25 HEALTH

Methodological notes

Data on the health status of the population 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)

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

*Information on health care expenditure pursuant to the System of Health Accounts 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.*

The Chapter uses the breakdown of diseases and related health problems according to diagnoses and chapters of the International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10).

Besides the aforementioned sources, the chapter uses structural (employee) wage statistics, namely in the case of data on the average gross monthly wage of medical doctors (physicians) and nurses.

Data on students of and graduates from health fields of education at universities in the Czech Republic were obtained from data sources of the Ministry of Education, Youth, and Sports, namely from the SIMS *database (i.e. Union Information from Students' Registers).*

Notes on Tables

Table 25-1 Acute care hospitals

***Health professionals** (health workforce; health personnel) - such a person is considered a health professional, who acquired professional qualification for performance of a health care profession pursuant to the legislation in force and who performs activities pertaining to him/her based on the profession.*

*The **full-time equivalent (FTE)** = the sum of work hours of individual workers of the health establishments converted using the number of hours of work per week of a full-time employment contract as laid down for a given establishment or workplace. The full-time equivalent is given including contract workers.*

*A **physician** – provides preventive, diagnostic, curative, rehabilitative, dispensary, or palliative care.*

*A **general nurse** – provides nursing care to patients based on a diagnosis made by a physician or a dentist. Furthermore, in co-operation with a physician or a dentist, a general nurse participates in preventive, curative, diagnostic, rehabilitative, palliative, and urgent or dispensary care.*

*A **midwife** – provides specialised nursing care for a pregnant woman, a delivering woman, and a woman (mother) up until the sixth week after the delivery (the puerperium), including care for the newborn and nursing care for women in the area of gynaecology.*

*A **healthcare assistant** – under an expert's supervision or under direct control performs ancillary activities within providing health services. For example, he/she performs hygienic care for a patient (e.g. bathing and toileting), helps with positioning or immobilisation of patients, etc.*

*A **radiology assistant** performs radiological imaging and quantitative procedures, therapeutic applications of ionizing radiation, and provides specific nursing care in connection with radiological procedures. Provides radiation protection and in collaboration with a physician, participates in diagnostic and therapeutic care.*

*A **physiotherapist** provides preventive, diagnostic, medical, rehabilitative, and palliative care in the field of physiotherapy leading to the development, restoration, and maintenance of optimal health of a client. Through movement and other physiotherapy modalities, purposefully influences the function of other systems, including psychological functions, when compromised by illness, aging, injury, pain, disability, disease, or environmental factors.*

***Others** – include other health personnel (health professionals) not classified in the groups above (for example, hospital attendants / orderlies, medical assistants, ambulance paramedics, pharmacists).*

Tables 25-2 to 25-4 Inpatient care in acute care hospitals

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 case of hospitalisation at one department either it

has been terminated by a release or decease of a patient or the patient has been relocated to other department or other health establishment.

Hospitalised persons

The number of persons (every person only included once) hospitalised in a given health establishment or in a given department, 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, including accommodation and board.

The average length of stay (days of treatment)

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.

Tables 25-5 and 25-6 Inpatient care in follow-up care hospitals

*A **follow-up care hospital** – it is a facility that provides care to a patient who has been diagnosed with an underlying condition and has stabilized his or her health, managed a sudden illness or sudden exacerbation of a chronic illness. However, the patient's condition requires follow-up treatment or the provision of, in particular, medical rehabilitation care. Follow-up intensive care may also be provided to patients who are partially or totally dependent on support of vital functions.*

Tables 25-7 and 25-8 Inpatient care in mental health hospitals and facilities

*A **mental health hospital (facility)** is a medical facility specialising in the treatment of serious mental illnesses and drug addictions (substance abuse) of hospitalised patients. It is an establishment providing long-term psychiatric care, not acute care.*

Table 25-9 Balneological institutions

The data source here is the questionnaire on the activities of a provider of balneological rehabilitation and care filled in by balneological institutions.

***Balneological care** recommended by a physician as an inevitable part of a treatment process and fully covered by health insurance companies is referred to as complete balneological care.*

*Data on the numbers of **institutions** and of **beds for the complete balneological care** also include institutions, which terminated their activities during a year.*

Table 25-10 Selected infectious diseases of compulsory notification

Data are obtained from the Information System of Infectious Diseases, which is developed and maintained by the National Institute of Public Health and administered by the Ministry of Health. The table furthermore contains data on other infectious diseases from specialised information systems as follows: the Register of Tuberculosis and the National Reference Laboratory for HIV/AIDS.

Tables 25-11 and 25-12 Patients in and visits to outpatient care establishments by speciality and by age

A patient in outpatient care is a person who at least once in a given year received outpatient care covered by a health insurance company. It is an aggregate of natural persons on whom a procedure has been performed during their visit to an outpatient establishment.

*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. **The number of contacts includes consultations over the phone and electronic consultations**, which considerably increased in 2020 and 2021 due to the COVID-19 disease.*

Tables 25-13 and 25-14 Newly notified malignant neoplasms

Data in the table 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).*

Tables 25-15 and 25-16 Diabetics under treatment

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 here.

Table 25-17 Incapacity for work due to disease or injury – basic indicators

Data for years before 2012 are based on the processing of the CZSO's statistical questionnaire. The questionnaire had to be filled in by all economic entities, and/or their lower organisational units, which independently fulfilled duties concerning health insurance. The processing also included total figures submitted by the District Administrations of Social Security for those entities that did not settle health insurance claims by themselves.

*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"). The statistics of temporary incapacity for work captures all diseases and injuries, which caused at least one-day long incapacity for work of the sickness-insured persons. Administrative data in the Information System of the CSSA contain data reported for all employees of legal and natural persons and separately for the own-account workers (the self-employed). Since 2012, data are not fully comparable with data for the previous years.*

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.*

Note: The number of new notified cases of temporary incapacity for work due to disease also includes incapacity for work due to quarantine or isolation. ***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).*

Calendar days of incapacity for work *show the sum of calendar days, for which sickness-insured employees were incapacitated for work (on a sick leave; based on the reported beginning and end of their incapacity for work (sick leave)).*

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

The ***average percentage of incapacity for work*** *expresses how many of one hundred of the sickness insured are every day incapacitated for work due to disease or injury. It is calculated as a ratio of the number of calendar days of incapacity for work (multiplied by 100) and the average number of the sickness-insured persons, multiplied by the number of calendar days in the given period.*

Occupational injuries *are injuries that occurred to employees when they were fulfilling their work assignments or in direct connection with them.*

Table 25-18 Fatal occupational injuries and occupational diseases

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 since the day, on which an occupational injury was inflicted. The source of data here is the State Labour Inspection Office (in Czech abbreviated as* SÚIP*).*

Occupational diseases *are according to the Section 1 paragraph 1 of the Decree of the Government of the Czech Republic No 290/1995 Sb, establishing the list of occupational disease as subsequently amended (the latest time by the Decree of the Government of the Czech Republic No 168/2014 Sb) diseases formed due to adverse effects of chemical, physical, biological, or other adverse factors if they were formed under conditions enlisted on the List of Occupational Diseases. An acute poisoning caused by adverse effects of chemicals shall also be taken as an occupational disease. A considerable break in the growth of the total number of recognised cases of occupational diseases in the Czech Republic was caused by the recognition of the COVID-19 disease as an occupational disease under new registration codes.*

Risk of occupational disease *shall mean, according to the Section 347 of the Act No 262/2006 Sb, the Labour Code, such changes to the health status that were formed while performing work due to adverse effects of conditions under which occupational diseases may occur, however, they do not reach the level of health damage, which can be assessed as an*

occupational disease and continuation in the work performance under the same conditions would lead to the formation of an occupational disease.

Occupational diseases and risks of occupational diseases are registered in the National Register of Occupational Diseases, which forms a part of the National Health Information System according to the Act No 372/2011 Sb, on Health Services. The IHIS CR is an administrator of the Register and data processing is carried out by the Centre for Occupational Health at the National Institute of Public Health.

Table 25-19 Terminated cases of incapacity for work by sex and age group

Data on terminated cases of the incapacity for work due to disease or injury (hereinafter only referred to as incapacity for work) are obtained from the "Incapacity for Work" Information System maintained by the IHIS CR. Data for the Information System are provided by the Czech Social Security Administration (in Czech abbreviated as CSSA*) that acquires them from electronic reports from physicians by means of the application called in Czech "*eNeschopenka*".*

***Terminated cases of incapacity for work** include all diseases and injuries, which caused at least one-day-long incapacity for work of the sickness-insured persons that was terminated in the given year. It involves neither diseases and injuries at which incapacity for work extended into the following year, nor the cases, in which the "Decision on the temporary incapacity for work" forms were not filled in.*

***Calendar days of incapacity for work** are the sum of calendar days, for which sickness-insured employees were incapacitated for work (on a sick leave; based on the reported beginning and end of their incapacity for work (sick leave).*

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

Table 25-20 Expenditure on health care by source of financing and type of health care provided

*Data in the table have been processed based on the System of Health Accounts (SHA) according to the OECD unified methodology (therefore, they are internationally comparable). In 2022 and 2023, **data for 2010–2019 were revised and data for 2020 and 2021 processed** while using **a new data source**. For the first time, the CZSO for an analysis of expenditure on health care for the year 2020 did not use data handed over directly from individual health insurance companies – it used data sent by health insurance companies during the year to the National Register of Reimbursed Health Services (abbreviated* NRHZS *in Czech) and to the Ministry of Health of the Czech Republic. An effort to reduce the administrative burden of individual health insurance companies and to unify the input source was the main reason for the revision. In addition, a revision of data from the general government (budgets), voluntary health insurance, and non-profit organisations has been made for the years 2010–2020. A large revision also applied to older data on health insurance companies for the years 2010-2016.*

***Only current expenditure** is included in the **total health care expenditure** within the System of Health Accounts. The following items **financed directly from the state budget** are **excluded** from surveyed data:*

i) expenditure on construction and reconstruction of health establishments,

ii) investment expenditure on purchase and modernisation of instrumentation/equipment,

iii) expenditure on health research and development,

iv) expenditure on education of medical staff (health professionals).

***Expenditure of health insurance companies** includes reimbursements from the obligatory public health insurance on health care reported by health establishments and recognised by health insurance companies. Revenue of health insurance companies comes from the public health insurance in which every person with permanent residence in the territory of the Czech Republic is obliged to participate.*

***State budget expenditure** mainly includes support to long-term care establishments (e.g. retirement homes). Administration of the sector of the Ministry of Health is also covered from the state budget, i.e. operation of the Ministry of Health, health departments of individual regional authorities, public health authorities, the National Institute of Public Health, the State Institute for Drug Control, and the Institute of Health Information and Statistics of the CR. In 2020, the following were covered from the state budget: payment of hospitals' debt and purchase of personal protective equipment in relation to the COVID-19 disease pandemic.*

***Regional/local government budgets** include financial means on health care from budgets of Regions and municipalities and relating, for example, to operation of the ambulance service.*

***Household out-of-pocket payment** (direct expenditure of households) includes direct expenditure of health care recipients (patients) and their co-payments. It includes the population expenditure on medicines (co-payments for prescribed medicines and full payments for over-the-counter medicines), for medical devices, payments for above-standard services at dentists, for spa treatment stays, above-standard rooms in hospitals, and payments for various certificates.*

***Voluntary health insurance** only comprises travel insurance. Except for additional travel insurance, the population of the Czech Republic cannot use other voluntary health insurance to cover health care.*

Non-profit organisations *include expenditure on health care covered by non-profit non-state institutions (e.g. the Red Cross). Activities of these institutions are financed from voluntary contributions of households and from government transfers or subsidies/grants.*

Company-funded preventive health care (enterprise financing schemes) *includes costs for performed routine check-ups and medical examinations of own employees, provided that they have not been covered from the public health insurance.*

Curative care *is a summary of health services to patients that especially include making a diagnosis, making corresponding medical examinations, determining how to treat a disease (eliminate pain and health problems), providing treatment by means of necessary procedures including using of medicines and corresponding healthcare products, and following observation of the health status.*

Inpatient curative care *includes formal reception to a health establishment for treatment, rehabilitation, or long-term care for which an overnight stay is expected. Inpatient care is not limited as for the type of provider. Most often, the provider is a hospital, but it can also be nursing care facilities/establishments or establishments classified as providers of outpatient care, which provide occasional procedures requiring inpatient care and therefore they are able to provide overnight accommodation.*

Outpatient curative care *includes medical and ancillary services provided to a patient who has not been formally received to an establishment and does not stay in the establishment overnight. Outpatient care can be provided in hospitals or by general practitioners and specialists in private health establishments or in individual surgeries.*

Day curative care *includes planned medical procedures performed by physicians and paramedical personnel (non-physicians) provided to patients formally received to a health establishment for diagnosis to be made, for treatment or other types of health care. A patient is received and released on the same day; the length of stay is 3–8 hours.*

Home-based curative care *includes medical services, ancillary services, and nursing services (care services), which are provided to patients in their homes and include physical presence of a provider. They include, for example, home obstetric services, home dialysis and all other health care services consumed in a home-setting, regardless of the provider, which may be, for example, a relative or a health professional. Assisted living facilities are not included in this category.*

Rehabilitative care *is a summary of health services provided in rehabilitation establishments (including balneological ones) aimed at elimination of health limitations and health problems experienced by a patient and at repeated achieving of a corresponding health condition (usually after medical care has been provided).*

Long-term health care *comprises a range of services of medical care and personal care that are consumed with the primary goal to relieve pain and suffering and to reduce or manage deterioration of health condition of patients with a level of long-term dependence.*

Ancillary services *include laboratory diagnostics and medical imaging diagnostics (X-ray imaging, computerised tomography (CT), magnetic resonance, etc.) and also transport of patients (it also applies to the ambulance service).*

Medical goods (non-specified by function) *are determined to be used for diagnostics, mitigating a disease's effect, or treating a disease including prescribed medicines and over-the-counter medicines. Expenditure on medicines consumed in inpatient health establishments is not included.*

Preventive care *includes immunisation programmes (vaccinations), programmes for early detection of a disease (e.g. screenings of malignant tumours), regular routine check-ups/examinations (e.g. examinations during pregnancy, check-ups of growth and development of children, regular check-ups at the dentist, and general routine check-ups). Preventive care also includes expenditure on information and counselling programmes such as information about health consequences of smoking, drinking of alcohol, unhealthy diet, or insufficient physical activity. In 2020, this category also includes costs for PCR tests and antigen tests for the COVID-19 disease.*

Health care system administration *focuses on the health system rather than direct health care; it is considered to be a collective service since it is not allocated to specific individuals but benefit all health system users. It directs and supports health system functioning. These services are expected to administer and enhance efficiency and performance of the health system. Included are, for example, formulation and administration of government policy, setting standards, or licencing.*

Table 25-21 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.

Table 25-22 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.

Table 25-23 Household expenditure on health care

Data from the national accounts statistics of the CZSO are the basic source of data for the estimation of household final consumption expenditure on health care. Household expenditure on health care is broken down by an international methodology of the System of Health Accounts (SHA).

***Other medical non-durable goods** include medical non-durable goods (e.g. adhesive and non-adhesive bandages, hypodermic syringes, first-aid kits, medical hosiery such as elasticated stockings and knee supports, etc.).*

***Other therapeutic appliances** (all other medical durables including medical technical devices) comprise a wide variety of medico-technical devices from hearing aids to wheelchairs (powered and unpowered) and invalid carriages, as well as miscellaneous durable medical products not elsewhere classified such as blood pressure instruments.*

Table 25-24 Health professionals

***Dentists** perform prevention, make a diagnosis, and treat diseases, injuries, and malformations of the (set of) teeth, mouth, jaws, and related tissues. They use a variety of specialised diagnostic, surgical, and other methods to promote and restore oral health.*

***Pharmacists** store, preserve, prepare, and dispense medicinal products in accordance with medical regulations and provide advice on the correct use and adverse side effects of medicines. They contribute to the research, preparation, prescription, and monitoring of drug therapies to optimise human health.*

***Paramedics** provide emergency medical treatment and transport injured, sick, and otherwise physically and mentally ill persons to health establishments.*

***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).*

Tables 25-25 and 25-36 Wages of health professionals

***Classification of Occupations (CZ-ISCO)** was used to define selected groups of health professionals. The following two 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.

*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 (physicians in Table **25-25**) and nursing and midwifery professionals and nursing and midwifery associate professionals (general nurses and midwives in Table **25-26**) 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.*

Table 25-27 Students of and graduates from health fields of education at universities

Data on students of and graduates from health fields of education were obtained from the SIMS *database (i.e. Union Information from Students' Registers). The source database of* SIMS *is continually completed and updated, including retrospective*

corrections. Data published in this publication correspond to the state of processing as at 20 January 2022. Data on students of universities are always related to 31 December of the relevant year; data on graduates are related to the entire school 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 091 Health, which includes the following detailed fields of education:

Dental studies (0911);

Medicine (0912) – it mainly comprises preparation of doctors;

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 study in more study programmes at the same time. The total numbers of students and graduates thus do not have to be equal to the sums of students and graduates of respective types of study programmes.

* * *

Further information can be found on the website of the Czech Statistical Office at:

– www.czso.cz/csu/czso/health_care_lide

or on the website of the Institute of Health Information and Statistics at:

– www.uzis.cz/en