health service providers, Other staff***

Source of data: **DHB Shared Services, DHB Workforce Information (DHBWI) from the Health Workforce Information Programme (HWIP).**

Reference period: Headcount data on 30 June.

Coverage:

- DHB employed personnel only.
- The data reported to OECD collect a snap-shot of the DHB employed workforce using the following criteria:
  - a) 'Employed' means those who have more than zero contracted hours;
  - b) Do not have a 'leaving date' prior to or equal to the 30<sup>th</sup> June, i.e. they were actively employed on the reporting date;
  - c) Do not have "Leave" in their job title (i.e. those on long term leave).

**FTE data: Physicians, Professional nurses and midwives, Associate professional nurses, Health care assistants**

**a) Data from 2008 onwards**

Source of data: **Ministry of Health.**

Reference period: FTE data are at 30 November each year, except 2012 onwards which is 30 September.

Coverage:

- DHB (District Health Boards) employed personnel only.
  - Figures provided used the Employed FTE methodology:
    - Employed FTE counts the number of staff up to a maximum of 1.0 FTE based on their contracted number of hours compared to a 40-hour week.
    - Part time and casual staff paid via payroll are included.
    - Overtime is excluded from this calculation.
  - **Physicians:** Medical personnel includes: Senior Medical Officers (SMOs), Medical Officer of Specialist Service (MOSS), General Practitioners, Registrars, House Officers and House Surgeons, and Probationers and Interns. Figures provided are for medical personnel submitted by DHBs in accordance with the DHB/Ministry of Health Common Chart of Accounts classification system.
  - **Professional nurses and midwives:** Nursing and Midwifery personnel includes: Senior Nurses, Nurse Practitioners, Registered Nurses, Registered Midwives, and Internal Bureau Nurses. Figures provided are for nursing and midwife personnel submitted by DHBs in accordance with the DHB/Ministry of Health Common Chart of Accounts classification system.
  - **Associate professional nurses:** Associate professional personnel includes: Enrolled Nurses. Figures provided are for Enrolled Nurses submitted by DHBs in accordance with the DHB/Ministry of Health Common Chart of Accounts classification system.
  - **Health care assistants:** Health Care Assistants personnel includes: Health Assistants. Figures provided are for Health Assistants submitted by DHBs in accordance with the DHB/Ministry of Health Common Chart of Accounts classification system.
- Break in time series: 2008.
- From 2008 onwards, the source is still the "DHB monthly financial templates" but the definition of FTE has been changed to that of the concept of 'Employed FTEs' for physicians, nurses, midwives and health care assistants.
  - **Professional nurses and midwives:** Associate professional nurses and health care assistants are included until 2007 and excluded since 2008.

**b) Data up to 2007**

Source of data: **Ministry of Health: DHB monthly financial templates.**

Reference period: FTE data are as of 30 June each year.

Coverage:

- DHB employed personnel only.
- **Physicians:** Figures provided are for medical personnel.
- **Professional nurses and midwives:** Figures provided are for nursing personnel, which includes senior nurses, registered nurses, enrolled nurses, registered midwives, internal bureau nurses and health service assistants.
- **Associate professional nurses, Health care assistants:** Data not available. (Data cannot be provided separately and are included in Professional nurses and midwives employed in hospital).
- Hospital employment numbers are based on provider arm only FTEs; the number of staff employed in the DHB Governance arm does not have a material effect on the results.
- Information does not count vacancies.
- Excludes private hospital employees.

- The figures for 30 June 2002 through 30 June 2007 represent the FTE total as of that date.
- Note: Public hospitals only.

Estimation method:

- Hospital employment numbers are based on the average accrued FTEs; this method takes the total number of hours worked (including overtime) and divides by 40 hours - a usual working week.

Break in time series: 2007. The average accrued FTE method was introduced on 1 July 2006; prior to this there was not a standardised method of reporting staff numbers. (As FTEs data provided relate to financial years (July to following June), the impact of this change was in the 2007 year.)

**FTE data: Other health service providers, Other staff**

**a) Data from 2010 onwards**

Source of data: **DHB Shared Services, DHB Workforce Information (DHBWI) from the Health Workforce Information Programme (HWIP).**

Reference period: FTEs data on 30 June.

Coverage:

- DHB (District Health Boards) employed personnel only
- The data reported to OECD collects a snap-shot of the DHB employed workforce using the following criteria:
  - a) 'Employed' means those who have more than zero contracted hours;
  - b) Do not have a 'leaving date' prior to or equal to the 30<sup>th</sup> June, i.e. they were actively employed on the reporting date;
  - c) Do not have "Leave" in their job title (i.e. those on long term leave).
- The FTE is calculated by using the Total Contracted Hours variable (this records the annual contracted hours for that employee) and dividing by 2086 hours.
- As DHBWI uses snap-shot data there is no averaging over time for FTEs. This means that DHBWI have not reported on: a) casual workers (as they will have zero contracted hours DHBWI could only report headcount and not FTE at this stage) – typically >10% for large DHBs and <10% for small DHBs; and b) contractors – as they would often not show on the DHB's HR Information System.

Break in time series: Break in 2010 for FTEs data, due to change in data source.

**b) Data up to 2009**

Source of data: **Ministry of Health: DHB monthly financial templates.**

Reference period: FTEs data are as of 30 June each year.

Coverage:

- DHB employed personnel only.
- Allied Health.
- Hospital employment numbers are based on provider arm only FTEs; the number of staff employed in the DHB Governance arm does not have a material effect on the results.
- Information does not count vacancies.
- Excludes private hospital employees.
- The figures for 30 June 2002 through 30 June 2007 represent the FTE total as of that date, while the FTE figures from 30 June 2008 represent the year to date average.
- Note: Public hospitals only.

Estimation method:

- Hospital employment numbers are based on the average accrued FTEs; this method takes the total number of hours worked (including overtime) and divides by 40 hours - a usual working week.

Break in time series: 2007. The average accrued FTE method was introduced on 1 July 2006; prior to this there was not a standardised method of reporting staff numbers. (As FTEs data provided relate to financial years (July to following June), the impact of this change was in the 2007 year.)

## Norway

Source of data: **Statistics Norway;** Register-based statistics on employment of health-care personnel.

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

Deviation from the definition: Data refer to economically active professionals.

Coverage:

- The figures provided give the number of practising personnel within HP1. There is no guarantee that these

professionals actually work in patient care as data refer to education the individuals have rather than the job they hold within the HP structure.

- The health sector in Norway underwent a large reorganisation in 2001. Figures are therefore provided from 2002.

Break in time series: 2009, 2015.

- 2009: New calculation method.

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

### ***Associate professional nurses***

Norway has no occupation corresponding to ISCO-08 code 3221.

### ***Other health service providers, Other staff***

Break in time series: 2005. Until 2004, “other staff” (head count) include other health service providers (reported separately as of 2005).

## **Poland**

### ***Total hospital employment, Associate professional nurses, Health care assistants, Other health service providers, Other staff***

- Data not available.

### ***Physicians, Professional nurses and midwives***

Source of data: **Ministry of Health.**

Coverage:

- Due to the possibility of physicians, midwives and nurses working in several places, the data may be duplicated.

- Excludes physicians, midwives and nurses employed in hospitals founded by the Ministry of Interior and Administration.

## **Portugal**

Source of data: **National Statistical Office - Survey on Hospitals.**

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

Coverage:

- The Hospital Survey began in 1985. This survey covers the whole range of hospitals acting in Portugal: hospitals managed by the National Health Service (public hospitals with universal access), non-public state hospitals (military and prison) and private hospitals.

- Information on full time equivalents is not available.

Break in time series: 1999.

- In 1999, a methodological change occurred in this survey. Information regarding qualified nurses and midwives, associate professional nurses and caring staff became available from then on. Before 1999, these data were included in “Other health professionals employed in hospital” and “Other staff employed in hospital”. Therefore, there is a break in these series in 1999.

### ***Physicians***

Coverage: Includes all physicians employed in hospital.

### ***Professional nurses and midwives***

Coverage: Includes all specialised nurses employed in hospital since 1999.

### ***Associate professional nurses***

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

### ***Health care assistants***

Coverage: Includes all “other nursing staff” (nurse’s assistants and medical care assistants) employed by hospitals since 1999.

- The 2011 numbers of health care assistants and other staff employed in hospital have been estimated by the OECD Secretariat (to eliminate the break due to a partial switch between both categories in 2011).

#### ***Other health service providers***

Coverage: Includes “technical diagnosis and therapeutic staff” and “senior health technician staff”.

Break in time series: 1999.

- In 1999, a methodological change occurred in this survey. Information regarding qualified nurses and midwives, associate professional nurses and caring staff became separately available from then on. Therefore, there is a break in the series “Other health professionals employed by hospital” in 1999.

#### ***Other staff***

Coverage: Includes “other senior technician staff”, “administration staff”, “administrative and technical-professional staff”, “auxiliary staff of medical action”, and “other staff”.

- The 2011 numbers of health care assistants and other staff employed in hospital have been estimated by the OECD Secretariat (to eliminate the break due to a partial switch between both categories in 2011).

Break in time series: 2009.

- In 1999, a methodological change occurred in this survey. Information regarding qualified nurses and midwives, associate professional nurses and caring staff became separately available from then on. Therefore, there is a break in the series “Other staff employed by hospital” in 1999.

## **Slovak Republic**

Source of data: **National Health Information Center.**

- “Annual report S (MZ SR) 1 – 01 on network of health care providers” for data up to 2008.

- “Report on network of health care providers” since 2009.

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

Coverage:

- Data are available for FTE hospital employment in Hospitals - HP1 (according to the recommendations and definitions following the SHA version 1.0.) in the territory of the Slovak Republic (i.e. general hospitals, specialty hospitals, sanatoriums - i.e. hospitals providing long-term care for the chronically ill and hospitals providing rehabilitation and related services to physically challenged or disabled people).

- There are no data available for head count.

- Total hospital employment includes only health care workers. No data exist regarding other staff.

Break in time series:

- 2009: Data source changed from “Annual report S (MZ SR) 1 – 01 on network of health care providers” for years 2008 and earlier to “Report on network of health care providers” in 2009. From 2009 onwards, service contracts with non-employed health professionals are included in the data (which is not the case for data before 2009).

#### ***Associate professional nurses***

- The category "Associate professional nurse" does not exist in the Slovak Republic. All nurses are classified as Professional nurses.

#### ***Health care assistants, Other health service providers***

- The 2008 data have been estimated by the OECD Secretariat based on the respective share of these categories in 2007 and 2009.

## **Slovenia**

Source of data: **National Institute of Public Health, Slovenia, National Health Care Providers Database.** With this database, data on hours worked (FTE) and jobs (number of contracts) were not available.

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

#### ***Health care assistants***

Break in time series: 2012.

- Until 2012: health care assistants who were individually registered in National Health Care Providers Database.

- From 2012: health care assistants who were individually registered in National Health Care Providers Database and the number of health care assistants which are reported only as aggregated data from health care providers to the National Health Care Providers Database.

Health care providers report following categories of employed staff as aggregated data:

- health care workers with less than 4 years of secondary education (includes predominantly health care assistants) and
- non-health care workers with less than university education.

### ***Other staff***

Break in time series: 2012.

- Until 2012: staff who was individually registered in National Health Care Providers Database.

- From 2012: staff who was individually registered in National Health Care Providers Database and the number of other staff which are reported only as aggregated data from health care providers to the National Health Care Providers Database.

Health care providers report following categories of employed staff as aggregated data:

- health care workers with less than 4 years of secondary education (includes predominantly health care assistants) and
- non-health care workers with less than university education.

## **Spain**

Source of data:

- Up to 2009: **Ministry of Health**, from **Statistics on Health Establishments Providing Inpatient Care (ESCRI)**.

- Since 2010: **Ministry of Health**, from **Specialised Care Information System** – Statistics on Health Centres for Specialised Care, SCIS (Sistema de Información de Atención Especializada – Estadística de Centros Sanitarios de Atención Especializada, SIAE.).

<http://www.msssi.gob.es/estadEstudios/estadisticas/estHospInternado/inforAnual/homeESCRI.htm>.

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

Coverage:

- All public and private hospitals in Spain are included.

- FTE data are not available.

### ***Physicians***

Coverage: Number of physicians employed by hospital: doctors in training (interns and resident) are included.

Break in time series: 2010. Until 2009 Family practitioners in training in hospital are included. Since 2010 Family practitioners in training in hospital are excluded.

### ***Associate professional nurses***

- The category 'associate professional nurses' does not exist in Spain.

### ***Other health service providers***

Coverage: Other health professionals include other health staff (with university degree or adequate diploma) working in the hospital (e.g. physiotherapists, psychologists, pharmacists, etc.).

### ***Other staff***

Coverage: Other staff includes non-health staff working in hospital (e.g. administrative staff, etc.).

## **Sweden**

Data not available.

## **Switzerland**

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

Reference period: FTE based on yearly average.



Deviation from definition: Self-employed persons (mostly physicians) are not included.

Estimation method: The method used for FTE calculation is based on detailed data on contractual working hours.

Break in time series: 2010.

- Until 2009, the hospital employment estimate was made with data on professions from 75% of hospitals.
- Hospital statistics have been revised since 2010. No more estimation needed, all categories can be identified.

### ***Physicians***

Coverage: There are a large number of self-employed physicians working in hospitals without being employed, leading to a severe underestimation of medical attendance in hospitals.

## **Turkey**

Source of data: **General Directorate for Health Services, Ministry of Health.**

Coverage:

- Total hospital employment includes physicians, nurses, midwives, other health service providers and other employees working in the MoH, universities, private and other sector (other public establishments, local administrations and since 2012 MoND-affiliated facilities).

- Total hospital employment is available from 2011 onwards because the numbers of other staff employed in hospital are missing before then.

Break in time series: 2018.

- In 2018, the used database for health personnel has been changed. This new source keeps the data as person-based. Health personnel data were collected from health facilities as health facility-based before 2018.

### ***Physicians***

Coverage:

- Physicians in the MoH, universities, private and other sector are included.
- Physicians acting as managers in the MoH, universities and private sector are included.

### ***Professional nurses and midwives***

Coverage:

- Professional nurses and midwives in the MoH, universities, private and other sector are included.
- Professional nurses and midwives acting as managers in the MoH, universities and private sector are included.

### ***Associate professional nurses, Health care assistants***

- Data not available.

### ***Other health service providers***

Coverage:

- Other health service providers include: Surgery Technician, Anesthesia Technician, Biologist, Environmental Health Technician, Child Development Specialist, Dental Technician, Dietitian, Physical Therapy Technician, Physiotherapist, Emergency and First Aid Technician, Heart-Lung Pump Operation Technician, Laboratory Technician, Audiologist, Audiometric Technician, Orthopedic Technician, Pathological Anatomy Technician, Perfusion Pump Technician, prosthetic Technician, Psychologist, X-ray Technician, Health Physician, Health Officer of the war, Health Technician, Cytopathologist, Social Worker, Medical Secretary, Medical Technologist, Public Health Technician.

- Other health service providers employed in hospitals cover those in the MoH, universities, private and other sector.

- Data also include dentists and pharmacists working in public hospitals. For the private sector, data on dentists and pharmacists are available but there is no possibility to disaggregate salaried professionals from self-employed professionals. Hence dentists and pharmacists working in the private sector are excluded.

### ***Other staff***

Coverage:

- This number includes Lawyers, Imams and other hospital staff not elsewhere classified, working in the MoH, universities, private and other sector.

- Data are available since 2011.

Break in time series: 2013. In 2018, the data on “Other staff” have been revised since 2013, with a data source offering a better coverage. This explains the increase in the number of Other staff and Total hospital employment in 2013.

## United Kingdom

Source of data: **NHS-Digital**.

Estimation method: In 2020 NHS-Digital supplied England statistics for every category of head-counts and full-time equivalents (FTEs) in a time series from 2009 to 2019. In 2020 this time series has been re-weighted (grossed-up) to represent United Kingdom estimates based on per-capita population share. The ‘total hospital employment’ estimates previously submitted by the UK have been revised since 2009.

## United States

Source of data: **American Hospital Association Annual Survey of Hospitals/Hospital Statistics**, 1976, 1981-2018, 1991-2018 Editions. Chicago. (Copyrights 1976, 1981, 1991-2017: Used with permission of Health Forum LLC, an affiliate of the American Hospital Association). <http://www.aha.org/>.

Coverage: National.

- The Hospital Statistics draws its data from the AHA Annual Survey of Hospitals.
- Data are for all AHA-registered hospitals in the United States. The AHA Survey was mailed to all hospitals, both AHA-registered and non-registered, in the U.S. and its associated areas: American Samoa, Guam, the Marshall Islands, Puerto Rico and the Virgin Islands.
- Estimates exclude U.S. associated territories, Puerto Rico and non-registered hospitals.
- Overall AHA Survey average response rate: 82%.
- U.S. government hospitals located outside the mainland U.S. are not included.
- Personnel data include full-time personnel and full-time equivalents of part-time personnel.
- Full-time equivalent (FTE) is calculated as full time personnel plus .50 part time personnel.
- Head count is calculated as full time personnel plus part time personnel.
- The U.S. estimates for Total hospital employment include physicians and dentists, registered nurses, licensed practical nurses and other salaried personnel.

Deviation from the definition: Data match OECD definition. Calculation methods match OECD definition.

Estimation: Survey.

Break in time series: No breaks for total hospital employment, physicians, and professional nurses and midwives.

### *Physicians*

Coverage: Includes physicians and dentists as well as medical and dental residents/interns.

### *Professional nurses and midwives*

Coverage: Includes registered nurses, nurse practitioners (1991-1993) and nurse midwives (1993).

### *Associate professional nurses*

Coverage: Includes licensed practical (vocational) nurses and nursing assistant personnel from 2003 onwards.

Break in time series: 2003. There is a break in 2003 due to the inclusion of nursing assistant personnel.

### *Health care assistants*

Coverage: Includes ancillary nursing personnel (1991-1993).

### *Other health service providers*

Coverage: Includes other trainees (from 1994), laboratory technicians (from 2006), radiology technicians (from 2006), licensed pharmacists (1991-1993, from 2006), pharmacy technicians (1991-1993, from 2006), respiratory therapists (1991-1993, from 2007), physician assistants (1991-1993), medical technologists (1991-1993), other laboratory personnel (1991-1993), dieticians (1991-1993), dietetic technicians (1991-1993), radiographers (1991-1993), radiation therapy technologists (1991-1993), nuclear medicine technologists (1991-1993), other radiologic personnel (1991-1993), occupational therapists (1991-1993), occupational therapy assist. and aides (1991-1993), physical therapists (1991-1993), physical therapy assistants and aides (1991-1993), recreational therapists (1991-1993), speech pathologists (1991-1993), audiologists (1991-1993), respiratory therapy technicians (1991-1993),

psychologists (1991-1993), social worker (1991-1993), all other health professional and technical personnel (1991-1993).

Break in time series: 1994 and 2006.

***Other staff***

Coverage: Includes all other personnel, administrators and assistant administrators (1991-1993), medical records administrators (1991-1993), medical records technicians (1991-1993).

Break in time series: 1994, 2003 and 2006 (See above for Associate professional nurses and Other health service providers).

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