Data on the health status of the population (Tables 2–1 through 2–17) and on activities of the health service providers are obtained from the National Health Information System (hereinafter only referred to as the NHIS). The NHIS is defined in the Act on Health Services and Conditions of Their Provision. The NHIS is determined for keeping national health registers and processing of data kept therein. The administration of the NHIS has been delegated by the Ministry of Health to the Institute of Health Information and Statistics of the Czech Republic (IHIS CR). Data for the Table 2–22 – Number of health care personnel – are collected by means of statistical reports (questionnaires) from the Programme of Statistical Surveys from health service providers. The Institute of Health Information and Statistics of the CR (IHIS CR) also administers the data.

The Czech Statistical Office (CZSO) in cooperation with the Czech Social Security Administration (CSSA) ensures data on new reported cases of incapacity for work due to disease or injury – Tables 2–34 through 2–40.

*Information on health care expenditure (pursuant to the System of Health Accounts – Tables 2–18 through 2–21) is derived from data of the Ministry of Health, the Ministry of Finance, the Ministry of Labour and Social Affairs, the National Register of Reimbursed Health Services (*Národní registr hrazených zdravotních služeb *– NRHZS), which is part of the NHIS, and data sources of the CZSO.*

Besides the aforementioned sources, this Chapter uses structural (employee) wage statistics, namely in the case of data on the average gross monthly wage of medical doctors (physicians), nurses and midwives, and in other selected health professions (Tables 2–30 through 2–33).

Data on students of and graduates from health fields of education at universities in Czechia were obtained from data sources of the Ministry of Education, Youth, and Sports, namely from the system of the Union Information from Students' Registers (the SIMS *database) – Table 2–25.*

Data on international comparisons come from the database of Eurostat (Tables 2–23, 2–24, 2–26 through 2–29, and 2–41). In some cases, data on international comparisons may slightly differ, due to methodological reasons, from data presented in tables solely for the Czech Republic.

Inpatient care (Tables 2–1 through 2–9)

The National Register of Hospitalised Patients (NRHOSP) is the data source.

Providers of ***acute inpatient care*** *are as follows: university/teaching hospitals, other hospitals providing acute care, specialised hospitals, and some mental health hospitals. Inpatient care includes formal reception of a patient to a health establishment for treatment and/or care for which an overnight stay is expected.*

Long-term care (follow-up inpatient care) *is provided to a patient to whom a basic diagnosis has been made and whose health status has been stabilised, a sudden illness or a sudden worsening of a chronic disease was dealt with, and whose health status requires a follow-up treatment or provision of mainly curative (and) rehabilitative care. Within this inpatient care, follow-up intensive care may also be provided to patients who are partially or fully dependent on the support of vital functions.*

Inpatient care in mental health hospitals and facilities *is provided to patients with a mental illness or to persons addicted to toxic substances. These are facilities providing long-term psychiatric care, not acute care.*

Cases of hospitalisation *– hospitalisation statistics is based on individual reports on terminated cases of hospitalisation. Every inpatient department of health establishments in the Czech Republic except for convalescent homes (recovery centres) and balneological institutions is a reporting unit. One case of hospitalisation shall mean every terminated hospitalisation at one department of acute inpatient care either it has been terminated by a release or decease of a patient or the patient has been relocated to other department of the hospital or to other health establishment.*

Hospitalised persons *– the number of hospitalised persons (every person only included once), including foreigners and newborns.*

Days of treatment *– one day of treatment shall mean a whole calendar day, on which a patient has received all services, which the health services provider provides, i.e. including accommodation and board.*

The ***average length of stay*** *– it is the average length of stay in a hospital department in days. It is calculated as an average number of days of treatment per one case of hospitalised patients in a department.*

*The **average age of hospitalised persons** – it is the arithmetic mean of the age of all hospitalised patients during the calendar year.*

Outpatient care (Tables 2–10 through 2–13)

The National Register of Reimbursed Health Services (Národní registr hrazených zdravotních služeb – NRHZS *in Czech*)*, which collects data reported to health insurance companies by all health care providers, is the source of information. All health insurance companies in the Czech Republic, which reimburse health care services provided to their policy holders (sickness-insured persons) from resources of the public health insurance system are the reporting units.*

***Visits to (contacts with) outpatient care establishments** – a visit (contact) is a set of all procedures made when treating a natural person in an outpatient care establishment during a single patient's visit. A contact with a patient in order to make administrative work (to write out a medical prescription, to confirm a certificate, etc.) is also considered to be a visit (contact). Procedures are performed by a physician/practitioner or by a nurse according to a physician's instructions. Also consultations over the phone and by e-mail, the number of which significantly increased in 2020 and 2021 due to the COVID-19 disease, are included in the number of contacts.*

***Patients in outpatient care** – persons who at least once in the reference year received outpatient health care covered by a health insurance company.*

Diabetics under treatment (Tables 2–14 and 2–15)

It applies to patients treated by medicines used in diabetes (ATC subgroup/code A10) for type 1 and 2 diabetes mellitus regardless of whether they are treated at the diabetology (including outpatient parts of hospitals) or in a surgery of a general practitioner for adults. The status as at 31 December of the reference year is shown. Diabetic patients only treated by a diet are not included.

Newly notified malignant neoplasms (Tables 2–16 and 2–17)

Data in the tables are based on data from the National Cancer Register (in Czech abbreviated as NOR*), which is part of the National Health Information System (in Czech abbreviated as* NZIS*). The National Cancer Register (*NOR*) is a nationwide population register, which has been in operation since 1976, and the purpose of which is to register oncological diseases and to periodically monitor their further development. In the table, all malignant neoplasms are included, **except for other malignant neoplasms of skin, i.e. C00–97 excluding C44** according to the International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10).*

Expenditure of health insurance companies (Tables 2–18 through 2–21)

The main source of data on expenditure of health insurance companies are data on health care from the National Register of Reimbursed Health Services (abbreviated NRHZ*S in Czech) reported by health establishments and recognised by health insurance companies.*

Expenditure of health insurance companies per capita by sex and age group

The data in the table are based on the System of Health Accounts of the Czech Republic. Expenditure that cannot be broken down by age is also included in the total indicator of expenditure per capita of a given sex.

Expenditure of health insurance companies on health care by selected diagnosis, sex, and by age group

The table shows selected diagnoses and chapters of the ICD-10 representing groups with the largest costs incurred for health insurance companies.

Health care personnel (Table 2–22)

The Annual questionnaire on employers, the registered number of employees, and contractual workers E (MZ) 4–01 *and questionnaires (reports) on components of salaries and wages and on personnel and operating equipment of the health service provider* E (MZ) 2–01 *and* 3–01 *are the data sources. In addition to those data, data on general practitioners, general practitioners for children and adolescents (paediatricians), and general gynaecologists from the National Register of Reimbursed Health Services* (Národní registr hrazených zdravotních služeb) *were also added*.

*Data in the Table 2–22 are provided as **headcount** (number) **of health care personnel** as at 31 December of the reference year.*

Other health professionals *– perform technical tasks and provide support services in the areas of dentistry, medical records administration, community health care, vision correction (for those with reduced ability to see), physiotherapy, public health protection, urgent medical assistance/treatment, and activities to promote and enhance human health. This category includes, for example, dental hygienists, physiotherapy technicians and assistants, optometrists, medical assistants, and others.*

Other health care personnel *– are indirectly involved in care for patients (e.g. a cook, a cleaner, a maintenance worker).*

Students of and graduates from health fields of education at universities (Table 2–25)

Data on students of and graduates from health fields of education at universities in the Czech Republic were obtained from the system of the Union Information from Students' Registers (the SIMS *database). The source* SIMS *database is continually completed and updated, including retrospective corrections. Data presented in this publication correspond to the state of processing as at 20 January 2023. Data for university students are always as at 31 December of a given year; data on graduates are for the whole calendar year.*

Health studies are specified based on the ISCED Fields of Education and Training 2013 classification (the Czech version: CZ-ISCED-F 2013), namely by means of its narrow field of 091 Health, which includes the following detailed fields of education:

- *Dental studies (0911);*
- *Medicine (0912);*
- *Nursing and midwifery (0913);*
- *Medical diagnostic and treatment technology (0914);*
- *Therapy and rehabilitation (0915);*
- *Pharmacy (0916);*
- *Traditional and complementary medicine and therapy (0917).*

Numbers of students and graduates are given as headcount, i.e. each student is included in a particular piece of data only once, including students who concurrently study more study programmes. The total numbers of students and graduates thus do not have to be equal to the sums of students of and graduates from respective types of study programmes.

Wages of health professionals (Tables 2–30 through 2–33)

The ***Classification of Occupations (CZ-ISCO)*** *was used to define selected groups of health professionals. The following main categories of employees in the health sector were selected by means of the classification:*

- *221 Medical doctors (except for dentists);*
- *222+322 Nursing and midwifery professionals and Nursing and midwifery associate professionals, who are further split into:*
  - *222 Nursing and midwifery professionals;*
  - *322 Nursing and midwifery associate professionals;*
- *2262 Pharmacists;*
- *321 Medical and pharmaceutical technicians;*
- *3255 Physiotherapy technicians and assistants;*
- *3256 Medical assistants;*
- *3258 Ambulance workers.*

The difference between nurses (general nurses) and midwives with a speciality (specialism) and the nurses (general nurses) and midwives without a speciality (specialism) should be determined according to the character of work they perform. The qualification in a speciality (specialism) is confirmed by a certificate in the relevant field, which a nurse obtains after she passes a medical certification examination before the medical certification committee. Nurses (general nurses) and midwives ***with a speciality*** *(specialism) include, for example, ward sisters (charge nurses), nurses and midwives for intensive care and operating theatre (operating room) nurses, and further e.g. paediatric nurses and nurses for internal medicine and surgical fields. Sisters* ***without a speciality*** *(specialism) include nurses of general practitioners and dentists and other outpatient specialists. Besides those categories of nurses, also the following work in the health sector: hospital matrons and principal nursing officers (head nurses / nurses in charge) (ISCO 13424) and medical assistants (ISCO 3256), who are not part of the aforementioned (general) nurses / nursing and midwifery professionals.*

*Data on **wages** of medical doctors (Tables **2–30** and **2–31**) and nurses and midwives (Tables **2–32** and **2–33**) come from the **structural employee wage statistics**. The structural wage statistics is generated by merging of data from the sample survey of the **Information System on Average Earnings** of the Ministry of Labour and Social Affairs, which covers the wage sphere, and of the administrative data source of the **Salary Information System of the Ministry of Finance**, which exhaustively covers the salary sphere.*

*The **wage sphere** includes all private health establishments including regional and municipal hospitals (joint stock companies).*

*The **salary sphere** includes health establishments directly controlled by the Ministry of Health (e.g. university/teaching hospitals and specialised therapeutic institutions / medical institutes) or semi-budgetary organisations of Regions.*

The amount of average wages/salaries includes all payments additional to wage or salary and bonuses paid in a given calendar year (including so-called "covid bonuses").

Incapacity for work due to disease or injury (Tables 2–34 through 2–41)

New notified cases

Before 2012, statistical data on temporary incapacity for work due to disease or injury were surveyed based on the Nem Úr 1–02 *state statistical questionnaire (report). As a consequence of reduction of administrative demandingness and burden of reporting units, the* Nem Úr 1–02 *Report on incapacity for work due to disease or injury was replaced by data available from administrative sources. Data since 2012 are not fully comparable with data for the previous years. Since 2012, the CZSO has obtained the data by processing of data from an administrative data source of the Information System of the CSSA. The Information System of the CSSA registers cases of temporary incapacity for work in the Czech Republic, which were reported by a physician electronically by means of the application called in Czech "*eNeschopenka*" (before 2020, they completed a printed form called "Decision on the temporary incapacity for work"). Data of the CSSA do not include members of the Police of the CR, the Fire and Rescue Service of the CR, the Customs Administration of the CR, the Prison Service of the CR, the Inspectorate General of the Security Forces of the CR, the Security Information Service, the Office for Foreign Relations and Information, professional soldiers, persons serving a sentence of imprisonment (convicts) who work while serving a sentence of imprisonment, and persons accused that are working while in custody (Section 5(a) points 2 and 14 of the Act No 187/2006 Sb).*

***Average number of the sickness-insured persons** includes all persons who were insured for sickness for at least one day of the reference period, whether compulsorily (employees) or voluntarily (own-account workers).*

***New notified cases of incapacity for work** are registered based on the reported beginning of the incapacity for work (a sick leave) of the sickness-insured persons. Besides diseases, the number of cases of incapacity for work due to disease also includes quarantines.*

*Note: **In January** (as of 17 January) **and February 2022**, while testing employees for COVID-19, **some workers** were given a sickness certificate for quarantine or isolation **in duplicate**. In order to act expeditiously in dealing with them, both general practitioners and regional public health authorities were issuing sickness certificates. However, it is not possible to identify duplicate cases from the available source databases. This has an impact on the other indicators presented and derived from them (the number of calendar days of incapacity for work, the average percentage of temporary incapacity for work, average daily number of persons temporarily incapacitated for work).*

*The **number of days of incapacity for work** is the sum of calendar days, during which the sickness-insured employees were incapacitated for work (based on reports on the beginning and termination of incapacity for work).*

*The **average duration of one case of incapacity for work** – the indicator expresses how many calendar days of the incapacity for work there are on average per one new notified case of the incapacity for work.*

*The **average daily number of persons temporarily incapacitated for work due to disease or injury** is calculated as a share of calendar days of the temporary incapacity for work in the number of calendar days in the reference period. The indicator shows the number of the sickness insured who were on average daily absent at work due to incapacity for work in the given year.*

*The **average percentage of temporary incapacity for work** – the indicator shows how many of one hundred of the sickness insured are on average incapacitated for work due to disease or injury every day. It*

takes into account both the total number of cases of incapacity for work (how often people take a sick leave) and the average duration of one case of incapacity for work (how long they remain on sick leave).

***New notified cases of temporary incapacity for work due to occupational injury** are registered based on notifications on start of incapacity for work of the sickness-insured persons. An **occupational injury** shall mean damage to health or death of an employee provided that they occurred independently from the will of the employee by a short-term, sudden, and violent effect of exogenous influences while the employee was fulfilling work assignments or in direct connection with the fulfilment of these assignments.*

*A **fatal occupational injury** is such health damage that occurred to employees while fulfilling their work assignments or in direct connection with the fulfilment of these assignments leading to death of the suffering employee within one year at the latest. The State Labour Inspection Office (in Czech abbreviated as* SÚIP*) is the source of data.*

***Note on the cartograms 2–3 and 2–4:** Breakdown by Region and District is based on a piece of data on the registered office of a unit, which keeps records of wages for the employer of a person who is incapacitated for work.*

Terminated cases

The Czech Social Security Administration also keeps a record of, processes, and publishes data on terminated cases of incapacity for work for individual quarters, see https://www.cssz.cz/web/cz/nemocenska-statistika (Czech only). Differences in the numbers of new notified and terminated cases of temporary incapacity for work are due to a different methodology for data collection.

Deaths and mortality rate (Tables 2–42 through 2–46)

***Age-specific mortality rates:** the number of deaths (deceased persons, women or men) at a given age per 1 000 mid-year population of the same age.*

***Index of male excess mortality** (in the Graph 2–39) shows the male mortality rate to the female mortality rate ratio at a given age.*

***Life expectancy at a given age**: the average number of years to be still lived by a person who is now at a given age while mortality conditions for individual ages in a given calendar year are maintained. It is a resulting indicator of so-called life tables.*

*The number of **deaths by cause of death** is based on processing of data on causes of death or on diseases, conditions, or prospective other medical or other characteristics related to a death, stated on the "Death certificate (Report on examination of the deceased person)", before 2012 by means of filling the statistical Report on death. An underlying cause of death is a basis for statistical classification; the underlying cause of death is defined by the World Health Organization as (a) the disease or injury that initiated the train of events leading directly to death or (b) the circumstances of the accident or violence which produced the fatal injury. Causes of death have been coded (since 1994) according to the International Statistical Classification of Diseases and Related Health Problems in the wording of the 10th decennial revision (ICD-10) and its subsequent, in the Czech Republic adopted, updates. In 2020, the COVID-19 disease was newly included in the classification of diseases; the U07 code from the chapter of Codes for special purposes was assigned to it. Since 2021, a multisystem inflammatory syndrome associated with COVID-19 (U10 code) also can be the underlying cause of death.*

Further information, data, and analyses of the CZSO can be found on the websites mentioned below:

Publications devoted to health: https://www.czso.cz/csu/czso/public-health
Statistical Yearbook of the Czech Republic: Statistical Yearbook of the Czech Republic - 2022 | CZSO
Regional yearbooks: https://www.czso.cz/csu/czso/regional-yearbooks