

Czechia

Health system review

Lucie Bryndová
Lenka Šlegerová
Jana Votápková

Pavel Hroboň
Nathan Shuftan
Anne Spranger

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Health Systems in Transition

Czechia

Health System Review 2023

Lucie Bryndová

Faculty of Social Sciences, Charles University

Lenka Šlegerová

Institute of Economic Studies, Faculty of
Social Sciences, Charles University

Jana Votápková

Institute of Economic Studies, Faculty of
Social Sciences, Charles University

Pavel Hroboň

Advance Healthcare Management Institute

Nathan Shuftan

European Observatory on Health Systems
and Policies and Department of Health Care
Management, Berlin University of Technology

Anne Spranger

European Observatory on Health Systems
and Policies and Department of Health Care
Management, Berlin University of Technology



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PREFACE

The Health Systems in Transition (HiT) series consists of country-based reviews that provide a detailed description of a health system and of reform and policy initiatives in progress or under development in a specific country. Each review is produced by country experts in collaboration with the Observatory's staff. In order to facilitate comparisons between countries, reviews are based on a template prepared by the European Observatory, which is revised periodically. The template provides detailed guidelines and specific questions, definitions and examples needed to compile a report.

HiTs seek to provide relevant information to support policy-makers and analysts in the development of health systems in Europe and other countries. They are building blocks that can be used to::

- learn in detail about different approaches to the organization, financing and delivery of health services, and the role of the main actors in health systems;
- describe the institutional framework, process, content and implementation of health care reform programmes;
- highlight challenges and areas that require more in-depth analysis;
- provide a tool for the dissemination of information on health systems and the exchange of experiences of reform strategies between policy-makers and analysts in different countries; and
- assist other researchers in more in-depth comparative health policy analysis.

Compiling the reviews poses a number of methodological problems. In many countries, there is relatively little information available on the health system and the impact of reforms. Due to the lack of a uniform data source, quantitative data on health services are based on a number of different sources, including data from national statistical offices, the Organisation for Economic Co-operation and Development (OECD), the International Monetary Fund (IMF), the World Bank's World Development Indicators and any other

relevant sources considered useful by the authors. Data collection methods and definitions sometimes vary, but typically are consistent within each separate review.

A standardized review has certain disadvantages because the financing and delivery of health care differ across countries. However, it also offers advantages because it raises similar issues and questions. HiTs can be used to inform policy-makers about experiences in other countries that may be relevant to their own national situations. They can also be used to inform comparative analysis of health systems. This series is an ongoing initiative and material is updated at regular intervals.

Comments and suggestions for the further development and improvement of the HiT series are most welcome and can be sent to contact@obs.who.int.

HiTs and HiT summaries are available on the Observatory's website (<https://eurohealthobservatory.who.int>).

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This 2022 edition was written by Lucie Bryndová (Faculty of Social Sciences, Charles University); Lenka Šlegerová (Institute of Economic Studies, Faculty of Social Sciences, Charles University); Jana Votápková (Institute of Economic Studies, Faculty of Social Sciences, Charles University) and Pavel Hroboň (Advance Healthcare Management Institute).

It was edited by Nathan Shuftan and Anne Spranger (European Observatory on Health Systems and Policies). The basis for this edition was the previous HiT on Czechia, which was published in 2015, written by Jan Alexa, Lukáš Rečka, Jana Votápková, Ewout van Ginneken, Anne Spranger and Friedrich Wittenbecher.

The European Observatory on Health Systems and Policies is grateful to Peter Pažitný and Daniela Kandilaki (Prague University of Economics and Business) and Tomáš Roubal (WHO Country Office in Ukraine) for reviewing the report. The authors are also grateful to everyone at the Ministry of Health for invaluable comments on an earlier draft of manuscript and for the review of the final draft. Thanks are extended to the WHO Regional Office for Europe, the Organisation for Economic Co-operation and Development, the World Bank and the European Commission for their data on health, health expenditure and health care services in Europe. Thanks are also extended to the Czech Statistical Office, ÚZIS, and other national data holders for so freely sharing their expertise and data.

The HiT uses data available in September 2022, unless otherwise indicated. The HiT reflects the organization of the health system, unless otherwise indicated, as it was in September 2022.

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LIST OF ABBREVIATIONS

Abbreviation	Czech term	English term
AI	–	Artificial intelligence
ATC	–	Anatomical Therapeutic Chemical groups
CHE	–	Current health expenditure
CHF	–	Congestive heart failure
CHSC	–	Centres of highly specialized care
ČLS JEP	Česká lékařská společnost Jana Evangelisty Purkyně	Czech Medical Association of J. E. Purkyně
COPD	–	Chronic obstructive pulmonary disease
ČSSZ	Česká správa sociálního zabezpečení	Czech Social Security Administration
ČSÚ	Český statistický úřad	Czech Statistical Office
CT	–	Computed tomography
CZ DRG	–	Czech refined diagnosis-related group
CZK	Česká koruna	Czech crown (national currency)
DPT	–	Diphtheria, pertussis and tetanus
DRG	–	Diagnosis-related group
EU	–	European Union
EU27	–	European Union (27 Member States as of 2020)
EU28	–	European Union prior to Brexit (28 Member States including the United Kingdom)
FFS	–	Fee-for-service
FTEs	–	Full-time equivalents
GDP	–	Gross domestic product
GP	–	General practitioner
Health 2030	Zdraví 2030	The Strategic Framework for the Development of Health Care in Czechia until 2030
HIB	Kancelář zdravotního pojištění	Health Insurance Bureau
HIFs	Zdravotní pojišťovna	Health insurance funds
HiT	–	Health in Transition
HPV	–	Human papillomavirus
HSPA	–	Health system performance assessment

Abbreviation	Czech term	English term
IR DRG	–	International refined diagnosis-related group
IT	–	Information technology
IVF	–	In vitro fertilization
LHS	<i>Seznam zdravotních výkonů</i>	List of health services
LTC	–	Long-term care
MDAs	–	Medical devices and aids
MFČR	<i>Ministerstvo financí</i>	Ministry of Finance
MPSV	<i>Ministerstvo práce a sociálních věcí</i>	Ministry of Labour and Social Affairs
MRI	–	Magnetic resonance imaging
MŠMT	<i>Ministerstvo školství, mládeže a tělovýchovy</i>	Ministry of Education, Youth and Sports
MZČR	<i>Ministerstvo zdravotnictví</i>	Ministry of Health
NATO	–	North Atlantic Treaty Organization
NZIP	<i>Národní zdravotnický informační portál</i>	National Healthcare Information Portal
NZIS	<i>Národní zdravotnický informační systém</i>	National Health Information System
OECD	–	Organisation for Economic Co-operation and Development
OOP	–	Out-of-pocket
PCG	–	Pharmacy-based cost group
PHI	–	Private health insurance
PPP	–	Purchasing power parity
RPHAs	<i>Krajské hygienické stanice</i>	Regional public health authorities
SDR	–	Standardized death rate
SHI	–	Statutory health insurance
SÚJB	<i>Státní úřad pro jadernou bezpečnost</i>	State Office for Nuclear Safety
SÚKL	<i>Státní ústav pro kontrolu léčiv</i>	State Institute for Drug Control
SZÚ	<i>Státní zdravotní ústav</i>	National Institute of Public Health
US\$	–	United States Dollar (currency)
ÚZIS	<i>Ústav zdravotnických informací a statistiky</i>	Institute of Health Information and Statistics
VHI	–	Voluntary health insurance
VZP	<i>Všeobecná zdravotní pojišťovna</i>	General Health Insurance Fund
WHO	–	World Health Organization

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ABSTRACT

This analysis of the Czech health system reviews developments in governance, organization, financing and delivery of care, health reforms and health system performance. Czechs have enjoyed a statutory health insurance system with a high level of financial protection, a broad benefits package and universal membership for over 30 years. The central level of the state, mostly represented through the Ministry of Health and its subordinated bodies, takes on the various roles of legislator, steward and even owner of various providers of care, while also making insurance contributions for the sizeable part of the population classified as economically inactive. Health insurance funds are responsible for contracting sufficient care provision for their members.

The Czech health system has traditionally derived a majority of its financing from public sources, which stood at 81.5% of current health expenditure in 2019, as the latest available year of reference, with the rest coming from private sources. While health spending in Czechia is below the European Union (EU) average, the densities of acute care beds and primary care physicians are above respective EU averages. Ageing and a lack of qualified staff (for example, nurses in hospitals) are already putting pressure on the Czech health workforce, a bottleneck further exposed by the COVID-19 pandemic. Additionally, Czechia has embarked on a reform process to modernize and centralize specialized tertiary care and psychiatric care. Patients enjoy free choice of primary and specialized outpatient providers, though there are signs that accessibility is limited in some regions and for some specialties.

Overall, health outcomes in terms of life expectancy, mortality and survival rates of stroke and cancer have improved in recent years, though these improvements have been slower in Czechia than in other countries. However, life expectancy dropped considerably due to heightened mortality resulting from the COVID-19 pandemic in 2020 and 2021. There remains considerable room for improvement in strengthening disease prevention and

health promotion, particularly for dietary habits and health literacy. Various efforts to advance evidence-based interventions in the health system, such as the initiation of health care quality monitoring and health system performance assessment, will assist in further analysing Czechia's health outcomes.

EXECUTIVE SUMMARY

Czech life expectancy remains below the EU average, and although mortality rates have dropped, dietary habits and other behavioural risk factors pose large risks to population health

Czechia is a landlocked country situated in central Europe with a total population of 10.5 million in 2021. Of the total population, just over one in 10 Czechs live in the capital city of Prague, whereas other regions are sparsely populated. Czechia has an industrialized economy with a gross domestic product, expressed in US\$ (purchasing power parity), of 44 261 per capita, just below the EU average. Steady economic growth resulted in a very low unemployment rate of 2.8% in 2021 and a very low share of people at risk of poverty.

Average life expectancy at birth increased by more than 4 years between 2000 and 2019 before falling by nearly 2 years to 77.4 years in 2021; Czechs are expected to live 2.7 years less than the EU average. There are differences in life expectancy along gender (with women living just over 6 years longer), regional and socioeconomic lines. A drop in mortality rates by one quarter mainly facilitated the rise in life expectancy, particularly for diseases of the circulatory system, though they remain the leading cause of mortality in Czechia and accounted for just over 40% of all deaths in 2019. The second leading cause of mortality was malignant neoplasms, contributing another 23% of total deaths. Respiratory diseases rank third in mortality, while deaths from diabetes mellitus are high compared with the EU average and rank as the fifth leading cause of mortality.

Dietary risks, alcohol and tobacco consumption have a strong influence on the health of the population, and it is estimated that nearly half of total mortality resulted from behavioural risk factors. As a direct consequence of

poor dietary habits and low physical activity, obesity is major concern; 19.3% of adults in Czechia were obese, and smoking rates have remained high and stood at 19.9% in 2019.

The national level, namely the Ministry of Health, is the main steward of the Czech health system, while health insurance funds and regional authorities also have key roles

The Ministry of Health is the central administrative body for health system stewardship, and its responsibilities include ensuring the protection of public health; licensing health professionals (including dentists); defining networks of highly specialized care centres; administering and regulating health care facilities under its direct management; exploring and regulating natural curative sources (for example, spas and natural mineral waters) and supervision (jointly with the Ministry of Finance). Czechia's 14 regions play a major role via their ownership of health facilities and for registering private facilities. In addition, regions also coordinate emergency care directly and their planning capacities have been strengthened for instance via Regional Healthcare Concepts to address relevant issues within their regions. In addition, the seven health insurance funds (HIFs) have a major role in financing statutory health insurance (SHI) contributions and contracting a network of providers to comply with the care accessibility requirements (time and distance) set by law.

The principles of free patient choice, high financial protection and universal membership with one of the HIFs remain the core of the Czech SHI system. Compulsory membership for all Czech citizens residing in the country, including the self-employed, as well as for permanent residents of Czechia and most other foreign residents, results in near universal coverage. Moreover, a large portion of the population is exempt from paying SHI contributions due to being classified as “economically inactive” (including students, pensioners and the unemployed).

The range of benefits covered by SHI in Czechia is very broad and includes inpatient and outpatient care, prescription pharmaceuticals, some dental procedures, rehabilitation, spa treatments and over-the-counter pharmaceuticals (the last three if prescribed by a physician) and long-term care when provided in hospitals. Due to this broad coverage, voluntary health insurance plays only a marginal role.

A large majority of health system financing in Czechia comes from public sources and private expenditures are low, though there are concerns about underfinancing

With 81.5% of current health expenditure coming from public sources in 2019, Czechia has one of the highest levels of public financing in the WHO European Region. The main source of this comes from SHI contributions (consisting of wage-based contributions from individuals and employers, income-related contributions from self-employed people and transferred state contributions on behalf of economically inactive people). State contributions for the economically inactive increased substantially in 2020 and accounted for over a quarter of total SHI revenues.

Private health care expenditure has hovered between 15% and 20% of current health expenditure over the past decade. Out-of-pocket payments consist of direct payments for over-the-counter pharmaceuticals; co-payments on prescription pharmaceuticals; above-standard medical procedures and services and the few direct payments and surcharges for dental care. Outpatient and inpatient health services are provided free of charge at the point of use, except for some prescription pharmaceuticals, medical devices and aids and the user fee for accessing outpatient out-of-hours services.

The system of paying for health services combines several payment mechanisms that are applied by HIFs. HIFs provide monthly advance payments to providers and the final billing takes place the following year; payments to providers are based on the Reimbursement Directive. During the COVID-19 pandemic, an exceptional “Compensation Directive” took effect to compensate providers for losses of income and higher costs for treating infected patients.

Czechia had acute care bed and health personnel capacities close to or higher than the EU averages in 2019, though accessibility throughout the country is a rising challenge

Czechia recorded an acute bed density of 4 beds per 1 000 population in 2019, in line with the EU average. The overall bed capacity has remained stable over the last 5 years, as contracted with HIFs also to ensure accessibility.

The average length of stay decreased from 6 days in 2013 to 5.7 days in 2019. In addition, Czechia has specialized therapeutic facilities to provide specialized follow-up care, especially for long-term or chronically ill patients. These facilities also offer psychiatric beds, hospices and rehabilitative care.

Substantial investments from EU Structural Funds suggest that there have been some improvements in recent years, though investments were predominantly allocated to larger or specialized hospitals mostly located in larger cities, such that concerns about outdated facilities and renovation backlogs remain areas for concern, especially for rural facilities. Another issue that could impact the accessibility of care is a lack of personnel.

Furthermore, an ageing and unevenly distributed workforce has been politically acknowledged by various strategic documents from the Ministry of Health, HIFs and regional authorities. There is a need to collect and analyse relevant data to assess underserved areas and factual capacities and accessibility. Patients retain free choice of provider, and numbers of physicians and nurses per 100 000 inhabitants in Czechia in 2019 were slightly above EU averages. The physician-to-population ratio has in fact gradually increased over the past 20 years in Czechia, consistently above the EU average.

Inpatient care in Czechia features diverse facilities, many of them specialized, spread across the country; recent focus on mental health aims to deinstitutionalize care

Patients are free to see a specialist directly, although strengthening the role of primary care to serve as a focal point for coordination with other providers is a general aim. HIFs are responsible for contracting enough providers to ensure accessibility as specified, although patient mobility (commuting) to Prague and its surroundings to see outpatient specialists is a limitation; Prague has by far the highest density of all outpatient care specializations. Outpatient specialists cover 56 specializations and include non-medical specializations such as clinical psychologists, clinical speech therapists, eyesight therapists, orthoptists and audiologists.

Access to inpatient care is only possible via referrals or in cases of emergency. There is a stratification of hospitals, with hospitals in smaller cities tending to focus on a limited number of medical specialties (for example, internal medicine and maternity wards), whereas larger hospitals providing

broader services are only situated in urban areas. Teaching hospitals are owned and operated directly by the Ministry of Health and are expected to perform educational and research duties in addition to their function as providers.

Efforts to modernize mental health services have been underway following the psychiatric care reform launch in 2011 and stemmed from underfinancing and outdated organization that focused on psychiatric hospitals that could provide neither sufficient support for patients in their own environment nor coordination among providers. The underlying goal has been to improve quality of life for people living with mental illnesses, mainly by deinstitutionalizing psychiatric care, that is, shifting from psychiatric hospitals to community and outpatient settings while stressing the importance of multidisciplinary teams and the linkage between health and social services. Full implementation of these reforms began in 2017 and the first mental health centres opened in July 2018; the goal is to have 100 functioning centres by 2030.

Many ongoing reforms to the Czech health system began before the COVID-19 pandemic and aim to strengthen public health, health financing and care provision

Though the COVID-19 pandemic has highlighted the necessity to further strengthen public health efforts, sustainability of financing, care provision and personnel shortages, most of the reforms implemented up until 2021 had been in the planning stages before lockdowns in March 2020.

Tobacco and alcohol policies have been strengthened in recent years: a full-scale ban on smoking in public places was introduced in 2017, and gradual increases to excise taxes on cigarettes, cigars and other tobacco products were launched in 2020, with annual increases approved through to 2023. Another public health reform targeted mandatory vaccinations for children, though further strengthening of disease prevention and health promotion remains a goal.

The sustainability (and fairness) of health financing and reimbursement is a continued area of focus. In 2018, another reform to risk adjustment and redistribution among HIFs took effect, which included a redistribution mechanism that added adjustment for patients with chronic diseases identified by their pharmaceutical consumption. On the revenue side, state transfers for the SHI contributions on behalf of the economically inactive population

changed in 2022, with transfer amounts becoming linked to overall economic performance.

Provision of care reforms were seen in the area of highly specialized care concentration, leading to designated networks for traumatology, oncology, severe burns, cardiology, stroke care, and transplantation medicine throughout the 2010s. Functionalities for eHealth were accelerated by the COVID-19 pandemic (electronic prescriptions and prescription histories).

Czechia has undertaken efforts to improve transparency and accountability in the health system, while improving quality is a major strategic aim

Improving transparency and accountability can be seen in the patient and stakeholder involvement and evidence-based policy-making in the current policy framework. The Ministry of Health has a central role in health system governance and has sought to engage more institutions in governance processes and to strengthen patient involvement in recent years. Informal payments (sometimes to skip waiting times or to see a specific physician), however, and using personal connections to get health services were reported by more than half of respondents surveyed by Transparency International in 2020.

There are low levels of self-reported unmet needs for medical care in Czechia due to the high level of financial protection and low barriers to accessibility. In 2020, only 0.4% of Czechs reported unmet needs for medical examinations, compared with an EU average of 1.9%.

There are national efforts to monitor the quality of primary and inpatient care in Czechia; data show a drop in the case-fatality rate within 30 days after admission following acute myocardial infarction, from 18.3% in 2000 to 10.2% in 2019. Czechia has reduced amenable mortality, from 140.7 deaths per 100 000 population in 2011 to 120.3 per 100 000 population in 2019; reductions in amenable mortality can be seen across Europe, and Czechia ranks near the middle, between countries like Switzerland, with an age- and gender-standardized amenable mortality rate of around 50 and Romania, with a rate just above 200 deaths in 2019. Preventable mortality stood at 188.3 deaths per 100 000 population in 2019, representing a decline of 16.6% from 2011 (225.7 per 100 000).

Inequities of population health outcomes are documented along socioeconomic groups, for example for disabled persons, the Roma population, and by age, employment status and along educational lines. Regional disparities are a burden to population health, with a concentration of capacities in Prague and the surrounding area, and lower capacities in rural areas. Beyond physical and human resources, it is likely that disparities do not follow a clear urban-rural divide and that perhaps socioeconomic factors and health behaviour are creating sub-regional disparities.

Introduction

Chapter summary

- Czechia has a population of 10.5 million (2021). Prague, the capital and biggest city, accounts for nearly 1.3 million inhabitants alone. Similar to other European Union (EU) member states, the Czech population is ageing, and every fifth person is aged 65 years or older.
- The Czech economy has one of the lowest unemployment rates in the EU (2.8% in 2021); 10.7% of the population is at risk of poverty, compared with an EU average of 21.7%.
- Czechia is a parliamentary constitutional republic with a bicameral parliament elected by popular vote. The political system has undergone recent changes as the incumbent minority government lost an election in autumn 2021, being replaced with an alliance of five (previously) opposition parties.
- Czechia's population experiences disparities along regional, gender and socioeconomic lines, but virtually all groups have benefitted from increases in life expectancy rates in recent decades. After increasing by more than 4 years since 2000, life expectancy at birth peaked at 79.3 years in 2019. Heightened deaths in relation to the COVID-19 pandemic caused this to fall to 77.4 years in 2021.

- The roughly 25% drop in mortality between 2000 and 2019 has been the main factor in the rising life expectancy. Despite a significant reduction (of around 40%) between 2000 and 2019, however, diseases of the circulatory system remain the leading cause of death. Malignant neoplasms were the second most common cause of death in 2019, at 23% of all causes.
- Health-related lifestyles and health behaviour (that is, dietary habits and smoking) contribute significantly to morbidity and mortality in Czechia. Dietary risks such as low vegetable and fruit intake were the most prevalent – contributing to more than one fifth of all deaths (23%). Obesity is on the rise and is also a major risk factor for high levels of diabetes mellitus (type 2 diabetes) among Czechs.

1.1 Geography and sociodemography

Czechia is a landlocked country situated in central Europe, bordered to the west by Germany, to the northeast by Poland, to the east by Slovakia, and to the south by Austria (Fig. 1.1). Covering an area of approximately of 78 871 km², Czechia has a temperate continental climate with warm summers and cold winters. The country is composed of the historic regions of Bohemia in the west, Moravia in the east, and part of Silesia in the northeast. Czechia has 14 administrative regions, including the capital city of Prague. Prague has approximately 1.3 million inhabitants (as of 2021), making it by far the largest city in the country (ČSÚ, 2022a).

Of the 10.5 million people living in Czechia in 2021, 50.7% were female, and the population density was 138.6 per km². This varied greatly across the 14 regions, from the *Jihočeský* Region bordering Austria recording 63 inhabitants per km², to Prague with 2 570 inhabitants per km² (ČSÚ, 2022a).

FIG. 1.1 Map of Czechia



Source: UN, 2016.

The number of inhabitants has increased slightly since 2014, with some population growth coming from a gradual fertility rate increase (from 1.15 births per woman in 2000 to 1.71 in 2020, see Table 1.1) to surpass both the EU average (1.5) and those of neighbouring countries. Though Czechia's crude mortality and fertility rates were the same (10.5) in 2019, the crude death rate (13.3) in 2021 exceeded the crude birth rate (10.6), meaning a natural population decline (Eurostat, 2022). When accounting for immigration, however, Czechia's population has increased. The net migration of 26 927 persons in 2020 contributed to a total of 632 570 foreign-born individuals (5.9% of the total population). In 2021, net migration jumped further to nearly 50 000 persons, which is assumed to have also added to the already large proportion of Ukrainian citizens that stood at around 165 000 in 2020 (ČSÚ, 2022a). As for the EU, Czechia's population is ageing, with every fifth person being aged 65 years or older in 2021; this is up from 13.8% of the total population in 2000. These trends are likely to become more pronounced in the future, as the latest projections by the Czech Statistical

Office (*Český statistický úřad, ČSÚ*), estimate that those aged 65 years and above will comprise close to 30% of the total population by 2101, while the share of those aged 15–64 years is likely to decline (ČSÚ, 2018). The share of the population aged 0–14 years stood at 16.1% in 2021. Additionally, 4.2% of Czechs turned 80 or older in 2021. Comparatively, this is below both the EU average (6.5%) and neighbouring countries like Germany (7.1%) (Eurostat, 2022).

TABLE 1.1 Trends in population and demographic indicators, 1995–2021 or latest year available

	1995	2000	2005	2010	2015	2019	2020	2021
Total population ^a	10 333	10 278	10 198	10 462	10 538	10 671	10 697	10 505
Population aged 0–14 (% of total) ^a	18.85	16.61	14.93	14.28	15.19	15.90	16.00	16.10
Population aged 65 and above (% of total) ^a	13.13	13.80	14.06	15.29	17.84	19.59	19.93	20.20
Population density (people per km ²) ^b	133.7	132.7	132.2	135.6	136.6	138.2	138.6	138.6
Population growth (average annual growth rate in %) ^b	–0.27	–0.06	–0.28	0.14	0.29	0.33	0.39	0.25
Fertility rate, total (births per woman) ^a	1.27	1.15	1.29	1.51	1.57	1.71	1.71	n/a
Distribution of population (rural : urban) ^b	25 : 75	26 : 74	26 : 74	27 : 73	27 : 73	26 : 74	26 : 74	n/a

Sources: ^a Eurostat, 2022; ^b World Bank, 2022.

Note: n/a: not available.

1.2 Economic context

Czechia has a developed economy and is an industrialized country, with gross domestic product (GDP) per capita expressed in purchasing power standard reaching 91% of the EU average in 2021 (GDP per capita of US\$ 44 261 purchasing power parity (PPP) (see Table 1.2)). GDP amounted to more than EUR 238 714 billion in 2021 (throughout this volume, a standard conversion of EUR 1 to Czech crown 25 (CZK) is used). The Czech economy had grown continuously by at least 2% since 2000 (except for a brief decline in 2009 during the financial crisis) until shrinking because of the comprehensive measures

taken in response to the COVID-19 pandemic. Table 1.2 shows the most important macroeconomic indicators for Czechia.

Total public expenditure as a percentage of GDP decreased from 53.2% in 1995 to 41.1% in 2019 (reaching a low of 39.0% in 2017), which was below the EU average that year (46.5%). This decrease is widely attributed to economic growth outpacing the macroeconomic expectations that informed public budgets and expenditures. By 2020 (the first year of COVID-19), this figure had increased to 47.2%.

TABLE 1.2 Macroeconomic indicators for Czechia, 1995–2021 or latest year available

	1995	2000	2005	2010	2015	2018	2019	2020	2021
GDP per capita (current US\$) ^a	5 824	6 029	13 431	19 960	17 830	23 420	23 660	22 934	26 379
GDP per capita, purchasing power parity (current international US\$) ^a	13 826	16 243	22 095	27 903	33 899	41 136	42 847	41 608	44 261
GDP annual growth rate ^a	6.5	4.0	6.6	2.4	5.4	3.2	3.0	–5.8	3.3
Public expenditure (Government expenditure as % of GDP) ^b	53.2	40.8	42.4	43.6	41.9	40.6	41.1	47.2	n/a
Government deficit/surplus (% of GDP) ^b	–12.4	–3.6	–3.0	–4.2	–0.6	0.9	0.3	–5.6	n/a
General government gross debt (% of GDP) ^b	13.6	17.0	27.7	37.1	39.7	32.1	30.0	37.7	n/a
Unemployment, total (% of labour force) ^b	n/a	8.8	7.9	7.3	5.1	2.2	2.0	2.6	2.8
People at risk of poverty or social exclusion, total (% of total population) ^b	n/a	n/a	19.6	14.4	14.0	11.8	12.1	11.5	10.7
Income inequality (Gini coefficient of disposable income) ^b	n/a	n/a	n/a	24.9	25.0	24.0	24.0	24.2	24.8

Sources: ^a World Bank, 2022; ^b Eurostat, 2022.

Notes: GDP: gross domestic product; n/a: not available.

Trends in employment have a direct impact on revenues for Czechia's statutory health insurance (SHI) system (see Section 3.3.2). Unemployment fell from 8.8% in 2000 to 2.0% in 2019, the lowest value reported in the EU, before rising to 2.6% in 2020 (the EU average was 7.0%), and 2.8% in 2021.

In 2020, the employment rate of those aged 20–64 years reached 79.7%, seven percentage points above the EU average and hinting at labour shortages as a bottleneck for further growth. Labour shortages are more pronounced in the industrial backbone of the Czech economy (for example, the automotive, heavy machinery, iron, steel and construction industries), but less so in services (European Commission, 2020). In 2021, 10.7% of Czechs were at risk of poverty, compared with an EU average of 21.7%. In-work poverty is also low (4.2% in 2020), but being unemployed poses an enormous risk of poverty (62.8%), as in other EU countries. Finally, the Gini coefficient remained nearly the same in Czechia between 2010 and 2021.

1.3 Political context

Czechia is a parliamentary constitutional republic featuring a president as the formal head of state and commander-in-chief of the armed forces. The president is elected via popular vote for a 5-year term and limited to two consecutive terms, and the constitution vests the president with certain specific powers, including those to appoint and dissolve the government; to veto bills (with the exception of constitutional acts) and so return them to parliament; to appoint judges to the Supreme and Constitutional Courts, as well as members to the board of the Czech National Bank; to grant amnesty (subject to government approval); and to dissolve the Chamber of Deputies under exceptional circumstances. The president's role as commander-in-chief of the armed forces is ceremonial, as all substantive authority regarding the use of the military is vested by the constitution in parliament.

The Czech Constitution provides for a bicameral parliament that is responsible for final decision-making to approve new legislation. The 200 members of the Chamber of Deputies (*Poslanecká sněmovna*) are elected for 4-year terms, while the 81 members of the Senate (*Senát*) are elected for 6-year terms. As the head of government, the prime minister is the government's chief representative and is responsible for organizing the activities of government and choosing government ministers. The government proposes new legislation for the health system to the parliament, usually through the minister of health.

Elections in October 2021 resulted in a government formed by the centre-right alliance SPOLU (three parties, 27.8% vote share), with support from two other opposition parties and a narrow defeat of the 2017–2020 Czech minority government of the ANO party (27.1%).

Czechia has been a member of the Organisation for Economic Co-operation and Development (OECD) since December 1995, of the North Atlantic Treaty Organization (NATO) since February 1999 and of the EU since May 2004.

1.4 Health status

After increasing by more than 4 years since 2000, life expectancy at birth in Czechia peaked at 79.3 years in 2019, before falling to 77.4 years in 2021 (see Table 1.3), 2.7 years below the EU average. Many deaths contributing to this occurred during late 2020, as the death toll related to COVID-19 peaked for that year (ČSÚ, 2021a). As in other countries, there is a gender gap: women born in 2021 are expected to live more than 6 years longer than men, which is higher than the EU average (5.6 years). Life expectancy after the age of 65 increased from 13.7 to 14.7 years for men and from 17.2 to 18.7 years for women between 2000 and 2021, indicating a narrower gender gap of 4 years among seniors. There are substantial differences across Czechia's regions, as life expectancy for women born in Prague in 2021 was 82.6 years, compared with 78.8 years for women in the *Karlovarský* Region. These regional differences are even more pronounced among men, with an in-country difference of 4.4 years between those born in Prague and those in the *Karlovarský* Region (ÚZIS, 2019a). Overall, 67.8% of Czech adults reported being in good or very good health, just under the EU average (69.0%) in 2021, though disparities across income groups are substantial and have grown: 83.8% of Czechs in the highest income quintile reported being in good health in 2021 (74.2% in 2005), but only 50.8% for those in the lowest income quintile (52.6% in 2005) said the same (Eurostat, 2022).

TABLE 1.3 Mortality and health indicators, 1995–2021 or latest year available

	1995	2000	2005	2010	2015	2019	2020	2021
LIFE EXPECTANCY (YEARS)								
Life expectancy at birth, total ^a	n/a	75.1	76.1	77.7	78.7	79.3	78.3	77.4
Life expectancy at birth, male ^a	n/a	71.6	72.9	74.5	75.7	76.4	75.3	74.3
Life expectancy at birth, female ^a	n/a	78.5	79.2	80.9	81.6	82.2	81.3	80.6
Life expectancy at 65 years, male ^a	n/a	13.7	14.4	15.5	15.9	16.4	15.2	14.7
Life expectancy at 65 years, female ^a	n/a	17.2	17.7	19.0	19.4	20.1	19.1	18.7
MORTALITY								
Mortality (SDR per 100 000 population)								
All causes ^a	n/a	1 602.3	1 518.9	1 307.4	1 280.2	1 182.4	n/a	n/a
Circulatory diseases ^a	n/a	926.2	850.5	698.8	629.0	529.5	n/a	n/a
Malignant neoplasms ^a	n/a	376.9	347.8	314.1	278.6	272.4	n/a	n/a
Respiratory system ^a	n/a	75.6	88.5	76.4	86.6	86.4	n/a	n/a
Alzheimer's and other dementias ^a	n/a	7.8	12.3	13.1	19.1	21.2	n/a	n/a
Diabetes mellitus ^a	n/a	20.4	19.4	23.9	43.5	45.6	n/a	n/a
Communicable diseases ^a	n/a	n/a	n/a	n/a	22.6	19.8	n/a	n/a
External causes of death ^a	n/a	n/a	n/a	n/a	62.2	57.7	n/a	n/a
Infant Mortality Rate (per 1 000 live births) ^a	7.7	4.1	3.4	2.7	2.5	2.6	n/a	n/a
Maternal mortality rate (per 100 000 live births) ^b	n/a	7	5	4	4	3*	n/a	n/a

Sources: ^a Eurostat, 2022; ^b WHO, 2022.

Notes: n/a: not available; SDR: standardized death rate; * Data refer to 2017.

A reduction in mortality by more than one quarter between 2000 and 2019 was a main driver of rising life expectancy in Czechia before the pandemic. Despite a significant reduction (over 40%) in mortality from circulatory diseases between 2000 and 2019, they remain the leading cause of mortality and accounted for 529.5 deaths per 100 000 population (45% of all deaths) in 2019, the ninth highest in the EU. More specifically, ischaemic heart diseases were responsible for over 21% of all deaths in 2019, with another 7% due to stroke.

Malignant neoplasms were the second most common cause of death in Czechia in 2019 and represented 23% of all deaths. Even though neoplasm-related mortality has decreased since 2000, the standardized death rate (SDR) was 272.4 in 2019. Lung cancer, the leading cause of cancer deaths (4.2% of all deaths in 2019) has decreased steadily since 2000, as have deaths due colorectal cancer (3% in 2019). This contrasts with mortality from pancreatic cancer (1.8% of all deaths in 2019), which remained stable between 2000 and 2019.

Respiratory diseases were the third most common cause of death in Czechia in 2019, with chronic obstructive pulmonary disease (COPD) causing 2.9% of all deaths. Pneumonia caused 3.3% of all deaths.

Although the SDR attributable to external causes (injury or poisoning) has fallen markedly since at least 1970, external causes remained the fourth largest cause of death in 2019. Mortality from diabetes mellitus (type 2) was the fifth leading cause of mortality in 2019, responsible for 3.8% of all deaths. Notably, the SDR from diabetes (45.6 per 100 000) was the fourth highest in the EU after Croatia (96.05), Cyprus (56.06) and Malta (47.18) in 2019.

Infant mortality in Czechia has been decreasing for decades and stood at 2.6 deaths per 1 000 live births in 2019. Czechia has remained consistently below EU averages for infant mortality since 1999 and lower rates were reported only in Estonia (1.6), Slovenia, Finland, Sweden (all 2.1) and Italy (2.4) (Eurostat, 2022).

Health-related lifestyles and behaviours, such as dietary habits and smoking, contribute significantly to morbidity and mortality in Czechia. Fig. 1.2 shows that nearly half of all deaths in Czechia in 2019 can be attributed to behavioural risk factors, including dietary risks, tobacco smoking, alcohol consumption and low physical activity. Dietary risks contributed to more than one fifth of all deaths (23%, compared with 17% across the EU), closely followed by tobacco consumption at 20%. As a direct consequence of poor

dietary habits and low physical activity, obesity is a major concern. In 2019, 19.3% of adults in Czechia were obese, above the EU average of 16.0% (Eurostat, 2022); a similar share of obesity was self-reported by 15-year-old Czechs, which has increased in recent years (OECD/European Observatory on Health Systems and Policies, 2021). Smoking rates have remained high; 19.9% of those aged 15 years and older were daily smokers in 2019 (Eurostat, 2022).

FIG. 1.2 Risk factors affecting health, 2019



Source: OECD/European Observatory on Health Systems and Policies, 2021.

Note: The overall number of deaths related to these risk factors is lower than the sum of each one taken individually, because the same death can be attributed to more than one risk factor. Dietary risks include 14 components such as diet low in fruit and vegetables, high consumption of sugar-sweetened beverages. Air pollution includes exposure to fine particles (PM2.5) and ozone. Estimates refer to 2019.

Organization and governance

Chapter summary

- Stewardship and the policy process of the health system are vested at the national level, with the Czech Parliament responsible for legislation and the Ministry of Health (and subordinate agencies) responsible for regulatory, supervisory and to a certain degree the ownership roles.
- Czech health insurance funds (HIFs) are quasi-public, self-governing bodies functioning as purchasers and payers of health services for their members. There are seven HIFs and the largest is the General Health Insurance Company. HIFs collect SHI contributions from employers and individuals, though transfers from general tax revenue are made on a monthly basis and cover 51% of the population. Membership in a HIF is mandatory for citizens and permanent residents of Czechia.
- Major decentralization processes took place in 2003, with authority passing from the central government to 14 Regional Public Health Authorities. In the same year, the regional administrative system reform took place and was followed by changes to supervision and ownership of health care providers, which were passed onto the newly created regional administrations. In some areas of provision, notably highly specialized care, there have been centralization efforts over the past 15 years.

- There is no option to opt out of health insurance in Czechia, but members have the right to choose their HIF freely and have free choice of health provider. HIFs themselves are obliged to accept all applicants and risk selection is not permitted; HIFs compete for insured individuals through a variety of supplementary benefits. The basic benefits package is the same across all HIFs and the range of benefits covered is very broad.
- Patient rights in Czechia were strengthened legislatively beginning in 2011 and provide guarantees for patients regarding travel distance and waiting times, standardized treatments, access to medical records, translation services (when needed), treatment based on consent and complaint procedures, among others.

2.1 Historical background

2.1.1 *Early and mid-20th century developments*

Following Czechoslovakia's independence in 1918, the “Bismarckian” health system inherited from the Austro-Hungarian Empire was expanded and refined. In 1924, the sickness funds were reclassified as health insurance funds (*Zdravotní pojišťovna*, HIFs), reflecting an expenditure shift from cash benefits to benefits-in-kind. Although self-governing in character, HIFs were required to collect contributions for old-age and invalidity insurance. By 1938, more than half of the population of the Czechoslovakia was covered by compulsory health insurance (Nečas, 1938; Neklíček, 1994).

After the Second World War, Czechoslovakia fell within the Soviet sphere of influence and a Soviet-style centralist system of unified state health care based on the Semashko model was introduced in 1952. The state assumed responsibility for coverage and financed it through general taxation. All health care providers were nationalized and incorporated into Regional and District Institutes of National Health. The new system proved reasonably effective in dealing with the post-war problems of the early 1950s, enabling significant improvements in infant mortality rates and reductions in the prevalence of

tuberculosis, other serious infections and malnutrition. However, the system's design and rigidity proved unable to respond flexibly to new health problems stemming from lifestyle changes and environmental factors, resulting in a stagnation of most health status indicators between the late 1960s and the late 1980s. For more detailed descriptions on the historical background of the Czech health system, please refer to previous HiTs.

2.1.2 After 1989

The Velvet Revolution in 1989 led to democratization and reforms that had far-reaching effects on health care in Czechoslovakia and, later, Czechia. The principle of free choice of provider was introduced, and the Regional and District Institutes of National Health were dismantled. Primary care, outpatient (ambulatory) specialist care, the pharmaceutical industry, pharmacies and spa facilities were almost completely privatized, though hospitals remained publicly owned.

In the early 1990s, several key laws relating to the new health system were approved, including the General Health Insurance Act (1991), the Act on the General Health Insurance Fund (1991) and the Act on Departmental, Professional, Corporate, and Other Health Insurance Funds (1992). These shifted the health system towards SHI, with quasi-public, self-governing HIFs acting as payers and purchasers of care, primarily financed through mandatory, wage-based contributions. The first established entity was the General Health Insurance Fund (*Všeobecná zdravotní pojišťovna*, VZP) in early 1992, which remains the largest HIF in Czechia, followed by others shortly after. The number of HIFs operating in Czechia peaked at 27 in the mid-1990s, though their numbers decreased dramatically in the following years and stabilized at nine in the early 2000s. One new HIF has since been established, and, after several mergers, the number of HIFs settled at seven in 2012, where it remains at the time of writing.

As a result of these reforms, HIFs contracted an increasing number of state and private health care facilities on a fee-for-service (FFS) basis, leading to unsustainable costs. In 1997, FFS payments were replaced by capitation fees for primary care and by fixed, prospective budgets for hospitals. The FFS scheme was also modified for outpatient specialists by introducing prescription

limitations, followed later by pharmaceutical budgets and limits on the volume of services to be fully reimbursed.

Following governance reforms in 2003, ownership of approximately half of the hospitals was transferred from the central government to 14 newly formed, self-governing regions. Some regions later decided to change the legal incorporation of their hospitals from entities directly subordinate to regional authorities to joint-stock companies (see Section 2.3). A system of user fees was introduced in 2008, though due to popular opposition it was gradually dismantled and abolished by 2015 (with a few exceptions, see Section 3.3.1). Fees for some defined higher-standard health services were introduced in 2012 and quickly abolished (Constitutional Court of the Czech Republic, 2013).

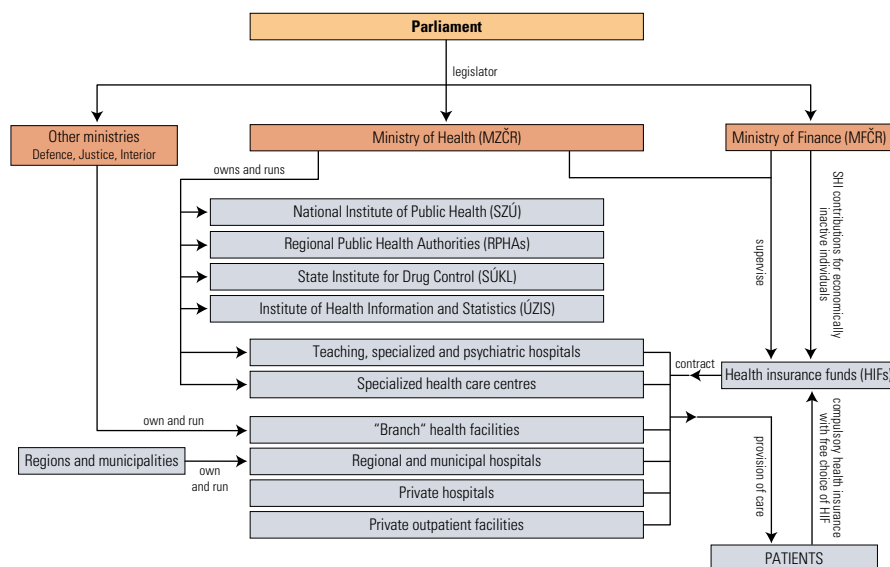
2.2 Organization

The health system in Czechia has three main organizational features:

1. SHI with virtually universal membership and a broad benefits package, funded primarily through compulsory, wage-based contributions and government transfers from general taxes;
2. Diversity of provision, with outpatient care providers (mainly private) and hospitals (mainly publicly owned, with different legal forms) contracted by HIFs; and
3. Joint negotiations by key actors within defined segments of care and reimbursement issues, supervised by the government.

The universal accessibility of health care is stipulated by legislation, particularly the Health Insurance Act (*Zákon o veřejném zdravotním pojištění 48/1997 Sb*). Membership in one of seven HIFs is compulsory for all Czech citizens residing in the country, including the self-employed, as well as for permanent residents of Czechia and foreigners employed by companies based in Czechia. HIFs compete for insured individuals through a variety of supplementary benefits to the standard benefits package. In setting the health policy agenda, the Ministry of Health (*Ministerstvo zdravotnictví, MZČR*) and its agencies are the most influential, together with HIFs and – to a lesser extent – professional associations (see Fig. 2.1).

FIG. 2.1 Overview of the Czech health system



Source: Authors' own compilation.

Note: “Branch” health facilities serve employees of respective ministries, as well as soldiers and prisoners, but are sometimes open to other individuals as well. HIF: health insurance fund; SHI: statutory health insurance.

2.2.1 National level

The state itself plays many roles, including that of legislator (Czech Parliament); tax collector and source of contributions to SHI for the economically inactive, state-insured through the state budget transfers (Ministry of Finance (*Ministerstvo financí*, MFČR)); owner of health care facilities (MZČR, Ministries of Defence and Justice); investor of domestic and structural funds; and regulator (MZČR and MFČR).

MZČR is a central administrative body, and its responsibilities include ensuring the protection of public health; licensing health professionals (including dentists); defining networks of highly specialized care centres; administering and regulating facilities under its direct management; exploring and regulating natural curative sources (for example, spas and natural mineral waters); overseeing reimbursement negotiations; and supervising HIFs (jointly, with MFČR).

MZČR directly administers large hospitals with supra-regional spheres of influence, including teaching hospitals and some highly specialized tertiary care facilities. All psychiatric hospitals and some therapeutic centres are managed by MZČR, which also supervises agencies charged with protecting public health: the National Institute of Public Health (*Státní zdravotní ústav*, SZÚ), two other Institutes of Public Health (arising from a 2012 reform, see Section 5.1), and 14 regional public health authorities (*Krajské hygienické stanice*, RPHAs). These institutions are directly subordinate to, and managed by, the Chief Public Health Officer. Responsibilities of these agencies range from research to occupational safety, as well as infectious disease control (including COVID-19).

Another agency under MZČR, the State Institute for Drug Control (*Státní ústav pro kontrolu léčiv*, SÚKL) is charged with ensuring the safety and quality of pharmaceuticals and medical devices and aids (MDAs) in Czechia. It is responsible for reviewing clinical trials; registering pharmaceuticals and MDAs; monitoring adverse events; supervising production and distribution, including pharmacies; and managing pharmaceutical and MDA registries. Since 2008, SÚKL has also been responsible for setting maximum prices and reimbursements for pharmaceuticals covered by SHI, and for managing reimbursement procedures for MDAs since 2019. Finally, the Institute of Health Information and Statistics (*Ústav zdravotnických informací a statistiky*, ÚZIS), is an agency of MZČR responsible for managing the National Health Information System (*Národní zdravotnický informační systém*, NZIS), including the various health registries, as well as the administration of the diagnosis-related group (DRG) system (see Section 3.7.1).

2.2.2 Regional level

Regional authorities are responsible for registering private facilities, including individual private practices and inpatient facilities that are not directly subordinate to the state or regional governments (so-called budgetary organizations). Although registration is a necessary condition for being allowed to provide health services in Czechia, registration itself does not automatically translate to receiving SHI reimbursements. Czechia's regional governments also own various hospitals and so also take on the roles of investor and coordinator. Regions also play a key role in emergency care (see Section 5.5).

2.2.3 Health insurance funds

HIFs administer and collect compulsory, wage-based SHI contributions from employers and individuals and pay for health services provided to their members based on contracts with providers. They are also responsible for maintaining a network of contracted providers to comply with time and distance accessibility requirements, set by law, for all members. HIFs, however, do not have much power to influence where providers are located (see Section 4.2.1).

VZP, as the largest HIF (covering 56% of population), also serves as the clearing centre for redistribution of SHI contributions and state budget transfer to the seven HIFs according to a risk-adjustment scheme (see Section 3.3.3).

2.2.4 Professional organizations

There are three professional health care organizations established by law in Czechia: the Czech Medical Chamber (*Česká lékařská komora*), the Czech Dental Chamber (*Česká stomatologická komora*) and the Czech Chamber of Pharmacists (*Česká lékárnická komora*). Membership within a chamber is compulsory for practising physicians, dentists and pharmacists. The chambers represent their members' interests and are responsible for ensuring ethical behaviour, including care provision and members' life-long education. They are non-profit organizations, and their expenses are covered exclusively by membership fees, donations and proceeds from any penalties against members (for example, for violating ethical codes).

There are several associations with voluntary membership, including the Association of General Practitioners (*Sdružení praktických lékařů*) and the Association of Ambulatory Care Specialists (*Sdružení ambulantních specialistů*); these represent their members in annual negotiations with HIFs on reimbursement rates. The Czech Medical Association of J. E. Purkyně (*Česká lékařská společnost Jana Evangelisty Purkyně*, ČLS JEP), an umbrella organization of physicians, pharmacists and other non-physician health workers with over 37 000 members, promotes the development and distribution of evidence-based medical knowledge and supports its use (ČLS JEP, 2021). The association closely cooperates with MZČR on various projects, including educating the public on prevention and healthy lifestyles, and quality of care

assessments. The largest professional organization for nurses in Czechia is the Czech Association of Nurses (*Česká asociace sester*).

There are also four hospital associations that serve as interest groups for inpatient facilities:

- the Association of Hospitals of the Czech Republic (*Asociace nemocnic ČR*);
- the Association of Czech and Moravian Hospitals (*Asociace českých a moravských nemocnic*);
- the Association of Private Hospitals of the Czech Republic (*Sdružení soukromých nemocnic ČR*);
- and the Association of Regional Hospitals (*Asociace krajských nemocnic*),

Professional organizations, upon nomination by the minister, can participate in MZČR's Working Group, which negotiates the fee schedule referred to as the List of Health Services (*Seznam zdravotních výkonů*. LHS). The Working Group is based at MZČR and consists of several stakeholders, including professional chambers and other organizations, representatives of hospitals, HIFs and others (see Section 2.7.3).

2.3 Decentralization and centralization

There have been both decentralization and centralization trends in the Czech health system over the past 20 years. An important development took place in 2003, when a regional administrative system (made up of 13 regions plus the capital of Prague) replaced the previous governance structures at the district level. Since then, regional authorities in Czechia have overseen various matters related to health care, social services, education and other areas of public administration. Lower levels of governance allowed for decentralization in health care, including the ownership of emergency units, long-term care (LTC) institutions (minus psychiatric hospitals) and transferring hospitals to regional control. Several regions later decided to convert the legal and management structures of their hospitals to joint-stock ("corporatized") companies, with regional authorities remaining sole shareholders; this was the result of a process beginning in 2004, when regional authorities took over regional hospitals, and, in the aim of increasing efficiency, corporatized them. At the same time, some smaller hospitals were transferred to municipalities or privatized.

The regional governments' mandate also included compliance (registration and oversight of equipment and personnel) for outpatient care providers and the organization of any out-of-hours outpatient care (generally provided in regional hospitals).

Along with the public administration reform, health administration in Czechia was decentralized. In 2003, the central government ceded authority to 14 newly created RPHAs, which function as offices under MZČR. Each of them acts independently on some issues, which created an obstacle to efficiently managing the COVID-19 pandemic because no strict central guidelines on implementing protective measures existed; measures to overcome this were proposed in 2022 (see Section 6.2)

Highly specialized care in select medical fields was gradually centralized from 2008 to 2011, though not on a regional basis. Through this process, MZČR aimed to improve safety and quality by ensuring that specialized treatments for polytraumas and diseases such as stroke, acute myocardial infarction and cancer were delivered in facilities with adequate technology and skilled personnel able to treat complicated cases (Bryndová et al., 2021).

2.4 Planning

Planning in the Czech health system involves MZČR playing a major role by establishing general frameworks on scope, conditions and requirements for provision (see Box 2.1). Other stakeholders involved are HIFs, teaching and regional hospitals, and regional authorities.

The Strategic Framework for the Development of Health Care in Czechia until 2030 (*Zdraví 2030* or Health 2030) is the government's current main strategic document (MZČR, 2020a). It was adopted in 2019 and later updated in response to the COVID-19 pandemic. The plan promotes seven priority areas: (1) primary care reform; (2) disease prevention, health promotion and protection, and increasing health literacy; (3) implementation of integrated care models, integration of health and social care, and mental health care reform; (4) health workforce stabilization; (5) health sector digitalization; (6) optimization of the reimbursement system; and (7) involvement of science and research in solving priority tasks (MZČR, 2020a). Health 2030's development was supported by an extensive analytical study prepared by ÚZIS (2019b), based on the data available from the National Healthcare Information

BOX 2.1 Capacity for policy development and implementation

With limited access to quality data, regional authorities face challenges in effective planning, unless they have their own databases. ÚZIS has plans to provide them with key information, such as regional-level mortality rates from selected diseases and capacity reviews; ÚZIS has already provided some regions with these regional-targeted analyses, though work on the remaining regional reports was suspended due to COVID-19. Effective planning (on any level) is also hindered by the non-existence of systematically captured data on waiting times and unmet needs (see Sections 7.1 and 7.2).

In 2021, MZČR launched a project on setting up a health system performance assessment (HSPA) framework, financially supported by the European Commission with OECD's technical assistance. The HSPA framework serves to assess the strengths and weaknesses of the Czech health system, also in the context of international comparisons and time development. Among others, it supports stakeholders to identify needs for particular focus within their agendas and enable evaluations of implemented measures. For policy-makers, it will flag undesirable developments, no developments, or worsening of a particular indicator. Overall, this framework aims to improve dissemination of information on the state of the Czech health system, population health status and health care outcomes, thus contributing to better policy development.

Portal (*Národní zdravotnický informační, NZIP*) (see Section 2.8.1). The preceding strategy, Health 2020, was last evaluated in 2018 and concluded that “the implementation of the strategy was largely delayed due to insufficient financial coverage of the planned activities” (MZČR, 2018d).

In response to the COVID-19 pandemic, the National Recovery Plan, funded by the European Commission (an expected EUR 7 billion for Czechia, out of which roughly EUR 0.5 billion should go to the health sector), aims for several investments, particularly for research and development (aim 5.1), increasing health system resilience (aim 6.1), and strengthening cancer prevention and care (aim 6.2) between 2021 and 2026 (MPO, 2021).

Regarding financial planning, each HIF is obliged to develop its financial and operating plan (*zdravotně pojistný plánů*) on an annual basis for the coming year, including an outlook for the subsequent 2 years ahead. This serves as a business plan, and also contains plans on contracting and purchasing policies, and resource use. The plans are reviewed by MZČR, in collaboration

with MFČR. Following governmental approval, plans are submitted for approval to the Chamber of Deputies. This process can be lengthy, and plans may not be approved before the actual year starts; when this occurs, HIFs operate as if their plans had been approved (see Section 2.7.1). The following year's plan evaluates compliance with the preceding one and adjusts expectations on revenues and expenditures for the years ahead accordingly.

Regional authorities have recently taken on more planning responsibilities, although they are not legally obliged to. Most of them have created Regional Healthcare Concepts (*Koncepce krajského zdravotnictví*), addressing relevant issues within their region. These may include personnel and financial stabilization, coordination among providers (public and private) and strengthening certain fields, among others (see, for example, the Healthcare Concept of the *Hradec Králové* Region for the period 2021–2025).

All hospitals subordinate to MZČR are required to produce financial and investment plans and submit them to MZČR for regular review. Similarly, regional hospitals report their financial and investment plans to their respective regional authority.

2.5 Intersectorality

To enhance cooperation between different public stakeholders in achieving specific health policy goals, Health 2030 tasks MZČR and its subsidiary bodies first and foremost with execution. Other national and regional authorities are also tasked with cooperating to achieve Health 2030's objectives and to take it into account when preparing departmental or regional strategic documents.

MZČR works with the Ministry of Education, Youth and Sports (*Ministerstvo školství, mládeže a tělovýchovy*, MŠMT) to raise awareness of health issues among school-aged children with educational campaigns to reduce health inequalities. SZÚ organizes preventive campaigns and programmes for schools promoting healthy nutrition and lifestyles. This is a long-term initiative, with higher focus devoted to schools in socially deprived areas. Additionally, the Ministry of Agriculture promotes the school programme “Fruit, vegetables, and milk to schools” to increase healthy diets, and SZÚ is tasked with evaluating the programme's achievements. An interdepartmental committee at SZÚ has been dealing with iodine deficiency among the

population since 1995 and includes experts from the health, agriculture and food production sectors. In 2004, the World Health Organization (WHO) declared that iodine deficiency in Czechia had been successfully managed (though it is still monitored on a continuous basis). The Czech Agriculture and Food Inspection Authority, under the Ministry of Agriculture, is responsible for the supervision of safety, quality and labelling of foodstuffs. If harmful substances are detected, the Czech Agriculture and Food Inspection Authority is responsible for informing the public.

Occupational health and safety are explicitly stated in the Czech Labour Code. Employers must protect their employees from health risks and injuries in the workplace. Professions exposed to increased risk of health, damage or injuries are classified into several groups; those in the highest categories receive additional remuneration or holidays within a range set by the government, as defined in the code.

During the COVID-19 pandemic, the national response was led by MZČR (including the Chief Public Health Officer, who is also a Deputy Minister of Health), the COVID-19 Central Management Team (chaired by another Deputy Minister of Health) and the Central Crisis Staff. The Central Crisis Staff is a working body of the government responsible for crisis management chaired by the Minister of the Interior or the Minister of Defence; its chair submits recommendations to the Security Council of the State and, if necessary, directly to the government. The COVID-19 Central Management Team was originally established as an advisory entity to the government and was later re-established as MZČR's advisory body, tasked with implementing most of the government's COVID-19 plan. For details, see the Health System Response Monitor on Czechia (HSRM, 2022) and Sagan et al. (2021).

MZČR collaborates with MFČR on public health through excise taxes on alcohol and tobacco use, though excise tax increases are often driven by budgetary concerns. The tax on alcoholic beverages was most recently increased in 2020, included as part of a wider package to boost revenues (MFČR, 2019a). Tobacco taxes have increased every year since 2020 and will continue to increase through 2023, as approved in late 2020 (Act no. 609/2020 Coll.).

2.6 Health information systems

Almost every health care provider in Czechia uses a computerized information system to charge HIFs for services, pharmaceuticals and materials provided. All HIFs follow a standardized procedure for transmitting claims data from providers and use an information structure managed by VZP. Reimbursement databases have recently been used also for economic analyses, though the data (due to their structure) are not readily suitable for disease management and other health-related analyses.

Data for health policy and research purposes are collected by ÚZIS, whose main tasks are to manage and refine the NZIS. By collecting and processing information concerning health status and care and providing information for research purposes, the NZIS ensures compliance with data privacy laws and has 12 health registers. These include the National Cancer Register, the National Register of Hospitalized Patients, the National Register of Healthcare Providers, the National Register of Health Professionals and the National Register of Reimbursed Health Services. Data in the registers are periodically provided by providers, administrative authorities, HIFs and educational facilities (usually monthly, quarterly or annually) (MZČR, 2016).

The National Register of Healthcare Providers contains publicly available information on all health services (though not information on health workers); it also includes social care providers who, under specific legal circumstances, provide health services. Data from other registers are available to lawfully listed institutions (MZČR, medical chambers, SÚKL, etc.). ÚZIS also makes some information available via its analyses, and some data can be requested (according to the guarantee on free access to information) (Act no. 106/1999 Coll.).

ČSÚ determines the Programme of Statistical Surveys, which lists the reports that MZČR (through ÚZIS) annually requires from all providers (both public and private), mainly including aggregate data on treated patients, information about available personnel and physical resources, including wages of health workers, and the provider's economic situation (only for inpatient facilities). The reports are customized for around 60 segments of outpatient care (including the number of examinations, registered and treated patients) and inpatient care (including categories of services provided and average waiting times for chosen services, though these data are not systematically collected, meaning that inpatient facilities rely on estimates); not all information from

these reports is made publicly available, however. ČSÚ publishes data on health accounts (health expenditures) in the System of Health Accounts structure. Some public health data are also gathered by RPHAs and SZÚ and are analysed and published by SZÚ, such as data on infectious diseases, health-risk factors and environmental measures (such as bathing water quality).

Quality indicators, like performance success rates for individual providers, are generally not available to patients, even though both internal (obligatory) and external (voluntary) quality assessments take place. The Health Insurance Bureau (*Kancelář zdravotního pojištění*, HIB) runs the Quality Indicators Portal, making measurement and monitoring indicators accessible to target stakeholders (for example, HIFs, providers, state authorities and professional organizations) for better decision-making and quality improvement – at the time of writing, these included measures related to treatments in gynaecology, surgery, neurology and prescriptions. In the future, the HIB would also like to publish selected data (such as number of services performed) to improve the orientation of the general public regarding health services in Czechia (HIB, 2021).

External quality and safety assessments are voluntary and used to assess the organizational level of care provision in inpatient facilities, based on assessment standards. These are performed by certified individuals or organizations and are valid for 3 years (Health Service Act, 2011). A comprehensive review of health care quality in Czechia was last conducted by the OECD (2014).

Some providers (mainly inpatient facilities) also distribute patient satisfaction questionnaires for their own purposes. In 2020, MZČR launched the National Patient Satisfaction Assessment, the aim of which was to standardize part of the internal quality assessment. The evaluation takes the form of a questionnaire, and the provider participation is voluntary; results are intended for internal management use rather than public rankings.

Further advances in information technology (IT) and eHealth are discussed in Section 4.1.3.

2.7 Regulation

With a system based on compulsory SHI, the organizational relationship between HIFs and providers is based on long-term contracts. In terms of regulation, the main actors for the health system are the Czech Parliament, which sets the legal regulatory framework (including the basic benefits package, as detailed by legislative acts), and MZČR and MFČR, which jointly oversee HIFs. SÚKL and MZČR have regulatory roles for pharmaceuticals and MDAs, while regional authorities register and supervise outpatient providers and inpatient providers other than those operated by the state. Inpatient facilities directly subordinate to the Ministries of Health or Defence are directly overseen by these ministries. MZČR is also responsible for licensing health professionals.

2.7.1 Regulation and governance of third-party payers

HIFs operate as quasi-public, self-governing bodies that collect SHI contributions and purchase health services. The state, through MZČR and MFČR, plays key roles in the regulation and governance of HIFs. Both ministries also have representation on the boards of trustees (*správní rada*) of HIFs and so have a say in managerial decisions.

HIFs are not permitted to make profits and are open to any applicant who is legally entitled to health insurance in Czechia; risk selection and cream-skimming are not permitted. Although all HIFs fundamentally serve the same purpose, there is a special law establishing and governing VZP (Act no. 551/1991 Coll.) while establishment of all other HIFs is from a different law (Act no. 280/1992 Coll.). VZP differs from the others regarding its role as an insurer of the last resort (in case of a HIF's bankruptcy or insolvency), and because its solvency is explicitly guaranteed by the state.

VZP also differs from other HIFs in terms of its organizational structure and governance. There is a legal requirement to have 14 VZP regional branches, one in and for each Czech region. Though other HIFs are smaller in population share and/or geographical presence, they are free to expand if they so choose; most general practitioners (GPs), outpatient specialists and hospitals contract with all HIFs relevant in their region. The smallest HIF is the Škoda Employee Insurance Fund (*Zaměstnanecká pojišťovna Škoda*), insuring around 1.4% of the Czech population (nearly 150 000 members, and open to all).

HIFs are managed by directors, who in turn are appointed by trustee boards. The boards provide oversight of their respective directors and the decisions they make, which can include calling on directors to change decisions or limiting their managerial authority. Furthermore, certain directorial decisions explicitly require prior board consent, as defined by law. In the case of VZP, the board has 30 members, 10 of whom are nominated by MZČR and appointed by the government; the other 20 are elected by the Chamber of Deputies in proportion to the parliamentary parties' strength. Members of the board are not personally liable for decisions made by the board as a whole or for VZP's performance.

For other HIFs, board compositions are based on a system of tripartite representation. One-third of board members are appointed by the government; another third of members are elected among employers contributing the largest shares of the given HIF's collected contributions (usually from industry, but in some cases also from civil service); and the remaining third of the board members are elected representatives from the HIF's insured members, usually from labour unions at firms with significant employer contributors to the respective HIF. The election procedures for the latter two groups legally changed in 2020, broadening the eligibility for employers to nominate candidates and for more participation for insured members outside labour unions, respectively. Altogether, these HIFs have 15 board members. Like their VZP counterparts, board members bear no personal liability for board decisions or for the HIF's performance.

All HIFs also have supervisory boards (*dozorčí rada*) as their highest level of governance; the narrow scope of regulatory oversight means, however, that their roles are rather limited. Their main tasks are to ensure that HIFs follow internal rules and adhere to a set financial and operating plan. VZP's supervisory board consists of 13 members, with MZČR, MFČR and the Ministry of Labour and Social Affairs (*Ministerstvo práce a sociálních věcí*,

MPSV) each nominating one member to be appointed by the government, while the other 10 are elected by the Chamber of Deputies, again using a proportional method based on parliamentary representation. The supervisory boards of the other HIFs consist of nine members and are based on a system of tripartite representation similar to that used to constitute the trustee board. MZČR, MFČR and MPSV each nominate one member to be appointed by the government.

To ensure that HIFs are held accountable for their performance, they are obliged to submit their financial and operating plan for the next year every autumn, including the outlook for next 2 years ahead. After the plan is approved by a HIF's board, it is submitted to MZČR, which reviews the document in collaboration with MFČR. Subsequently, the plan is sent for governmental approval, and is then submitted for final approval to the Chamber of Deputies. If the plan is not approved before the start of the following year, a HIF acts according to the submitted plan. A similar procedure is used for approving the final accounts and annual reports of HIFs. However, plan approval is rarely withheld, nor are they often amended, so main oversight and de facto approval lie with MZČR and MFČR.

On a quarterly basis, HIFs submit their financial reports and other requested information to MZČR and MFČR for review; they also carry out regular inspections and spot checks. If irregularities or errors are identified, MZČR may call for correction. In very serious cases, MZČR can place a HIF under forced administration or, as a measure of last resort, can revoke its operating licence. This may happen, for example, in cases of poor economic performance, if a HIF is in serious debt or cannot meet its liabilities, or because of failure to comply with the public interest. Members of a HIF whose licence has been revoked are automatically switched to VZP. Since the 1990s, there has been only one example of forced administration; VZP was put under forced administration for almost 6 months due to poor economic performance and large debts in 2005.

With regard to the HIFs' internal accounting systems, MFČR publishes a directive that (1) specifies the different accounts that HIFs must create, and (2) limits transfers between these accounts so that, for instance, only a certain percentage of revenues can be spent on operating expenses. Examples of internal accounts include a reserve account; an account for financing health promotion programmes; an account for financing investments; an account to cover operating expenses; and, of course, an account for reimbursing providers for services. Health promotion accounts are used to reimburse members, such

as for non-SHI-covered vaccinations and sporting activities, though this may differ among HIFs (see Section 3.3.1).

Finally, to create a new HIF, applicants must apply for a licence from MZČR. During the licensing process, the application is reviewed by MZČR and MFČR. Both may request to review additional information or supporting documents. MZČR must decide on the application within 180 days of receiving it. If all conditions are fulfilled, the applicant is legally entitled to a licence; only legal entities residing in Czechia may apply. Applicants are required to set aside financial reserves (in the reserve account described previously) before being licensed; after a HIF is established, the reserve should function as a financial buffer in case of a temporary liquidity shortage. Within 1 year of establishment, a new HIF must prove that it has at least 50 000 insured members. Mergers of HIFs have to be approved by MZČR, which assesses that the merger is not disadvantageous to the existing system. Mergers occurred in the past either if one faced financial difficulties or in order to benefit from shared structures and increased efficiency; the last merger took place in 2012.

2.7.2 *Regulation and governance of provision*

The regional authorities are responsible for authorizing health service provision for outpatient providers as well as inpatient providers that are not directly subordinate to any ministry or region. That said, apart from teaching hospitals and state-owned specialized inpatient facilities, and regional hospitals that were not transformed into commercial companies (regional hospitals that remained directly subordinate, so-called budgetary organizations of a region), all other providers must be authorized by their respective regional authority in order to provide services (see Table 2.1).

As part of the authorization process, the type and scale of services that providers are permitted to provide are defined. Since 2012, the minimal staffing and technical requirements are legally defined and binding for all providers (Health Service Act, 2011); providers must also comply with hygiene requirements, among others. Any changes to the information provided during the authorization process, including a change in professional staff, must be reported to the respective regional authority. In addition, providers must report any change that occurs regarding the scope of their authorization to the National Register of Healthcare Providers (for example, places of provision or operating hours).

TABLE 2.1 Overview of regulation of providers

	LEGISLATION	PLANNING BODY RESPONSIBLE	AUTHORIZING BODY RESPONSIBLE	QUALITY ASSURANCE / COMPLIANCE WITH PROVIDER AUTHORIZATION
Outpatient care	Health Service Act (Act no. 372/2011 Coll.)	Regional authorities for the out-of-hours outpatient care only	Regional authorities	1. Regional authorities; 2. Independent private entities, accredited by MZČR for the voluntary process of quality and safety assurance; 3. Czech Medical Chamber; 4. State Office for Nuclear Safety (<i>Státní úřad pro jadernou bezpečnost</i>, SÚJB)
Inpatient care	Health Service Act	n/a	1. MZČR; 2. Regional authorities (for regional and local hospitals)	1. MZČR; 2. Independent private entities, accredited by MZČR for the voluntary process of quality and safety assurance; 3. SÚKL; 4. SÚJB
Dental care	Health Service Act	Regional authorities for the out-of-hours dental care only	Regional authorities	1. Regional authorities; 2. Independent private entities, accredited by MZČR for the voluntary process of quality and safety assurance; 3. Czech Dental Chamber; 4. SÚJB
Pharmaceuticals (outpatient)	Health Service Act; Act no. 378/2007 Coll. (on pharmaceuticals)	Regional authorities for the out-of-hours pharmaceutical care only	Regional authorities	1. Regional authorities; 2. SÚKL; 3. Czech Chamber of Pharmacists
LTC (provided outside hospital settings)	Health Service Act; Act no. 108/2006 Coll. (on social services)	n/a	Regional authorities	Regional authorities

Source: Authors' own compilation.

Note: LTC: long-term care; MZČR: Ministry of Health (*Ministerstvo zdravotnictví*); SÚJB: State Office for Nuclear Safety (*Státní úřad pro jadernou bezpečnost*); SÚKL: State Institute for Drug Control (*Státní ústav pro kontrolu léčiv*).

Upon completing the authorization process, a provider may either (1) start its operations thereafter by taking out-of-pocket (OOP) payments (seen in dental care or cosmetic surgery) or (2) try to conclude a contract with HIFs under the condition that a mandatory selection process, organized by MZČR for inpatient providers and by the regions for outpatient providers, establishes a proof of need for the new provider or for the extended services of an existing provider. Concluded contracts may not always be identical to a provider's full range of authorized services, meaning that providers may offer other (but authorized) services for OOP payments. Additionally, a contract with one HIF does not guarantee contracts with all HIFs. HIFs cannot sign new contracts without the above-mentioned selection procedure taking place and establishing the proof of need.

MZČR is also responsible for licensing health professionals, including physicians, dentists, nurses, pharmacists and paramedics. Licensing procedures consider applicants' professional qualifications along with performance on standardized state licensing examinations (*státní atestační zkouška*). For more information on training and licensing of health professionals, see Section 4.2. To open a private practise, licensed physicians must apply for authorization from their respective regional authority, as described above.

All inpatient providers are legally obliged to have an internal system in place for monitoring quality, though no external authority collects or reviews the results. MZČR offers some guidance regarding the scope and organization of internal quality monitoring, but providers are free to choose how to do it.

There is no system-wide compulsory accreditation system for quality standards. Accreditation process for providers is voluntary, however it can only be performed by an accredited third party that fulfils the legal requirements of independence and professional background and staffing; MZČR grants these third-party accreditations. Any organization fulfilling the accreditation requirements can apply; these criteria were created over the past decade to standardize accreditation organizations.

To define networks that ensure the delivery, accessibility, proper utilization and staffing of specialized treatment, MZČR can assign inpatient providers the status of being highly specialized health care centres; this procedure is described in law (Health Service Act, 2011). MZČR publishes the list of highly specialized centres for each selected medical specialty in its decrees (see Section 5.4.3). Centres are subject to quality indicator reporting and regular monitoring of their compliance with centre requirements as defined in the application process (Bryndová et al., 2021).

Since 2015, the Agency for Health Care Research of Czechia, a state agency directly subordinate to MZČR, is responsible for the development of clinical guidelines. The project is currently in its pilot phase, with 19 clinical guidelines developed and approved as of May 2022, and 24 more being prepared or consulted (KDP, 2022).

2.7.3 *Regulation of services and goods*

BASIC BENEFITS PACKAGE

The range of benefits covered by SHI in Czechia is very broad (see Section 3.3.1). A combination of means is used to define the basic benefits package; the most important of them is legislation, namely the Health Insurance Act (1997). Any changes in defining the benefits package, or to the positive and negative lists of benefits, require an approval from parliament and the president. Proposals are usually submitted by the government, though regions and members of both parliamentary chambers can propose new legislation or amendments. The five annexes to the Health Insurance Act define (1) negative lists (namely, explicitly excluded services) and (2) positive lists on pharmaceutical substances, MDAs, dental aids and procedures, and a spa treatment indication list.

The principal of a basic benefits package being defined by law was put forward in a 2013 court decision abolishing the above-standard care co-payments (Alexa et al., 2015). Although the ruling found a system of above-standard procedures was legally sound in principle, the court took the view that a list of them must be specified by law and not, as was the case, only by governmental decree (Constitutional Court of the Czech Republic, 2013).

SÚKL is responsible for determining the list of pharmaceuticals covered by SHI and the depth of their coverage, which is done via reference pricing and Anatomic Therapeutic Chemical (ATC) groups for prescription pharmaceuticals (see Section 2.7.4).

Benefits are also rationed by the LHS, a fee schedule known as the List of Health Services (*Seznam zdravotních výkonů*) that is issued as a directive from MZČR. The LHS is primarily intended for reimbursement purposes, but for everyday practice it serves as a positive list of benefits. The LHS is updated annually based on decisions taken within the Health Services Working Group; any stakeholder can propose modifications. In addition to the applicant who requests a change, the Working Group includes representatives of MZČR,

ČLS JEP, the outpatient and inpatient providers' associations (including for physicians and nurses), representatives of HIFs and a patient representative. The group meets on a continuous basis throughout the year and decides, based on a consensus procedure, which LHS items will be added, removed or modified. At the end of each year, the updated LHS is issued as a directive by MZČR. The last amendment to date, which amended MZČR Directive no. 134/1998 Coll., on the List of Health Services and Point Values (MZČR, 1998), resulted in the LHS containing 3 995 items for 2022 (MZČR, 2021a).

HEALTH TECHNOLOGY ASSESSMENT

There is no public body systematically conducting comprehensive analyses of gathered information to enable evidence-based policy approaches.

In 2021, Health Technology Assessment was not used systematically in SHI coverage or reimbursement decisions, except for pharmaceuticals. Only some evidence-based criteria are taken into consideration when there are requests to change the LHS. For instance, applicants are required to submit a range of evidence that includes an assessment of efficacy, a comparison with existing treatments (if possible), a projection of expected costs to the SHI system, and a description of the mechanisms of reimbursement employed in foreign countries.

For the process of setting reimbursement rates for pharmaceuticals, SÚKL requires applicants to supply evidence of the clinical effectiveness and cost-effectiveness of a pharmaceutical as well as an analysis of the impact a positive reimbursement decision would have on the SHI system (SÚKL, 2020).

2.7.4 Regulation and governance of pharmaceuticals

REGULATION OF PHARMACEUTICAL PRODUCTS

MZČR, the Ministry of Environment, SÚKL and SÚJB are responsible for the regulation and governance of pharmaceuticals.

MZČR approves and controls specific treatment programmes; regulates the use of non-registered pharmaceuticals (for example, within specific treatment programmes or in case of a threat to public health (Act no. 378/2007 Coll.))

takes part in the preparation of the European pharmacopoeia; defines the Czech pharmacopoeia that describes the parameters of pharmaceuticals production and manipulation; and controls and makes publicly available lists of individuals authorized to dispose of unused or expired pharmaceuticals.

The Ministry of Environment assesses pharmaceuticals containing genetically modified organisms and assesses impacts of pharmaceuticals on the environment. In the case of radiopharmaceuticals, SÚJB also takes part in the registration and clinical assessment.

SÚKL is the main regulatory body for pharmaceuticals. It is responsible for the supervision of properties of medicinal products for humans. SÚKL's activities relate to monitoring of quality, safety and efficacy of pharmaceuticals in all stages of development, sale and use. For this purpose, SÚKL uses a system of preliminary reporting, authorization procedures, inspections, laboratory controls and monitoring of practical use of medicines. SÚKL is entitled to act when a risk to public health arises, to impose penalties and to request necessary documentation. Furthermore, SÚKL authorizes access for pharmaceuticals before their entry onto the Czech market. The market authorization procedure includes an assessment of a dossier, in which a prospective authorization holder describes the safety, efficacy and quality of the product. The indications, contraindications, dosage of the product, general classification for supply, and the package patient leaflet are also assessed. During the registration process, SÚKL classifies pharmaceuticals into one of the four categories: prescription only, prescription only with restriction (for example, opioids, cannabis for therapeutic purposes, abortion pills), without prescription and without prescription with restriction (for example, pseudoephedrine – restriction on quantity).

For prescription pharmaceuticals and those with restrictions, an electronic system from SÚKL is in place. Since January 2018, it is obligatory for all providers to issue prescriptions in electronic form. Since mid-2020, full patient records on prescribed pharmaceuticals are available to attending physicians and to pharmacists; a patient can deny access to their individual record for a particular provider or to all, or selectively allow access for some providers. The system also allows for polypharmacy checks and control of potential duplicate prescriptions.

SÚKL also identifies and sanctions illegal conduct; the European regulation on counterfeit pharmaceuticals, including the unique-per-package barcode monitoring, is fully established in Czechia. Activities requiring

effective authorization and supervision by SÚKL include manufacturing, import, distribution, supply or sale, preparation and parallel import, performing clinical trials and reference laboratory activities.

In 2013, the surveillance activities of SÚKL were extended to narcotic and psychotropic substances. SÚKL is also charged with the surveillance of quality and safety of human tissues and cells intended for use in humans.

REGULATION OF WHOLESALERS AND PHARMACIES

Wholesalers need permission from SÚKL to distribute pharmaceuticals; SÚKL may fine them or suspend or cancel their permission to distribute pharmaceuticals. All pharmacies have to be registered by SÚKL and meet certain requirements on staff education and training. There is no limit on the number of pharmacies.

Generic substitution has been allowed in pharmacies since 2008, conditional upon the same active substance and the same mode of administration.

Mail-order and Internet pharmacies have to be listed by SÚKL, and sales are limited to over-the-counter pharmaceuticals without volume or frequency restrictions; pharmacies are responsible for ensuring safe delivery and providing pharmacists for consultations during office hours. At the time of writing, extending mail-order pharmacies to cover prescription pharmaceuticals has been under expert discussion, though not yet under serious legislative consideration.

SYSTEM FOR PRICING PRESCRIPTION PHARMACEUTICALS

Since 2008, SÚKL has been responsible for determining the maximum prices of pharmaceuticals and for determining the level and conditions of reimbursement. Only the prices of pharmaceuticals covered by SHI are regulated and the price regulation is based on two mechanisms: (1) the maximum end-customer price – this is the average of the three lowest prices in the EU, and (2) a maximum trade margin determined by the so-called Price Decree from MZČR (usually a certain proportion of the ex-factory price).

The conditions for reimbursement are also regulated. Prices for prescription pharmaceuticals usually consist of SHI reimbursement and patient co-payment (which may be zero). A system of reference groups is in place, each group consisting of pharmaceuticals with similar effects and safety levels (considered substitutable at the beginning of treatment); generally, the reference groups are broader than ATC groups. According to the law, there must be at least one fully reimbursed pharmaceutical in each of the 195 existing groups. In case of need, SÚKL re-evaluates prices, and thus also reimbursement level, of prescription pharmaceuticals. For the process of setting reimbursement rates, SÚKL requires applicants to supply evidence of the clinical effectiveness and cost-effectiveness of a pharmaceutical, as well as an analysis of the impact a positive reimbursement decision would have on the SHI system (SÚKL, 2020)

There are annual limits on pharmaceutical co-payments for prescription pharmaceuticals, the actual price of which exceeds the reference price in a particular pharmaceutical group (however, not all co-payments count into the limit, only the level of co-payment of the least expensive alternative with the same active substance and the same mode of administration counts). Limits differ by groups of people, reflecting their socioeconomic vulnerability, and patients are reimbursed automatically on a quarterly basis by their HIF after reaching the annual limit (see Section 3.4.1).

Since January 2022, changes to reimbursements of innovative medicines and orphan drugs have been implemented, opening up access to and availability of these products for Czech patients. For highly innovative medical products, the temporary reimbursement period has been extended from 2 years to 3 years for the first temporary reimbursement and from 1 year to 2 years for the second temporary reimbursement. However, the market authorization holder is obliged to reimburse HIFs for costs exceeding those indicated in the budget impact analysis that served as the basis of SÚKL's decision and there is a follow-up treatment obligation in case the product is not accepted for permanent reimbursement after the 5-year period. For orphan drugs, a new pathway gives registered patient organizations and medical societies a voice in the administrative procedure to set prices and reimbursement rates (see Sections 2.8 and 7.1). Social impact and benefits have been newly added to extend the scope of evaluation criteria. In the case of orphan drugs, HIFs can also initiate reimbursement setting procedures; in these cases, market authorization holders are not obliged to pay back costs exceeding the budget impact analysis on which SÚKL based its issuance of the temporary reimbursement decision.

2.7.5 *Regulation of medical devices and aids*

In line with Regulation (EU) 2017/745 on MDAs, which came into effect in May 2021, the process of entering the Czech market has changed substantially. The EU regulation, plus a new national law (Act no. 89/2021 Coll.) replaced the two regulations related to the previous European Directives (90/385/EEC and 93/42/EEC). SÚKL is the regulatory body for MDAs, with MZČR handling all related appeals. SÚKL began managing Czechia's MDA Registry in 2015; its task portfolio was broadened in 2021 to also include administrative procedures of new applications to the registry, which is a necessary condition for a product to enter the market. The law allows for two types of temporary exemptions for a non-marketed product to be used: (1) for a specific patient based on MZČR approval, and (2) for a general exemption based on SÚKL approval for public health protection or for patient safety and health reasons.

Coverage of MDAs is defined at the national level and adjustments to SHI reimbursements came into effect in 2019 with an amendment to the Health Insurance Act (1997). The amendment's annex specifies the categorization of MDAs for reimbursement (including prescription, indication, volume and reimbursement limits). SHI reimbursement levels can now only be changed through amendment to the law or temporarily when interchangeable MDAs appear. In such cases, SÚKL defines the reference group of interchangeable MDAs in an administrative procedure and organizes a bidding procedure. Alternatively, the level of reimbursement can be defined by an agreement on the highest price between a producer (distributor) and at least one HIF. For marketed MDAs, SÚKL assigns an MDA to a particular reimbursement category based on the producer's or distributor's application, and administrative procedure is only initiated if SÚKL finds the application to be faulty and there is a risk of its rejection. For MDAs needing a new categorization group, exemptions from the 2018 amendment exist in cases where risk-sharing contracts are signed with all HIFs or via MZČR approval.

2.8 Patient-centred care

2.8.1 Patient information

Since 2007, patients or designated persons have full access to their own medical records from providers and may make a copy (or ask the provider for a copy, which may be subject to a fee). Based on the Health Service Act (2011), providers must inform patients about their health status and alternative treatment options, including about the appropriateness, risks and benefits of all alternative treatments (see Table 2.2).

TABLE 2.2 Patient information

TYPE OF INFORMATION	IS IT EASILY AVAILABLE?	COMMENTS
Information about statutory benefits	Yes	Statutory benefits are identical for all insured members, regardless of HIF. Services statutorily covered are defined by the Reimbursement Directive (MZČR, 2020e)
Information on hospital clinical outcomes	No	Initiatives are in place, for example MZČR's National Patient Satisfaction Assessment, the pilot of which started in 2020
Information on hospital waiting times	No	Hospitals must have information on specified waiting times available online, but these are generally incompatible due to lack of unified methodology
Comparative information about the quality of other providers (for example, GPs)	No	See Section 2.6
Patient access to own medical record	Yes	Patients may view their own record and make copies. A copy made by the provider may incur fees
Interactive web or 24/7 telephone information	Yes	During the COVID-19 pandemic, some private providers developed functioning telemedicine solutions ("virtual clinics"), such as MOJE AMBULANCE (mojeambulance.cz) and EUC (https://euc.cz/lekar-online/?gclid=CjwKCAjwhNWZBhB_EiwAPzlhNgirRlptfYIAVeik4CMS-yZPo8WY-8RjcoB0Yn2YYkWqZVh5xTq-9BoCwsUQAuVd_BwE)
Information on patient satisfaction collected (systematically or occasionally)	No	MZČR's National Patient Satisfaction Assessment (see above)
Information on medical errors	Yes	ÚZIS and SÚKL gather information on adverse events; initiatives of regional governments or patient organizations

Source: Authors' own compilation.

Note: GP: general practitioner; HIF: health insurance fund; MZČR: Ministry of Health (Ministerstvo zdravotnictví); SÚKL: State Institute for Drug Control (Státní ústav pro kontrolu léčiv); ÚZIS: Institute of Health Information and Statistics (Ústav zdravotnických informací a statistiky).

HIFs allow their members (physically or electronically) to view the care that they were provided which was reimbursed to providers (see Section 4.1.3). Additionally, patients can view their prescription pharmaceutical records via the electronic prescription system. As some prescription pharmaceuticals are not fully covered by SHI, patients have the right to be informed by their physicians and pharmacists on available pharmaceuticals with similar therapeutic effects and lower or no co-payments (generic substitution).

According to the Health Insurance Act (1997), HIFs must guarantee accessible care to their members within a reasonable time frame in their area of residence. Accessibility times differ by specialization and are set by the government (Governmental Regulation no. 307/2012 Coll.). Both the Czech Medical Chamber and the Czech Dental Chamber provide public lists of physicians and dentists that patients can consult to find care (<https://www.lkcr.cz/seznam-lekaru-426.html>, <https://www.dent.cz/zubni-lekari/>, respectively). All providers with valid registration are also included in the National Register of Healthcare Providers. If a patient cannot register in their area of residence (for example, because contacted physicians are not accepting new patients), they may contact their HIF to ask for assistance in finding an available provider; HIFs provide lists of providers in the area, though these also include providers not admitting new patients (so often these lists are not very helpful). Providers can only reject new patients for a few reasons:

- due to capacity reasons, which are vaguely defined (each provider sets its own capacities), though overcapacity would mean a decrease of quality with every additional new patient;
- GPs can reject patients if the distance from their residences would hamper regular visits;
- if a patient is a member of a HIF that a provider is not contracted with.

Patients generally do not have access to information from the internal quality assessments of providers, and there is no unified methodology implemented that would enable patients to make informed choices. Data from performance measurements for stakeholders, though for decision-making purposes and quality improvements, may also be published for the public, such as from the HIB (2021). A patient under 18 years of age has a say in health service provision. Their opinion must be considered as a factor, increasing in importance with age.

To boost health literacy in Czechia, MZČR launched the NZIP, developed by ÚZIS through EU funds, to provide verified information on various health topics, including specific diseases, allergens and vaccinations, and on prevention and health lifestyles, among others. The portal also includes information on existing patient organizations (<https://www.nzip.cz/kategorie/45-pacientske-organizace>). The accuracy of information featured on the NZIP is guaranteed by MZČR and is collected with the help of medical experts from ČLS-JEP.

Attempts have been made to address the information needs of minority populations and HIFs publish general information about the Czech health system in Vietnamese and Ukrainian languages (larger minority groups). Individuals with health conditions enjoy the same membership benefits and pay the same contributions as all others. To reflect the needs of the visually impaired, manufacturers have been required to include Braille text on consumer pharmaceutical packaging since 2007. For the hearing impaired, patient rights have been explained using sign language on video recordings. Additionally, a council representing patients was re-established in 2017 as an advisory body to MZČR (see Section 6.1); council members are asked to comment and give suggestions to changes in legislation, actions and measures, and thus serves as a mediator between patients and their needs and MZČR.

2.8.2 *Patient choice*

Generally, no one can opt out of health insurance in Czechia. Insured individuals, however, have the right to choose their HIF freely and have free choice of provider. In regard to HIFs, patients may switch their HIF once every 12 months, always towards the start of each half-year, that is either by 1 January, or by 1 July.

All HIFs are obliged to accept any applicant; risk selection is not permitted. There is hardly any competition among HIFs. They cannot deviate from the basic benefits package, but they can offer supplementary programmes to which they provide small contributions (for example, self-paid swimming courses by members, voluntary vaccinations). These fees are very small, being around CZK 925 per activity course in 2020.

Patients also have the right to choose or switch their primary health care provider every 3 months (see Table 2.3). According to the Health Service Act (2011), a provider must inform patients about all alternatives and suggested forms of treatment, though instances of this not occurring are still being reported. In practice, providers often only present their preferred alternative(s).

TABLE 2.3 Patient choice

TYPE OF CHOICE	IS IT AVAILABLE?	DO PEOPLE EXERCISE CHOICE? ARE THERE ANY CONSTRAINTS? (FOR EXAMPLE, CHOICE IN THE REGION, BUT NOT COUNTRYWIDE)? OTHER COMMENTS?
CHOICE AROUND COVERAGE		
Choice of being covered or not	No	SHI is compulsory
Choice of public or private coverage	No	No private coverage is available that would cover statutory benefits (see Section 3.6)
Choice of purchasing organization	Yes	Free choice of HIF (every 12 months, towards the start of each half-year)
CHOICE OF PROVIDER		
Choice of primary care practitioner	Yes	Free choice. Patient can switch their primary health care provider every 3 months
Direct access to specialists	Yes	Patients can access specialists of their choice directly. Referrals are needed for certain cases (physiotherapy and speech therapy, among others), including non-emergency hospital stays
Choice of hospital	Yes	Free choice, also without regional limitations
Choice to have treatment abroad	Yes	Planned care abroad is possible only via Regulation (EC) no. 883/2004 or Directive 2011/24/EU
CHOICE OF TREATMENT		
Participation in treatment decisions	Yes	Obligatory patient consent except for emergency care according to civil law and the Health Service Act (2011). Opinions of patients under 18 must also be heard
Right to informed consent	Yes	Informed written consent is necessary for procedures, except for emergency care
Right to request a second opinion	Yes	Requesting a second opinion with a provider of one's choice is enshrined in law
Right to information about alternative treatment options	Yes	A physician must present all alternatives of treatment according to the Health Service Act (2011)

Source: Authors' own compilation.

Note: HIF: health insurance fund; SHI: statutory health insurance.

2.8.3 *Patient rights*

Patient rights were substantially respecified in the Health Service Act (2011). Patients have the right to choose their physician and hospital freely; to have guaranteed access to care within reasonable time limits in their area of residence (as defined by Governmental Regulation no. 307/2012 Coll.); to seek a second opinion; to receive medical treatment according to recognized standards; to determine the treatment and its extent; to have medical procedures performed only with their legal consent; to view their own medical records and copy them; to have their patient data treated with confidentiality; to access a translator at all times in case of inability to communicate; to living wills (expressly excluding assisted suicide); and to receive compensation in the event of medical error, lack of informed consent, or injury caused by pharmaceuticals or medical devices. The Health Service Act (2011) further regulates rights of the children), and the Specific Health Service Act (2011) includes provisions on sterilization, in vitro fertilization (IVF), organ donation and specific patient rights related to these services (see Box 2.2).

Complaint procedures are defined by the Health Service Act (2011), which stipulates who can file a complaint against a provider; the burden of proof lies with the filer. Providers must respond within 30 days to the complaints filed, and persons unsatisfied with the providers' handling of the complaint can subsequently inform the respective administrative body (primarily regional governments). There are also precise rules for setting up exploratory committees and/or consulting professionals, if necessary, to decide the legitimacy of a complaint. In case of compensation requests, the matter is usually settled by civil courts. Even though the Health Service Act does not stipulate it explicitly, patients may also contact their HIF if the provider rejects carrying out a procedure covered by SHI. Professional chambers may be contacted particularly if ethical codes have been breached. More specifically, Act no. 116/2020 Coll, defines rights and complaint procedures in cases of damage caused by compulsory vaccinations. Table 2.4 elaborates on the extent of patient rights in Czechia.

BOX 2.2 Specific patient rights in Czechia

The Specific Health Service Act (2011) also introduced a specific legal procedure for non-reversible castration without medical need. It can be conducted in the case of convicted criminal offenders if active consent is given. For those patients who wish to be castrated after a conviction for rape or similar offences, a reported high probability of reoffending is necessary in addition to consent, as well as the approval of a commission comprising psychologists, sexologists and lawyers.

Since 2011, similar expert commissions have also had to be instituted in cases of voluntary sterilization, gender transitions and psychosurgical treatments. Additional regulations apply for these procedures in the case of underage patients.

The Specific Health Service Act (2011) also sets boundaries for the manipulation of the human embryonic genome. Future medical diagnostics and treatment are in theory allowed, but any manipulation for scientific purposes is prohibited (that is, the transfer of parts of the human genome into other species or the creation of human clones). This law furthermore provides a new and more comprehensive framework for preventive custody, such as compulsory hospitalization in psychiatric wards.

In addition, other charters of patient rights have been adopted, including the Charter for Children in Hospital in 1993. Professional associations in Czechia have also drafted codes of ethics for their respective fields; these include the Code of Ethics for Physicians, drafted by the Czech Medical Chamber in 1992, which outlines the ethical duties of physicians towards their patients. The 1997 Council of Europe Convention on Human Rights and Biomedicine was signed by Czechia in 1998. Most providers also specify their own ethical codes of patient rights as an extension the minimum codes defined by law.

TABLE 2.4 Patient rights

	Y/N	COMMENTS
PROTECTION OF PATIENT RIGHTS		
Does a formal definition of patient rights exist at national level?	Yes	§28 of the Health Service Act (2011)
Are patient rights included in legislation?	Yes	Health Service Act (2011)
Does the legislation conform with WHO's patient rights framework?	Yes	The first Charter of Patients' Rights in Czechia was drafted by the Central Ethics Committee of MZČR in 1992
PATIENT COMPLAINTS AVENUES		
Are hospitals required to have a designated desk responsible for collecting and resolving patient complaints?	No	Although not required, most hospitals have a hospital ombudsman to deal with patient complaints
Is a health-specific ombudsman responsible for investigating and resolving patient complaints about health services?	No	n/a
Are there other complaint avenues?	Yes	A direct complaint as defined by the Health Service Act (2011)
LIABILITY/COMPENSATION		
Is liability insurance required for physicians and/or other medical professionals?	Yes	Liability insurance is required for all health professionals (not just physicians) by §45 of the Health Service Act (2011)
Can legal redress be sought through the courts in the case of medical error?	Yes	Usually in civil court if no agreement is reached
Is there a basis for no-fault compensation?	Yes	If not mediated (settled outside court) beforehand, civil courts settle the disputes (see below)
If a tort system exists, can patients obtain damage awards for economic and non-economic losses?	Yes	In case of damage caused by mandatory vaccinations (Act no. 116/2020 Coll.) If not mediated (settled outside court), civil courts settle other disputes according to Act no. 99/1963 Coll. A patient may sue for the remedy of damage, remedy for the breach of protection of person or remedy for negligence caused by a health care provider (Civil Act, 2012). Both direct and indirect losses may be financially compensated

Source: Authors' own compilation.

Note: MZČR: Ministry of Health (*Ministerstvo zdravotnictví*); n/a: not available.

2.8.4 *Patients and cross-border health care*

There are several ways to receive care abroad. As EU citizens, Czechs can use their European Health Insurance Card to receive services abroad. This is paid for by the Czech system when temporary stays result in cases of emergency care (as tourists, for example). For planned care abroad, Regulation (EC) no. 883/2004, supplemented by Regulation (EC) no. 987/2009, may be used. It requires prior consent of a Czech HIF and covers full costs for patients in the approved foreign country or countries. Planned care can also be sought under Directive 2011/24/EU, where no prior authorization (as opposed to other EU countries) is required. In this case, patients cover all costs of care in another member state and subsequently file reimbursement claims up to the costs usual in Czechia with their HIF. Patients are responsible for any price differences.

Cross-border reimbursements for Czech patients abroad and claims for costs paid for foreign nationals in Czechia are settled through the HIB. Cross-border health care is not widely applied in Czechia, though. According to HIB statistics, planned care provided to Czech patients abroad in 2020 (according to the directive regimen) totalled 106 cases (accounting for 2% of costs of care provided to Czech patients abroad), whereas, as many as 1 329 insured Europeans received planned health care in Czechia, including 1 020 Slovaks, 144 British individuals, 58 Croatians and 39 Germans). In 2020, Czechia issued a total of 116 S2 certificates for cross-border cases (according to the regulation regimen), including 47 cases for Germany, 31 for Slovakia, 13 for Poland and 8 for Austria (HIB, 2020). Care has been made accessible for displaced persons from Ukraine (see Box 2.3).

BOX 2.3 Access to health care for displaced persons from Ukraine

In response to the activation of the Temporary Protection Directive by the European Commission on 4 March 2022, Czechia activated three acts (Act no.65/2022 Coll.; Act no.66/2022 Coll.; Act no.67/2017 Coll.), the so-called Lex Ukraine, and established temporary protection primarily for foreign nationals fleeing the Russian invasion. Displaced persons were thus automatically and immediately given access to the SHI system, with the state making contributions per person via the usual state payment mechanism (see Section 3.3.2) for an initial length of 60 days or until they are granted temporary protection status. Should a displaced person start to work in Czechia, they would have to pay the wage-based contribution, as anyone else. Those arriving from Ukraine have been offered and encouraged to undertake general health assessments to identify health needs while access to vaccinations (including against COVID-19) are available and covered.

Financing

Chapter summary

- Czechia spent EUR 18.5 billion on health in 2019, which accounted for 7.8% of GDP. Though this was slightly below the EU average (9.9%), it did rank in the top half of countries in the WHO European Region for share of GDP spent on health and represented a rise in Czechia since 2000 (when health spending was 5.7% of GDP). In the first year of the COVID-19 pandemic, current health expenditure jumped to 9.2% of GDP. These additional expenditures were partially financed by a substantial rise in monthly transfers for persons directly insured by the state that continued to rise in 2021 and 2022.
- Public funding made up 81.5% of current health expenditure in 2019. Public spending was also a 15.4% share of general government expenditure, while per capita health expenditure was US\$ PPP 3 347.
- More than one-quarter of current health expenditure was spent on inpatient care (29.9%) in 2020 according to ČSÚ, followed by outpatient care (23.2%), pharmaceuticals (17.3%), LTC (17.1%) and other services (12.5%).
- While Czechia's health system is based on compulsory enrolment in the SHI system, entitlement to coverage is based on permanent residence and not SHI contributions themselves. Opting out of the system is not possible and HIFs cannot reject those with a legal basis for entitlement. Although this results in almost 100% population

coverage, just over half of the population are state insured, meaning that the government sees them as economically inactive and makes contributions on their behalf.

- HIF members have free choice among the seven HIFs in Czechia and may switch no more than once every 12 months, though the percentage of those switching is traditionally very low.
- Flat user fees for different consultations and visits that were introduced in 2008 were abolished due to opposition by 2015. The lone exception is a fee for accessing out-of-hours outpatient care, though this is waived for socially vulnerable groups. Pharmaceutical co-payments also exist.

3.1 Health expenditure

Current health expenditure (CHE) in Czechia in 2019 amounted to EUR 18.5 billion (ČSÚ, 2022b). Table 3.1 presents the most recent health expenditure data from WHO and according to these data, CHE as a share of GDP in Czechia in 2019 was 7.8% (up from 5.7% in 2000; see Fig. 3.1) and ranked below the EU average of 9.9%. As seen in Fig. 3.2, the increase between 2007 and 2009 is mainly attributed to the sharp decline in GDP during the economic crisis and the fact that HIFs had accumulated enough reserves before to keep spending levels stable or even increase them. After 2009, most countries followed a slight downward trend. During 2010–2011, Czech HIFs came under pressure to decrease spending levels, while health expenditure increases during 2012–2013 were severely restricted by the Reimbursement Directive (see Section 3.3.4). From 2011 to 2015, the funds disbursed by HIFs remained relatively constant and expenditure decreased year-on-year between 2013 and 2016, accounting for inflation (ČSÚ, 2021d).

Preliminary data from the OECD for 2020 show that health expenditure data jumped due to the COVID-19 pandemic, with CHE rising to 9.2% of Czechia's GDP because of policy responses (OECD, 2022a). These additional expenditures were partially financed by a substantial rise in monthly state budget transfers for persons directly insured by the state and continued to rise in 2021 and 2022 (see Section 3.3.2). This increase in CHE's share of overall GDP is expected to continue after the pandemic.

Private sources of funding traditionally play a smaller role in financing health, accounting for 18.5% of CHE in 2019. National data from ČSÚ (2022b) show that private sources then dropped nearly three percentage points in 2020, the first year of COVID-19 (attributed to large public expenditure increases from HIFs). OOP payments made up more than three quarters of this (see Section 3.4). Voluntary health insurance (VHI), is negligible in Czechia, forming around 1% of private expenditure.

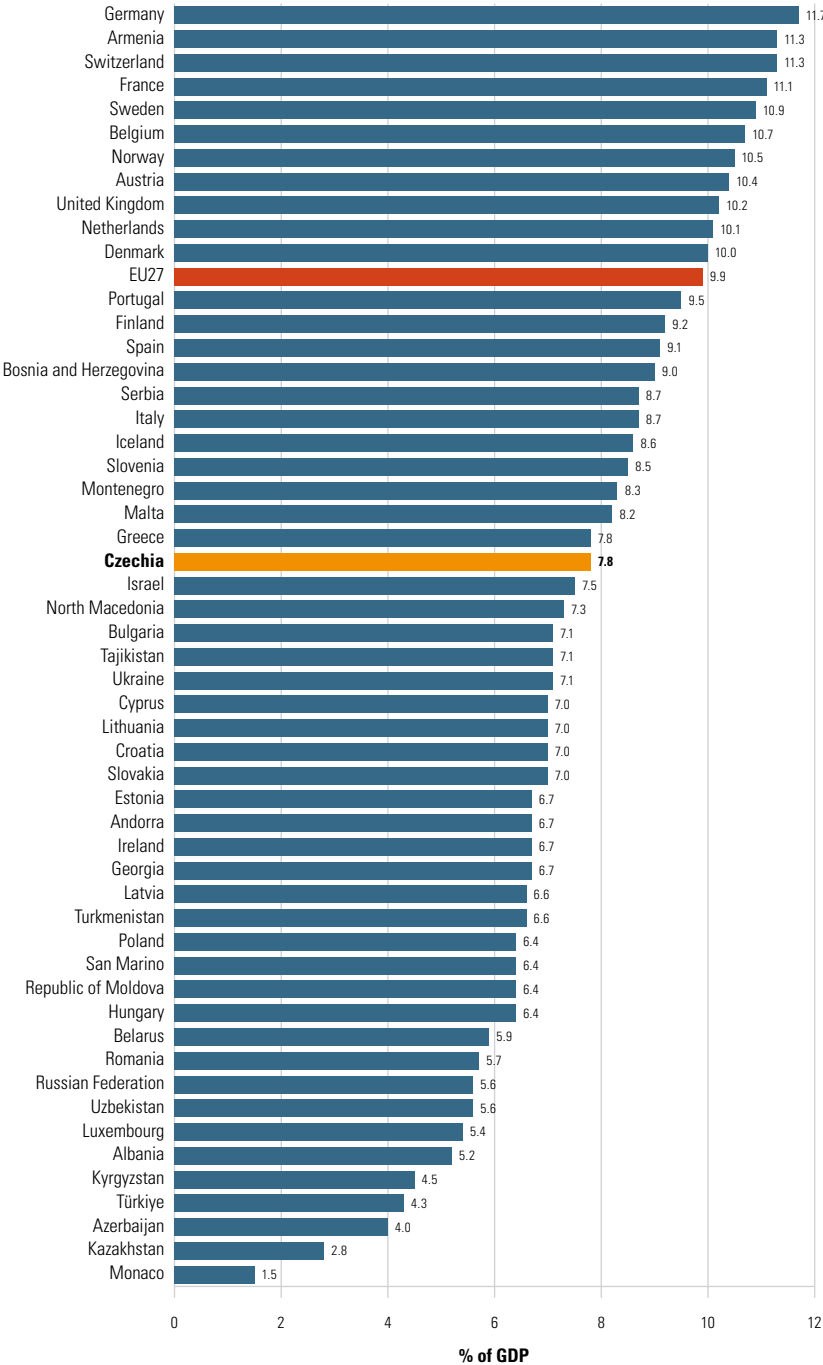
TABLE 3.1 Trends in health expenditure in Czechia, 2000–2019

	2000	2005	2010	2015	2017	2018	2019
CHE per capita in International US\$ PPP ^a	924	1 403	1 921	2 441	2 786	3 199	3 477
CHE as % of GDP ^a	5.7	6.3	6.9	7.2	7.1	7.5	7.8
Public expenditure on health as % of CHE ^a	88.7	85.2	83.1	82.2	81.8	82.7	81.5
Public expenditure on health per capita in International US\$ PPP ^a	820	1 196	1 597	2 008	2 278	2 646	2 834
Private expenditure on health as % of CHE ^a	11.3	14.8	16.9	17.8	18.2	17.3	18.5
Public expenditure on health as % of general government expenditure ^a	12.4	12.8	13.1	14.1	15.0	15.3	15.4
Government health spending as % of GDP ^a	5.1	5.4	5.7	5.9	5.8	6.2	6.4
OOP payments as % of CHE ^a	10.2	11.1	15.3	14.8	14.8	14.2	14.2
OOP payments as % of private expenditure on health ^a	90.3	75.1	90.4	83.5	81.2	82.0	76.5
Private insurance as % of private expenditure on health	n/a	n/a	0.9 ^b	0.8 ^b	0.9 ^c	1.0 ^c	1.0 ^c

Sources: ^a WHO, 2022; ^b ČSÚ, 2021d; ^c ČSÚ, 2022b.

Note: In 2022, ČSÚ's methodology for health accounts was revised; years 2017–2019 follow this new methodology, though previous years were not recalculated. CHE: current health expenditure; GDP: gross domestic product; OOP: out-of-pocket; PPP: Purchasing Power Parity.

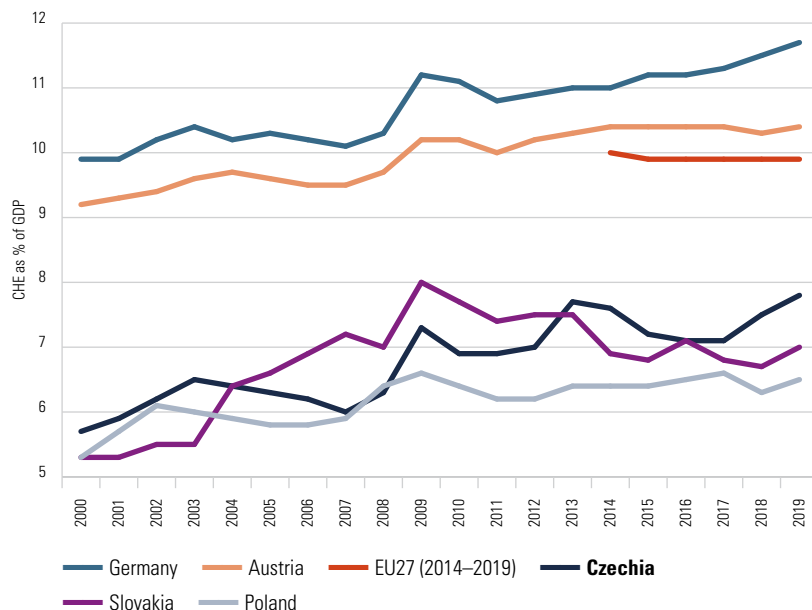
FIG. 3.1 Current health expenditure as a share (%) of GDP in the WHO European Region, 2019



Source: WHO, 2022.

Note: Albania data from 2018. Preliminary 2020 data from the OECD (OECD, 2022b) show that CHE jumped rose to 9.2% of Czechia's GDP in 2020. EU27: European Union (27 Member States as of 2020); GDP: gross domestic product.

FIG. 3.2 Trends in current health expenditure as a share (%) of GDP in Czechia and selected countries, 2000–2019



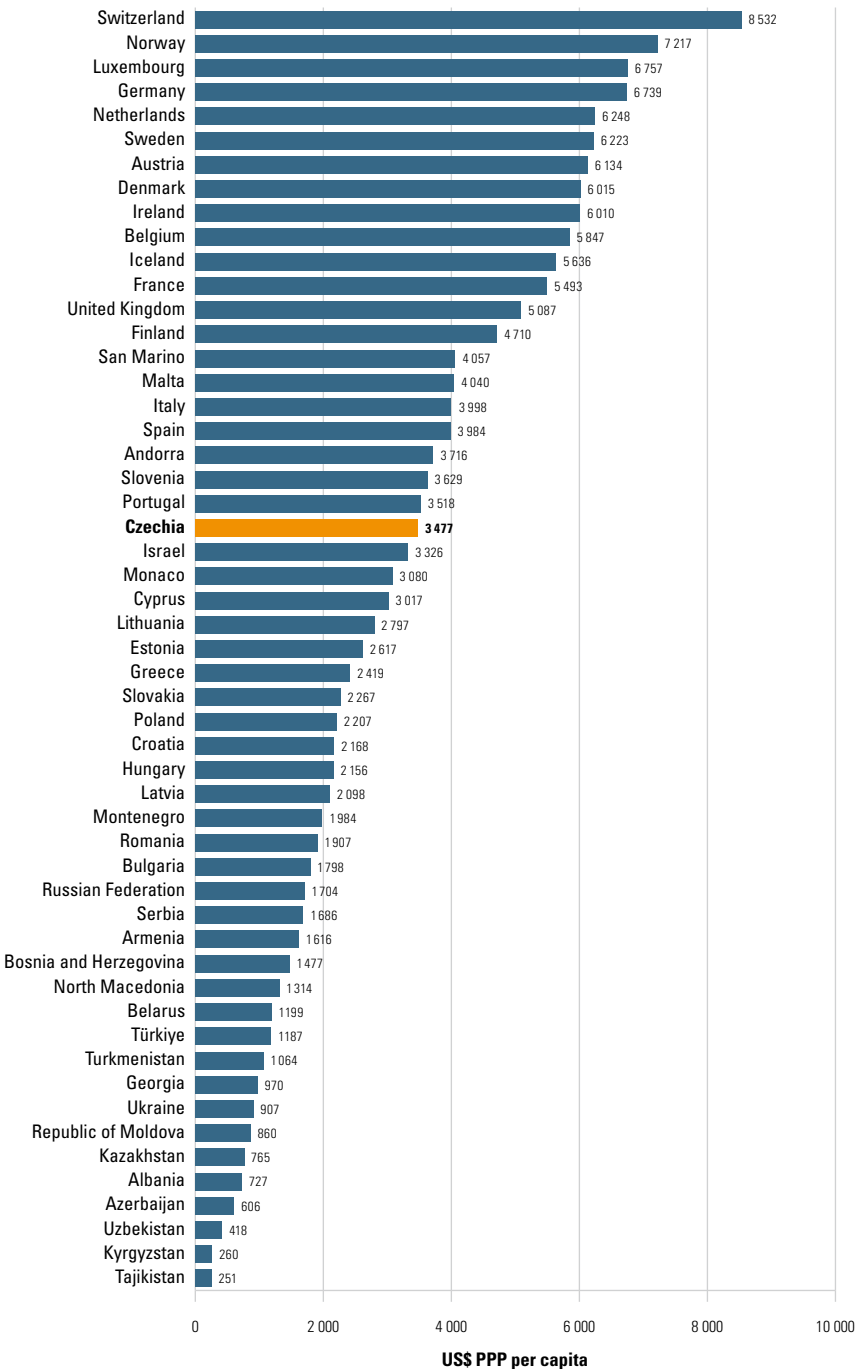
Source: WHO, 2022.

Note: EU average was newly calculated after Brexit. CHE, current health expenditure; EU27: European Union (27 Member States as of 2020); GDP, gross domestic product.

Czechia's per capita health spending measured in US\$ PPP stood at US\$ 3 477 in 2019 (see Fig. 3.3). Lower expenditures, especially when compared with other countries in the WHO European Region, have led to frequent criticism by various stakeholders, including physicians and other health workers, particularly within the context of limiting their pay (see Section 3.7.2).

The share of CHE from public sources in Czechia, on the other hand, ranked among the highest in the WHO European Region at 81.5% in 2019 (see Fig. 3.4) and enables the broad benefits package and virtually universal coverage in Czechia (see Section 3.3.1). With the large expenditure increases from HIFs due to the pandemic, ČSÚ estimates that the share of CHE coming from public sources rose by a near similar three points (as with the drop in private sources) in 2020 (ČSÚ, 2022b).

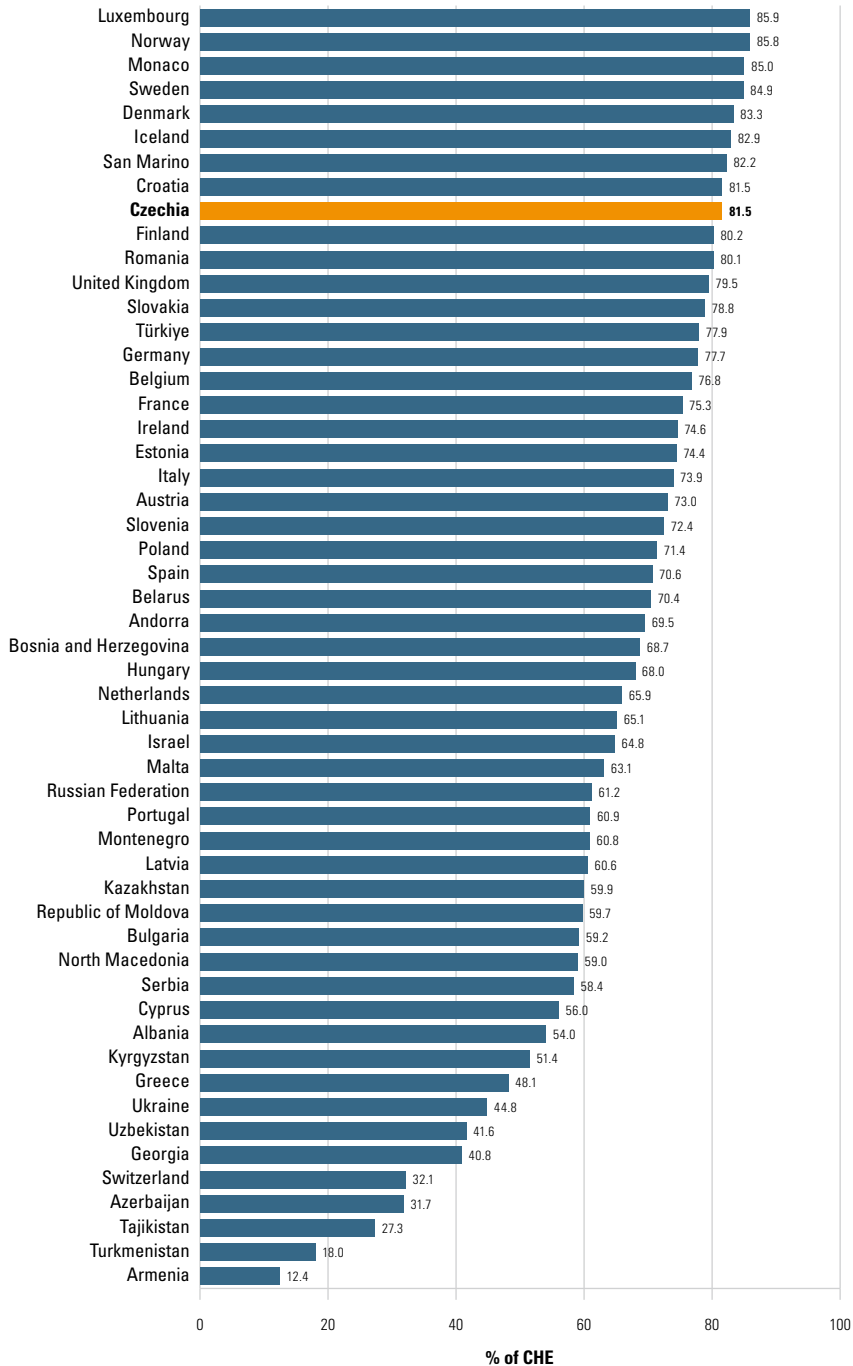
FIG. 3.3 Current health expenditure in US\$ PPP per capita in the WHO European Region, 2019



Source: WHO, 2022.

Note: Albania are data from 2018. PPP: purchasing power parity.

FIG. 3.4 Public expenditure on health as a share (%) of current health expenditure in the WHO European Region, 2019



Source: WHO, 2022.

Note: Albania data from 2018. CHE, current health expenditure.

Data from ČSÚ in 2020 furthermore show that just over half of CHE went toward inpatient and outpatient care (see Table 3.2). Pharmaceuticals formed a further 17.3% of CHE and LTC formed 17.1%. OOP payments were mostly spent on pharmaceuticals (specifically those not fully covered by the benefits package) and outpatient care (for example, non-reimbursed dental care services, see Section 3.4).

TABLE 3.2 Expenditure on health (as % of current health expenditure) according to function and type of financing, 2020

	INPATIENT CARE	OUTPATIENT CARE	LTC	PHARMACEUTICALS	PUBLIC HEALTH	ADMINISTRATION	OTHER SERVICES	TOTAL
General government	4.2%	0.2%	9.2%	1.5%	0.3%	0.6%	1.5%	17.5%
Statutory health insurance	25.4%	19.5%	6.9%	9.0%	3.1%	1.5%	4.8%	70.2%
Private OOP payments	0.2%	3.5%	1.0%	6.8%	0.0%	0.0%	0.0%	11.5%
Private insurance	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
Other (non-profit institutions, occupational care)	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.3%	0.7%
Total	29.9%	23.2%	17.1%	17.3%	3.8%	2.1%	6.7%	100%

Source: ČSÚ, 2022b.

Note: General government includes expenditure from state and regional budgets. Statutory health insurance includes wage-based contributions and state budget transfers on behalf of state-insured people. Inpatient care includes one-day surgeries. Outpatient care includes homecare. LTC also includes rehabilitation care. Pharmaceuticals provided in inpatient facilities (so-called centre drugs) are included in inpatient care, not in pharmaceuticals. Public health includes preventive care. LTC: long-term care; OOP: out-of-pocket.

3.2 Sources of revenue and financial flows

As shown in Table 3.2, the main sources of health revenues in Czechia in 2020 came from SHI contributions (70.2% of CHE), transfers from the state and regional budgets (17.5%) and private sources (12.3%). Fig. 3.5 visualizes the main financial flows described in the following subsections.

3.2.1 *Statutory health insurance*

Individual HIFs collect monthly SHI contributions from employers and employees, self-employed people and individuals without taxable income who do not qualify to be insured by the state; this is referred to as the “collection of premiums”. VZP manages the redistribution procedure of collected contributions and the state budget transfers to SHI among HIFs. Since 2018, the redistribution formula is based on age-gender and pharmacy-based cost group (PCG) risk indices (see Section 3.3.3).

As the largest component of SHI funding, compulsory, wage-based contributions (forming the collection of premiums) accounted for 77.1% SHI revenues in 2019 and can be broken down as follows: employees and employers contributed 90.4% of the total collection of premiums, self-employed individuals contributed 8.2%, and individuals without taxable income contributed 1.4% (Health Insurance Funds, 2019). Despite employers and employees contributing the majority of total SHI revenues in 2019, only 40% of all insured persons in Czechia are classified as employees (Bryndová & Šlegerová, 2021). In 2020, the collection of premiums dropped to 71.6% of SHI revenues (see Table 3.3). The partial exemption from contributions for the self-employed (resulting in CZK 5.5 billion less and dropping their share of the collection of premiums to 6.0% that year) and the increase in state transfers to SHI as pandemic relief measures (Act no. 134/2020 Coll.), and COVID-19's impact on the general labour market contributed to this overall decline. It should be noted that the minimum SHI contribution rates for self-employed individuals (CZK 2 352 monthly) were waived for 6 months in 2020 and only advance payments above the minimum contributions had to be paid; self-employed individuals could choose whether to pay them continuously (during 2020) or starting in spring 2021.

State budget transfers to SHI, which refers to set per capita payments for those defined as state insured, accounted for another 22% of SHI revenues in 2019 and increased to 27% in 2020 due to the substantial rise in monthly state budget transfers for persons directly insured by the state (see Section 3.3.2) (MFČR, 2020a; MFČR, 2021).

TABLE 3.3 SHI revenues in Czechia, 2011–2021 (billion CZK)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Collection of premiums	164.7	168.1	172.1	178.6	188.7	199.5	216.3	237.8	255.7	256.3	274.0
State budget transfers	53.0	59.0	53.7	59.9	60.9	62.3	65.3	68.4	71.8	97.3	128.0
Other	2.7	2.6	2.8	2.8	2.9	3.1	3.2	3.6	3.9	4.4	5.0
Total SHI revenues	220.4	229.7	228.6	241.3	252.6	264.9	284.8	309.8	331.5	358.0	407.0

Sources: MFČR (2014, 2015, 2016, 2017, 2018, 2019b, 2020a, 2021).

Note: SHI, statutory health insurance.

3.2.2 State and regional budgets

Spending from state, regional and municipal budgets (not counting state budget transfers to SHI for the state insured) accounted for 12.9% of CHE in 2019 and for 17.5% in 2020 (ČSÚ, 2022b). These budgets are financed through general taxation.

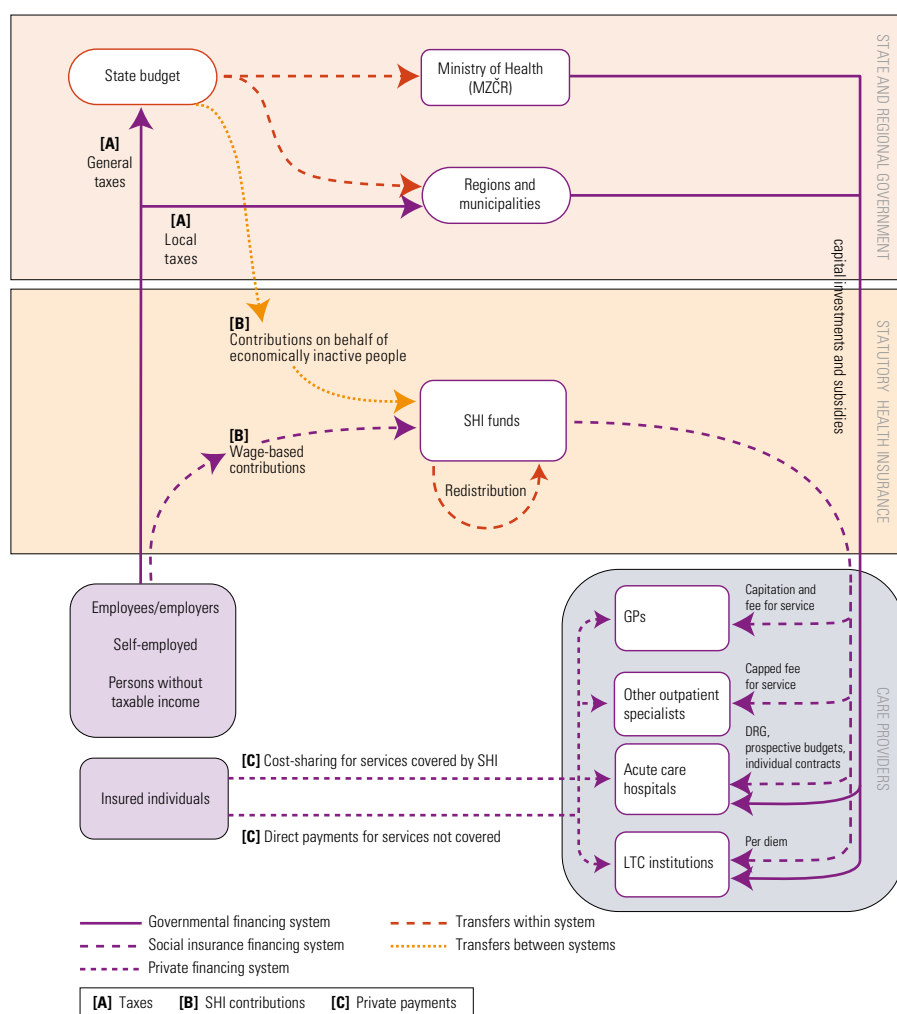
At the national level, MZČR finances capital investments in facilities that it manages and provides investment subsidies to any providers using targeted calls for application. It also provides direct financing for public health services and a variety of specialized preventive health programmes; covers some of the costs of physicians' training through subsidizing residence places; finances emergency air services; and provides grant subsidies for medical research.

At the regional level, capital investments in regional and municipal hospitals are financed by those respective authorities. Emergency rescue service readiness is financed by general tax revenue transfers to the regions from the state budget (the emergency service interventions are covered by SHI). Regions also subsidize publicly owned long-term social care facilities.

3.2.3 Private expenditure

According to WHO, OOP payments comprised 76.5% of private health expenditure in 2019 (national data from ČSÚ (using a different methodology) for 2017–2019 show that OOP payments were roughly 93% of private health expenditure in the pre-pandemic years). The remaining share comes from the following: non-profit institutions, travel insurance and corporate preventive care and private health insurance (see Section 3.4 for details on OOP expenditure).

FIG. 3.5 Financial flows



Private & voluntary health insurance play only negligible roles in health financing (see Section 3.5)

Source: Authors' own compilation.

Note: GP: general practitioner; LTC: long-term care; SHI: statutory health insurance.

3.3 Overview of the statutory financing system

3.3.1 Coverage

BREADTH: WHO IS COVERED?

Entitlement to SHI coverage is based on permanent residence, not on SHI contributions themselves. All people residing in Czechia are subject to compulsory SHI enrolment, including Czech citizens and permanent residents. Individuals who are not permanent residents are also covered if they are working for a Czech-based employer. EU nationals who do not fulfil these conditions and who stay for longer than 90 days in Czechia have the option of participating in the Czech SHI system; if they choose not to participate, they must be insured through their country's insurance system or be privately insured. As health insurance is compulsory, non-EU nationals without permanent residence and not working for a Czech-based employer must purchase private health insurance (PHI) if they wish to remain in the country (see Section 3.5). These provisions result in virtually 100% population coverage. Czech nationals living abroad who do not wish to contribute to SHI must explicitly deregister from their Czech HIF, and EU regulations on coverage apply for Czechs located in other EU countries.

For permanent residents and those working for Czech-based employers, opting out of the SHI system is not possible. Similarly, HIFs must accept all applicants who have a legal basis for entitlement; risk selection is not permitted. Individuals may choose freely among HIFs.

SCOPE: WHAT IS COVERED?

The range of benefits covered by SHI in Czechia is very broad and includes inpatient and outpatient care (including homecare), prescription pharmaceuticals, some dental procedures, rehabilitation, spa treatments and over-the-counter pharmaceuticals (the last three if prescribed by a physician). This is in accordance with Czech law, which stipulates that insured individuals are entitled to any medical treatment delivered with the aim of maintaining

or improving their health status. In practice, however, benefits are rationed by a combination of means, including legislation, formularies, an annual negotiation process between HIFs and providers aimed at defining specific conditions of reimbursement and the LHS.

The first mechanism by which benefits are rationed is the Health Insurance Act, which excludes procedures and services either implicitly or explicitly. Examples of implicitly excluded services are voluntary abortions, examinations requested by employers and various medical certificates, as these do not meet the requirements of maintaining or improving health status. Examples of explicitly excluded services are cosmetic surgery, acupuncture and some dental treatments, which are specified in a negative list contained within the first Annex of the Health Insurance Act. This also defines exceptional cases in which items on the negative list may be covered by SHI. Other annexes contain: a list of substances for which at least one pharmaceutical should always be fully covered (the second Annex); the categorization of MDAs, including prescription, indication and volume reimbursement limits (the third Annex); dental aids and procedures that may be reimbursed under the SHI system (the fourth Annex); and an indication list for spa treatment covered by SHI (the fifth Annex) (Health Insurance Act, 1997).

Formularies are the second mechanism by which benefits are rationed. In essence, these are positive lists of approved pharmaceuticals that may be reimbursed under SHI. The list of pharmaceuticals covered by SHI and the depth of coverage are set by SÚKL (see Section 2.7.4). Previously, formularies were also used for medical and dental aids, but legislative changes in 2019 revised the definitions of content in the annexes of the Health Insurance Act. An item not included in the formularies or in the positive lists in the above law's annexes may still be reimbursed if it is the only remaining potentially effective treatment for a specific patient. This decision is made by the respective HIF; since January 2022, the decision procedure is newly set in an amendment (see Section 6.1).

The third means by which benefits are rationed is an annual negotiation process between HIFs and providers (see Section 3.3.4). In the negotiation process, the reimbursement conditions and prices for health care should be set in a consensual way. MZČR moderates the negotiation process and in the end issues the so-called Reimbursement Directive, which serves as a guideline for annual amendments to the purchaser–provider contracts on specific conditions

of reimbursement. From the patient perspective, this can result in limitations of volume of services provided by specific providers.

Finally, the fourth mechanism by which benefits are rationed is the LHS (see Section 2.7.3). Although the LHS functions in everyday practice as a positive list of benefits, services that are not specified in it may still be reimbursed depending on the needs of individual patients. In 2022, the LHS contained more than 3 995 items (MZČR, 1998, 2021a).

The following details the most important services that are fully or partially covered by SHI:

- Preventive services (such as examinations, screening, vaccinations)
- Diagnostic procedures
- Curative ambulatory and hospital care, including rehabilitation and care of the chronically ill
- Some dental treatments
- Pharmaceuticals and medical aids
- Psychotherapy
- IVF under certain conditions
- Medical transportation services
- Spa treatments (if prescribed by a physician)
- Emergency health services

Several treatments, such as spa therapy and some types of dental and cosmetic procedures, necessitate patients obtaining permission via prior authorization from their HIF to be covered. Above the statutory benefits package, additional benefits may be offered by HIFs only in the field of extra prevention (for instance, for reimbursements for voluntary vaccinations not covered by SHI like tick-borne encephalitis, extra screenings, mammography for younger women, safety helmets for children, vitamins and health promotion activities).

Sick pay, maternity benefits and social care allowances are not covered by SHI, but are part of the state social security system, which is also responsible for pensions, unemployment compensation and other social benefits. This system is financed through social security contributions and general taxation.

DEPTH: HOW MUCH OF THE BENEFIT COST IS COVERED?

Most health services covered by SHI are provided free of charge at the point of use (see Box 3.1). Except for pharmaceuticals and MDAs, partial coverage is not permitted – that is, patients cannot top up their statutory coverage by choosing a treatment that is more expensive than one normally covered and paying for the difference. Patient co-payments are only permitted for above-standard hotel-like services in hospitals and for accommodation during spa treatments. This applies also to dental care, for which only some treatments are covered by the HIFs; treatments not covered are paid in full directly by the patients based on prices set by the dentists.

There have been almost no user fees applied since 2015, though one remaining user fee (CZK 90) is for accessing out-of-hours outpatient care. A wider range of small user fees introduced in 2008 proved politically divisive and were gradually removed and fully abandoned. An annual ceiling for pharmaceutical co-payments, also introduced in 2008, continues to be applied; exemptions from the out-of-hours outpatient care fee apply for people living below the poverty line.

BOX 3.1 What are the key gaps in coverage?

Gaps in coverage are very limited in Czechia; SHI covers the entire population with the exception of family members of non-EU nationals employed by Czech companies. Asylum seekers and grantees are covered, and measures are steadily taken to cover missing groups. Beginning in 2021, for example, babies born in Czechia with only the mother having Czech permanent residence also receive coverage.

The very broad scope of SHI coverage leaves only limited space for potential VHI. For this reason, VHI plays a marginal role and is mainly used for travel purposes to cover health care abroad, rather than being complementary insurance for Czech-based services.

Regarding depth of the coverage, the Czech system applies almost no cost-sharing and virtually all health services are free at the point of use. This SHI design with a comprehensive benefits package makes health care in Czechia affordable, resulting in high financial protection and low levels of unmet medical care needs, at least prior to the COVID-19 pandemic (OECD/European Observatory on Health Systems and Policies, 2021).

3.3.2 *Collection*

The vast majority of health care expenditure is financed through the SHI system, which is financed primarily from earmarked payroll taxes (wage-based contributions) and, to a lesser degree, from the state budget's general tax revenue transfers on behalf of the state-insured parts of the population. General tax revenue is also responsible for additional public expenditure in the health care sector, such as state or regional investment subsidies to providers, while private expenditure is mainly tied to OOP spending.

GENERAL GOVERNMENT BUDGET

The state budget transfers monthly SHI contributions (set per capita payments) on behalf of defined state-insured people. These transfers represented 27% of SHI revenues in 2020 (Table 3.3). The general tax revenue of the entire state budget consists of value-added tax (21%), income taxes from individuals and corporations (21%), social security contributions (39%; not including SHI contributions), and consumption taxes (11%), though none of these are earmarked specifically for health (MFČR, 2020b).

State-insured individuals and groups are defined by law and include: children, students, women or men on parental leave, pensioners, unemployed individuals, people living below the poverty line, prisoners and asylum seekers (see Box 3.2). During the response to the COVID-19 pandemic, the monthly state SHI contribution per person rose from CZK 1 067 (January 2020) to an unprecedented CZK 1 567 per person in June 2020. Further increases in 2021 (CZK 1 767) and 2022 (CZK 1 967 per person) resulted in a state per capita payment increase of 84%, greatly contributing to the jump in CHE's share of Czech GDP (Bryndová & Šlegerová, 2021). In September 2022, the per person transfers decreased to CZK 1 487 (Act no. 260/2022 Coll.). While the state budget contribution for per capita payments had been set by governmental decree, many adjustments over the past decade led to legislation to link it automatically to economic performance beginning in 2024 (see Section 6.1).

STATUTORY HEALTH INSURANCE CONTRIBUTIONS

Each HIF collects SHI contributions, apart from the state payments described above, independently. These SHI contributions are collected monthly from

employers and employees (employers are tasked with collecting contributions), the self-employed, and individuals without taxable income who do not qualify for any of the state-insured groups. Self-employed individuals make advanced payments, which are accounted annually.

SHI contributions are legally set at 13.5% of pre-tax monthly wages for employees, with the employees paying a 4.5% share and employers a 9.0% share, while the self-employed pay 13.5% of their contribution base, defined as 50% of their profits (Act no. 592/1992 Coll.). There has been no annual ceiling on contributions since 2013, though there is a legally defined minimum contribution base for employees and employers, equal to the monthly minimum wage. For individuals without taxable income who do not qualify for any of the state-insured groups, 13.5% of the monthly minimum wage applies. The minimum monthly contribution base for self-employed persons is 50% of the average monthly wage in Czechia from 2 years prior, multiplied by a conversion factor set by the government.

BOX 3.2 Is health financing fair?

The fairness of health system financing can be best described by the terms regressive, proportional and progressive, which describe how different income groups are burdened. As the Czech health system is mainly financed via SHI and state budget transfers, it can be seen as both mildly regressive (higher relative cost burden on lower-income households) and progressive (higher cost burden on wealthier strata).

SHI contribution rates in Czechia are proportionate across income groups, but existence of the minimum contribution rate makes it mildly regressive. However, 51% of the Czech population qualify for state sponsorship, generally releasing them from having to pay the minimum contribution amount, yet they have to contribute a fixed share from their wage. The system of exempting defined state-insured people from the minimum contribution obligation makes the system mildly progressive.

The financing system results in the redistribution of resources, first between employers/employees and the state insured. Whereas the former group contributed 71% of all SHI revenues and comprise 40% of the Czech population, the latter group is 51% of the population, though their contributions only accounted for 22% of SHI revenues in 2019 (Bryndová & Šlegerová, 2021). There is another disparity between employers/employees and the self-employed, where the self-employed are seen as paying too little compared with their income (due to underreporting, summary payments and exceptions), creating a gap in an otherwise generally proportionate system.

3.3.3 *Pooling and allocation of funds*

ALLOCATION FROM COLLECTORS TO POOLING AGENCIES

All SHI contributions are managed by HIFs, including state budget transfers on behalf of state-insured people. The state budget transfer is defined by the number of people in the legally defined groups. Wage- and income-based contributions are also set in law. SHI revenues are fully subject to redistribution among HIFs according to a risk-adjustment scheme.

The reallocation process of resources among HIFs is calculated by MZČR through a special central account of VZP, which serves as a clearing centre. Monthly payments are transferred from the state budget to this account, where it is then used to clear the net surpluses and deficits among HIFs, who retain collected premiums from the rest of the population. If HIFs have net surpluses above the sum of their collected premiums (that is, collected premiums are higher than risk-adjusted allocations), then they refer surpluses to the central account to be reallocated.

The reallocation process takes place monthly and is conducted 1 month after the respective collection of premiums. HIFs provide information on their premium collection, together with information on the statistical and health risks of their insured members, to MZČR, which supervises the risk-adjustment process and the redistribution mechanism, and runs the necessary calculations.

ALLOCATING RESOURCES TO PURCHASES

VZP is the largest HIF with a market share of 56% in 2020; the second and the third largest HIFs have similar market shares of around 12% (MZČR, 2020b). Individuals may choose freely among HIFs and may switch no more than once every 12 months, provided they have applied at least 3 months before the swap dates, which are 1 January and 1 July (before 2015, there was only one swap date per year). The percentage of individuals who switch is very low, slightly above 1% in recent years, as there is little true competition between the funds.

Risk adjustment and redistribution of SHI revenues among HIFs have been in place since the 1990s, with significant change in scope and definition of the redistribution formula having taken place in 2004–2006

(see Box 3.3). The last change occurred in 2018 and added an adjustment to the redistribution mechanism for clients with chronic diseases identified by their pharmaceutical consumption, using PCGs (see Section 6.1). The reform also redefined the reinsurance tool by changing the rules for retrospective compensation and the definition of very high-cost patients. (Reinsurance here refers to the “insurance-of-the-insurers” mechanism used to cover HIFs’ costs for exceptionally expensive patients. This takes the form of retrospective compensation for HIFs from an explicitly reserved share of pooled funds as part of the overall redistribution scheme.)

BOX 3.3 Are resources put where they are most effective?

In 1994, a simple risk-adjustment mechanism as part of the national pooling arrangement was introduced. Only 60% of collected premiums and the whole state budget contribution on behalf of state-insured people were subject to redistribution among HIFs. Risk adjustment was based on the number of state-insured people with those aged 60+ triple weighted. It soon became evident that the formula did not sufficiently account for cost differences among insured members based on their age and sex and was providing for significant risk selection potential.

From 2004 to mid-2006, a refined risk-adjustment mechanism was gradually implemented, leading to the redistribution of all SHI revenues. The formula combined prospective redistribution based on 36 age–sex risk indices with retrospective partial compensation of expensive cases (for which approximately 10% of SHI revenue was used to compensate 80% of individual client costs exceeding the attachment point).

In the 2018 reform, PCGs were chosen as proxies for chronic conditions, defined by consumption of selected pharmaceuticals. The prospective risk rating was based on 38 age–sex risk groups and 25 (further increased to 30 in 2022) PCGs and was combined with strengthened reinsurance, compensation and redistribution for expensive cases with a higher share of resources retrospectively. These elements have led to the redistribution model capably covering the substantial share of differences in individual care costs (Bryndová, Hroboň, & Tulejová, 2019).

The current risk-adjustment mechanism is viewed by its stakeholders as reducing potential for cream-skimming based on health status to a negligible level, but regular reviews are undertaken. According to the law, any HIF can propose a change to the risk-adjustment mechanism (in terms of changes in the PCG risk indices and their definitions); MZČR decides on its acceptance and if approved, validates the change by publishing a new directive.

The risk-adjustment mechanism aims to maintain solidarity in both revenue and the expenditure within defined age–sex risk groups, and to take account of specific chronic conditions that are either very common or expensive (or both). Its second component, the retrospective partial compensation, aims at solidarity in the context of excessive health risks and reinsures HIFs against above-average numbers of very high-cost patients, which could lead to financial issues. The Czech redistribution scheme is zero-sum; though HIFs do not purchase reinsurance, they pay an implicit premium for it. The reinsurance set share is defined by MZČR, which has the discretion to adjust the share of the pooled funds used based on a defined formula. Two attachment points are defined: an 80% reimbursement rate for excessive patient costs above a certain cost level and a 95% reimbursement rate above a higher patient cost level (Bryndová, Hroboň, & Tulejová, 2019).

The Czech PCG model is based on the 2012 Dutch classification of PCGs. It allows for patients to be categorized into more than one PCG, based on consumption of a given pharmaceutical over the previous 12 months. Twenty-five PCGs were introduced in 2018 and include diabetes, depression, transplantation, renal failure and HIV. In addition to PCGs, 38 age–sex interacted risk groups are used. Risk indices are calculated based on individual-level claims data of the insured population. For more information on the prospective risk indices calculation and the reinsurance setting, see Bryndová, Hroboň & Tulejová (2019).

Further adjustments to the definition of PCG groups were made in 2021 and 2022, resulting in 30 PCG groups in 2022 (four new groups added, two groups split in two, and one PCG group dropped for not meeting the statistical thresholds) and revisions to the ATC classification requirements to reflect the current trends in pharmacology.

3.3.4 *Purchasing and purchaser–provider relations*

HIFs serve as the main purchasers of health services in Czechia. The purchasing process is regulated by the state, as is the relationship between HIFs and providers, though HIFs are allowed to contract selectively (namely, they are not required to have contracts with any specific provider). In practice, all HIFs have contracts with virtually all inpatient facilities; networks of

contracted outpatient providers may differ according to geographic scope. They are obliged to ensure the provision of SHI-covered services to their members, including local and timely availability of health services (see Box 4.2 and Section 5.4.1). This obligation is fulfilled by HIFs through their contracted providers, though HIFs' oversight and monitoring of health care availability is limited.

There is no true competition between providers for contracts from purchasers. Generally, it is not a common practice to cancel existing contracts from the HIFs' side. Such cases are also rare for political reasons.

Both the state and regional authorities play an important role in the process of arranging new contracts. Whenever an inpatient care provider requests a contract with HIFs or vice versa, MZČR is responsible for assembling a committee consisting of HIF representatives, care providers, professional medical associations and other interested groups (such as the Czech Medical Chamber). The committee makes non-binding recommendations as to whether a provider should or should not be contracted by a respective HIF – among the main criteria are density and availability of existing contracted providers. The same procedure is initiated by regional authorities whenever a new contract with an outpatient care provider is requested. Here, too, the recommendation of the committee is non-binding in terms of requiring HIFs to sign a contract. However, no contract can be signed between HIFs and providers without this (sometimes lengthy) selection process (*výběrové řízení*) and unless its recommendation is in favour of closing the contract.

HIFs sign long-term contracts with individual providers for a period of either 5 or 8 years, depending on the type of provider, often with automatic extensions enshrined directly in the contract. The default binding contract for each type of provider is specified in the Directive on Framework Contracts issued by MZČR and includes necessary conditions for providing health care, such as the staffing and technical equipment, general payment mechanisms, conditions for ending the contract, and other rights and obligations of purchasers and providers (MZČR, 2006). The framework contracts do not, however, include the specific conditions of reimbursement, which are subject to annual amendments to the contracts either based on individual agreements between providers and HIFs, or on the annually issued Reimbursement Directive.

MZČR acts as a mediator and final arbiter in the reimbursement setting process; it hosts and supervises annual negotiations between HIFs and specific groups representing providers (such as acute care hospitals, physicians and outpatient care specialists) to determine the conditions of reimbursement, including payment mechanisms. Agreements between stakeholders must be reached by June and published by October for the upcoming year. If an agreement is reached (though MZČR has the right to alter agreements), MZČR publishes the result in the Reimbursement Directive (expanded upon during the COVID-19 pandemic, see Box 3.4). If an agreement is not reached for certain types of providers, MZČR determines the specific conditions of reimbursement for that group of providers, including the payment mechanisms and volume limitations, in the Reimbursement Directive itself.

Using the Reimbursement Directive as a guideline, individual HIFs and individual providers then draw up amendments to the long-term contracts previously described. If no agreement is reached between an individual HIF and an individual provider, the Reimbursement Directive's specific reimbursement conditions become binding for both parties for that particular year.

BOX 3.4 The Compensation Directive during the COVID-19 pandemic

The Reimbursement Directive is issued annually for the upcoming year. As part of the government response to the COVID-19 pandemic, legislation was passed to allow for an exceptional issue of the so-called Compensation Directive (MZČR, 2020c), which complemented the 2020 Reimbursement Directive in the middle of the year. This directive increased payments and released reimbursement volume limitations in order to compensate providers for income losses due to volume drops and for extra costs associated with treating COVID-19 patients (Waitzberg et al., 2021). A similar one-off legislative adjustment to permit an exceptional Compensation Directive issuance in order to change reimbursement payments in the middle of a year was used again in 2021 (see Section 3.7).

3.4 Out-of-pocket payments

The share of OOP payments of CHE in Czechia is relatively stable and, according to WHO data, hovered around 14% from 2015 to 2019, though ČSÚ data show this share dropping to 11.5% in 2020. OOP payments have accounted for just over 2% of total household expenditure over the same time, and the ČSÚ data furthermore show that OOP payments per capita dropped slightly from CZK 5 803 in 2019 to CZK 5 666 in 2020 (ČSÚ, 2022b).

OOP payments consist of direct payments for over-the-counter pharmaceuticals (26% of OOP payments in 2020); co-payments on prescription pharmaceuticals (20%); above-standard medical procedures and services in both inpatient and outpatient settings (22%, including for spa stays and cosmetic procedures); direct payments and surcharges for dental care (18%); and co-payments on medical aids and other devices (11%) (ČSÚ, 2022b).

Outpatient and inpatient health services are provided free of charge at the point of use, except for some prescription pharmaceuticals, medical aids and the user fee for accessing outpatient out-of-hours services (CZK 90; this fee is not collected if the visit results in a hospital stay). In 2008, more flat user fees were introduced, such as for physician consultations (CZK 30), stay per hospital day (CZK 60, increased to CZK 100 in 2011) and per collected prescription pharmaceutical (CZK 30), but were gradually dismantled and fully abolished due to popular and political opposition as of January 2015. No co-payment for “above-standard” medical treatment is possible; should a patient desire an alternative procedure or MDA, they would pay for the whole medical treatment. For a detailed description of user fee development in 2008–2014 and the above-standard opt-out experiment of 2012–2013, please refer to Alexa et al. (2015).

The out-of-hours user fee also applies to out-of-hours dental care; those living below the poverty line are generally exempt from any user fee.

3.4.1 Cost-sharing (user charges)

Reference pricing is in place for prescription pharmaceuticals (see Table 3.4). Therapeutic substitutions are applied for setting the ATC reference groups with at least one pharmaceutical being fully covered in each of these groups. Generic substitution is also permitted in pharmacies and SÚKL can regularly re-assess the set maximum prices (in an administrative procedure) based on international benchmarking.

TABLE 3.4 User charges for health services

HEALTH SERVICE	TYPE OF USER CHARGE IN PLACE	EXEMPTIONS AND / OR REDUCED RATES	CAP ON OOP SPENDING	OTHER PROTECTION MECHANISMS
Primary care	Co-payments: an out-of-hours user fee	Exemption: socially vulnerable groups	n/a	n/a
Outpatient specialist visit	Co-payments: an out-of-hours user fee	Exemption: socially vulnerable groups	n/a	n/a
Outpatient prescription drugs	Reference pricing	Lower annual caps on OOP for: 1. moderately and severely disabled people (CZK 500); 2. children below 18 and seniors 65+ (CZK 1000); 3. seniors 70+ (CZK 500)	Annual cap CZK 5 000	1. Generic substitution allowed; 2. full coverage of at least one drug in each reference group (therapeutically substitutive)
Inpatient stay	None	n/a	n/a	n/a
Dental care	Extra billing	n/a	n/a	Basic dental care fully covered
Medical devices	Reference pricing	n/a	n/a	n/a
Other: physiotherapy, speech therapy, IVF	Benefit maximum (limited number of treatments per given period of time, or per life (IVF))	n/a	n/a	n/a

Source: Authors' own compilation.

Note: IVF: in vitro fertilization; OOP: out-of-pocket.

An annual ceiling of CZK 5 000 was established in 2008 in line with user fee introduction. To date, this annual cap is used as an OOP payment maximum for prescribed pharmaceutical cost-sharing. The original annual limit of CZK 5 000 has been lowered several times for select vulnerable groups and occurred most recently in January 2020 for people with moderate and severe disability, defined as those with a second or third disability level, according to Act no. 108/2006 Coll. They were assigned the lowest co-payment limit of CZK 500, which is the same limit as for people aged 70+ (introduced in 2017, when it was CZK 2 500 previously). The limit is set at CZK 1 000 for seniors aged 65–69 and for children below 18 (also reduced from CZK 2 500 in 2017); everyone else has an annual cap of CZK 5 000. HIFs reimburse members for defined co-payments on prescribed pharmaceuticals automatically and retrospectively after reaching the individual annual limit; the assessment is done on a quarterly basis. Retrospective reimbursements to patients for their prescribed pharmaceutical co-payments have steadily increased, from CZK 648 million in 2018 to CZK 864 million in 2020 (Health Insurance Funds, 2019, 2021).

There is no cost-sharing in place for inpatient stays. Spa treatments and rehabilitation inpatient services are also covered by SHI if prescribed by an attending physician (this can also be a GP); a co-payment exists for part of the associated spa hotel service costs, however.

Regarding reimbursed MDAs, co-payments have been based on reference pricing since 2019 (see Section 2.7.5). Some specialized medical care, such as physiotherapy, speech therapy and IVF, have set benefit maxima in terms of number of treatments per given period or over the life (for IVF).

3.4.2 *Direct payments*

Direct payments consist of payments for over-the-counter pharmaceuticals, medical products and non-SHI services, such as cosmetic surgeries and the use of higher-quality material in dental care; direct payments are limited in scope given the broad SHI benefits package. Direct payments also include more luxurious hotel-related services in inpatient settings and other non-curative services provided by physicians, such as fitness-for-employment evaluations.

Approximately 50% of dental care costs were funded privately through OOP payments in 2020, as the range of dental treatments covered by SHI is limited and restricted to the least expensive options (ČSÚ, 2022b). Most insured individuals choose to pay for higher-quality dental materials in full (although the treatment itself is usually covered by SHI). According to (ČSÚ, 2022b) data, OOP payments on dental care accounted for 18% of total OOP expenditure on health care in Czechia in 2020.

3.4.3 *Informal payments*

There is little official evidence on informal payments in the Czech health system. According to the Transparency International Global Corruption Barometer, 10% of the population made informal payments in the health system in 2020, above the EU average of 6% (Transparency International, 2021). A European Commission study on corruption in the health system found that informal payments by patients are only relevant in relatively limited areas in Czechia, such as for quicker treatment of non-life-threatening but highly painful conditions, for example, hip replacements (European Commission, 2013). Informal payments similarly occur in gynaecology and obstetrics. The level of informal payments relative to official payments is not known, though it is widely seen as a negligible part of health financing due to the broad SHI benefits package, relatively low OOP payments reported in household surveys and low reported unmet needs.

3.5 Voluntary health insurance

Due to the broad range of benefits available in the public system, there is only a very small market for VHI. In Czechia, this is only for coverage when travelling abroad and accounted only for 0.11% of CHE in 2020 (ČSÚ, 2022b). There is virtually no VHI that would offer coverage of certain services not already covered under the SHI system, including cosmetic surgeries and some types of dental care. An oft-cited reason for this is the inability for proper risk sharing in commercial settings outside the SHI coverage for this small scope of services. Sickness benefits over and above those afforded by the social security system are covered by commercial insurance without any link to in-kind or in-cash health care benefits. (Private sickness insurance usually

includes lump-sum or per diem payments when individuals are unable to work due to illness. The payments are not necessarily linked to health needs or care consumption. This is sometimes included in a package when purchasing other commercial insurance.)

As health insurance is compulsory in Czechia, those who do not qualify for SHI must purchase PHI. These are non-EU nationals without permanent residence and not working for a Czech-based employer who wish to remain in the country for a longer period, and for whom PHI is primary and principal (see Section 3.3.1). Health care expenditures from PHI are not included in Czechia's System of Health Accounts statistics, as the PHI system concerns neither Czech nationals nor permanent residents. In 2020, collected PHI premiums amounted to CZK 2.7 billion, dropping from the pre-COVID-19 level of CZK 3.2 billion in 2019 (these values reflect the prescribed premiums for PHI in Czechia; CHE related to PHI is not available) (ČAP, 2020).

3.6 Other financing

3.6.1 *Parallel health systems*

There are some private physicians not contracted with any HIF (mainly dentists), but their share is negligible. This group of providers nevertheless receives SHI reimbursements for necessary urgent health care.

There are also networks of providers not accessible to the public that receive SHI financing. These include the Military Medical Service for comprehensive medical security of the armed forces, the Prison Service and the Ministry of the Interior's health care facilities for security forces. Members of the armed forces enjoy some extra benefits above the SHI benefits package; these costs are reimbursed by the Army Health Insurance Fund, which obtains a dedicated subsidy from the Ministry of Defence, namely, from the state budget.

3.6.2 *External sources of funds*

EU contributions are important sources of external funds, especially for investments and pilot projects. For example, the EU structural funds partially covered capital investments to highly specialized care centres in the

2007–2013 programming period. In the 2014–2020 period, EU funding was crucial for establishing centres within the ongoing mental health care reform (see Section 5.11), supporting newly created palliative care teams in inpatient facilities and enabling the operation of low-threshold medical centres taking care of homeless people (MZČR, 2020g). For the 2021–2027 programming period, Health 2030 sets out priority areas in which the Czech authorities would like to seek further funding from EU funds (see Section 2.4).

3.6.3 *Other sources of financing*

Occupational health services accounted for 0.3% of CHE in 2020 (ČSÚ, 2022b). Non-governmental organizations, donors and religious organizations provided CZK 2.3 billion in 2020, accounting for 0.5% of CHE and 3.6% of all private health expenditure in 2020 (ČSÚ, 2022b).

There have been several past examples of extraordinary financial subsidies from public budgets in order to rectify specific situations either facing HIFs (relief from overdue payments or loans from the state budget) or hospitals (additional funds provided by state and regional budgets). An excessive debt burden of CZK 6.6 billion accumulated by six teaching hospitals over the years was relieved in spring 2020 (MZČR, 2020e).

3.7 **Payment mechanisms**

3.7.1 *Paying for health services*

The system of paying for health services combines several payment mechanisms, mainly capitation, capped FFS payments, case payments based on DRGs and activity-based prospective budgets. These are all financed by HIFs. Table 3.5 provides an overview of payment mechanisms. HIFs provide monthly advance payments to providers and the final billing takes place the following year; the monthly advance payments equal one twelfth of annual payments from 2 years before, multiplied by a coefficient. The coefficient is supposed to capture the estimated increase in costs and volume of health services for a given provider.

TABLE 3.5 Provider payment mechanisms

PAYERS / PROVIDERS	HIFS (SHI FUNDS)	MZČR	REGIONAL GOVERNMENTS AND MUNICIPALITIES
GPs	Capitation (63%) + FFS (37%)	Subsidies to address uneven distribution of GPs (see Section 4.2.1)	Subsidies to address uneven distribution of GPs
Outpatient specialists	Capped FFS + FFS for policy priorities (such as screening and mental health)	n/a	n/a
Other outpatient provision	Capped FFS	n/a	n/a
Acute care hospitals	Case-based DRG (44%) + prospective budgets with volume targets measured with DRG case-mix (56%) + individual contracts possible but not significantly in use since 2021	Capital investment and subsidies	Capital investment and subsidies
Other hospitals	LTC hospitals: per diem	Capital investment and subsidies	Capital investment and subsidies
Hospital outpatient	FFS with historical volume limitations	n/a	n/a
Dentists	FFS	Subsidies to address uneven distribution of dentists (see Section 4.2.1)	Subsidies to address uneven distribution of dentists
Pharmacies	Business margin + FFS	n/a	n/a
Public health service	n/a	State budget financing	n/a

Source: Authors' own compilation.

Note: Indicated shares relate to the year 2021. DRG: diagnosis-related group; FFS: fee-for-service; GP: general practitioner; HIF: health insurance funds; LTC: long-term care; MZČR: Ministry of Health (*Ministerstvo zdravotnictví*); n/a: not available; SHI: statutory health insurance.

Payments to providers are based on the Reimbursement Directive, issued by MZČR annually for the following calendar year, or on individual agreements between providers and HIFs. Yearly Reimbursement Directives should reflect agreements reached after negotiations between HIFs and representatives of a particular provider type; if no agreement is reached, MZČR ultimately sets the rules for reimbursement in the directive by itself (see Section 3.3.4). In 2020 and 2021, an exceptional so-called Compensation Directive was approved legislatively to compensate providers for income losses and higher costs for

treating COVID-19 patients during those 2 years; this was exceptional in that the Reimbursement Directives require issuance before the year begins).

Public health services are provided by state authorities and paid for by the state budget via the budget chapter of MZČR (see Section 5.1).

PAYMENT OF GPs AND OUTPATIENT SPECIALISTS

For GPs, a system of age-based risk-adjusted capitation payment per registered patient is in place. In certain areas (with low population density or geographically remote), GPs may receive higher capitations if the number of patients registered with them is below the 70% of a given HIF's average. All HIFs also offer a bonification system for GPs who offer office hours throughout the week of at least 25 hours over 5 days, if patients are able to choose the time of their appointment. More than 70% of independent GP offices reached the highest bonification level in capitation payments in 2019 (Medical Tribune, 2019). In addition, selected primary care services are paid via FFS. These mainly concern preventive examinations, vaccinations, screenings and visits to patients' homes. In 2008, FFS payments to GPs accounted for approximately 30% of their income (Bryndová et al., 2009). This share has increased in recent years, reaching 37% of GPs' reimbursement income in 2021 (MZČR, 2022a). This development reflects MZČR's priority to promote primary care services and strengthen GP competencies, particularly the primary care reform launched in 2018, and new FFS payments for GPs have been introduced since then (see Sections 5.3 and 6.1). Along with existing capitation payments, a new FFS payment was introduced in 2020 for each GP-performed clinical examination to reflect high care demands for multimorbid patients; this payment replaced the capped compensation payment to GPs that was introduced in 2015 after user-fee abolishment. Primary care reform is also one of the specific goals of Health 2030.

Outpatient care, outpatient laboratories and radiodiagnostic services are reimbursed using a capped FFS scheme. Care is reimbursed via FFS, according to the LHS, up to a pre-defined limit (usually based on historical volumes, but adjustments are made to it based on individual or collective mutual agreements).

Reimbursement mechanisms for acute care hospitals have seen a substantial development in recent years, with the introduction of CZ DRG as the base payment mechanism in 2021 (see Table 3.6 and Section 6.1). In 2019, only 7% of payments for inpatient care were case-based DRG payments (international refined, or IR, DRG classification; deliveries and neonatal care and transplantations only). Individual contracts were mainly used to settle bundled payments for new treatment methods. The rest of inpatient care was reimbursed by budget-like payments, which were activity-based and measured by the IR DRG classification.

Originally (starting in 2007), the DRG classification used in Czechia was based on the IR DRG classification. In the late 2000s, attempts to adapt it to local conditions were led by the National Reference Centre (a supportive organization established by the HIFs), which started to publish relative weights and base rates annually, which were based on data from 12 representative hospitals. Different hospitals had, for historical reasons, different base rates and multiple coefficients were being applied, causing strong internal opposition to the whole system. In 2015, the project “DRG Restart” was launched by ÚZIS, aiming to develop a localized (CZ) DRG classification (ÚZIS, 2022a).

In 2020, the CZ DRG classification was introduced for reimbursements in a pilot program for selected inpatient cases (that is, highly specialized care and oncology invasive therapy), though these accounted for a mere 0.5% of hospitals’ revenue from HIFs. The IR DRG classification remained the mechanism to measure the volume of the rest of provided inpatient care, paid for by activity-based prospective budgets with volume targets measured by the IR DRG case-mix.

In 2021, a major change in DRG classification occurred when all case-based DRG payments and the volume measurement switched to the CZ DRG classification. Roughly 44% of inpatient care was reimbursed by CZ DRG case payments; the rest was reimbursed through a budget-like reimbursement mechanism (namely, activity-based budgets newly using the CZ DRG classification to measure provided care volume). In 2021, a unified basic DRG rate was applied to the CZ DRG-classified inpatient care of 2020 and psychiatric care (2% of payments), while individual basic rates were applied to the rest of the case-based reimbursed care (42%) with the possibility of individual base rates converging over a period of 3 years; a process that has already slowed down in 2022.

PAYMENT OF HOSPITALS

Individual contracts are still possible, though they are no longer significantly used. Previously, individual contracts were mainly used for bundled payments to pay for new treatment methods; these methods are now part of the CZ DRG classification, so special bundled payments are no longer necessary.

TABLE 3.6 Development of hospital payments since the 1990s

TIME PERIOD	HOSPITAL PAYMENT MECHANISMS
1990s – early 2000s	Various hospital payments, mainly based on FFS, per diem and global budgets
2004–2006	Prospective global budgets (based on hospital activity measured by FFS and the LHS)
2007–2010	Combination of reimbursement mechanisms of case-based DRG payments (IR DRG), individual contracts, global budgets and capped FFS payments for hospital outpatient care
2011	Reimbursement scheme completely replaced by flat payments (global budgets) at the value of 98% of total payment in 2009
2012–2020	Combination of activity-based global budgets, case-based DRG (IR DRG classification), and individual contracts for inpatient care; FFS with historical volume limitations for hospital outpatient care
2021–	Combination of case-based DRG (CZ DRG classification) and activity-based prospective budgets (with volume targets measured with the DRG case-mix)

Source: Authors' own compilation.

Note: CZ DRG: Czech refined diagnosis-related group; FFS: fee-for-service; IR DRG: international refined diagnosis-related group; LHS: List of Health Services.

3.7.2 Paying health workers

When it comes to paying health workers in Czechia, there are two main groups. The first group is comprised of self-employed outpatient care physicians and dentists, while the second group features salaried and wage-based health workers (mostly in hospitals).

Self-employed physicians and dentists constitute the majority of those in private outpatient settings. They are reimbursed by HIFs for the care they provide (capped FFS payments and capitations in the case of physicians). They may also receive direct payments from patients for services not covered by SHI – corresponding prices are set by the physicians. Notable prices following

the Reimbursement Directive in this setting are for services rendered to citizens of EU countries, services in case of emergency care for non-EU nationals and services demanded by a court or the police. OOP payments are most common and frequent for dentists – these prices are regulated by the annually issued price regulation directive (*cenový předpis*). Self-employed physicians must cover all expenses from their income, including for remuneration of other employees (for example, nurses), rent and equipment.

Remuneration of employed health staff depends on whether they work in the so-called budgetary organizations that are subsidiary to state and regional authorities (staff remunerated by salaries) or in facilities with a legal form according to Act no. 90/2012 Coll. (staff remunerated by wages). The first group comprises state-owned hospitals and some regional hospitals (as a result of the 2003 reform), while the second group consists of the remaining regional hospitals and private facilities.

Salaries are negotiated between the budgetary organizations and unions (or employees) and are ultimately set by providers in accordance with legal prerequisites (tariff intervals), usually on an annual basis. The tariff intervals of budgetary organizations also feature the upper limits, as opposed to Act no. 90/2012 Coll., where only the minimum guaranteed wage by profession has to be observed. Salaries in public institutions are generally divided into 16 tariff levels in Czechia. Physicians fall into levels 11 to 16, but nurses and midwives fall into levels 9 to 12, based on their title. The salary tables are separate for each of these professions, securing physicians higher salaries than those of highly specialized nurses even though the tariff levels can be the same. Moreover, within each tariff level, the salary depends on the number of years of experience.

In 2022, the gross monthly basic salary tariff of a physician with 10 years of experience employed in a position that falls into tariff level 14 was approximately CZK 56 670. The gross salary tariff is increased annually based on governmental decision. After not keeping pace with inflation in 2019 and 2020, there was a 10% year-on-year rise in 2021 and 6% in 2022 (for the above-described physician), appreciating physicians' work during the pandemic (Governmental Regulation no. 341/2017 Coll.).

For most health workers in hospitals (especially physicians) personal evaluation add-ons, premiums and overtime bonuses constitute a substantial part of total income. In 2020, the average monthly gross salary of physicians (and dentists) employed in inpatient facilities that are budgetary organizations subsidiary to state and regional authorities reached approximately CZK 93 658 (a 10.4% increase from 2019). This was CZK 53 500 for nurses (a 15.8% increase from 2019) (ÚZIS, 2022b).

Employee wages in facilities with a legal form according to the Business Corporations Act (Act no. 90/2012 Coll.) are in general negotiated within the legal limits (minimum guaranteed wage by profession) between providers and employees (or unions) and set by the provider, usually at intervals of 1 year. In 2020, the average gross monthly wage of physicians and dentists reached CZK 85 891 (up 11.9% from 2019) and CZK 44 983 for general nurses and midwives (up 18.4% from 2019) (ÚZIS, 2022b). It should be noted that the difference in average salaries and wages cannot simply be attributed to remuneration mechanisms but also to the demographics and experience levels of the two groups of employees. Moreover, the significant year-on-year increases in remuneration are to a large extent given by bonuses and increases in reimbursement during the COVID-19 pandemic.

The average remuneration across all economic sectors in Czechia was CZK 35 611 in 2020 (ČSÚ, 2021e). Thus, in 2020, employed physicians' average salary and wages represented approximately 263% and 241% of the average remuneration in Czechia, respectively, and employed nurses' average salary and wages represented approximately 150% and 126%, respectively. That is a considerable improvement since 2010, when the protest movement called "Thank you, we're leaving" (*Děkujeme, odcházíme*) was organized by publicly employed physicians complaining about the poor financial and organizational conditions in the Czech health system. Then, employed physicians' average salary represented approximately 210% of the average remuneration in Czechia, and employed nurses' average salary 115% (ČSÚ, 2011; ÚZIS, 2011).

Physical and human resources

Chapter summary

- In 2019, there were 194 hospitals in Czechia; 154 were acute care hospitals, with a total of 57 422 beds, and 40 were LTC hospitals with 3 078 beds. A previous trend of decreasing acute care beds from the 1990s through the early 2010s has eased off, and the bed density of four acute care beds per 1 000 population is in line with the EU average. The average length of stay in acute care hospitals was 5.7 days in 2019 (down from 6 days in 2013).
- Facilities are unequally distributed across the country and specialized centres are concentrated in urban areas, though legislative quotas are met. As there are no catchment areas, patients living across Czechia can be treated anywhere. Infrastructure is a concern in that both facilities and medical devices are aged in the context of modern capabilities, though devices are in sufficient supply.
- The COVID-19 pandemic has kickstarted eHealth's growing role in Czechia, with electronic prescriptions, digital sick notes and electronic information sharing in place. HIFs can communicate with their members digitally and members can also easily access their records; the Act on eHealth (2021) stipulates the basic legislative framework for this. Furthermore, the use of artificial intelligence in health is increasingly being incorporated into areas of care provision.

- Mechanisms for planning human resources are not overly developed in Czechia, and the increasing number of physicians reaching retirement age has made both the stabilization and future strength of the health workforce priorities for MZČR. Financing from the state budget has helped to contribute to the recent rise in new medical students as well as provide for subsidies from regional authorities to attract workers. Legislation has also been passed to simplify postgraduate training.
- The long-running trend of female medical graduates resulted in women constituting a slight majority of all Czech physicians. In 2019, 20.1% of physicians worked in facilities owned by MZČR or other state authorities, 23.4% worked in establishments owned by local or regional authorities and the remaining 56.5% of physicians were at private establishments. Some graduates do leave for better working conditions or salaries abroad, though verified numbers are not available.
- All health professionals are obliged by law to participate in continuous, lifelong education in order to better adjust to the real needs and practical requirements in improving the quality of care provided.

4.1 Physical resources

4.1.1 *Infrastructure, capital stock and investments*

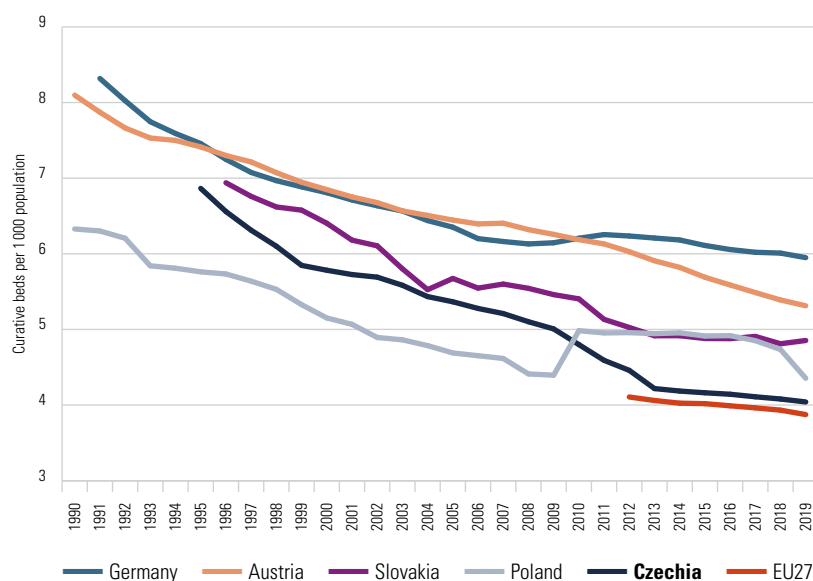
INFRASTRUCTURE

Of the 194 hospitals in Czechia in 2019, 154 were acute care hospitals (with 57 422 beds) and 40 were LTC hospitals (3 078 beds). From the 1990s through 2013, Czechia set about decreasing acute care hospital beds and increasing LTC beds, though this trend slowed between 2014 and 2019. Czechia recorded an acute bed density of 4 beds per 1 000 population in 2019, which was lower than neighbouring countries but similar to the EU average (see Fig. 4.1).

Additionally, 119 specialized therapeutic institutes had a total of 16 937 beds in 2019. Specialized therapeutic institutes do not have the legal status of hospitals; they provide specialized follow-up care, especially for long-term or chronically ill patients. These include beds for psychiatric care (8 610 for adults and another 210 for children in 2019), hospices (491 beds) and rehabilitation care (2 407 beds) (ÚZIS, 2020a).

The average length of stay in acute care hospitals stood at 5.7 days in 2019 (down from 6 days in 2013), the lowest among neighbouring countries. The occupancy rate of acute care hospital beds, at 68.6% in 2019, is the lowest recorded value since 1975 and lower than in Germany (79.1% in 2018) and Austria (72.9%), but higher than in Slovakia (65.9%), and is a result of a lack of nurses in acute care hospitals (Eurostat, 2022). Nurses often leave this area of care as it is very exhausting. As a result, not only does the occupancy rate decrease, but wards are often either partially or fully closed (MZČR, 2020a).

FIG. 4.1 Hospital beds in acute care hospitals per 1 000 population in Czechia and selected countries, 1990–2019



Source: Eurostat, 2022.

Note: Depicted are curative beds in hospitals only. EU27: European Union (27 Member States as of 2020).

In principle, regulation of hospitals occurs through HIFs' registration and contractual processes (Health Service Act, 2011). Quality and safety requirements must be fulfilled, too, though the number of beds in hospitals is not explicitly regulated. Providers reduce or expand their capacities according to agreements with those HIFs with whom they have contracts, and these agreements are guided by anticipated patient demand. In anticipation of lower demand or insufficient personnel, excessive beds mean higher operational costs, and as such are reduced.

Similar to other countries, specialized centres are concentrated in urban areas, while nursing care is rather prevalent in rural areas, though not missing in big cities (see Box 4.1). Note that bigger acute care hospitals also include LTC wards.

BOX 4.1 Are health facilities appropriately distributed?

Health facilities are unevenly distributed across the country (see Fig. 4.2). There is a dense hospital network in Prague and the surrounding *Středočeský* Region. Although the hospital network is generally quite dense across the country, hospitals are sparsely distributed in some regions, the reasons being that: (1) personnel are less attracted to hospitals in rural and poor areas due to worse facilities and amenities, and (2) rural and smaller hospitals often suffer from financial difficulties due to financing based on historical prices. Although historical prices have been recently phased out and more emphasis has been put on case-mix financing, concerns related to outdated facilities and a lack of personnel persist.

Accessibility limits to health facilities are set (including in rural and border areas) and HIFs are in charge of guaranteeing access (see Section 2.7), though legal limits are sometimes just met and not adapted for conditions in rural areas (Governmental Regulation no.307/2012 Coll.). Specialized centres also tend to be located in and around urban areas, resulting in patient mobility towards regional centres and Prague in particular, where many highly specialized centres are located. As core catchment areas were abolished, patients living across Czechia may be treated anywhere they desire.

FIG. 4.2 Distribution of hospitals, 2019**Sit' nemocnic k 31. 12. 2019***Survey of hospitals to 31. 12. 2019*

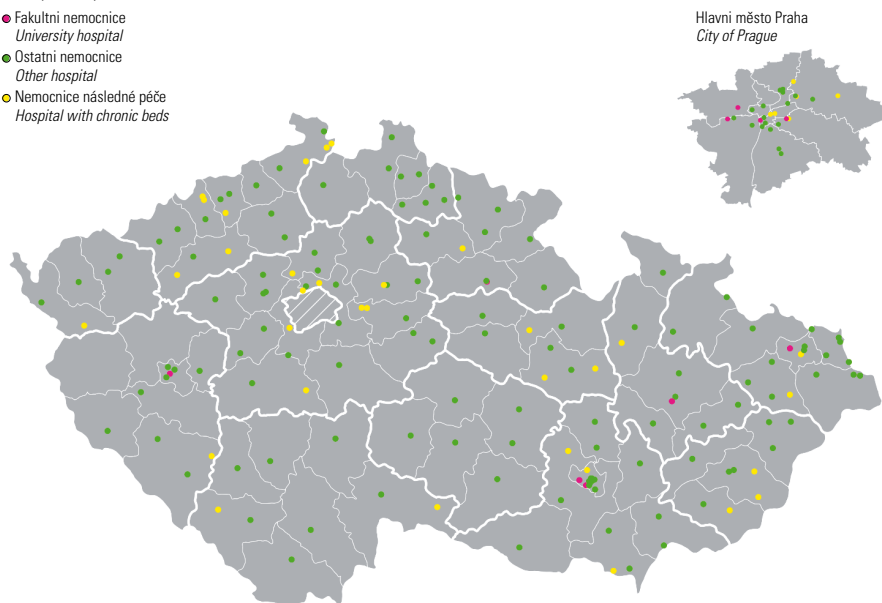
● Fakultní nemocnice

University hospital

● Ostatní nemocnice

Other hospital

● Nemocnice následné péče

Hospital with chronic beds*Source: ÚZIS (2020a).**Note: Homecare (which represents a portion of nursing care) is not depicted.***CURRENT CAPITAL STOCK**

Included in Czechia's 154 acute care hospitals in 2019 are:

- 24 hospitals run by MZČR and other state bodies (ministries), including 10 university and military hospitals (36.0% of total bed capacity);
- 69 regional and district hospitals run by regional governments, including both budgetary and corporatized hospitals (38.2%);
- 27 municipal hospitals, including both budgetary and corporatized hospitals (7.6%);
- a few single-specialty hospitals, such as maternity care hospitals (18.2%) (ÚZIS, 2020a).

In contrast to most inpatient facilities, almost all outpatient providers are privately run (mainly run by self-employed individual physicians).

With no comprehensive surveys of property conditions, it is difficult to objectively assess the state of physical resources, though anecdotal evidence and substantial investments from EU Structural Funds suggest that there have been some improvements in recent years. The state of physical resources in smaller hospitals is thought to be generally worse, as investments were predominantly allocated to larger facilities. Some form of ad hoc appraisal of conditions is usually used when planning future investments, though there are no formalized procedures that would facilitate formal assessments.

REGULATION OF CAPITAL INVESTMENT

Renovations of hospital infrastructure are, in theory, financed by HIFs through their reimbursements for services. On the provider side, however, reimbursement revenues are usually insufficient for capital investments. In state-owned hospitals, investments are often supplemented by transfers from state or regional budgets. Decisions on using revenues and transfers for capital investments lie with individual hospital management teams, though they must enable hospitals to at least fulfil the minimal technical requirements set by an amendment to the Health Service Act (2011). As upkeep has long been underfinanced and facilities need repairs, university and state-owned hospitals have recently begun to receive state subsidies for improvements. Recent programmes through the European Regional Development Fund have also targeted smaller regional hospitals to improve care quality in these facilities. New national investment plans include seven major strategic investments to selected teaching and state-owned hospitals to improve infrastructure and maintain the current scope and quality of care while also creating modern and pleasant environments for patients; these investments amount to CZK12 billion (information provided by MZČR on 29 March 2022). Capital investments in the private sector are not regulated if financed from private resources.

INVESTMENT FUNDING

In 2019, MZČR expenditure on capital investments, that is, transferred funds on top of HIF reimbursements, amounted to nearly CZK 2 billion, decreasing 15% from 2018 (CZK 2.4 billion) and 37% from 2015 (CZK 3.2 billion). These largely cover the purchase of equipment and renovations for state-owned hospitals, including for acute care, LTC and palliative care, both for children and adults (MFČR, 2016, 2019b, 2020a).

Other hospitals may apply for EU funds, which MZČR then allocates; EU funding contributes substantially to capital investments, has supported the creation and modernization of psychiatric wards within hospitals and is expected to reach CZK 50 billion over the next 5 years. Investment priorities, set by MZČR, are aligned with Health 2030 to include modernizing emergency wards and support for nursing care, public health and eHealth initiatives (MZČR, 2020a).

Hospitals may also apply for REACT-EU funds, which was in response to the COVID-19 pandemic. These funds (CZK 22 billion) will go toward improving the health system through the Integrated Regional Operational Programme. Hospitals may further apply for subsidies from the Operational Programme Environment, the National Recovery Plan (*Národní plán obnovy*) and the Modernization Fund.

Other investments include European Economic Area and Norway Grants, which have financed over 140 health-related projects amounting to CZK 1.2 billion since 2004. These have recently gone toward strengthening patients' roles within the Czech health system, child mental health and disease prevention.

There is no reliable information available on investments in private facilities, especially for outpatient care. Public-private partnerships are not common in the Czech health system.

4.1.2 Medical equipment

Proposals to purchase equipment for facilities are submitted to the Equipment Committee at MZČR, which considers the equipment's need based on existing infrastructure. All equipment purchased using state or SHI funds above 5 million CZK is subject to committee approval. Czechia had 1.64

computed tomography (CT) scanners per 100 000 inhabitants in 2019, with an overwhelming majority in inpatient facilities (1.48); though increasing by nearly 70% between 2000 and 2019, this remains under the EU average (2.45). A similar trend exists for magnetic resonance imaging (MRI) units, which increased from 0.17 per 100 000 inhabitants in 2000 to 1.04 in 2019, also lower than the EU average (see Table 4.1).

TABLE 4.1 Items of functioning diagnostic imaging technologies (MRI units, CT scanners) per 100 000 inhabitants in Czechia and the EU28, 2019

	CZECHIA	EU28 AVERAGE
MRI units	1.04	1.62
CT scans	1.64	2.45

Source: Eurostat, 2022.

Note: EU28 average includes also the UK. CT: computed tomography; EU28: European Union prior to Brexit (28 Member States including the United Kingdom); MRI: magnetic resonance imaging.

Although a lack of devices is not a problem, devices ageing is. There are also large differences between Prague and rest of the country, though medical facilities in Prague also serve inhabitants of other regions (see Box 4.1). Czechia is also incorporating artificial intelligence (AI) and robotics into the health system. As of 2022, 12 da Vinci and 2 Cyberknife systems were in use in Czechia, among other AI products (icobrain, Brainomix), and Czech scientists have recently developed and applied AI to detect chronic diseases. The use of AI for health in Czechia is expected to accelerate when ethical and liability issues are fully resolved.

4.1.3 Information technology and eHealth

The share of Czech households connected to the internet increased from 67% in 2013 to 81.7% in 2019 and internet use is comparable to neighbouring countries (ČSÚ, 2021c; Eurostat, 2022). The share of Czechs accessing the internet for health purposes stood at 52% for men and 72% for women in 2019, exceeding the EU averages (49% for men and 60% for woman) (ČSÚ, 2021c). NZIP websites in particular have useful health information (see Section 2.8).

All HIFs have websites for communicating with their members; and members can view their record of administered and reimbursed care electronically (for example, *mojeVZP* and *e-komunikace*). Moreover, HIFs (minus VZP) have a common site (<https://szpccr.cz/>) for communicating with contracted providers, reducing the administrative burden for all parties. Some form of sharing records has existed at the regional level for about 5 years, particularly between emergency services and hospitals.

After being long fragmented into individual HIF initiatives, the first plan for nationwide data collection was unveiled in 2011, though implementation was paused because of a lack of funding. Nevertheless, MZČR adopted a national strategy for health system digitalization in 2016 for 2016–2020, which set the foundations, including electronic prescriptions and digital sicknotes.

After a voluntary pilot period, electronic prescriptions were fully launched in 2018, requiring providers to issue them. This enabled patients to request prescriptions via phone or email without a physical visit, something greatly used throughout the COVID-19 pandemic. Phone consultations have also become more widespread and accepted. Digital sicknotes were fully launched in January 2020, whereby providers electronically notify the social security system about a sick worker. Sick workers must still notify employers, but can now provide employers with an electronic copy. Other excusal notes (such as caring for a sick household member) still require the submission of physical documentation.

Nearly all health facilities in Czechia employ IT for reimbursement and accounting and most large facilities have websites to provide patients with an overview of their services; 18.5% of facilities allow patients to book appointments online in Czechia, while 16.2% offer online consultations and a further 32.5% allow patients to request prescriptions online without needing to speak to a physician (ČSÚ, 2021c). Some private providers have built virtual clinics (see Table 2.2).

Both the COVID-19 pandemic and the Act on eHealth (2021) have significantly accelerated digital health priorities in Czechia. The Act on eHealth (2021) introduced a basic legislative framework, defined obligations and standardized rules for communication, information sharing and data protection. It did not introduce electronic health records, though did introduce conditions for the safe sharing of documents among providers or between providers and HIFs. Patients have the right to receive transcripts of information shared about them at public administration contact points, although not all providers participate yet.

4.2 Human resources

4.2.1 Planning and registration of human resources

There are strategic plans for planning human resources in Czechia established by MZČR, such as Health 2030, which includes 11 strategies to support staffing in the health system (for example, building a national system to monitor and plan personnel needs, and strengthening the competencies of non-physician health workers) (MZČR, 2020a). Due to increasing numbers of physicians reaching retirement age, these strategies emphasize preventing future shortages. In 2019, around 14% of physicians were aged 65 and above, with another 19% aged between 55 and 64 years (Eurostat, 2022).

The number of students studying medicine has grown in the past 10 years (see Table 4.2). With financial support from the state budget (CZK 6.8 billion through MŠMT for 2019–2029), medical faculties saw a 20% rise in first-year students for winter semester 2019/2020 than in previous years (MŠMT, 2018; Medical journal, 2019). MZČR also supplies accredited providers with financial support for postgraduate training (*rezidenční místa*), covering costs for training and part of trainees' salaries. This allows MZČR to set priorities, define the number of subsidized positions within each speciality and set rules for how many senior physicians gain licenses to train new graduates. For example, in 2018, 415 young physicians were supported through the programme *rezidenční místa*; and 310 in 2019 (MZČR, 2020a). Subsidy programmes, such as the one in 2018–2022, are also used to tackle uneven distributions of dental resources throughout Czechia (see Box 4.2) (MZČR, 2018a).

Regional authorities try to attract workers through various subsidy schemes (recruitment bonuses, equipment for outpatient offices, etc.), while some authorities provide scholarships to medical students who commit to practising for a certain number of years in the region. Some facilities ask their physicians in postgraduate training to sign contracts committing to practise there for up to 5 years after passing the state licensing examination (*kvalifikační dohoda*). In 2019, 20.1% of physicians and 25.0% of paramedics worked in facilities owned by MZČR or other state authorities, while 23.4% of physicians and 34.6% of paramedics worked in establishments owned by local or regional authorities. The remaining 56.5% of physicians and 40.3% of paramedics were at private establishments (ÚZIS, 2020a).

The registration of providers depends on the founder and the type of facility and follows the Health Service Act (2011) (see Section 2.7.2). The Ministries of Justice, Interior and Defence are responsible for authorizing care provision in their own facilities, while authorizations for setting up and running pharmacies are granted with SÚKL's consent. Each practising physician, dentist and pharmacist has to register with their respective chamber, which, among others, supervises lifelong education for its members (see Section 4.2.4).

TABLE 4.2 Number of medical students in Czechia, 2005–2020

	2005	2010	2015	2020
Women	6 957 (59.4%)	8 205 (59.7%)	9 076 (60.1%)	9 406 (59.7%)
Men	4 753 (40.6%)	5 545 (40.3%)	6 027 (39.9%)	6 359 (40.3%)
Total	11 710	13 750	15 103	15 765

Source: ČSÚ, 2021f.

Note: Number of students on 31 December per given year.

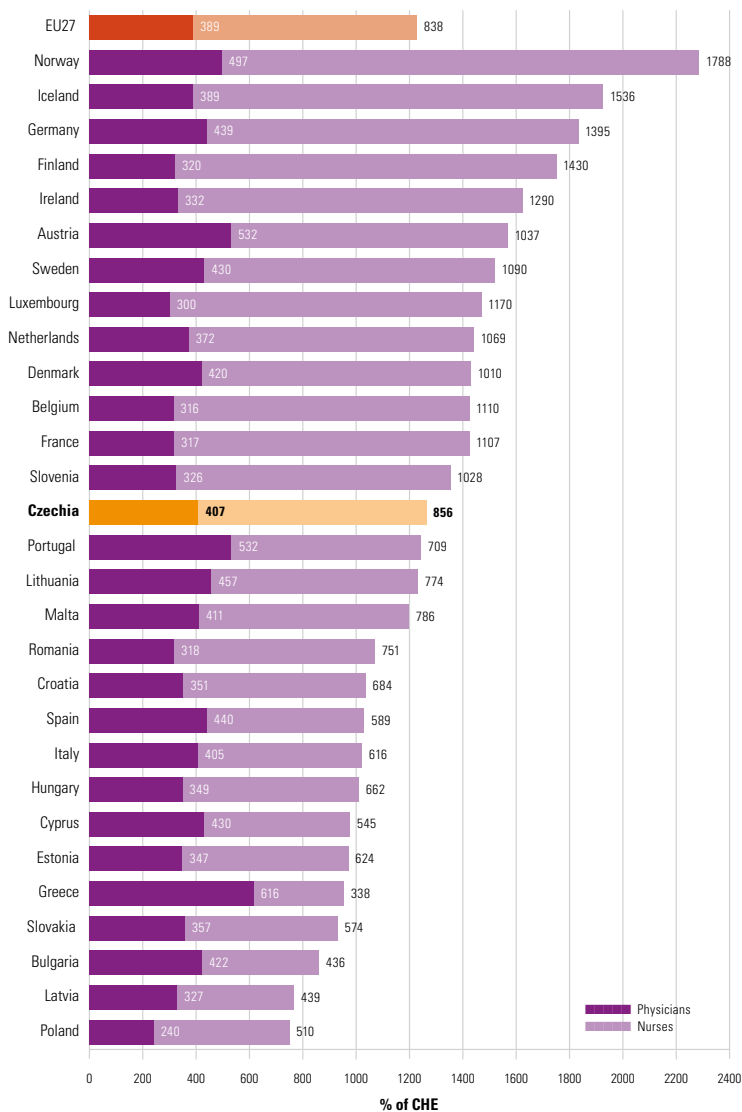
BOX 4.2 Distribution of health services and workers

Ensuring accessibility is the responsibility of HIFs. Governmental Regulation no. 307/2012 Coll. defines how certain specialties should be reachable (in minutes) and the maximum time one should wait for chosen medical interventions (in weeks). Reachability defined in minutes is met in nearly all municipalities; however, data on providers' capacities are scarce. The actual accessibility of some specialties is very limited; for example, child psychiatry. The maximum time one should wait for certain interventions is defined, but not effectively measured.

Simply reporting physician-to-population ratios may also be misleading, as patients have the freedom to choose their providers (no catchment areas). For example, in 2019, there were 123 dentists per 100 000 inhabitants in Prague, but only 46 in the neighbouring *Středočeský* Region (ÚZIS, 2020a). The high density of most health professionals in Prague can be partially explained by providing services to patients who only formally reside in other regions or who commute.

Similar to the general population, the average age of health workers in rural areas is higher (this is particularly a problem in primary care).

FIG. 4.3 Practising nurses and physicians per 100 000 population, 2019 or latest available year



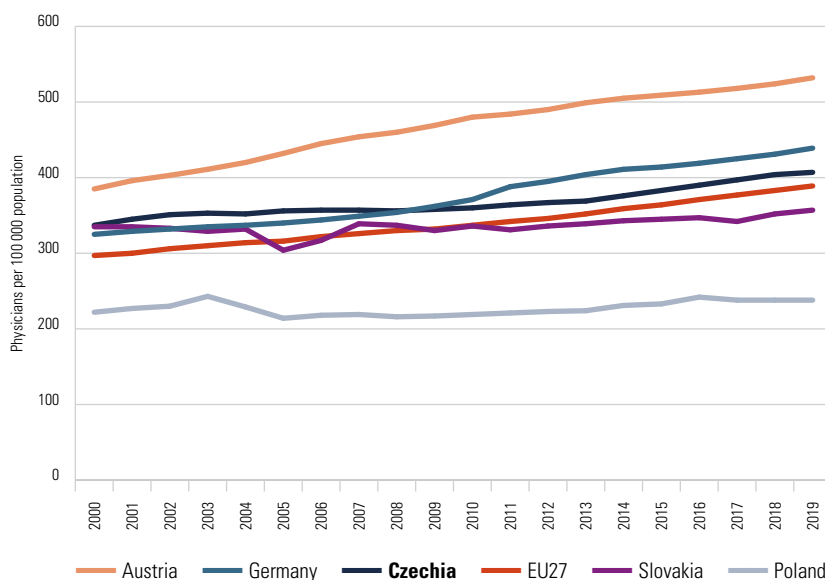
Source: OECD, 2022b.

Note: The EU27 (European Union (27 Member States as of 2020)) average is unweighted, calculated by the Organisation for Economic Co-operation and Development, excluding Iceland and Norway. Values for Poland, Belgium, Denmark, Luxembourg, Sweden, Ireland and Finland are estimated. Greece and Portugal: Data refer to all doctors who are licensed to practise, resulting in a large over-estimation of the number of practising doctors (of around 30% in Portugal). Slovakia: Data refer to professionally active physicians. They include not only doctors providing direct care to patients, but also those working in the health sector as managers, educators, researchers, etc. (adding another 5–10% of doctors); Greece reports only nurses employed in hospital. France, Ireland, Portugal and Slovakia: Data refer to professionally active nurses. They include not only nurses providing care for patients, but also those working as managers, educators and researchers.

4.2.2 Trends in the health workforce

In 2019, the numbers of physicians and nurses per 100 000 inhabitants were slightly above the EU averages: Czechia had 407 physicians per 100 000 inhabitants compared with 389 (EU average), and 856 nurses compared with 838 (EU average) (see Fig. 4.3). Czechia's physician-to-population ratio has gradually increased over the past 20 years, remaining above the EU average, while ratios in neighbouring countries have either moderately increased or stagnated (see Fig. 4.4).

FIG. 4.4 Practising physicians per 100 000 population in Czechia and selected countries, 2000–2019

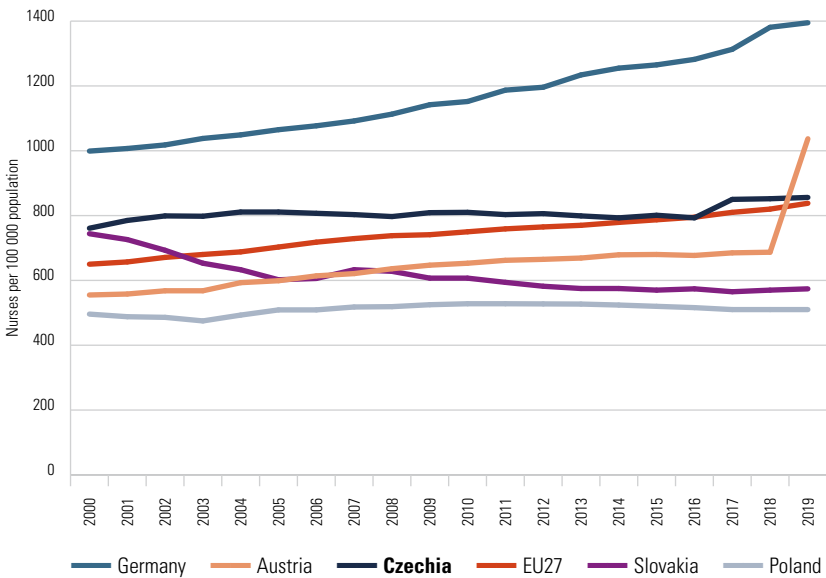


Source: OECD, 2022b.

Note: The EU27 (European Union (27 Member States as of 2020)) average is unweighted, calculated by the Organisation for Economic Co-operation and Development. Estimated values for Czechia (2014–2017) and Poland (2018–2019). Slovakia: Data refer to professionally active physicians. They include not only doctors providing direct care to patients, but also those working in the health sector as managers, educators, and researchers (adding another 5–10% of doctors).

As shown in Fig. 4.5, the nurse-to-population ratio is higher in Czechia than Poland or Slovakia, but lower than in Germany and Austria (after including non-hospital nurses). Although Germany has managed to steadily increase this over the past 20 years, other countries, including Czechia, have stagnated, and roughly mirror the EU average. In Slovakia, the nurse-to-population ratio has been declining.

FIG. 4.5 Practising nurses per 100 000 population in Czechia and selected countries, 2000–2019



Source: OECD, 2022b.

Note: The EU27 (European Union (27 Member States as of 2020)) average is unweighted, calculated by the Organisation for Economic Co-operation and Development. Estimated values for Poland (2012, 2018–2019).

Austria (until 2018): Data report only nurses employed in hospital. Slovakia: Data refer to professionally active nurses. They include not only nurses providing care for patients, but also those working as managers, educators and researchers.

In 2020, there were 221 567 full-time equivalents (FTEs) of workers in the Czech health sector, 43 475 of whom were physicians and 7 585 were dentists. There were a further 6 728 pharmacists and 114 007 paramedics. Of these, 75 011 worked as general nurses, 3 787 as paediatric nurses and 3 778 as midwives (ÚZIS, 2022b). Although men have historically dominated the profession, the long-running trend of female medical graduates resulted in them constituting 54% of Czech physicians in 2020 (according to headcounts; see Table 4.3). In 2019, the majority of nurses (general nurses, paediatric nurses and midwives) worked in hospitals (58%, including outpatient care), roughly 33% worked in independent outpatient care establishments and 3% worked in psychiatric institutes (ÚZIS, 2020a).

TABLE 4.3 Number of health personnel by categories (headcount), share of females

	2000	2005	2010	2015	2020
Health personnel, total	246 861	256 413	263 538	275 924	314 273
	79.8%	78.8%	79.0%	76.8%	78.6%
Physicians	39 608	40 689	43 458	48 175	53 662
	—	50.0%	51.9%	50.6%	54.0%
Dentists	5 102	7 081	7 606	8 461	7 915
	—	65.7%	65.4%	59.1%	62.5%
Pharmacists	5 102	5 917	6 339	6 965	7 594
	80.9%	81.1%	82.3%	81.0%	83.2%
General nurses and midwives	85 145	87 154	89 233	89 361	96 175
	98.8%	98.5%	98.4%	98.0%	97.8%

Source: ČSÚ, 2021f.

Note: The table displays the number of persons (headcount) on December 31 in the given year, not full-time equivalents.

4.2.3 Professional mobility of health workers

There are over 1 300 graduates from Czech medical faculties annually. Some leave for better working conditions or salaries abroad (mainly to Germany); however, verified numbers of professional migration from the health sector are not available. The only possible source of data – the issuance of certificates allowing physicians to work abroad according to European Directive 36/2005/EC – is unreliable, as not all applicants leave the country. However, the Czech Medical Chamber estimates that approximately 200 graduates go abroad annually, which is around 15% (E15.cz, 2021). Emigration flows for nurses are not concretely known. MZČR is trying to minimize the number of departing workers by increasing wages (through reimbursement). Between 2015 and 2020, nominal wages in health and social care together increased by 52% (reaching the gross monthly salary of CZK 41 076 per FTE), in comparison with average wage growth of 34% in Czechia (see Section 3.7.2) (ČSÚ, 2021b). Additionally, in 2017, legislation was passed to simplify postgraduate training, shorten its length, limit required time in specialized centres and ease potential retraining of physicians in case of specialty shortages (Act no. 67/2017 Coll.). Stabilizing and developing human resources are also the goals stipulated in Health 2030 (MZČR, 2020a). According to a survey conducted in 2020, the most frequent reasons for students to consider completing their postgraduate training abroad are expected higher quality of training, higher salaries and negative experiences with the Czech health system (L. Šlegerová, Michenka & Kočí, 2020).

Even though a not insignificant share of medical school graduates leaves annually, there is an inflow of health workers (mainly from Slovakia and Ukraine, among other mostly eastern European countries). Between 2013 and 2018, the annual inflow of physicians ranged between 210 and 311, though it dropped to 105 in 2019 and 148 in 2020 (Eurostat, 2022). Nevertheless, there is no state-operated programme focused on recruiting health workers from abroad.

Recognition of professional qualifications for health professionals attained in other EU countries is in line with Directive 36/2005/EC. The qualifications of physicians, dentists and pharmacists are recognized by MZČR, according to Act no. 95/2004 Coll. Applicants seeking recognition in Czechia must produce a certificate of formal qualification and proof of Czech language knowledge to the extent necessary to perform the corresponding job. To obtain recognition for foreign qualifications, a non-EU candidate (physician,

dentist or pharmacist) has to go through a two-stage process: first, the diploma must be recognized by a Czech university as valid and equivalent to a Czech diploma; and second, the candidate has to pass a professional examination in Czech (*aprobační zkouška*). Recognizing the professional qualifications of non-physician health workers is similar (Act no. 96/2004 Coll.)

4.2.4 Training of health personnel

TRAINING OF PHYSICIANS

MŠMT is responsible for setting standards in educating and training aspiring physicians. University medical studies comprise 6 years of instruction; dentistry and pharmacy studies comprise 5 years. There are eight medical faculties where general medicine can be studied, as well as the Faculty of Military Health Sciences at the University of Defence. Dentistry can be studied at six of these faculties (including military dentistry). Additionally, there are two faculties fully devoted to pharmacy and a department focusing on pharmacy at the Faculty of Military Health Sciences.

To comply with European Directive 36/2005/EC, two Czech laws established conditions for obtaining and recognizing medical degrees and specialized postgraduate training for physicians and non-physician health workers alike. Medical graduates must complete a training programme in a medical specialty and pass the state licensing examination to be allowed to work independently (that is, without supervision) as a physician. The programmes are offered by a wide range of providers throughout the country, each of which must be accredited by MZČR.

Act no. 95/2004 Coll., as amended, defines 43 basic postgraduate medical specialties (*specializační obory*) in 19 fields (*základní kmeny*). Additionally, there are three basic postgraduate specialties for dentists and five for pharmacists. These specializations take 3–5 years to complete, depending on the specialty, and 6 years for cardiac surgery and neurosurgery.

All physicians, dentists and pharmacists are obliged by Act no. 95/2004 Coll. to participate in continuous, lifelong education. Planning and oversight of this lies primarily with employers (the self-employed must plan it themselves) – this also holds for all health professionals. Employers plan and can implement lifelong learning according to their real needs and practical requirements in order to improve the quality of care they provide. Most physicians participate

in opportunities organized by the Czech Medical Chamber. As such, each physician must accumulate a certain number of points every 5 years through publishing activities or further education (such as seminars, workshops, symposia and congresses). The Czech Dental Chamber and the Czech Chamber of Pharmacists have similar requirements. No forms of formal relicensing are otherwise required.

TRAINING OF NURSES AND OTHER NON-PHYSICIAN HEALTH WORKERS

MŠMT is also responsible for setting graduate education standards for non-physician health workers. MŠMT is responsible for creating content and approving and publishing framework educational programmes for secondary vocational education. MŠMT also accredits educational programmes of higher vocational education or higher education. MZČR, in agreement with MŠMT, sets the minimum requirements for educational or study programmes granting professional qualifications to non-physician health workers.

Act no. 96/2004 Coll., as amended, defines the conditions for acquiring and recognizing the competencies of non-physician health workers. Based on the acquired training level, nurses can work as general or practical nurses. In short, to become a general nurse, one must attain a university degree or graduate from a higher vocational school in an appropriate field. This requires at least 3 years of study, or, alternatively, 1 year for those already practical nurses, midwives, paediatric nurses or paramedics (though this depends on the compatibility of previous education with general nursing programmes and can also take longer than a year). A practical nurse needs to graduate from a specialized high school. In the long run, this is expected to result in more nurses for inpatient care. Nurses may also pursue a further specialization by taking courses accredited by MZČR and passing the state licensing examination.

In reaction to the COVID-19 pandemic, Act no. 96/2004 Coll. was amended by Act no. 585/2020 Coll. to allow students of general medical to work as practical nurses after passing eight semesters of the study with the appropriate examinations.

4.2.5 Physicians' career paths

Upon graduation, physicians in Czechia begin training for their chosen specialization in hospitals. Certain requirements exist for each specialization (length of training, rotations, number of procedures performed). Part of the training can (or in certain fields must) be done in outpatient settings. After passing the state licensing examination, physicians can pursue hospital or outpatient work. In outpatient care, physicians can either have an independent, private practice or choose to be employed in a group practice. Independent private practice is by far the most common form of work for physicians in outpatient care in Czechia.

In hospitals, physicians can rise to senior physicians, assistant medical directors and medical directors. Larger health care facilities usually have some hierarchical structure and wards are directed by senior physicians (*primář*). In state-run facilities, there is a link between the years served and salary, as part of the salary is determined in a way similar to that for civil servants. Generally, there is no rule stating that those with more years of service should attain senior positions or earn more. In teaching hospitals, physicians may combine clinical duties with research activities. Apart from personal merit and ambition, promotions and career progressions are dependent either on superiors or institutional boards. For details on remuneration, see Section 3.7.2.

4.2.6 Other health workers' career paths

Possibilities within the different health professions are manifold and vary considerably. In general, career progression in all fields very much depends on personal capabilities, choices and desires. For example, pharmacists may decide to pursue a career in industry or run a private pharmacy. Nurses can work in hospitals and progress to different levels of responsibility (regarding both patients and staff) or choose to work in outpatient settings or homecare agencies. As with physicians, there is no set nationwide career path. Hospital wards usually have a head nurse (*staniční sestra*), who is a counterpart to the senior physician and oversees all other nurses. Other health professionals, such as speech therapists, psychologists and hospital auxiliary staff, do not follow defined career paths, either.

Provision of services

Chapter summary

- Public health authorities in Czechia collaborate on epidemiological surveillance and preventive care services, while recent legislative changes include smoking prohibitions and additions to compulsory vaccination schedules for children. During the COVID-19 pandemic, RPHAs played a key role in implementing COVID-19 restrictions.
- A patient's first point of contact with the Czech health system is typically through non-emergency primary care, though there is no true gatekeeping role and patients are free to (and often do, with some exceptions) obtain care directly from specialists of their choice without referral. Patients retain the freedom to choose among providers of care, including hospitals.
- Prescription pharmaceuticals are covered by SHI, though 14% of pharmaceutical expenditure went toward non-covered, non-prescribed purchases in 2019. Since 2010, the number of consumed pharmaceutical packages has gone down by nearly 50 million per year, though the total volume of daily defined doses has returned to its 2010 level after a decline in the mid-2010s.
- Care for long-term conditions is split between the health and social care systems. This primarily affects the elderly, disabled and those suffering from chronic diseases. Though overlapping, LTC is not considered a separate branch of either system. Both systems vary in terms of organization, funding and supervision, though both MZČR and MPSV have large supervisory roles.

- Rehabilitation care is included in the benefits package (inpatient and outpatient), although patients obtaining it without a referral can face OOP payments. There are no reported shortages or problems regarding service availability. Inpatient rehabilitation care also includes spa treatments, which can be fully or partially reimbursed from SHI, though some conditions were scaled back.
- Mental health services in Czechia, following changes launched in 2011, are focused on improving quality of life for people living with mental illnesses. Programmes have been implemented to destigmatize mental care and provide support at the community/outpatient level. Mental health centres, open since 2018, offer new health and social services to care for those with serious mental illnesses, also in their own environments.
- Dental care in Czechia mainly comes from private providers, and there has been a long-running trend for dentists to only take private (self-paying) patients. However, one in four dentists was aged 60+ in 2021, and nearly 95% of dentists are specialized in general dentistry, leaving personnel gaps for specialists. Some dental care is also available in publicly owned hospitals.

5.1 Public health

As of 2022, the main actors for public health in Czechia are SZÚ, the two regional institutes of public health and 14 RPHAs. These institutions are directly subordinate to and managed by MZČR and its Chief Public Health Officer, who is also a Deputy Minister of Health.

SZÚ conducts research, provides advice on methodology and drafts expert opinions on the safety of various products, including cosmetics, food supplements and other items of daily use. It also systematically monitors the impact of environmental factors on population health, helps to prepare legislation and harmonizes Czech legislation with EU norms. For disease prevention and health promotion, SZÚ focuses on epidemiological surveillance of important communicable diseases and on promoting healthy lifestyles (Czechia has a surveillance system for some 50 diseases and public health

hazards). SZÚ also coordinates the different public health actors and supports their activities in a variety of ways, such as through the publication of educational materials.

The two regional institutes of public health (*zdravotní ústavy*) are in *Ústí nad Labem* and *Ostrava*, with branches in other cities; they were created following 2012 reforms out of the original 14 institutes of public health located throughout the country. Currently, they share some epidemiological surveillance duties with SZÚ, though their chief domains are science and research. These two institutes (and their branches) are also permitted to compete with private laboratories, though they primarily serve as reference laboratories. Regarding immunization logistics, the two institutes collaborate with primary care facilities, which are responsible for providing vaccinations and antenatal services.

RPHAs are responsible for public health services including certifications, authorizations and immunization logistics (along with the two regional institutes of public health). Any physician who diagnoses a communicable disease must inform the relevant RPHA, which subsequently reports total incidence levels to the Information System on Infectious Diseases, which is part of NZIS. Patients with certain communicable diseases, such as tuberculosis or viral hepatitis, must obtain treatment from hospital departments specially designated for this purpose. RPHAs played a key role in implementing COVID-19 restrictions, including quarantine requirements and local lockdowns

Immunization rates for vaccine-preventable diseases are relatively high, reaching 97% for diphtheria, pertussis and tetanus (DPT), and hepatitis B, respectively, and 94.4% for measles in 2020 (OECD, 2022b). The compulsory child vaccination programme covers DPT, poliomyelitis, hepatitis B and *Haemophilus influenzae*, and measles, mumps and rubella. For the first six vaccines, the vaccination schedule changed from 3+1 to a 2+1 in 2018 (children up to a year should receive the first two doses with a break of 2 months; the third dose should be provided between 11 and 13 months). In parallel, the compulsory vaccination schedule for measles, mumps and rubella also changed (the first dose provided to children aged 13–18 months, the second dose postponed to the age of 5–6 years). Parents can be fined up to CZK 10 000 for not following the vaccination schedule if there are no medical reasons to exempt a child.

Vaccination against hepatitis A, tick-borne encephalitis and meningococcal disease is available upon request but is generally not covered by SHI; some HIFs offer full or partial reimbursement for these vaccinations as part of their own prevention programmes. Compulsory vaccinations and vaccinations for some vulnerable groups are covered by SHI (namely, vaccination against influenza for people aged 65+ and for patients recovering from organ transplantation). In terms of financing, all compulsory and all voluntary vaccinations (for specified groups: human papillomavirus (HPV) for 13-year-olds, rotavirus and meningococcal disease for babies, influenza for seniors and vulnerable individuals), are covered by SHI. As of 2020, meningococcal vaccinations for children up to the age of 1 year are covered by SHI. COVID-19 vaccinations have also been fully covered. Other preventive care services covered by SHI include:

- preventive examinations and screening programmes for children of specific age groups;
- voluntary periodic examinations by GPs (biennially), dentists (annually) and gynaecologists (annually);
- cancer screening programmes – for cervical cancer (annually), breast cancer (biennially from age 45) and colorectal cancer (occult blood tests annually between ages 50 and 54 and biennially for people aged 55+, or colonoscopy examination once every 10 years).

Preschool facilities are not allowed to enrol children without documentation of all compulsory vaccinations that correspond to the age of the child and the vaccination schedule, if not exempted for medical reasons or due to lifelong immunity. The 2020 legislative amendment to Act no.258/2000 Coll. extended the vaccination requirement to all childcare facilities, including those organized by employers (“children groups”) and other types of facilities for preschool-aged children; violators are subject to a fine. This was aimed at reversing negative trends in vaccination uptake and to level regulation for all childcare providers.

Laws prohibiting smoking in public places and regulating tobacco advertisements on radio and television were enacted in 1989 and 1995, respectively. Greater restrictions on tobacco advertising came into force in 2004, and a new law on tobacco and tobacco product control was enacted in 2005, further restricting smoking in public places. However, the full-scale

ban on smoking in public places was only introduced in 2017, following years of discussions. The legislation extended the scope of smoke-free areas as stated in previous legislation, and overruled several previous exemptions (Act no. 65/2017 Coll.); health care facilities including surrounding areas, all indoor facilities used for public entertainment and for other public events, and zoological gardens must be smoke free. Furthermore, the 2017 law introduced regulation of the use of electronic cigarettes in public places. Gradual increases to the excise tax on cigarettes, cigars and other tobacco products began in 2020. Annual increases were approved through 2023: by 10% in 2020 and 2021, followed by 5% in 2022 and 2023.

The 2017 anti-smoking law also included restrictions on alcohol sales (banning the sale of alcohol at children's events and from vending machines) and increased fines for violations. Excise taxes on alcoholic beverages and tobacco were also increased in 2020. The increase in alcohol taxes was motivated by their rising affordability: while the average wage rose by 50% between 2009 and 2018, the excise tax on alcohol had remained unchanged since 2010. The excise tax on 0.5 L of 40% alcohol increased from CZK 57 to CZK 64.5, although this remained lower than in Germany and Poland (MFČR, 2019a).

Health 2030's focus on public health lies with disease prevention, health promotion and protection, and increasing health literacy. Additionally, the National Recovery Plan, funded by the European Commission in response to the COVID-19 pandemic, plans for several investments in health, specifically for research and development, increasing health system resilience and strengthening cancer prevention and care in the period 2021–2026 (see Box 5.1).

MZČR and MPSV are jointly responsible for occupational health and injury prevention, though occupational diseases are the responsibility of departments within RPHAs. Any measurements needing to be carried out as part of an investigation are conducted by accredited laboratories, usually run by the two institutes of public health and their branches. The National Register of Occupational Diseases is administered by ÚZIS.

BOX 5.1 Czechia's COVID-19 response in 2020 and future implications

Czechia dealt with limited spread and low case totals during the first national lockdown, leading to a gradual relaxing of measures by mid-May 2020. Reactions to the second wave were slower, however, leading to a new state of emergency and return of restrictions in October 2020. The government's pandemic evaluation system to guide containment measures, launched in November 2020, became less consistent over time as it struggled with risk communication and public engagement. The political opposition, COVID-19 experts and the general population all became more critical of the government's response as time went on and its ad hoc approach to pandemic-related measures became clear (Sagan et al., 2021).

Before the COVID-19 pandemic, Czechia's public health information systems only shared limited data widely, usually in aggregated form and with time delays. In response to the pandemic, national intensive care and COVID-19 laboratory capacity monitoring systems were created and MZČR began publishing a set of COVID-19 data daily, though the registry that was developed did not link to existing electronic systems or registries at first and eventually led to operational issues. Finally, in line with Health 2030 and pushed to the fore by the COVID-19 pandemic, a new law on health care digitalization setting out high-level rules and architecture for Czech health care information systems was passed in August 2021. Implementation necessitates substantial investment and political will for Czechia to modernize systems, and part of the CZK 20 billion for health in the National Recovery Plan is to support digitalization efforts (OECD/European Observatory on Health Systems and Policies, 2021).

5.2 Patient pathways

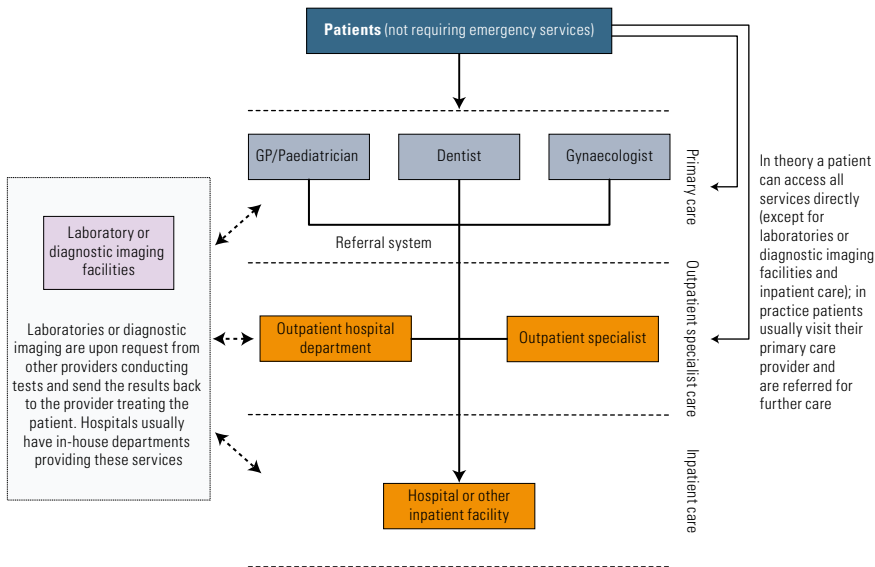
A patient's first contact with the health system is typically through non-emergency primary care (see Fig. 5.1), where a primary care physician (including GPs, (paediatricians, for children), dentists and gynaecologists) acts as a contact point, provides care and coordinates with other providers. If requiring specialized care, the primary care physician refers the patient to an appropriate specialist contracted with the patient's HIF and informs the specialist about examination results to date in a note or electronically via a secured system, as enacted by the Act on eHealth (2021). In reality, specialists are not typically recommended, and it is up to the patient to establish contact and even if a specialist is recommended, the patient is not required to contact them; they retain freedom of choice of provider. Physicians are also not true

gatekeepers, meaning that referrals are not obligatory for accessing specialized care and patients frequently obtain care directly from specialists of their choice without referral (exceptions include laboratory tests, occupational therapy, diagnostic imaging facilities and inpatient care (it should be noted that patients may also access inpatient care by ambulance or through emergency wards or hospital outpatient wards)).

Following examination, the specialist is obliged to notify the referring physician about findings and treatment. If surgery is needed (determined by the specialist), the patient is referred to a hospital by the specialist, the specialist prescribes necessary medication, and the patient can call the hospital to ask about waiting times and potential surgery dates. The patient is also free to choose among hospitals and can inquire about shorter waiting times. Maximum waiting times for specific procedures are set by law, with HIFs being responsible for contracting sufficient providers. The maximum waiting times are, however, not effectively guaranteed because they are not routinely measured using a unified methodology. Following surgery and primary rehabilitation in the hospital, the patient returns home (with a detailed discharge summary), where they might need homecare; this is usually prescribed by the primary care physician (who also receives a discharge summary) and provided by a HIF-contracted homecare agency; these services are fully covered.

Follow-up hospital visits are common in evaluating a surgery's outcome, as is occupational therapy, which is either prescribed during a follow-up visit or recommended in the discharge summary. The physician discharging the patient provides a referral directly, otherwise a referral can be issued based with the discharge summary. The specialist's or hospital's evaluation may also recommend further action or provide an assessment of the patient's ability to return to work.

From January 2022 onwards, medical documentation (be they hospital discharge summaries, specialist reports to physicians, or reports from physicians to specialists) may also be sent electronically (not compulsory at the time of writing). Pathways and adequate documentation are compulsory and are set by a Directive enacted in 2012 (and updated in 2018) (MZČR, 2018b).

FIG. 5.1 Patient pathways

Source: Alexa et al., 2015.

5.3 Primary care

The goals of primary care are to provide preventive care (immunizations and screenings), diagnostic, therapeutic and assessment care and consultations, and coordination and continuity of health services with other providers. Primary care physicians also perform several tasks related to assessing and verifying health status, including dependency status and other social protection measures linked to health or disability status, along with fitness for employment. Section 5.1 lists preventive care services covered by SHI. Primary care physicians also collaborate with RPHAs in epidemiological surveillance by reporting cases of communicable diseases (see Section 5.1) and can also provide visiting services to immobile patients or prescribe homecare for nurses to provide. Nurses can provide injections, intravenous therapy, wound dressing and medical check-ups, and can also prescribe certain types of medical aids (such as compression stockings, bandages, incontinence aids) under certain conditions.

Primary outpatient care is provided to patients by registering providers. The Health Service Act (2011) defines registering providers as those in general practice medicine, general practice for children and adolescents, dentistry, and

gynaecology and obstetrics, who have admitted patients to provide primary outpatient care. Note that there are no family physicians in Czechia. Younger patients switch from paediatricians to GPs between the ages of 14 and 19 years.

Most primary care physicians are self-employed in solo practices, typically employing a nurse who also has administrative duties (see Section 3.7.1). In 2019, there were 4 540 independent GP practices with 4 787 physician FTEs, 1 835 paediatric practices (1 970 FTEs), 5 624 dental practices (6 793 FTEs) and 1 274 gynaecological practices (1 350 FTEs). The total number of health care facilities in Czechia (including inpatient) reached 32 240 in 2019, meaning independent primary care offices formed around 41% (ÚZIS, 2020a). A primary care physician may join others to work in private group practices, health centres or polyclinics. Primary outpatient care can also be provided in inpatient facilities.

Health centres and polyclinics tend to be well equipped. Most have electrocardiographs, ultrasound scanners and X-ray equipment. They also generally have diagnostic laboratory facilities on the premises and employ nurses and physiotherapists. Primary care physicians working in solo practices are less likely to have direct access to advanced diagnostic equipment. Moreover, the working conditions for primary care physicians depend to a considerable extent on local circumstances and whether they are situated in urban or rural settings.

Patients may register with a physician of their choice and can switch to a new one every 3 months without restrictions and a registering physician can reject patients, primarily if a tolerable workload has been exceeded. “Tolerable workload” is not defined, and no threshold exists in terms of the number of registered patients. Moreover, physicians can further reject patients if their residences are too far away to provide visiting services when needed.

The number of children and adolescents registered with a paediatrician steadily declined between 2007 and 2019, from 993 to 894 patients per 1 000 population aged 0–18 years. In 2019, the average number of contacts with a paediatrician was 4.7. Out of these, 1.1 contacts were preventive visits. These data come from annual surveys among health care providers (including inpatient providers) conducted by ÚZIS (86.8% response rate in 2019). Even though Prague typically sees high numbers of commuters for both work and health services, the number of registered patients with a paediatrician located in Prague is 930. The highest densities of registered patients are in the *Středočeský* and *Ústecký* Regions (both 1 031) and *Pardubický* Region (1 000). The lowest

BOX 5.2 Key features of primary care in Czechia

Key primary care weaknesses in Czechia include low competencies of primary care physicians, the deficient gate-keeping role, a fragmented provider landscape (single practice prevalence) and the decline in the number of GPs in remote areas. In 2020, the average age of GPs in Czechia was 54.9 years. The situation is even more difficult with paediatricians, with an average age of 57.5 years (VZP, 2021). Currently, there is a strong renewed interest among medical students to become GPs, though the same interest has not yet been seen for paediatricians.

To address these, Health 2030 aims to:

- strengthen the competencies of GPs and establish a clear definition of relationships with outpatient specialists;
- provide incentives to increase the availability of care and promote preventive check-ups;
- effectively manage chronic diseases;
- improve the reimbursement mechanism;
- improve quality through monitoring of quality indicators.

Various incentives for health care providers are defined in the Reimbursement Directives (for example, rewards in remote areas and for extended office hours) (MZČR, 2020e). HIFs can award bonuses regarding quality, and VZP launched the VZP PLUS programme in 2019 to reward good organization and high quality of (mostly chronic) care. In VZP PLUS, paediatricians are rewarded for improved test results for patients previously diagnosed with obesity. The list of tests (monitoring body mass index, blood pressure, serum lipids and patient compliance) was defined by VZP in cooperation with professional organizations and provider associations. VZP also incentivizes GPs and others to examine glycated haemoglobin, low-density lipoprotein cholesterol, eyes, diabetic foot syndrome and renal functions in patients with diabetes mellitus; VZP rewards providers for improved results.

average number of registered patients, 795, is in the *Olomoucký* Region (ÚZIS, 2020a; VZP, 2020) (it should be noted that the regional values were calculated by the authors under the assumption that all paediatricians have a contract with VZP). In 2017, 89.5% of adults were registered with a GP; adults made on average 4.1 visits (out of which 0.25 were preventive visits) (ÚZIS, 2018).

HIFs are responsible for contracting physicians to ensure their accessibility for their members, though measuring the accessibility of health care is not straightforward. Based on an evaluation by VZP, their network of physicians

for primary care complies with Governmental Regulation no. 307/2012 Coll. and health care is reachable in all municipalities in Czechia within the agreed-upon time limits (VZP, 2022).

Personnel stabilization in health is another priority of Health 2030 and is especially important for primary care (see Box 5.2). Primary care reform, as envisioned, pursues a gradual transformation and strengthening of primary care to provide the broadest possible range of services while maintaining quality. As part of ongoing reforms, primary care physicians gained new competencies in 2019 to monitor oncological patients no longer in need of therapeutic treatment with specialized check-ups and examinations. Professional associations believe that GPs are easier to reach for most patients, yet monitoring patients at higher risks of disease relapse remains the oncologists' responsibility (MZČR, 2018c). Although it focuses mainly on strengthening GPs, the focus long-term is a gradual reconstruction of outpatient care entirely (MZČR, 2020a). See Section 6.1 for further details.

5.4 Specialized care

5.4.1 *Specialized ambulatory care (outpatient)*

Similar to primary outpatient care, specialized outpatient services in Czechia are offered by self-employed specialists in solo or group practices, health centres or polyclinics (see Box 5.3), or employed in hospital outpatient departments. As

BOX 5.3 Integration of outpatient care

Horizontal integration of outpatient care is represented by polyclinics, where multiple single practices are concentrated. Often outpatient providers rent space there, rather than being employed by the polyclinics. Specializations provided in polyclinics therefore differ and are not coordinated in terms of integration of care. Vertical integration of outpatient care, on the other hand, is represented by disease management of some (chronic) diseases, such as diabetes mellitus, which assumes a functioning network of GPs closely cooperating with diabetologists. The role of GPs is to identify asymptomatic diabetic patients and treat non-complicated diabetic patients for which GPs are compensated above capitation reimbursement. Should complications emerge, a patient is sent to a specialist (diabetologist, etc.).

stated above, patients generally have the possibility to visit specialists without referrals and frequently do so.

Outpatient specialists cover 56 specializations and include non-physician specializations such as clinical psychologists, clinical speech therapists, eyesight therapists, orthoptics and audiologists. The distribution of outpatient specialists is uneven across the country, particularly for some specializations (see Box 4.2; density maps for each specialization are also downloadable from VZP's website: <https://www.vzp.cz/poskytovatele/dostupnost-zdravotni-pece/ambulantni-pece>). Prague (with 64.2 physicians per 100 000 population in 2019; national average 37.3 per 100 000) is densely populated by all outpatient care specializations, while border areas are generally less dense (ÚZIS, 2020a). Minimum legislative limits as set by Governmental Regulation no. 307/2012 Coll. (2012), must be met across the country, however, meaning certain specializations must be accessible within 45, 60, 90 or 120 minutes. HIFs must contract outpatient care specialists to guarantee these limits for their members.

5.4.2 *Day care*

Day care is defined as the provision of a bed for a patient for less than 24 hours (Health Service Act, 2011). The exact time of care provision depends on the clinical examination or surgery. Besides hospitals providing inpatient care, day care may also be offered by facilities without inpatient departments if conditions to run a health care facility (hygienic, technical and personnel) and to perform the specific procedure are fulfilled. One of the conditions for day care provision is that a standard inpatient care facility must be accessible within a reasonable distance for follow up in case of complications.

Day care is provided for six specializations: surgery (including ocular, paediatric and vascular), cosmetic surgery (including burns), gynaecology, urology, orthopaedics and otolaryngology (including jaw surgery). Procedures carried out in emergency departments cannot be classified as day care under any circumstances. If carried out in other than surgical specializations above, the procedures must be invasive. Day care is only for patients with minimal medical risk. If a patient suffers from comorbidities or has health risks, inpatient hospitalization is provided, though day care provision is still possible.

Except for ocular surgeries (90% of day care) and partly orthopaedics, day care is underdeveloped in Czechia compared with many EU countries (Advanced Healthcare Management Consulting, 2022). The share of day care reaches 5–10% of all interventions suitable for day care, whereas other countries reach 50% and target even 75%. Advanced Healthcare Management Consulting (2022) show savings of 300 000 inpatient days in their model for 23 day care interventions (out of 200 interventions that could be carried out as day care); so as much as 20% more surgeries could be carried out compared with the current situation if care was better organized. This, however, would also require a strong system for follow-up care and support systems at home after discharge, without which day surgeries are not feasible. In 2019, day care was provided on 246 beds in Czechia. A total of 43 providers offered exclusively day care services at 69 different sites (ÚZIS, 2020a). Some providers provided day care alongside acute inpatient care, the data for which are not statistically collected. On the other hand, some outpatient providers categorized more difficult interventions as day care, which overestimates numbers (Advanced Healthcare Management Consulting, 2022). Eye surgeries, the most common day care treatment in Czechia, are also neither separately categorized in Czech data nor in European data (Eurostat, 2022).

Table 5.1 shows the total number of cases and most frequent diagnoses treated as day cases per Eurostat categories of day care; the number of day cases (all causes) has risen by 50% since 2011 in Eurostat definitions. All selected causes saw an increase, except for medical abortions, respiratory diseases and injuries. The decrease of medical abortions as day cases stems from the general downward trend of medical abortions in Czechia (ÚZIS, 2020b). Note that medical abortions nearly doubled between 2002 and 2011 (Alexa et al., 2015). Gynaecological and genitourinary conditions were mainly treated as day cases in 2019.

TABLE 5.1 Day cases: most frequent hospital discharges by diagnosis in Czechia, total number, selected years (sorted by 2019 values)

	2011	2013	2015	2017	2018	2019
All causes of diseases (A00–Z99) excluding V00–Y98	55 024	67 631	70 383	70 123	71 645	74 118
Diseases of the genitourinary system (N00–N99)	10 386	16 054	17 727	18 514	18 803	18 698
Pregnancy, childbirth and the puerperium (O00–O99)	10 067	13 183	13 423	13 481	12 890	12 576
Diseases of the circulatory system (I00–I99)	5 859	6 485	7 259	8 396	8 887	10 328
Other diseases of the genitourinary system (remainder of N00–N99)	4 665	7 737	9 011	9 967	10 280	10 215
Factors influencing health status and contact with health services (Z00–Z99)	4 161	6 593	6 584	5 640	6 480	6 492
Other pregnancy with abortive outcome (O00–O03, O05–O08)	3 148	5 135	6 016	6 473	6 399	6 198
Menstrual, menopausal and other female genital conditions	3 733	5 708	5 880	5 847	5 776	5 825
Medical abortion	5 351	6 528	5 797	5 268	4 883	4 801
Diseases of the respiratory system (J00–J99)	3 893	3 895	4 142	3 257	3 029	2 820
Injury, poisoning and certain other consequences of external causes (S00–T98)	2 908	2 691	2 740	2 717	2 905	2 807

Source: Eurostat, 2022.

5.4.3 Inpatient care

Inpatient care in Czechia is provided in hospitals and specialized inpatient facilities (see Box 5.4). As described in Section 5.2, access to specialist care is not restricted by gatekeeping, though referrals are necessary for hospitalization (except in cases of medical emergency, including life-threatening situations, childbirth or law-mandated hospitalization, such as highly contagious individuals). In case of emergency, patients are unlikely to be able to choose a hospital, except in most cases of childbirth, though pregnant women in most regions need to register in advance with the hospital of their choice for capacity reasons.

A referral must contain the physician's written justification for hospitalization and any other important information about the patient's health status. Patients can usually go to a hospital of their choice if that hospital has a contract with their HIF. The most frequent reasons for hospitalizations are listed in Table 5.2.

TABLE 5.2 Most frequent reasons for hospital admissions in Czechia by diagnosis, 2019

ICD-10	HOSPITALIZATIONS PER 1 000 INHABITANTS
IX. Diseases of the circulatory system	29.3
XXI. Factors influencing health status and contact with health services	28.6
XIX. Injury, poisoning and certain other consequences of external causes	20.9
XI. Diseases of the digestive system	20.3
XIII. Diseases of the musculoskeletal system and connective tissue	18.3
II. Neoplasms	17.6
Total	221.9

Source: ÚZIS, 2020e.

Note: ICD-10: International Classification of Diseases 10th revision.

BOX 5.4 Integration of inpatient care***Vertical integration:***

All Czech hospitals have inpatient and outpatient departments. Thus, if patients are directed to hospitalization from an outpatient department, it can also be scheduled for the hospital. However, patients can schedule hospitalization in a hospital of their choosing, regardless of where their sending specialist is based.

Horizontal integration:

A hospital's size influences its ability to gather specialists from different sectors of care. For patients suffering from unspecified problems, hospitalizations are often arranged to allow for check-ups from varying specialists, which helps determine a diagnosis quicker than if patients were examined in outpatient settings.

For economic and management reasons, some regions have integrated their hospitals under regional holdings. Regions also aim to acquire small local hospitals, helping local hospitals to survive after restructuring the care they provide (continued operability of small local hospitals is currently at stake). These hospitals then form a regional network of hospitals and are coordinated from the regional centres.

There were 194 hospitals in Czechia providing 60 500 beds in 2019; 40 hospitals provided LTC only, covering 3 078 beds. Acute care hospitals usually also provide some LTC beds in addition to acute care beds, summing up to approximately 16% of hospital beds. There were also 119 specialized therapeutic institutes with 16 937 beds, 52% of which were devoted to psychiatric care (both for children and adults). There are regional disparities in hospital densities (see Section 4.1).

Large hospitals providing maximum care are situated exclusively in larger cities. Hospitals in smaller cities and towns tend to focus on a limited number of medical specialties (for example, internal medicine and maternity wards) and the scope of care offered is less broad. In recent years, some of these hospitals have focused on day surgery and reduced their inpatient services to focus more on outpatient services.

Teaching hospitals, which are directly subordinate to MZČR (except for one that is subordinate to the Ministry of Defence), have a special status, as they perform educational and research duties in addition to their function as providers. MŠMT oversees instruction carried out in teaching hospitals (see Section 4.2), which tend to have high-end technologies, which is also in line with their teaching mission.

§ 112 of the Health Service Act (2011) defines conditions for the set up of centres of highly specialized care (CHSC). CHSC applications must be approved by MZČR, after which they can obtain a special reimbursement contract based on the costly care and pharmaceuticals provided; only CHSCs can prescribe type S pharmaceuticals (exceptionally costly pharmaceuticals). They also provide care using costly equipment reimbursed from SHI. A list of CHSCs in different specializations is provided on MZČR's website (at <https://www.mzcr.cz/category/agendy-ministerstva/zdravotni-sluzby-agendy-ministerstva/centra-vysoce-specializovane-pece/seznam-center-vysoce-specializovane-pece-v-cr/page/2/>).

Long-term care and nursing care in Czechia involve the health and social care systems, not being a separate branch of either (see Section 5.8); informal care may also substitute for portions of institutionalized LTC (see Section 5.9). Although the number of LTC beds has recently risen (be it in health or social care), patients sometimes tend to stay longer than necessary in acute care beds instead of being transferred to LTC, raising hospitalization costs.

5.5 Emergency care

Emergency care comprises urgent medical care provided to patients with life-threatening conditions (sudden deterioration of health status or acute pain). According to the defining law, a patient should receive emergency care within 20 minutes after notification (Act no. 374/2011 Coll.). The emergency care network in Czechia consists of command centres, operational rescue service units, a rendezvous system and air emergency medical services. The network is part of the nationwide integrated rescue system, along with fire brigades and the police. Emergency service provision is guaranteed by the state and paid for via regional budgets and HIFs. Emergency service providers are public budgetary organizations directly under the regional authorities. The few private emergency services providers in Czechia operate based on contracts with regional emergency service providers.

Both the standard emergency number for Czechia (155) and the European emergency number (112) connect callers to triage personnel in command centres. In addition, the mobile application *Záchranka* connects users to the nearest dispatcher based on given GPS location in Czechia, Austria and Hungary, and also to mountain rescue services in Slovakia. In 2021, there were 319 emergency units that were staffed with a total of 6 672 FTEs in Czechia, of which 598 (9%) were physicians, 2 008 (30%) were drivers and the rest were nurses and paramedics (ZZS ČR, 2022a). In the same year there were a total of 1 164 811 outbound activities, increasing by more than 50% from 2009 (ZZS ČR, 2022b). Paramedics complete a special training course. Rescue teams have either two or three members:

- a paramedic and a nurse, or two paramedics (general rescue team);
- a paramedic, a nurse and a physician, or two paramedics and a physician (medical rescue team);
- a paramedic and a physician (rendezvous team).

In 2021, and when measured by numbers of patients treated, almost 80% of outbound activities were handled by teams headed by a paramedic, 6% by teams headed by a physician and the rest handled by a rendezvous system. The rendezvous system encompasses two tiers: the first is a small vehicle (not equipped for patient transport) with a paramedic driving a physician, while the second consists of a fully equipped ambulance, able to transport patients, with the general rescue team. In the rendezvous system, two separate units are sent to the scene of an accident or emergency to provide aid; the advantage of

this being that the physician is available for another emergency after sending the patient to the hospital with the general rescue team.

The air emergency medical service (*Letecká záchranná služba*) is located at 10 stations scattered across the country and provides services throughout Czechia and border areas. The 10 helicopters in use are provided by private organizations (based on contracts with MZČR), or by the military. Crew assignments, equipment and dispatch are coordinated by rescue operation command centres.

For non-life-threatening situations outside standard physician and outpatient specialist hours, patients can seek out-of-hours outpatient care, usually located within hospitals (where the remaining user fee previously described applies if the visit does not lead to immediate hospitalization), and regions have been required to coordinate this care among regional hospitals since 2020.

BOX 5.5 Patient pathway in an emergency care episode

Facilities explicitly required to cooperate with emergency medical service include trauma centres, severe burn centres, cardiology centres, stroke centres and transplantation centres.

The first triage of a patient is done immediately upon ambulance arrival. There are specific guidelines in place for the emergency rescue team to assess whether the episode is due to stroke or acute myocardial infarction. Stroke triage has been mandatory for emergency medical services since 2013 and is monitored and evaluated on a regular basis as part of stroke care quality criteria. If triage-positive, the rescue team must contact the nearest comprehensive stroke centre, which operate designated 24/7 hotlines. Stroke treatment is not provided in the ambulance; the designated stroke care team is alerted after the ambulance call and is ready when an ambulance arrives to minimize symptom-to-treatment times (Bryndová et al., 2021).

For serious injuries and polytraumas, the emergency rescue team must take patients to acute care hospitals accredited as trauma centres, the network of which was established in 2008. For all other injuries and patients, they bring patients to the nearest acute care hospital.

For severe burns, patients are taken directly to one of the two highly specialized severe burn centres (in Prague and Brno).

Acute inpatient facilities are required by law to cooperate with command centres, to provide them with timely information on their available capacity, and are obliged to receive patients from rescue teams unless specific guidelines define otherwise.

5.6 Pharmaceutical care

Pharmaceutical services were provided by 2 749 pharmacies and 220 (medical device) dispensaries in Czechia in 2019: roughly 4 218 inhabitants per pharmacy. Following initial growth after privatization in the 1990s, the number of pharmacies and dispensaries decreased between 2015 and 2019 (108 fewer pharmacies and 244 fewer dispensaries). Smaller pharmacies originally run by private individuals have been overtaken by chains (Dr. Max, Benu, etc.), while other pharmacies closed because they could not survive and refused offers to merge with chains.

Online pharmacies and online sales of pharmaceuticals have increased in importance, particularly during the COVID-19 pandemic. In 2021, online sales of non-prescribed drugs, including dermatological products, reached 14% of all freely disposable sales (without prescription) of pharmaceuticals. Some pharmacies also began delivery services during the pandemic.

Extremely costly pharmaceuticals are only provided in CHSCs and are reimbursed based on contracts between HIFs and CHSCs; these include, for example, biological treatments and highly innovative drugs with temporary reimbursement (such highly innovative drugs are temporarily reimbursed for 3 years (extended to 5 years) during which clinical data are gathered to approve permanent reimbursement).

Pharmacy density differs throughout Czechia, with denser coverage in larger cities. Half of all pharmacies are open 6 days a week, the rest are open 5 days a week. Some pharmacies, operating mostly in supermarkets or shopping centres, are also open on Sundays. Pharmacies that belong to key regional and teaching hospitals are open 7 days a week or offer non-stop services (ÚZIS, 2020a, 2020d). Pricing and reimbursement decisions for registered pharmaceuticals have been the responsibility of SÚKL since 2008.

Czechia's pharmaceutical industry was almost completely privatized in the 1990s. Domestically produced pharmaceuticals have a long tradition (for example, Zentiva, though acquired by Advent International (US) in 2018) and are of great importance to the Czech health system, despite the presence of a number of international producers in the Czech market.

Total pharmaceutical revenues amounted to CZK 92.0 billion for pharmacies in 2019, of which HIF reimbursement of prescriptions amounted to CZK 39.9 billion, pharmaceuticals issued to providers CZK 32.1 billion, co-payments for pharmaceuticals not fully covered by SHI CZK 8.4 billion, and over-the-counter payments without prescription CZK 10.42 billion (ÚZIS, 2020d).

Pharmaceutical expenditure represented 14.8% of HIFs’ expenditures in 2019 (ÚZIS, 2020d). Roughly 255.9 million packages were dispensed in pharmacies in 2019, representing 6.804 million defined daily doses. Although the number of packages dispensed decreased, the total number distributed increased after a previous reduction (see Table 5.3). Anecdotal evidence indicates that there is still considerable pharmaceutical waste (see Section 7.6.2).

TABLE 5.3 Trends in volume of distributed pharmaceuticals, 2010–2019

	2010	2015	2016	2017	2018	2019
No. of packages (in millions)	304.6	267.2	260.8	262.5	261.0	255.9
CZK (ex-factory price, in billions)	59.0	62.0	64.3	67.9	72.3	77.3
DDD (in millions)	6 084.1	6 512.5	6 562.5	6 670.7	6 721.9	6 804.0

Source: ÚZIS, 2020a.

Note: DDD: defined daily dose.

Electronic prescriptions have been active in Czechia since 2018 and patients widely use physician-generated QR codes to collect orders at the pharmacy. Generic substitution was enacted in 2008 and attending pharmacists may disburse generics even when a physician prescribes a specific medication unless the physician bans generic substitution for a particular prescription. There must be at least one product fully reimbursed by HIFs within each pharmaceutical category. Biosimilars widely used in the Czech market as an alternative to extremely costly biological treatment have also increased availability of treatment to a wider population base and saved costs of the health system.

There are four classes of pharmaceuticals: (1) on prescription, (2) on prescription with restriction, (3) without prescription and (4) without prescription with restriction (see Section 2.7.4). The second category limits the number of packages that can be sold to a single patient, regardless of the number of prescriptions (potentially from multiple physicians) to prohibit the production of illegal substances. Since mid-2020, full patient records on prescribed pharmaceuticals are available for attending physicians and pharmacists to check the above-mentioned restrictions, along with checking duplicate and contraindicating prescriptions.

5.7 Rehabilitation/intermediate care

Rehabilitation and intermediate care are part of the benefits package, in both inpatient and outpatient settings. Rehabilitation care is primarily designed as follow-up care after other forms of treatment, often surgeries. Special rehabilitation exercise is also available for relieving back or joint pain, or to improve incorrect posture.

Specialists often prescribe rehabilitation care after surgery or hospitalization; outpatient specialists (orthopaedics or rehabilitation physician) can also prescribe physiotherapy. If applied as intermediate care, GPs can prescribe too. A referral is needed to receive care reimbursed by SHI. Only procedures defined in the LHS are reimbursed (MZČR, 2020e). Patients obtaining services without a referral will face OOP payments, and some procedures of occupational therapy (osteopathy, etc.) are fully OOP.

Rehabilitation care is usually offered in both inpatient (in hospitals and specialized facilities) and outpatient settings. These services are included in the benefits package. In case of shortages, HIFs are obliged to ensure provision of timely care (for example, to contract more providers) (Governmental Regulation no. 307/2012 Coll., 2012).

Costs for rehabilitation care amounted to CZK 23.5 billion in 2019 (accounting for 5.3% of CHE) and CZK 22.8 billion (4.3% of CHE) in 2020 (ČSÚ, 2022b). Costs were split roughly 50/50 between inpatient and outpatient rehabilitation care.

Inpatient rehabilitation and intermediate care are provided in hospitals and specialized facilities and spas. Spa treatment can be fully reimbursed or partially reimbursed by SHI, or they can be an OOP payment. Adults receiving spa treatments peaked in 2013, though legislative changes that year led to a decrease over 2014–2016. In 2013, the indication decree for spa and balneology treatment scaled back conditions for fully reimbursed spa treatments. Additionally, in 2015, the indication decree for spa treatment entered the Health Insurance Act (Act no. 1/2015 Coll.). However, numbers of fully SHI-covered patient days have been slightly increasing, while numbers of partially SHI-covered patient days and patient days paid OOP have been decreasing. Numbers of patient days paid by foreigners have also been increasing (ÚZIS, 2020c). MZČR sets further criteria for spa treatments (MZČR, 2015).

5.8 Long-term care

LTC for the elderly, disabled and those suffering from chronic diseases, along with vulnerable populations, is fragmented between Czechia's health care system (for example, aftercare in hospitals, LTC homes for the severely ill) and social care system (for example, residential homes or day care centres), but is not considered a separate branch of either system. Though overlapping, both systems vary in terms of organization, funding and staffing. Within the social care system, different organizational responsibilities rest with the state, the regions and municipalities; regional and municipal authorities are the main owners of residential social care institutions as well as outpatient or community based-services and MPSV is the main supervisor. In the health system, LTC is organized around nursing care and falls under the supervision of MZČR and is only available after a physician's assessment. Regarding funding from the budget, LTC is primarily SHI-financed and stood at CZK 3 288.8 per capita in 2019, up from CZK 2 152.8 in 2013 (Eurostat, 2022). In the social care system, LTC financing (which also funds related nursing care) comes first from the state, regional and municipal budgets, though private payments also play a role. A detailed breakdown of different sources of financing in 2018 is depicted in Table 5.4.

Act no. 108/2006 Coll. introduced care allowances into the social care system (on top of existing disability and other disability-related social benefits). Care allowances are scaled into four levels according to the recipient's degree of dependency. Degrees of dependency are determined by the number of basic living needs that cannot be met without everyday help (out of 10 activities). Care allowance applicants must first undergo an examination by the Czech Social Security Administration (including a fitness for employment evaluation). Depending on the assessed ability to perform independently activities of daily living, the patient may then be eligible for a monthly allowance as depicted in Table 5.5.

TABLE 5.4 Financing of social services in the social care system, 2018

TYPE OF SOURCE, FINANCING SCHEME	TOTAL AMOUNT	SHARE OF TOTAL AMOUNT (%)
MPSV budget (subsidy)	CZK 14.8 billion	33.7
Personal care allowance ^a	CZK 8.5 billion	19.4
Private payments (e.g. for accommodation, food)	CZK 8.3 billion	18.9
Regional budgets	CZK 4.2 billion	9.6
Municipal budgets	CZK 3.2 billion	7.3
SHI (medical services)	CZK 2.2 billion	5.0
EU funding	CZK 1.1 billion	2.5
Other sources	CZK 1.6 billion	3.6
Total	CZK 43.9 billion	100

Source: MPSV, 2019.

Note: EU: European Union; MPSV: Ministry of Labour and Social Affairs; SHI: statutory health insurance.

^a According to Act no. 108/2006 Coll., the whole amount of the personal care allowance has to be transferred to the provider of social care services in case of residential services.**TABLE 5.5** Personal care allowances from 1 January 2022

CATEGORY	TOTAL BASIC LIVING NEEDS THAT CANNOT BE MET	MONTHLY BENEFIT (CZK)	
		Age (years)	
		<18	18+
Level 1 (slight dependence)	3–4	3 300	880
Level 2 (medium dependence)	5–6	6 600	4 400
Level 3 (heavy dependence)	7–8	13 900	12 800
Level 4 (full dependence)	9–10	19 200	19 200

Source: Act no. 108/2006 Coll.

In 2019, personal care allowances amounted to CZK 29.8 billion, up 14.4% (CZK 3.8 billion) from 2018. There were 363 600 allowances paid out monthly in 2019, with 8.5% (30 900) for children up to 18 years of age (MPSV, 2020–2022).

There were 67 889 recipients in LTC institutions in 2019, up from 50 380 in 2008. There were 74 208 residential long-term beds in 2019, the highest capacity recorded for Czechia since 2005, though it was only a slight increase from 2008 (68 811; 7.8%) and was far outpaced by the increase in the number of recipients (34.3% increase from 2008 to 2019) (OECD, 2022a).

Apart from residential settings, comprehensive homecare from SHI is also available. First introduced in Czechia in the early 1990s, comprehensive homecare is an integrated form of care provided to patients within their own social environments. A key component of comprehensive homecare is home health care, which is a particular form of outpatient care provided over a defined time frame by nurses with a physician's direction. SHI-financed services provided by home health care providers must be strictly medical in nature; non-medical services, such as meal delivery, are not covered, though patients can purchase them using care allowances.

5.9 Services for informal carers

Informal care, mainly from family members, plays a key role in care and care assistance in Czechia. It is estimated that informal caregivers make up more than 80% of those providing LTC, and 97% of occasional care. Care mostly comes from women and those aged 55+ (Marešová et al., 2020; Wilja, 2015). The inadequate provision of formal care (and/or high costs in the social care system) drives informal care, hindering labour market participation for caregivers. This has been politically acknowledged within the National Strategy for the Development of Social Services 2016–2025, which estimates that there are up to 300 000 informal caregivers (MPSV, 2015). Following an amendment to Act no. 187/2006 Coll., LTC attendance allowances (*dlouhodobé ošetřovné*) were introduced in mid-2018, though there are strict prerequisites for eligibility. First, the person receiving care must suffer from serious health deterioration, requiring at least 7 days of hospitalization and the need for day care for at least another 30 days; second, the caregiver must have been insured for at least 90 days in the 4 months immediately preceding need for care; third,

the entitlement is subject to the approval of the responsible physician. The benefit can be paid for a maximum of 90 days and serves as a partial income substitute while providing informal care. Finally, it is applicable only to those who are employed but need to stay home as said caregiver.

Expenses for LTC allowances have been increasing steadily (see Table 5.6). The second half of 2018 saw as much as CZK 31.6 million spent on LTC allowances, but this rose to CZK 110 million for all of 2019. The number of recipients has been increasing, too: from 3 239 in 2018 (beginning 1 June) to 13 929 in 2021 (full year), with more than 75% of recipients being female.

TABLE 5.6 Expenses on and recipients of long-term care allowances, 2018–2021

EXPENSES				RECIPIENTS			
Year	CZK (millions)	Annual change (%)	Share of total sickness allowances (%)	Total	Men	Women	Share of women (%)
2018 (from 1 June)	CZK 31.6	n/a	0.1	3 239	734	2 505	77.3%
2019	CZK 110	n/a	0.3	10 939	2 469	8 472	77.4%
2020	CZK 137.7	25.2	0.2	12 384	2 712	9 672	78.1%
2021	CZK 157.4	14.3	0.3	13 925	3 346	10 579	76.0%

Sources: MPSV, 2020–2022; ČSSZ, Czech Social Security Administration (Česká správa sociálního zabezpečení) 2022.

Beyond improving the financial and economic situation of informal caregivers, the lack of respite support (short breaks from caring duties), information, education, training opportunities and counselling were acknowledged in the national strategy (MPSV, 2015). Non-governmental organizations, nursing homes and a few stakeholders, such as the Czech Alzheimer Society, provide these services (European Commission, 2018).

5.10 Palliative care

Palliative care – defined as care intended to alleviate suffering and improve quality of life for patients suffering from incurable diseases – is part of standard SHI coverage. The facilities contracted to provide palliative care usually also provide end-of-life care and can be provided both by inpatient and outpatient providers.

In inpatient facilities, it is either provided as clinical care for patients in their terminal phase within various speciality wards, or in specialized palliative care wards (two facilities in 2019), which also provide acute care as necessary. There were also 17 dedicated palliative care facilities (hospices) around the country in 2019 (MZČR, 2020a). Specialized palliative care in Czechia involves multidisciplinary teams, available in all major hospitals, and mobile palliative care services or so-called mobile hospices.

Before 2015, specialized palliative care (as part of the benefits package) was only covered in hospices. Between 2015 and 2017, however, a VZP pilot project evaluated the quality of care, feasibility, patient safety and economic costs of mobile specialized palliative care providers. As a result, SHI coverage for mobile hospices was introduced in 2018.

Palliative care is viewed as an integral part of the cancer patient pathway. Czechia's 15 complex oncological centres must have, as part of their accreditation criteria, a dedicated palliative care team providing services as well as a contract with outpatient providers of palliative homecare or end-of-life care services.

In 2019, a joint memorandum was signed by MZČR, HIFs and the Czech Palliative Medicine Society of ČLS-JEP to systematically develop palliative care accessibility throughout the country with sustainable financing. Palliative care's development was furthermore defined as a specific priority within one of the strategic goals of Health 2030 (on implementing integrated care models and integration of health and social care). The National Oncology Plan of the Czech Republic 2030, launched in 2022, also prioritizes ensuring accessibility to all types of palliative care (MZČR, 2022b)

Despite the number of positive measures aimed at supporting palliative and end-of-life care in recent years, many regions of Czechia still lack comprehensive multi-level palliative care models with sufficient care capacity and setting variability. The lack of providers in particular regions and/or insufficient capacities of existing providers has led to different scopes of mobile palliative care services being offered in different regions, ranging from a nurse

only to palliative physicians (and other multidisciplinary team members) being present. In some regions, this results in overutilization of hospital care and is typically associated with emergency wards trips with rescue teams (MZČR, 2020a).

5.11 Mental health care

Mental health care is funded by SHI and provided in both inpatient and outpatient settings. Inpatient facilities include hospital psychiatric departments and specialized psychiatric facilities. In 2020, providers of psychiatric outpatient services gave medical treatment to approximately 5.9% of Czechia's population (more than 628 000 patients; a 1.5% decrease from 2019). More women (62%) than men (38%) sought psychiatric outpatient treatment in 2020. Outpatient psychiatric care was provided by 2 083 FTEs in 2020: 1 017 physicians (of whom 883 were psychiatrists), 617 paramedics, 235 clinical psychologists and 178 other professional workers. Compared with 2019, there was an increase in the number of nurses and clinical psychologists, but a decrease of psychiatrists (ÚZIS, 2021).

In 2020, 22 specialized psychiatric inpatient facilities were registered in Czechia, of which 12 were reserved for adults, three for children, three were addiction treatment centres and four were other psychiatric facilities. In total, 8 337 beds were reported, of which 210 were in the children's facilities (the number of beds has decreased annually on average by 1.2% since 2010). The overall occupancy rate in all psychiatric facilities in 2020 was 84.2%, corresponding to 29 968 hospitalizations in psychiatric facilities. There are also 28 psychiatric wards in general hospitals, where the number of beds has remained rather constant in the past 10 years (ÚZIS, 2021).

Czechia is facing an acute shortage of child psychiatrists, both inpatient and outpatient. As there are no systematic data on waiting times, this shortage is emphasized especially by the physicians themselves. The chairman of the Association for Child and Adolescent Psychiatry informed MZČR's working group in May 2021 that half of outpatient providers are unable to accept new patients due to capacity reasons, waiting times are 2–3 months and there are problems with placing children with acute problems into inpatient facilities. Accessible help is often not available, even for the serious cases. The then-director of one of the three specialized psychiatric inpatient facilities for

children also warned about capacity and shortage problems in their facility (MZČR, 2021b). The system came under further stress during the COVID-19 pandemic, and the backlog situation remains critical in 2022 (Deník, 2022).

Mental health services have undergone major changes following the psychiatric care reform launch in 2011, due to underfinancing and outdated organization focused on psychiatric hospitals providing neither sufficient support for patients in their own environment nor cooperation/coordination among care providers. The underlying goal has been to improve quality of life for people living with mental illnesses, mainly by deinstitutionalizing psychiatric care; that is, by shifting from psychiatric hospitals to community/outpatient settings, stressing the importance of multidisciplinary teams and the linkage between health and social services (MZČR, 2019).

The Strategy for the Reform of Psychiatric Care (MZČR, 2013) lists seven strategic aims: (1) increase the quality of psychiatric care by systematic changes in the organization of its provision; (2) destigmatize the mentally ill and the field of psychiatry in general; (3) increase user satisfaction with psychiatric care provided; (4) increase effectiveness of psychiatric care through early diagnosis and identification of hidden psychiatric illnesses; (5) increase success rates of full integration of mentally ill people into society (especially by improving conditions for employment, education and housing, etc.); (6) improve connection of health, social and other follow-up services; and (7) humanize psychiatric care. The specific procedures for achieving these goals are incorporated in three main strategic documents: the National Mental Health Action Plan 2020–2030, the National Action Plan for Alzheimer's Disease and Related Diseases 2020–2030 and the National Suicide Prevention Action Plan 2020–2030, all of which are part of Health 2030 as well.

Programme implementation of the psychiatric care reform began in 2017, with mental health centres offering new health and social services to care for those with serious mental illnesses in their own environments. Multidisciplinary teams representing professions from the health and social care systems (psychiatrists, clinical psychologists, general nurses and mental health nurses, and social workers, among others) connect patients with any relevant local authorities responsible for assessing housing allowances and allocating social housing, curators, guardians, local and state police, and other local services (Svačina et al., 2021). The first mental health centres opened in July 2018 and by 2020 already cared for 3 489 people (59% of them were

treated for schizophrenia-related diagnoses) (ÚZIS, 2021); the goal is to have 100 functioning centres by 2030. Multidisciplinary teams have also been in operation since 2020, including teams specializing on children and adolescents, elderly people and persons struggling with addiction. After some psychiatric hospitals were forced to discharge long-stay patients during the COVID-19 pandemic, mental health care centres immediately started providing them with necessary support (Svačina et al., 2021).

As a part of destigmatizing the mentally ill, guidance materials were created by a group of specialists and distributed at the regional level (available at: <https://www.psychiatrie.cz/deni-zdravotni-a-socialni-politika/deni-destigmatizace>). Moreover, the *NA ROVINU* initiative was created as part of the project and promotes educational programmes for target groups, for example, people with mental illnesses, their family members, health and social care personnel, public administration employees, and the communities around the emerging mental health centres (MZČR, 2019).

5.12 Dental care

In 2019, Czech respondents self-reported 1.6 visits to dentists, representing the third highest usage in the EU after the Netherlands (3.0) and Lithuania (1.7) (Eurostat, 2022). Dental visits once every 6 months are covered by the benefits package and this frequency for dental check-ups has long been highly recommended (even during communism, dentists visited schools to provide regular check-ups to school children every half year).

Dental care in Czechia is mainly done by private providers (usually self-employed dentists), although some dental care is also available in publicly owned hospitals. However, there are increasingly more dentists that only take private (that is, self-paying) patients, a mismatch that can be seen in Czechia's low density of dentists (0.7 per 1 000 population in 2019) (OECD, 2022a). In 2021, there were 7 539 dentists in the active workforce, of which 64.5% were women and an overwhelming majority specialized in general dentistry (94.7%; 306 odontologists). Ageing is also impacting dental personnel: in 2021, one out of four dentists was aged 60+ according to national averages. Some regions are disproportionately affected by ageing: 36.5% of dentists in the *Karlovarský* Region in 2021 were aged 60+, whereas this was only 19.8% in Prague (ČSK, 2022).

Theoretically, dental care – including preventive dental care – is part of the benefits package, though cost-sharing is much more common in practice than in other areas of health care. The main reasons for this are limitations to the range of dental treatments and that only the least expensive option is covered (for instance, white cavity filling material instead of the standard filling for cosmetic purposes). Consequently, 50% of dental care expenditure came from OOP payments in 2019.

Principal health reforms

Chapter summary

- Reforms to financing and reimbursement in the health system have been areas of recent attention, including relinking state per capita payments to SHI on behalf of the state to insure economic performance, the reimbursement of MDAs, changes to the reimbursement of innovative and orphan drugs and DRG payment elaborations.
- Further efforts have been made to improve the quality of emergency care beyond the highly specialized trauma centres network, which designated networks for traumatology, oncology, other key treatments throughout the country. Some hospital wards have been (re)classified as highly specialized care centres, enabling provision of specific pharmaceuticals, while the designation of certain hospitals as acute inpatient emergency care providers ensures general provision in particular parts of the country.
- Longstanding plans to regulate smoking in public places were realized, with the implementation of the full-scale ban on smoking in public places. Excise taxes on tobacco and alcohol were increased to raise additional revenue.
- New eHealth functionalities, including some that had years of resistance to delay their implementation, were rolled out during the COVID-19 pandemic, and have helped to reduce the administrative burden overall (electronic prescriptions and sick notes).

- Many of the reform efforts were already being designed and planned before the COVID-19 pandemic, though some (such as Health 2030) were readapted in response to it. Nevertheless, the pandemic has highlighted the necessity to further strengthen particular areas of the health system and funds for the National Recovery Plan will go toward addressing those.

6.1 Analysis of recent reforms

The following section gives an account of the political objectives and contents of health care reform legislation from 2015 to mid-2022. Earlier reforms are described in detail in previous Health Systems in Transition editions (Bryndová et al., 2009; Alexa et al., 2015). However, as background to the following sections, two health acts are of particular importance: the Health Service Act and the Specific Health Service Act. The former replaced the 1966 Act on Care for People’s Health and constituted a modern basis for quality assurance and patient rights, including provider–patient relationship definitions and minimal care quality requirements. The latter deals with provisions of services such as sterilization, IVF and organ donation, and specifies patient rights related to these services. A brief overview of reforms during the period 2016–2022 is provided in Table 6.1.

TABLE 6.1 Chronology of main reforms to the Czech health system, 2016 to August 2022

YEAR	NAME AND DETAILS OF REFORM
2017	Implementation of psychiatric care reform care began, with mental health centres offering new health and social services to care for those with serious mental illnesses, children and adolescents, elderly people or those with addiction problems
2017	Legislation for a full-scale ban on smoking in public places (after years of discussions) by extending the scope of smoke-free areas as stated in previous legislation and removing several previous exemptions. The ban applies to health facilities (including surrounding areas), all indoor facilities used for public entertainment and for other public events, and zoological gardens. Furthermore, the law introduced regulation of the use of electronic cigarettes in public places
2017	Re-establishment of Patient Council at MZČR to represent the voice of patients that consults both legislative and non-legislative proposals

YEAR	NAME AND DETAILS OF REFORM
2018	Addition of an adjustment to the redistribution mechanism for patients with chronic diseases identified by their pharmaceutical consumption, using PCGs. Also redefined the reinsurance tool by changing the rules for retrospective compensation and the definition of very high-cost patients
2018–2020	Implementation of a previously delayed law, meaning electronic prescriptions became compulsory for all health care providers. Further functionalities were rolled out in 2020, including the options to access long-term prescription records and control for duplicate prescriptions
2018–2021	Adjustment of mandatory vaccination schemes for children, including timing and required dosages. Expansion of SHI coverage for HPV immunizations for boys, meningococcal disease immunizations for small children, and COVID-19 vaccinations. Extension of mandatory vaccination requirements to children in preschool facilities, including those organized by employers, via legislative amendment
2019	New SHI reimbursement rules for MDAs. SÚKL set reimbursements, either automatically or in an administrative procedure if the reimbursement category does not yet exist. The procedure also allows for risk-sharing contracts between producers and HIFs, and for exemptions for particular patients
2019	Launch of MZČR's Urgent Care Strategy to further improve quality of emergency care beyond the highly specialized trauma centres network
2019–2022	Expansion of competencies for GPs to monitor oncological patients; manage and analyse colorectal screenings; detect early dementia; care for patients with prediabetes and detect candidates for lung screening pilots
2020–2023	Gradual increases to excise taxes on cigarettes, cigars and other tobacco products, with planned annual increases. Increase of excise taxes on alcohol as part of a wider effort to boost public revenues
2020	Full introduction of electronic sick notes
2021	Act on eHealth: introduced a basic legislative framework, defined obligations and standardized rules for communication, information sharing and data protection among providers or between providers and HIFs
2021	Introduction of CZ DRG as the base mechanism for all case-based DRG payments and volume measurement in acute care hospitals
2021–2022	Proposal and adoption of a legislative change to link transfers to SHI for the state insured to economic performance, making annual adjustments automatic
2022	An amendment to change reimbursements of innovative medicines and orphan drugs; temporary reimbursement periods have been extended. A new procedure for setting reimbursements was established for orphan drugs, involving medical societies and patient organizations (for the first time)
2022	Legislative obligation for MZČR to register patient organizations and what constitutes a patient organization, and which patients it represents

Source: Authors' own compilation.

Note: Not an exhaustive list. CZ-DRG: Czech refined diagnosis-related group; GP: general practitioner; HIF: health insurance fund; HPV: human papillomavirus; MDA: medical devices and aids; MZČR: Ministry of Health (*Ministerstvo zdravotnictví*); PCG: pharmacy-based cost group; SHI: statutory health insurance; SÚKL: State Institute for Drug Control (*Státní ústav pro kontrolu léčiv*).

6.1.1 *Strengthening of public and patient involvement*

Public and patient involvement has been gradually strengthened in policy- and decision-making over the past decade. After the changed legal mandate by the Health Service Act, which defined patient rights for the first time, reforms included the establishment of MZČR's Patients' Council and Patients' Rights Support Unit. Both institutional changes represented formalizations of bottom-up patient engagement initiatives, but with a rather loose connection to the MZČR and its legislative processes (Dobiášová, Kotherová & Numerato, 2021). Other legislation is now incorporating a strengthened role of patients in the health system (for example, Health 2030) and in 2022, following new legislation on reimbursements for innovative and orphan drugs (see Section 2.7.4), MZČR became obligated to register patient organizations (that meet criteria set in the newly adopted legal definition; the legal definition was incorporated into the Health Service Act in 2022).

6.1.2 *Health sector financing reforms*

2018 saw the third major reform to risk adjustment and redistribution among HIFs. This included a redistribution mechanism, adding adjustment for patients with chronic diseases identified by their pharmaceutical consumption, using PCGs. It also redefined the reinsurance tool by changing the rules for retrospective compensation and definition of expensive cases. By combining the prospective risk-rating, based on 38 age–sex risk groups and 25 PCGs, with strengthened retrospective risk-sharing among insurers, the new redistribution mechanism increased coverage of predictable individual health risks (Bryndová, Hroboň, & Tulejová, 2019). Though the reform only resulted in moderate changes in risk-adjusted allocations of individual insurers, it is thought to have reduced motivation to selectively insure based on health status and to support the future development of disease management programmes. Further adjustments to the definition of PCG groups were made in 2021 and 2022, resulting in a total of 30. HIFs, since 2018, can propose changes to the redistribution mechanism in terms of altering PCG risk indices and their definition; MZČR accepts or rejects and, if approved, validates the change by publishing a new directive.

Discussions on reforms of contribution rates have been a mainstay since the 1990s, but the underlying parameters have changed frequently. First, the annual ceiling on SHI contributions has changed several times. Introduced in 2008 for all employees (the annual ceiling for the self-employed has been in place since the early 1990s), it increased from 48 to 72 times the average monthly wage in 2010, and then was temporarily withdrawn for all contributors between 2013 and 2015, before being finally abolished in 2015.

Besides wage-based SHI contributions, the second most important SHI revenue comes from the state budget as contributions made on behalf of defined groups of economically inactive people (see Section 3.3.2). In 2006, the per capita payment was linked to average wage growth, the link to economic performance was abolished in 2014 and adjustments were made via governmental decrees. This tool was used regularly in recent years, mostly for keeping state transfers in pace with economic growth and was also used to offset SHI revenue losses from taxable income contributions, to increase SHI revenue to cover extra COVID-19 costs and to allow for higher reimbursement rates during the pandemic. Between January 2019 and early 2022, the per capita payment increased substantially, whereas per capita payments in previous years increased by units of percent only. In 2022, the government proposed and adopted a legislative change to once more link the state payment to the economic performance and make annual adjustments automatic, following a similar pattern as with old-age pension increases.

6.1.3 *Reimbursement reforms*

In 2019, new SHI reimbursement rules for MDAs were introduced. Reimbursement changes were sparked by a 2017 Constitutional Court ruling that previous reimbursement setting procedures were not transparent, as appeals were not possible in the former process, so conditions for reimbursement were not legally set. The new rules still feature HIFs as important stakeholders, but they do not have decision-making authority. The process described in the legislation has SÚKL set reimbursements, either automatically or in an administrative procedure if the reimbursement category does not yet exist (see Section 2.7.5). The procedure also allows for risk-sharing contracts between producers and HIFs, and for exemptions for particular patients. Contrary to the previous system, reimbursement rules and procedures are now viewed as being more patient oriented.

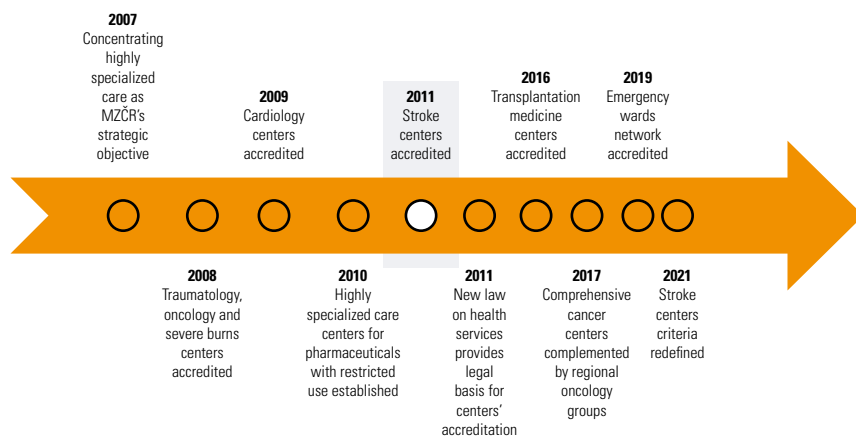
In January 2022, an amendment to existing pharmaceutical legislation changed reimbursements of innovative medicines and orphan drugs to further increase access and availability of these products (see Section 2.7.4). According to EFPIA (2022), accessibility of recently marketed pharmaceuticals is high in Czechia, and the new legislation is expected to bring further improvements. For highly innovative medical products, the temporary reimbursement period has been extended from 2 years to 3 years for the first temporary reimbursement and from 1 year to 2 years for the second temporary reimbursement; the condition to wait for two other EU countries to initiate price and reimbursement procedures has been suspended; and pay-back rules have been set for the market authorization holders. A new procedure for setting reimbursements was established for orphan drugs, involving medical societies and patient organizations (for the first time), and introducing additional reimbursement evaluation criteria beyond cost-effectiveness.

Reimbursement mechanisms for acute care hospitals have seen substantial developments in recent years, with the introduction of CZ DRG as the base payment mechanism in 2021 (see Section 3.7.1). DRG was first introduced for reimbursements in 2007, mainly being used for measuring the volume of provided care. The development of CZ DRG classification mechanisms was led by ÚZIS, with many hospitals serving as reference points to provide data on their costs for newly calculated weights. In 2020, CZ DRG was used in a pilot programme to reimburse selected inpatient cases accounting for a mere 0.5% of hospitals' revenue from HIFs (such as oncology and invasive therapy), though IR DRG was retained for measuring the volume of the rest of provided care for budget-like reimbursement purposes. In 2021, roughly 44% of inpatient care was reimbursed by CZ DRG case payments; the rest was through budget-like reimbursement mechanisms using the CZ DRG classification to measure provided care volume. Basic rates for cases reimbursed by case-based CZ DRG reimbursement mechanisms applied by HIFs to different hospitals (based on historical global payments) are to gradually converge from 2021 to 2023, though some differences among hospital rates may persist at the end of this period. This process is intended to even out reimbursements for the same cases among hospitals of the same size and catchment area (teaching, district, or small-size hospitals); for 2022, the base rate convergence has already slowed, and further convergence development remains unclear.

6.1.4 Reforms to provision of care

The process of highly specialized care concentration continued throughout the 2010s, leading to designated networks for traumatology, oncology, severe burns, cardiology, stroke care and transplantation medicine throughout the country (see Fig. 6.1). Improvements to access of highly specialized care, and increased quality and safety have been documented, notably in the decrease in age-standardized mortality from ischemic heart disease and stroke (OECD/ European Observatory on Health Systems and Policies, 2021) and other indicators – Bryndová et al. (2021) for stroke and Toušek et al. (2019) for ischemic heart disease. Apart from these, some hospital wards have been (re) classified as highly specialized care centres, enabling provision of specific pharmaceuticals and “centre-reserved pharmaceutical treatments”. The list of specific pharmaceuticals is set by MZČR and generally includes costly medicines, such as treatment for Crohn’s disease or other immunological diseases. Though the instrument of centre-reserved pharmaceuticals has been in place since the early 2010s, the centres’ list is regularly modified to keep pace with treatment and pharmacological advancements.

FIG. 6.1 Establishment of highly specialized care networks since 2008



Source: Bryndová et al., 2021.

In 2019, MZČR launched the new Urgent Care Strategy (*koncepte urgentní péče*) to further improve quality of emergency care beyond the highly specialized trauma centres network. This classified 13 existing highly specialized trauma centres, together with four hospitals that do not have accredited trauma centres but do have accredited highly specialized stroke units, as level 1 acute inpatient emergency care providers, Hospitals with specialized emergency wards, certain other inpatient specialized wards and 24/7 availability of particular diagnostics satisfy level 2 of acute inpatient emergency care provision, and 64 hospitals are accredited as such. A further 15 hospitals are classified as level 2B of acute inpatient emergency care providers, as they do not satisfy all accreditation requirements; their presence, however, is necessary for provision in particular districts (Hroboň, Šlegerová, & Tulejová, 2020). Emergency ward designations were defined, and the network was approved in late 2019; they were implemented in 2020 with MZČR guidelines and specific SHI reimbursements for designated emergency care wards (MZČR, 2020h).

6.1.5 Mental health reform

Mental health reform was launched in 2011. The underlying goal has been to improve quality of life for people living with mental illnesses and has been pursued by deinstitutionalizing psychiatric care; that is, shifting from psychiatric hospitals to community/outpatient settings, stressing the linkage between health and social services and the importance of multidisciplinary teams. Further aims include better accessibility of mental health professionals, the introduction of community centres of mental health, improved cooperation between social and health services in the field of mental health issues and lowering the stigmatization of patients. The Strategy for the Reform of Psychiatric Care was adopted in 2013, listing seven mental health strategic aims, and Health 2030 lists mental health reform as one of its goals and includes three specific action plans devoted to it.

In 2017, a programme for community mental health care centres (with some EU funding) was launched, with the first mental health centres opening in 2018. By 2020, mental health centres already cared for 3 489 people (59% of them treated for schizophrenia-related diagnoses) (ÚZIS, 2021); the goal is to have 100 functioning centres by 2030. They provide community-based mental health services, specifically focusing on patients with serious illnesses and offering them health and social services within their own environments.

Multidisciplinary team members include psychiatrists, clinical psychologists, general nurses and mental health nurses, and social workers, among others (Svačina et al., 2021). Since 2020, multidisciplinary teams have started to assemble, including teams specializing on children and adolescents, elderly people and those with addiction problems.

6.1.6 *Primary care reform*

As part of the ongoing primary care reform, which is also one of the specific goals of Health 2030, primary care physicians gained new competencies in 2019 and 2020. Besides taking care of stabilized patients with diabetes mellitus, GPs now monitor recovered oncological patients no longer needing therapeutic treatment and perform regular specialized check-ups and/or examinations. GPs monitoring these patients only assume these responsibilities based on individual agreements between a GP and the responsible oncologist, and with explicit patient approval. Professional associations believe that GPs are easier for patients to reach, and most patients appreciate this change, while oncologists estimate that two thirds of patients can be transferred for monitoring and tertiary prevention to their GPs, thus freeing the oncology centres' capacities and enabling clinicians to focus on acute patients. However, monitoring patients at higher risk of relapse, including children, will remain the oncologists' responsibility (MZČR, 2018c). GPs are compensated for this new role via FFS in addition to general capitation payments. Additionally, while Czechia has entered a period in which total numbers of GPs are likely to slightly decline over the next decade (at least in some regions), a strong renewed interest among medical students to become GPs is gaining traction. This trend, as of the time of writing, has not yet been seen in the case of paediatricians, however.

Additional new competencies for GPs (also compensated via new FFS payments) include management and analysis of colorectal screenings (since 2019); early dementia detection (since 2020); care for patients with prediabetes (since 2020); and detecting candidates for lung screening pilots among their registered patients (2022). Further development and strengthening of GPs competencies and role are envisaged in Health 2030 (see Section 6.2).

6.1.7 *Public health reforms*

Mandatory vaccination schemes for children were adjusted in 2018, including timing and required dosages. HPV immunizations for boys, meningococcal disease immunizations for small children, and COVID-19 vaccinations are examples of expanding SHI coverage for voluntary vaccinations in recent years. In 2020, to reverse negative trends in vaccination coverage and to level regulation for all childcare providers, a legislative amendment to Act no.258/2000 Coll., on public health protection, extended mandatory vaccination requirements to children in preschool facilities, including those organized by employers (so-called children's groups; see Section 5.1).

Tobacco and alcohol policies have been strengthened in recent years, too. A full-scale ban on smoking in public places was introduced in 2017, and gradual increases to excise taxes on cigarettes, cigars and other tobacco products were launched in 2020, with annual increases approved through 2023. The 2017 anti-smoking law also prohibited alcohol sales at children's events and from vending machines, and increased fines for violations. Excise taxes on alcohol were also increased in 2020 as part of a wider governmental package aiming to boost public revenues, though no sugar-sweetened beverage tax has been introduced (see Section 5.1).

6.1.8 *eHealth functionalities*

Plans to introduce electronic prescriptions date back to 2008, with a voluntary trial system beginning in 2009 and the first electronic prescription issued via the current system in 2011. In 2013, Act no. 70/2013 Coll. came into effect, requiring the use of electronic prescriptions for all prescribed medicines from January 2015. Opposition and technical concerns led to a 2014 change in the law (Act no.255/2014 Coll.) postponing implementation to January 2018, when electronic prescriptions finally became compulsory for all providers. With this, medicines can be prescribed from afar; an advantage in case of repeated prescriptions and also advantageous during the COVID-19 pandemic. Patients also receive information and safety information on prescriptions, which can be via email, SMS, in paper form, or through applications with unique identifiers (also as QR codes).

Further functionalities were rolled out in 2020, including the options to access long-term prescription records and control for duplicate prescriptions. The system therefore allows physicians and pharmacists to access the registry of all prescriptions issued or dispensed to a given patient, unless said patient has expressly withdrawn consent. A patient can fully opt out or may grant consent to specific physicians or pharmacists only. Parents can opt out or restrict viewing access for the pharmaceutical records of their children.

Since January 2020, GPs issue sick notes in electronic format only and send them directly to the Czech Social Security Administration, which automatically notifies employers. Although many GPs have voluntarily issued sick notes electronically since 2010, the former system required a special software and an electronic signature. The new system makes use of the same accounts issued to GPs by SÚKL for electronic prescriptions and are intended to relieve GPs of administrative burden. The introduction of electronic sick notes proved beneficial to the initial COVID-19 pandemic response in Czechia and has since resulted in no opposition, despite original expectations.

6.2 Future developments

The full implementation of the Health 2030 plan and its goals and seven priority areas (see Section 2.4), came after an extensive study from ÚZIS with data from the NZIP and had to be updated after initial passage in 2019 in response to the COVID-19 pandemic (MZČR, 2020a). With the infusion of EU investment for the National Recovery Plan, the implementation of Health 2030 has more funds available to overcome the insufficient financial coverage that plagued the Health 2020 plan (MZČR, 2018d). Further related to the COVID-19 pandemic and in view of lessons learned throughout the different waves of infections and hospitalizations, changes in the crisis management law are also expected. Additionally, provision of care using telemedicine is an area for further legislative action. Apart from the COVID-19 pandemic, the health system performance assessment framework set up by MZČR in 2021 and supported by the European Commission will generally assist stakeholders in identifying needs for particular focus and enabling evaluation of implemented measures (see Box 2.1).

Ongoing primary care reforms, as part of Health 2030, are aimed at boosting the competencies of primary care physicians in Czechia and use incentives from HIFs to increase the availability of care and promote prevention; long term, the plan is for primary care to offer the broadest range of services possible. Implementation of further mental health reforms are another important piece of Health 2030, as system stresses and corresponding backlogs related to the COVID-19 pandemic and workforce shortages remain. Further information regarding the future implementation of mental health reforms can be found in the National Mental Health Action Plan 2020–2030, the National Action Plan for Alzheimer’s Disease and Related Diseases 2020–2030 and the National Suicide Prevention Action Plan 2020–2030 (see Section 5.11).

Aside from goals explicitly mentioned in Health 2030, future developments may also deal with adjustments to the Health Service Act (2011) to strengthen service provision to vulnerable groups such as children suffering from long-term diseases or disabilities, in need of social services or palliative care. Furthermore, the development, standardization and dissemination of quality measurement (also for outpatient care) has been identified as an area for reform.

Disease prevention and public health is an important area for future developments, an area which was emphasized by the Minister of Health during the recent opening of the Czech EU presidency (as the chair of all meetings of EU health ministers during the presidency). Focal points of improved and streamlined cancer screenings, future bloc negotiations on COVID-19 vaccine procurement and better access to and use of health data were also emphasized (Euractiv, 2022). Finally, higher SHI expenditures for prevention, administering vaccinations and their documentation in the form of a register (among other registers in the area of public health), and the centralization of management and methodological guidance of RPHAs are areas for future development.

Assessment of the health system

Chapter summary

- Czechia has undertaken efforts to improve transparency and accountability in the health system, through patient and stakeholder involvement and evidence-based policy-making in Health 2030. Some informal payments and (even more so) using personal connections to get health services were reported for more than half of the population surveyed by Transparency International in 2020.
- Unmet need levels reached an all-reported low of 0.4% in 2020 (compared with an EU average of 1.9%). There is a need to strengthen capacities to monitor the factual accessibility of outpatient care and in addition also waiting times for inpatient services, issues that are a recurrent theme in the Czech health policy debate but remain hindered by a lack of data.
- Czechia has a high level of financial protection, which includes annual caps on co-payments for vulnerable groups. Consequently, levels of household catastrophic spending (4.2% in 2019) and reported unmet needs for financial reasons are low. Existing OOP payments mainly consist of direct payments for pharmaceuticals and dental care.

- Regarding amenable mortality, in 2019, diseases of the circulatory system were the leading cause, while mortality from cancer was the second highest share.
- Efficiency is not systematically monitored in the Czech health system, though overutilization and overconsumption of pharmaceuticals are seen as areas for action. The high fragmentation of care, very limited measurement of quality in outpatient care and outdated hospital network are other areas of concern.

7.1 Health system governance

MZČR has a central role in health system governance, particularly regarding decision-making, developing strategies and reforms. As a guiding document, Health 2030 draws upon an extensive analytical study conducted by ÚZIS (2019b) using NZIS data to shift toward an evidence-based approach in priority setting. This marks an expanded use of evidence-based policy-making in Czechia, as Health 2020 was not built off an underlying analysis. Health 2030's corresponding implementation programmes also strive for an evidence-based approach, particularly via indicators to monitor the evolution of the reforms (see Section 2.4).

The HIB is another institution that contributes to evidence-based health system governance by striving to optimize the concentration of specialized care, and began this by evaluating the performance of inpatient providers contracted with HIFs. These evaluations proved to be an efficient benchmark for providers and useful as a source for professional organizations to use in discussions establishing and assessing volume limits for the concentration of specialized care (see Section 2.6).

Though capacities for evidence-based governance are growing, policy capacity in the Czech health system (for example, the expertise to monitor developments, review evidence and draft legislation) is currently difficult to assess beyond mere resources. In terms of financial resources, Czechia spent 2.2% of CHE on governance and administration of the health system in 2019, which was the 10th lowest in the EU (Eurostat, 2022). Engaging more institutions in governance processes requires effective organization, definitions of responsibilities and accountability for individual stakeholders. The health system performance assessment framework launched by MZČR in 2021 aims

to support stakeholders in identifying where to focus their agendas and where change is needed. This increases the accountability of principal stakeholders, namely providers and HIFs (see Section 2.4).

Transparency for health benefits is mediated by the standardized benefits package and nearly universal population coverage, and in theory there is no need to use informal payments to seek treatment. However, 10% of those surveyed reported making informal payments in the health system in 2020 (the EU average was 7%), according to the Transparency International Global Corruption Barometer, and more than half of respondents (54%) reported having used personal connections to receive a specific health service (the highest among all surveyed EU countries) (Transparency International, 2021). A European Commission study found that the informal payments were only relevant in relatively limited areas in Czechia, such as for quicker treatment of non-life-threatening but highly painful conditions, for example hip replacements (European Commission, 2013).

MZČR has also identified the existence of payments for skipping waiting lists, topping up SHI coverage and for choosing a specific physician (MZČR, 2020f). This analysis recognizes weak transparency in procurement and personnel recruitment by hospitals, ambiguity in accountability for providers contracted by HIFs, and potential conflicts of interest between providers and MDA manufacturers.

A further recent step to improve health system transparency and governance in Czechia is the new categorization clearly listing which MDAs are covered and how much co-payments would be. The system has become more transparent for patients with Act no. 89/2021 Coll. (see Section 2.7.5), and, since January 2022, changes to the reimbursement of innovative medicines and orphan drugs have been implemented by an amendment to the Health Insurance Act to improve their availability for Czech patients. Prices for orphan drugs and reimbursements are now set in an automatic administrative procedure, and patients no longer have to rely on individual appeals to HIFs (see Section 2.7.4); a special advisory body now exists at MZČR to make recommendations regarding orphan drugs. Importantly, patient representatives also sit on the advisory body, giving them a voice and direct access to important information. Their involvement was made possible by the establishment of a legal definition for patient organizations and a list of those recognized, a significant step for patient involvement in the governance of the Czech health system. In general, though, there are no patient boards in hospitals that would have to be consulted by management, nor are there patient representatives

on VZP's supervisory board. The recently established patient board at the Masaryk Memorial Cancer Institute (*Pacientská rada Masarykova onkologického ústavu*) is one of the few exceptions. Other HIFs do have patient representatives on their boards, as they use the tripartite system (see Section 2.7.1). Patients can also use MZČR's National Patient Satisfaction Assessment to register their views on the quality of care provided.

7.2 Accessibility

As HIFs must accept all applicants with a legal basis for entitlement and risk selection is not permitted, Czechia has virtually 100% population coverage. In principle, all insured individuals are entitled to any medical treatment delivered to maintain or improve their health (see Section 3.3.1). All, including Czech citizens and permanent residents, are subject to compulsory SHI enrolment. Individuals without permanent residency are covered if they work for a Czech-based employer. Exemptions exist for EU nationals if they are insured through their country's system or privately insured in Czechia. Non-EU nationals without permanent residence and not working for a Czech-based employer must purchase PHI (see Section 3.5). The range of benefits covered by SHI is broad and includes inpatient and outpatient care; prescription pharmaceuticals; (some) dental procedures; rehabilitation; spa treatments; and over-the-counter pharmaceuticals (the last three if physician prescribed). Patients cannot top up their SHI coverage. Cost-sharing is rare (mostly for pharmaceuticals) and virtually all health services are free at the point of use. This broad range of benefits and services for all helps Czechia have among the lowest levels of unmet needs for medical care in the EU. These are related to waiting times and distances to providers, though waiting times and physicians' capacities are still not systematically monitored (see below).

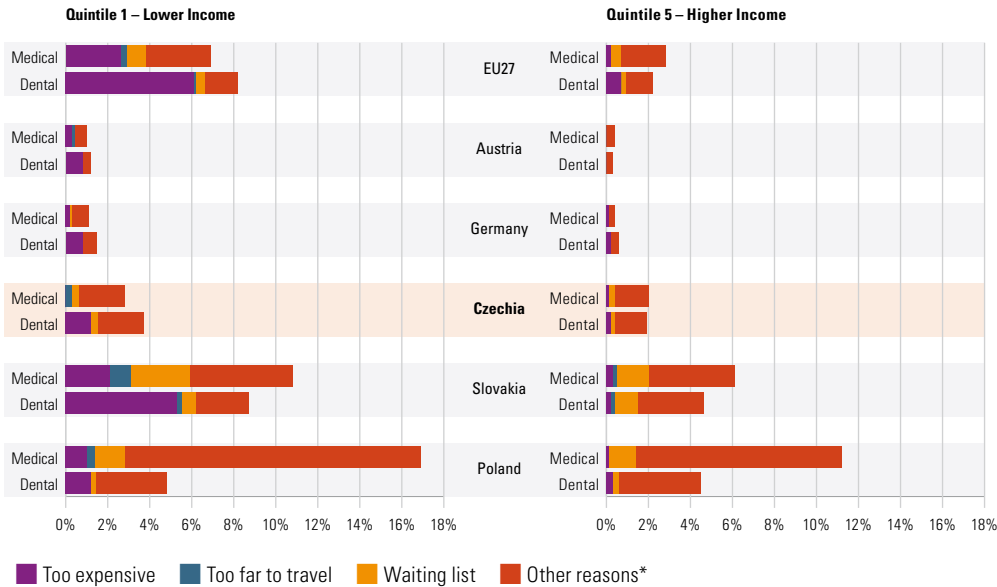
The accessibility of care is defined by Governmental Regulation no. 307/2012 Coll., which defines reachability (in minutes) for certain specialties and the maximum time one should wait for chosen medical interventions (in weeks). However, as waiting times in Czechia are not systematically monitored, their estimates are not objective. The main obstacle hindering this is the non-existence of electronic referrals (for requested care), though there are ongoing discussions about their introduction.

The definition of reachability (in minutes) is disputable, as it does not consider physicians' capacities (nor a definition of transportation methods). HIFs are responsible for ensuring that all members can reach physicians (for certain specialties) within the defined time and for their members' registration with physicians. To increase their accessibility, HIFs financially incentivize physicians to practise in remote areas and to offer extended hours. Based on VZP's analysis, the regulation on physicians' reachability is met for their members in all municipalities (VZP, 2022). Barriers (if any) to accessibility are along Czechia's borders, and the distribution of acute care hospitals can be approximated by the map of acute inpatient surgery. In 2019, patients near the western and southern borders needed the longest to reach hospitals.

As patients can choose their providers, comparing physician-to-population ratios across regions can be misleading. The high density of health professionals in Prague can be partially explained by patients who formally reside in other regions or who commute (see Section 5.3), and there is considerable variation in the availability of services across specializations. Nevertheless, data on actual accessibility, based on providers' capacities, are scarce. Even though the number of practising physicians and nurses is slightly higher than the EU average (see Section 4.2), service utilization is relatively high in comparison to other countries, presumably influencing their capacities. In 2019, the number of physician visits per capita (excluding dentists and telephone/email contacts) in Czechia (8.2) was among the highest (Eurostat, 2022).

There are low levels of self-reported unmet needs for medical care due to financial reasons, distance and waiting times (see Fig. 7.1). In 2020, only 0.4% of Czechs reported unmet needs for medical examinations, compared with the EU average of 1.9%. In Czechia, these are primarily attributed to waiting lists (0.2%), and distances (0.1%), whereas financial reasons are not seen as a driver of unmet needs for medical examinations (see Section 7.3). Unmet needs for dental examinations stood at 0.8% in 2020 and have more than halved since 2013 (1.7%). In contrast to medical examinations, there are significant differences in unmet needs for dental examinations between the lowest and highest income quintiles (1.5% versus 0.4%, respectively) (Eurostat, 2022).

FIG. 7.1 Self-reported unmet needs for medical and dental examinations, by main reason declared and income quintiles in Czechia and selected countries, 2020



Source: Eurostat, 2022.

Note: * “Other reasons” is the residual category for all other reported reasons for unmet needs not detailed here, for example, no time; didn’t know any good physician or specialist; fear of physician, hospital, examination or treatment; wanted to wait and see if problem got better on its own; and other reason. EU27: European union (27 Member States as of 2020).

7.3 Financial protection

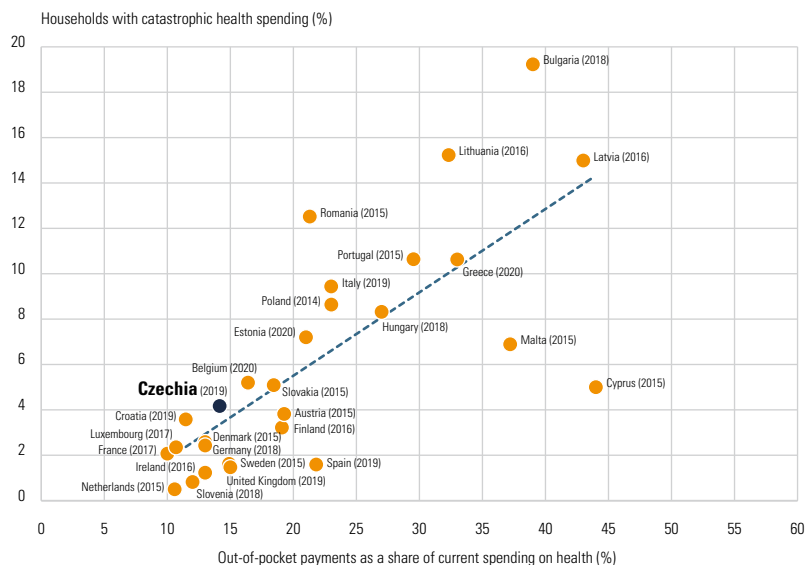
Czechia has a high level of financial protection for all age groups, with co-payments only for some prescription pharmaceuticals and MDAs, and a user fee for accessing out-of-hours outpatient care (CZK 90). Unmet medical needs due to high costs are negligible, with few differences between income groups (Fig. 7.1). The share of OOP payments as a percentage of CHE reached 14.2% in 2019, accounting for 2.3% of total household expenditure over the same time (dropping to 11.5% of CHE in 2020 according to ČSÚ data, while forming 2.4% of household expenditures) (ČSÚ, 2022b). According to analysis from the WHO Barcelona Office for Health Systems Financing (forthcoming), nearly nine out of 10 Czech households were affected by OOP payments in some way in 2019.

In 2019, catastrophic household spending for health stood at 4.2% in Czechia, roughly in the middle of all EU countries (see Fig. 7.2). As nearly

80% of households with catastrophic health expenditure were in the lowest income quintile in 2019, however, they are disproportionately affected (WHO Barcelona Office for Health System Financing, forthcoming). Household catastrophic spending is defined by WHO as the proportion of households with OOP payments greater than 40% of capacity to pay for health care (defined as total household consumption minus a standard amount to cover basic needs such as food, housing and utilities).

As detailed in Section 3.4, OOP payments are mainly direct payments for pharmaceuticals (26% toward over-the-counter pharmaceuticals; 20% for co-payments on prescription pharmaceuticals in 2020). Direct payments and surcharges for dental care constituted a further 18% of OOP payments. As the dental treatments covered by SHI are limited and restricted to the least expensive options, OOP payments reached as much as 50% of CHE on outpatient dental care in 2020 (ČSÚ, 2022b). This explains the existence of unmet needs for dental examinations due to high costs, especially among low-income households (Fig. 7.1), though the share of OOP payments overall in CHE has been relatively stable over time (see Table 3.1).

FIG. 7.2 Share of households with catastrophic health spending and the out-of-pocket payment share of current spending on health, 2019 or latest available year



Sources: WHO Barcelona Office for Health Systems Financing (forthcoming) for data on catastrophic incidence; OECD (2022a) and WHO (2022) for data on OOP payments.

Note: Data on out-of-pocket payments are usually for the same year as data on catastrophic health spending, except for Estonia, Greece, North Macedonia and Ukraine (2019).

To increase financial protection, there is an annual cap of CZK 5 000 on co-payments for prescribed pharmaceuticals; this limit is lower for vulnerable groups. The lowest limit, CZK 500, applies to people aged 70+ and, since 2020, to people at the second or third disability level (based on Act no. 108/2006 Coll.). This extended financial protection for vulnerable groups has broadened what was previously based solely on age. The other limit, set at CZK 1 000, applies to seniors aged 65–69 and children aged 0–18 (Health Insurance Act). Additionally, there is one fully covered medicine in each pharmaceutical reference group (therapeutically substitutive). Some vulnerable groups are also exempt from the flat fee for accessing out-of-hours outpatient care, particularly those who receive material need benefits, or people in homes for the disabled or elderly if they have low income, among other groups (Health Insurance Act).

7.4 Health care quality

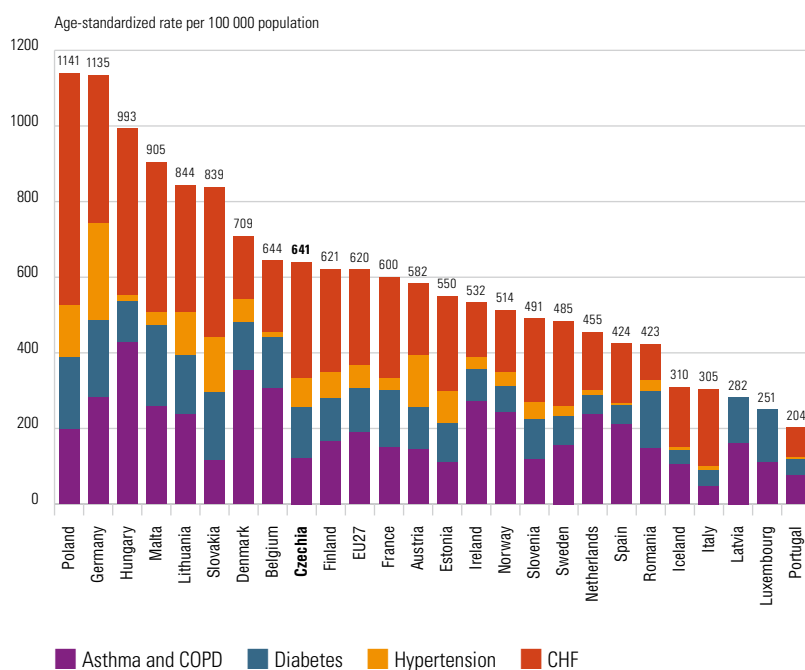
Two of the central goals of Health 2030 are the improvement and monitoring of health care quality. To this end the HIB is leading the development of a portal on quality (HIB, 2022). The currently available quality indicator data have been under discussion since 2008, though they were eventually discontinued due to lack of financing (HIB, 2021). Currently, the health quality monitor features a total of 15 indicators for primary care (four related to paediatricians), and 16 indicators for hospital care. These data are primarily aimed at providers and are complementary to the various national databases available (see Section 2.6), HIFs' programmes on quality and international databases.

7.4.1 Primary care

As a global quality indicator for primary care, hospital admissions for chronic conditions such as asthma, COPD and uncontrolled diabetes are used. Lowering admissions rates in a health system generally means patients being well managed at the primary care level. Fig. 7.3 shows that comparatively few patients in Czechia were admitted to hospital for asthma (21.2 per 100 000), hypertension (77.6 per 100 000), COPD (100.7 per 100 000) or

uncontrolled diabetes (132.5 per 100 000) in 2020. Among selected countries, Czechia ranked ninth-highest for avoidable hospital admissions, and has considerably higher admission rates for congestive heart failure (CHF; 309.2 per 100 000). Furthermore, Czechia has reduced avoidable hospital admissions going back to 2009 (earliest data available) for asthma, COPD, diabetes and by up to 60.7% for hypertension (down from 197.3) (OECD, 2021). Hospital admissions for CHF were only slightly reduced over that time, however. Trend analyses for hospital admissions were probably influenced by the COVID-19 pandemic's impact on hospital admissions data (for example, difficulties in accessing and hesitancy among patients to seek regular care) in general, and for asthma and COPD in particular (see Fig. 7.4) (OECD, 2022a).

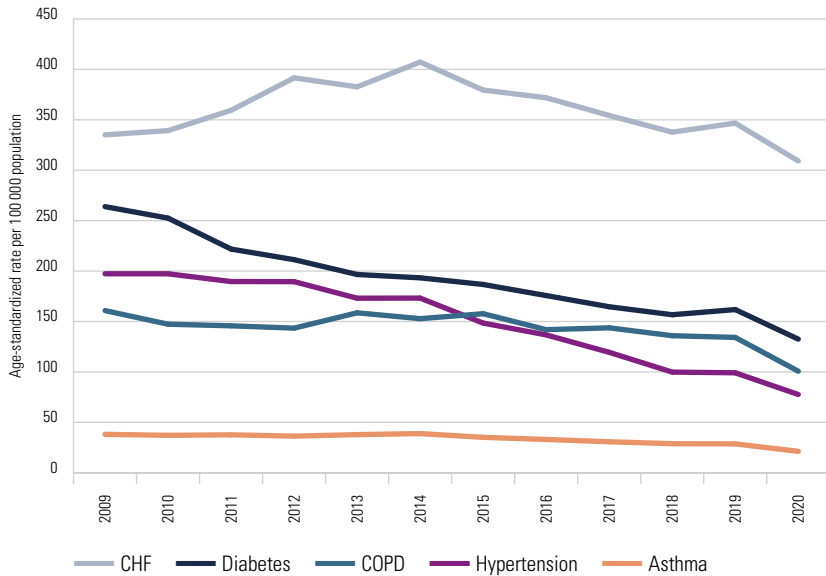
FIG. 7.3 Avoidable hospital admission rates for asthma, COPD, CHF, hypertension and diabetes, Czechia and selected countries, 2020



Source: OECD, 2022a.

Note: CHF: congestive heart failure; COPD: chronic obstructive pulmonary disease.

FIG. 7.4 Avoidable hospital admission rates for asthma, COPD, CHF, hypertension and diabetes in Czechia, 2009–2019

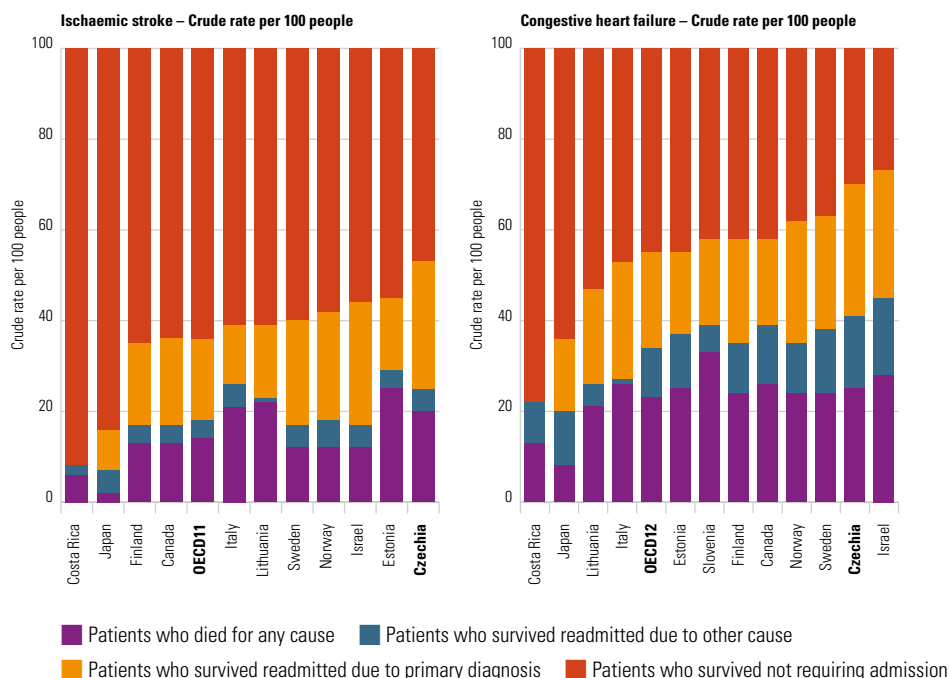


Source: OECD, 2022a.

Note: CHF: congestive heart failure; COPD: chronic obstructive pulmonary disease.

High admission rates for CHF and diabetes showcase the potential for integrating care in the Czech health system. To benchmark current performance, Czechia participated in an OECD-led pilot to test indicators for integrated care (Barrenho et al., forthcoming). Fig. 7.5 shows mortality and readmissions outcomes across the participating OECD countries in the year after discharge following ischaemic stroke or CHF in 2018. For patients who suffered an ischaemic stroke in Czechia, on average, 47% survived and did not return to acute care, 33% survived and were readmitted to hospital (5% for stroke related and 28% for other reasons) and every fifth patient died the following year. This 1-year mortality ranged from 2% in Japan to 25% in Estonia, with Czechia ranking fourth highest (OECD, 2021). Prescribing the right amounts of medication and following up on patient adherence are other areas for improvement. This was shown in an analysis of claims data for diabetic patients: up to one-third of diabetic patients in Czechia consume low levels of oral antidiabetics, either because of physicians’ non-adherence to recommended guidelines or patients’ non-adherence to recommended treatment, whereas 10.1% of identified patients collected more medication than was necessary for 1.5 years (Kučová & Votápková, 2017; Brož et al., 2020).

FIG. 7.5 Patient outcomes within one year of discharge after ischaemic stroke and congestive heart failure, 2018



Source: OECD, 2021.

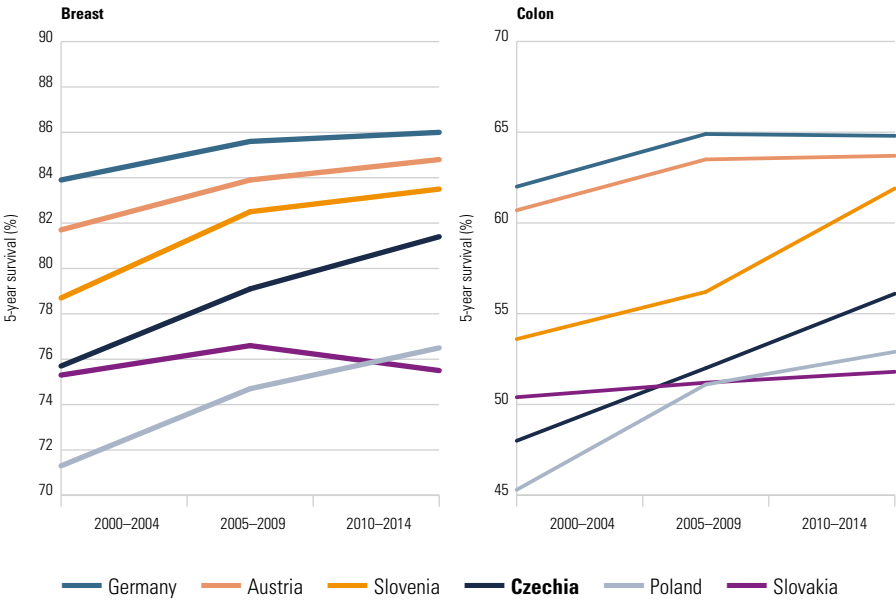
Note: OECD11 and OECD12 refers to the 11 and 12 OECD countries displayed in each graphic.

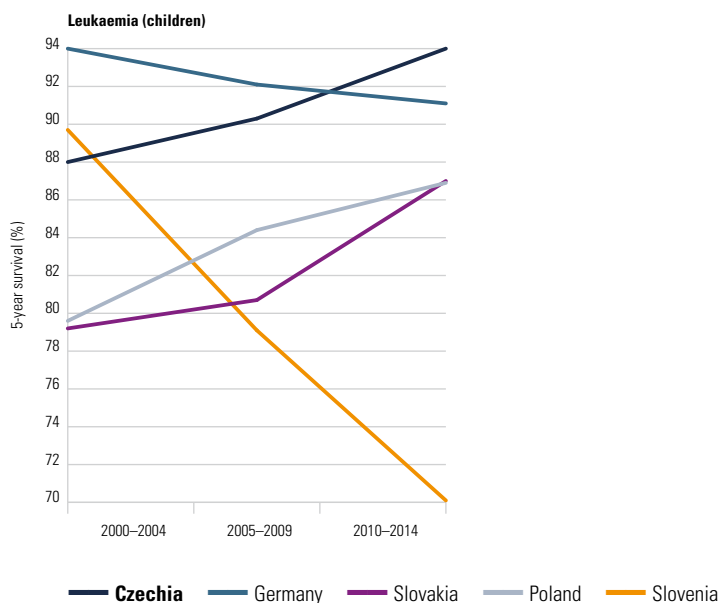
7.4.2 Hospital (inpatient) care

Czechia has seen considerable improvements regarding care of patients after an acute myocardial infarction. In 2019, Czechia recorded the fifth highest case-fatality rate of 10.2% within 30 days after admission for adults aged 45+ who were hospitalized following an acute myocardial infarction among the countries with linked data (down from 18.3% in 2000). Despite the decrease in acute myocardial infarction-related mortality, Czechia was outperformed by several other EU countries, including the Netherlands, with a case-fatality rate of 3.2% (OECD, 2022a). Similarly, hospital mortality rates for ischaemic stroke stood at 14.2% in 2019, the fifth-highest among the 16 EU countries with comparable data (age- and gender-standardized rates within 30 days after admission), down from 20.5% in 2000. The rate for haemorrhagic stroke, in contrast, stood at 34.6% in 2019 (OECD, 2022a).

Oncological care measures aspects of the organizational capacities of a health system, for example, those due to special challenges in logistics (such as invitations to screenings), and depends heavily on the timely diagnosis in the earliest stage possible (for example, by organized programmes). The relative survival rates in Czechia over a 5-year period (2010–2014) were 94% for childhood acute lymphoblastic leukaemia (OECD average 83.7%), 81.4% for breast cancer (OECD average 84.8%) and 56.1% for colon cancer (OECD average 62.1%) (OECD, 2022a). Czechia improved in all three cancers featured in Fig. 7.6, though rates for breast and colon cancer were below the OECD averages and those of neighbouring countries.

FIG. 7.6 Cancer survival rates for breast cancer (among women), colon cancer and leukaemia (among children) in Czechia and selected countries, 2000–2004, 2005–2009 and 2010–2014





Source: Allemani et al., 2018.

7.5 Health system outcomes

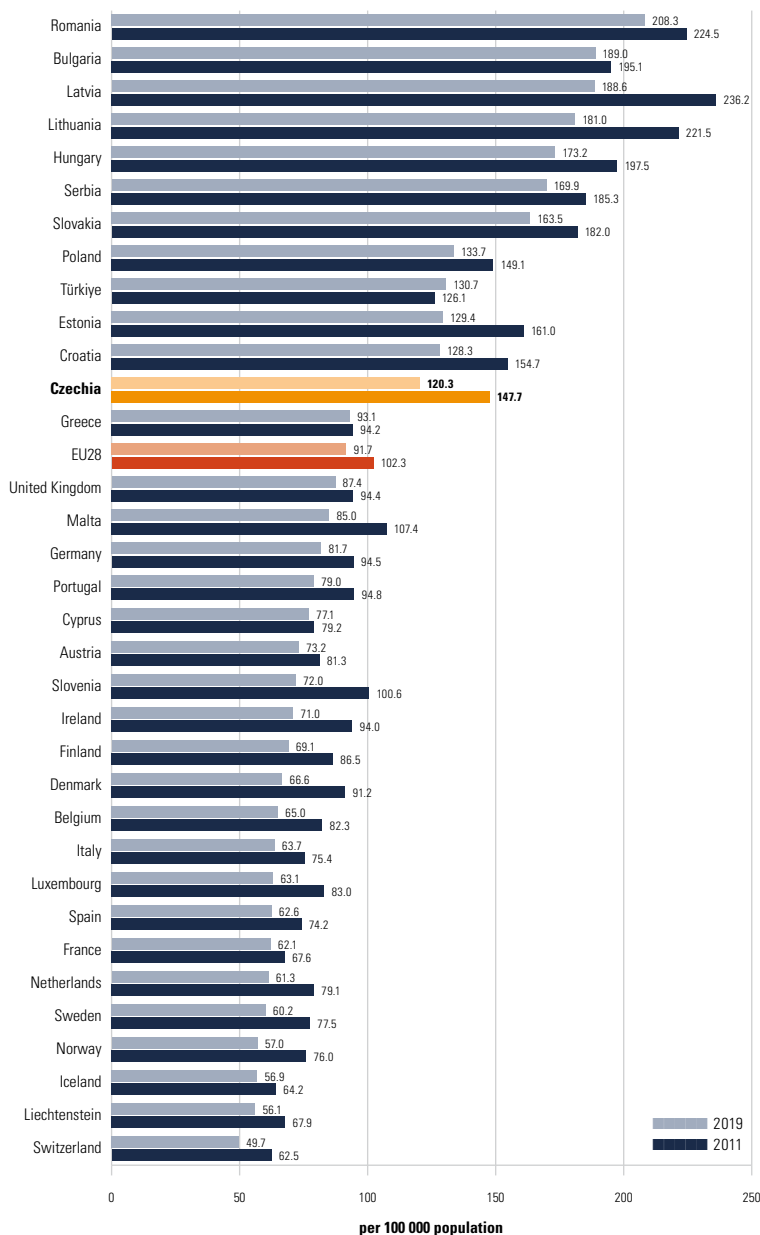
Improving the health of the population is the overarching aim of the Czech health system. The health status of the Czech population did indeed improve as measured by life expectancy and overall mortality, while determinants of health like dietary habits, smoking and other factors indicate areas for further focus (see Section 1.4). To disentangle the actual contribution of a health system to population health (controlling for factors such as education, social circumstances, individual lifestyles and harmful environmental factors) the metric of avoidable mortality is employed. Avoidable mortality is comprised of two components: (1) amenable mortality (otherwise known as mortality from treatable causes), which refers to deaths that should not occur if the population receives appropriate and timely care, including screening and treatment, and (2) preventable mortality, referring to deaths that could have been avoided through public health and primary prevention interventions focusing on the wider determinants of health, such as behaviour and lifestyle factors.

Czechia has reduced its amenable mortality, from 140.7 deaths per 100 000 population in 2011 to 120.3 per 100 000 in 2019 (Eurostat, 2022). Reductions in amenable mortality can be seen across Europe, and Czechia ranks near the middle, between countries like Switzerland, with an age- and gender-standardized amenable mortality rate of around 50 and Romania, with a rate above 200 deaths per 100 000 population in 2019 (see Fig. 7.7).

Diseases of the circulatory system, such as the ischaemic heart disease (30.1 per 100 000 population), cerebrovascular diseases such as stroke (9.1), and the hypertensive disease (3.9) comprise a significant share of amenable mortality in Czechia. Mortality from cancer is the second leading cause of amenable mortality, represented by mortality of colorectal cancer (17.9) and breast cancer (9.0).

Preventable mortality, on the other hand, stood at 188.3 deaths per 100 000 population in 2019, representing a decline of 16.6% from 2011 (225.7 per 100 000). Although Czechia has higher rates in preventing the onset of diseases than some neighbours, many EU countries pushed preventable mortality below 100 deaths per 100 000 population in 2019 (see Fig. 7.8). As lung cancer is a leading cause of preventable mortality, comprehensive tobacco control legislation was introduced in 2017, and the reduction of smoking has also been enshrined as a priority area in Health 2030. On a broader scale, strengthening public health and prevention in Czechia is recognized as an area for improvement (see Section 5.1). Although vaccination rates are traditionally high, the development of health literacy and reduction of risk factors present paths to reduce preventable mortality further.

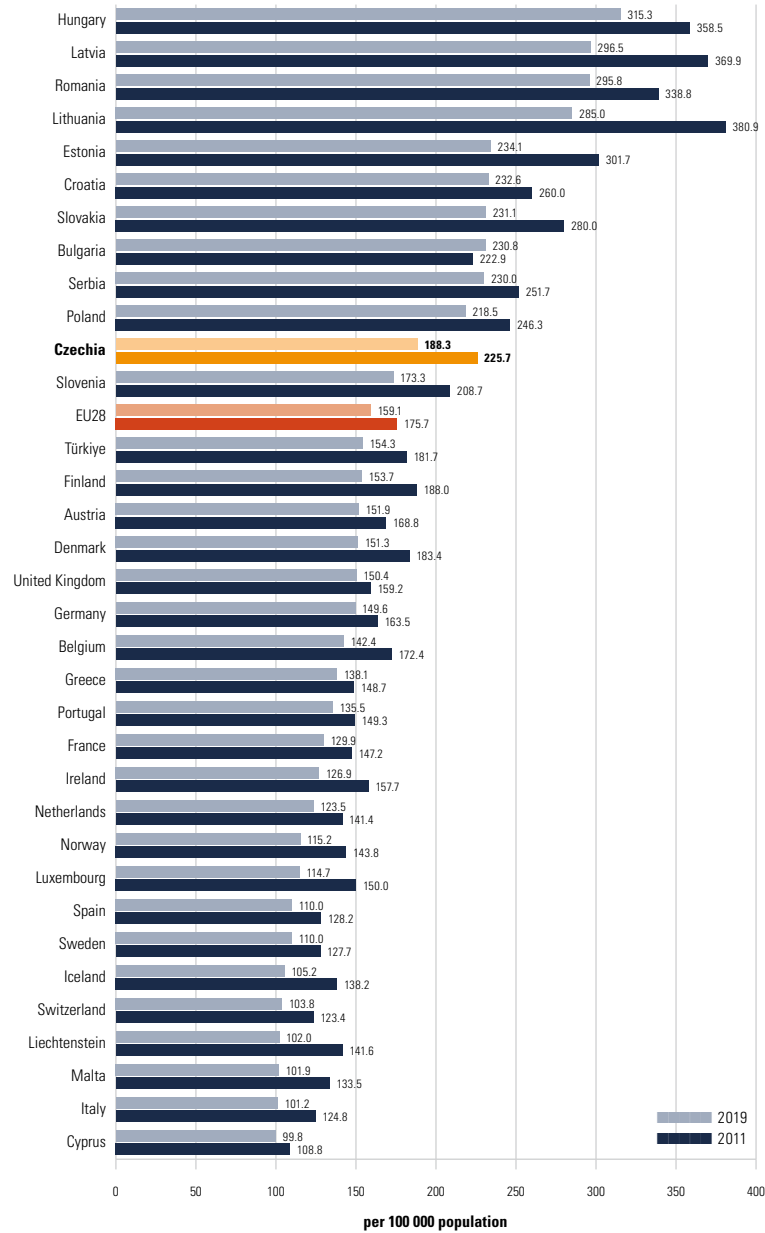
FIG. 7.7 Amenable mortality rates per 100 000 population in Czechia, the EU and selected countries, 2011 and 2019



Source: Eurostat, 2022.

Note: Preventable mortality is defined as death that can be mainly avoided through public health and primary prevention interventions. Amenable mortality is defined as death that can be mainly avoided through health care interventions, including screening and treatment. Half of all deaths for some diseases (for example, ischaemic heart disease and cerebrovascular disease) is attributed to preventable mortality while the other half is attributed to treatable causes. Preventable and amenable mortality indicators refer to premature mortality (under age 75 years). The data are based on the revised OECD/Eurostat lists.

FIG. 7.8 Preventable mortality rates per 100 000 population in Czechia, the EU and selected countries, 2011 and 2019



Source: Eurostat, 2022.

Note: Preventable mortality is defined as death that can be mainly avoided through public health and primary prevention interventions. Amenable mortality is defined as death that can be mainly avoided through health care interventions, including screening and treatment. Half of all deaths for some diseases (for example, ischaemic heart disease and cerebrovascular disease) is attributed to preventable mortality while the other half is attributed to treatable causes. Preventable and amenable mortality indicators refer to premature mortality (under age 75 years). The data are based on the revised OECD/Eurostat lists.

The inequity of population health outcomes is a further concern. Health outcome differences are documented along socioeconomic groups, for example, for disabled persons, the Roma population, and by age, employment status and along educational lines. Other factors, such as marital status, also seem to have an impact on health outcomes in Czechia (Tillmann et al., 2017). Finally, regional disparities hinder the realization of health equity across the population. With the country administratively divided into 14 regions, Prague and the *Středočeský* Region have a unique role in health service provision due to the concentration of highly specialized services in Prague and the use of these services by people travelling from the *Středočeský* Region. The *Karlovarský* and *Ústecký* Regions, on the other hand, register fewer human resources, based on 2017 data (Winkelmann, Muench, & Maier, 2020; Dlouhý, 2021). Beyond physical and human resources, it is likely that disparities are not following a clear urban–rural divide and that perhaps socioeconomic factors and health behaviour are creating sub-regional disparities (Hübelová & Kozumplíková, 2022). For instance, stark regional variations are documented in screening attendance for breast and cervical cancer across Czech municipalities: VZP claims data from 2017 show screening that varied from 38.3% to 69.8% for breast cancer and from 32.5% to 55.0% for cervical cancer (Altová et al., 2021).

7.6 Health system efficiency

Efficiency is not systematically monitored in the Czech health system, though a few studies have researched and assessed efficiency of selected sectors, such as inpatient providers (Dlouhý, Jablonský, & Novosádová, 2007; Mastromarco, Šťastná, & Votápková, 2019). Vrabková & Vaňková (2021) particularly focused on human resources while measuring efficiency of select inpatient care providers.

7.6.1 *Allocative efficiency*

The term allocative efficiency refers to the notion that society's limited resources are being used in such a way that they best satisfy the population's needs and wants. As regards health, this is usually interpreted as the allocation of resources between various levels and types of care consistent with what is in society's best interests (namely, maximizing health improvements). Levels of allocative efficiency may relate to the allocation of resources to the health system; the allocation of resources to different types of providers; the allocation of resources to different types of services; and the allocation of resources for public health.

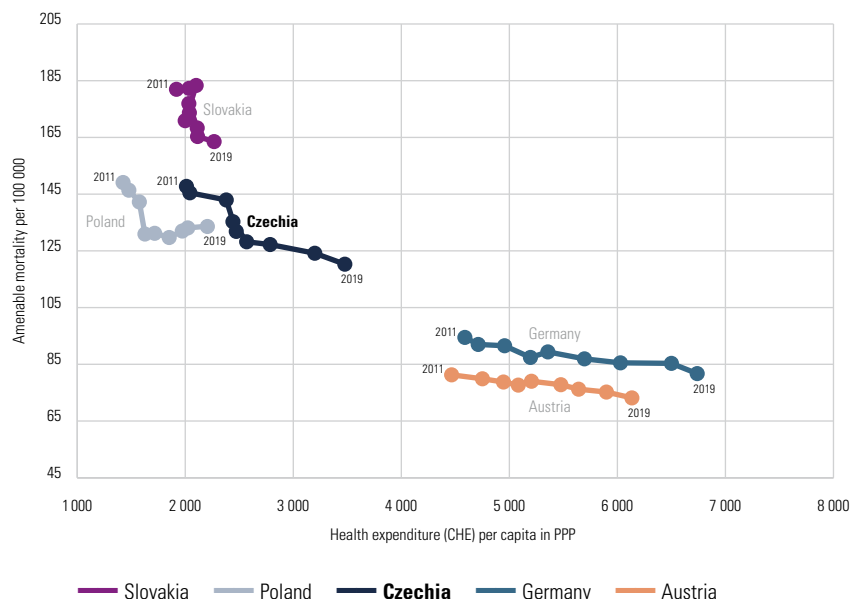
The share of public expenditure on health in Czechia is relatively high (81.5% in 2019; Table 3.1) and health service provision is not reliant on private OOP payments, though public expenditure allocations to health can be sensitive to economic downturns. As described in Box 3.3, a risk-adjustment reform in favour of an increase of allocative efficiency occurred in 2018. As such, the PCG risk-adjustment mechanism now considers not only age and sex, but also chronic conditions. It avoids cream-skimming and re-allocates funds among HIFs in a fairer way.

7.6.2 *Technical efficiency*

Considering the low share of CHE as a percentage of GDP in Czechia and the high reliance on public financing, technical efficiency of the health system (that is, the extent to which a health system secures the minimum levels of inputs for a given output) can be represented by looking at levels of amenable mortality with CHE per capita, which shows Czechia in an improving position (see Fig. 7.9).

There are nevertheless areas for improving technical efficiency in the Czech health system. First, while the number of beds in acute care has been steadily decreasing (Fig. 4.1), occupancy rates have been relatively stable over time, decreasing slightly in recent years. The average length of stay has been stable since 2012 and is still higher than in other EU countries (Eurostat, 2022).

FIG. 7.9 Amenable mortality per 100 000 population versus current health expenditure per capita, Czechia and selected countries, 2011–2019



Sources: Eurostat, 2022; WHO, 2022.

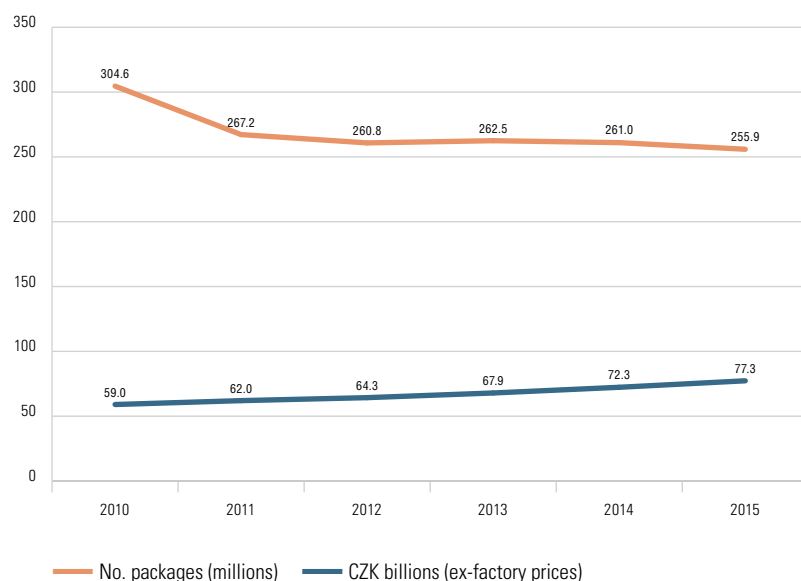
Note: CHE: current health expenditure; PPP: purchasing power parity.

Second, while the number of inpatient hospital discharges per 100 000 inhabitants decreased by 1.4 over the last decade, the number of discharges is still among the highest in the EU (Eurostat, 2022). The number of outpatient consultations is also among the highest compared with other countries and even increased in recent years (Eurostat, 2022).

Additionally, although the number of practising nurses and physicians reach EU averages, both physicians and nurses are often overworked and work extra hours that are still not sufficiently remunerated, particularly in inpatient care (see Section 4.1). Administrative burden is a particular problem for physicians and as a result, there are regions that suffer from a lack of medical professionals, as they go abroad for better pay and work conditions (moving there or as commuters). This is particularly a problem in regions bordering Germany and Austria (see Section 4.2.3). In some cases, hospital wards in border regions have had to close, and others have closed temporarily during summer, due to lack of personnel.

Finally, overspending on pharmaceuticals is still a concern in Czechia. Fig. 7.10 shows the development of pharmaceutical expenditure and consumption between 2010 and 2019. Even though total packages sold slightly decreased during the observed period, the amount paid for pharmaceuticals gradually rose. Generic substitution in pharmacies has been allowed since 2008, though there is only limited information on the share of generic pharmaceuticals. Determinants of generic substitution in pharmacies, that is, dispensing of a generic pharmaceutical if a non-generic medicine was prescribed, were explored by Votápková & Žílová (2016) and the scope for efficiency improvements in this area was established.

FIG. 7.10 Pharmaceutical expenditures and consumption in Czechia, 2010–2019



Source: ÚZIS 2020a.

As regards user fees, the effect of inpatient user fees in Czechia was empirically tested by Votápková (2020), whereas the effect of user fees in outpatient care was assessed by Zápál (2010) and Votápková & Žílová (2016). The results did not yield strong evidence for user fees in decreasing overutilization of services; most fees being phased out by 2014 and no new policies discouraging overutilization have since been announced. The inefficient use of resources and overconsumption of health services remain two important challenges facing the Czech health system in terms of technical efficiency.

Conclusions

The Czech SHI system is guided by the principles of universal coverage, high accessibility and a negation-based power balance between the three main layers of regulation: the national level, the 14 regions and the bodies that include HIFs and medical associations. Since the re-introduction of SHI in the early 1990s, these principles have remained intact and are strong characteristics of the Czech health system. Reforms (past and ongoing) target adapting parameters of the existing system (such as the provision of care and/or adapting to progresses in medical science) and improvements to the sustainability of financing or reimbursing medical services provided to the entire population.

There have naturally been changes to the responsibilities of these three powers over the past three decades. At the national level, mainly represented by MZČR, there are many duties when it comes to organizing the health system. For one, the state pays for state-insured people, covering more than half of the Czech population by making transfers for the SHI contributions on their behalf, resulting in contributions from employers and employees accounting for 71% of all SHI revenues in 2021 despite representing just 40% of the overall Czech population. Contributions for the state insured are paid on behalf of children, students, women or men on parental leave, pensioners, unemployed individuals, people living below the poverty line, prisoners and asylum seekers that are classified as “economically inactive”.

Czechia has traditionally financed an overwhelming majority of its CHE from public sources: in 2019, this share stood at 81.5% and placed Czechia ahead of all but a few countries in the WHO European Region. The rest of CHE is made up from private expenditures as VHI has virtually no role in the health system. From these health expenditures, Czechia provides an almost universal health coverage in scope, breadth and depth of coverage to its population. The benefits package includes inpatient and outpatient care,

prescription pharmaceuticals, some dental procedures, rehabilitation, spa treatments and over-the-counter pharmaceuticals (the last three if prescribed by a physician). The vast majority of health services covered by SHI are provided free of charge at the point of use. There are some concerns about the sustainability of health financing, which were reinforced by the COVID-19 pandemic. With 7.8% of GDP spent on health in 2019, the financial resources are spread throughout the system, coming with the risks of low wages in the health workforce, reduced capital investments and few reserves to embark on the modernization of service provision. Here, EU contributions have been crucial to inject capital to highly specialized care centres, mental health centres and palliative care teams in inpatient facilities, while the National Recovery Plan (*Národní plán obnovy*) offers more funds for the coming years.

Another role of the state in the health system is that of owner of 12 teaching hospitals, some highly specialized tertiary care facilities, all psychiatric hospitals and some therapeutic centres. Additionally, MZČR is the main regulator of the health system, sometimes through its subordinate bodies, such as SZÚ, SÚKL or ÚZIS. At the regional level, authorities are mainly involved in the organization and provision of health services, either via direct ownership of some inpatient providers or registering (the mostly private) outpatient providers. HIFs, as the main corporate bodies, are in turn responsible for the collection of compulsory wage-based SHI contributions, guarantee accessibility for patients by contracting sufficient providers and pay providers. As for the latter two layers, the competences and duties of the regional and corporate bodies have remained unchanged since reforms in 2003, while HIF governance has been continuously stable. The number of HIFs has remained at seven since 2012.

Planning of health care provision, and even more pronounced, the securing of a health workforce, has become a major focal point of the Czech health system. MZČR sets the main strategic frameworks, the current one (Health 2030) focusing on improvements leading up to the end of this decade, and now uses evidence-based analyses of main indicators of the health system. Regions have also been recently getting involved in planning for health care and some of this is due to pressing shortages in terms of finances and health personnel. HIFs also have planning duties, responsible for formatting their annual business plans. Czechia's embarkation on setting up a health system performance assessment in 2021 is also promising, although the challenges of data availability, transparency and interpretability remain. Furthermore,

Czechia has a dense network of providers, though planning is needed to boost the health workforce, which is facing long-term challenges with ageing, particularly for specialist occupations.

Recent reforms have strengthened patient information, enabling patients to make more informed decisions. Patient involvement was also introduced in one MZČR advisory body concerning reimbursement, a first in the Czech health system. Digital health and empowerment, in the form of eHealth for records and history, as well as electronic prescriptions for pharmaceuticals, are areas of focus to notch efficiency gains in the coming years.

Overall, health outcomes in terms of life expectancy, mortality, and survival rates of stroke and cancer have improved in recent years, although there remains considerable room for improvement in strengthening disease prevention and health promotion, particularly for dietary habits and health literacy. Additionally, applying the correct medications and treatment plans, especially for the chronically ill, and a better coordination of care across health and social care sector for those with long-term conditions may require further attention in the coming years. Finally, socioeconomic disparities in health are very likely to develop further, though the main reasons for these are not fully within the scope of the health system (education system, infrastructural problems, unemployment and social integration), but put together these challenges contribute to already existing regional disparities.

Appendices

9.1 References

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9.2 Useful websites

CATEGORY	LINK
Ministry of Health	https://www.mzcr.cz/en/the-ministry-of-health/ Information on COVID-19: https://koronavirus.mzcr.cz/en/
Payer/Insurer	Full overview of HIFs in Czechia: https://kancelarzp.cz/en/contacts/ceske-zdravotni-pojistovny-2/ General Health Insurance Company: https://en.vzp.cz/
General information on SHI	Health Insurance Bureau: https://kancelarzp.cz/en/homepage/
Pharmaceutical Regulatory Body	State Institute for Drug Control: https://www.sukl.eu/index.php?lang=2
National Public Health Institute	National Institute of Public Health: http://www.szu.cz/index.php?lang=2
Providers	Czech Medical Chamber: https://www.lkcr.cz/czech-medical-chamber-cmc Czech Dental Chamber: https://www.dent.cz/ Czech Chamber of Pharmacists: https://www.lekarnici.cz/ Association of General Practitioners: https://splcr.cz/ Association of Ambulatory Care Specialists: https://www.sasp.cz/ Association of Ambulatory Eye Surgery Providers: https://www.sdruzenisapoch.cz/ Czech Medical Association of J. E. Purkyně: https://www.cls.cz/ Czech Association of Nurses: https://www.cnna.cz/o-spolecnosti/ Association of Hospitals of the Czech Republic: http://www.ancr.cz/kontakt/ Association of Czech and Moravian Hospitals: https://www.acmn.cz/ Association of Private Hospitals of the Czech Republic: http://ssncr.cz/

CATEGORY	LINK
Health information	Institute of Health Information and Statistics of the Czech Republic: https://www.uzis.cz/index-en.php Institute of Health Information and Statistics of the Czech Republic – National Health Information System: https://www.uzis.cz/index-en.php?pg=nhis Various health information, and registers: https://www.nzip.cz/
Medical training	Institute for Postgraduate Medical Education: http://foreigner.ipvz.cz/en/
Patient organizations	Overview of patient organizations in Czechia: https://pacientskeorganizace.mzcr.cz/index.php?pg=pacientske-organizace--database
HSPM	https://eurohealthobservatory.who.int/monitors/health-systems-monitor/countries-hspm/hspm/czech-republic-2015
State of Health in the European Union	https://eurohealthobservatory.who.int/publications/country-health-profiles

9.3 HiT methodology and production process

HiTs are produced by country experts in collaboration with the Observatory's research directors and staff. They are based on a template that, revised periodically, provides detailed guidelines and specific questions, definitions, suggestions for data sources and examples needed to compile reviews. While the template offers a comprehensive set of questions, it is intended to be used in a flexible way to allow authors and editors to adapt it to their particular national context. The latest version of the template (2019) is available on the Observatory website at <https://eurohealthobservatory.who.int/publications/i/health-systems-in-transition-template-for-authors>.

Authors draw on multiple data sources for the compilation of HiTs, ranging from national statistics, national and regional policy documents, to published literature. Furthermore, international data sources may be incorporated, such as those of the OECD and the World Bank. The OECD Health Data contain over 1200 indicators for the 34 OECD countries. Data are drawn from information collected by national statistical bureaux and health ministries. The World Bank provides World Development Indicators, which also rely on official sources.

In addition to the information and data provided by the country experts, the Observatory supplies quantitative data in the form of a set of standard comparative figures for each country, drawing on the European Health for All database. The Health for All database contains more than 600 indicators defined by the WHO Regional Office for Europe for the purpose of monitoring Health in All Policies in Europe. It is updated for distribution twice a year from various sources, relying largely upon official figures provided by governments, as well as health statistics collected by the technical units of the WHO Regional Office for Europe. The standard Health for All data have been officially approved by national governments.

HiT authors are encouraged to discuss the data in the text in detail, including the standard figures prepared by the Observatory staff, especially if there are concerns about discrepancies between the data available from different sources.

A typical HiT consists of nine chapters.

1. Introduction: outlines the broader context of the health system, including geography and sociodemography, economic and political context, and population health.
2. Organization and governance: provides an overview of how the health system in the country is organized, governed, planned and regulated, as well as the historical background of the system; outlines the main actors and their decision-making powers; and describes the level of patient empowerment in the areas of information, choice, rights and cross-border health care.
3. Financing: provides information on the level of expenditure and the distribution of health spending across different service areas, sources of revenue, how resources are pooled and allocated, who is covered, what benefits are covered, the extent of user charges and other out-of-pocket payments, voluntary health insurance and how providers and health workers are paid.
4. Physical and human resources: deals with the planning and distribution of capital stock and investments, infrastructure and medical equipment; the context in which IT systems operate; and human resource input into the health system, including information on workforce trends, professional mobility, training and career paths.
5. Provision of services: concentrates on the organization and delivery of services and patient flows, addressing public health, primary care, secondary and tertiary care, day care, emergency care, pharmaceutical

care, rehabilitation, long-term care, services for informal carers, palliative care, mental health care and dental care.

6. Principal health reforms: reviews reforms, policies and organizational changes; and provides an overview of future developments.
7. Assessment of the health system: provides an assessment of systems for monitoring health system performance, the impact of the health system on population health, access to health services, financial protection, health system efficiency, health care quality and safety, and transparency and accountability.
8. Conclusions: identifies key findings, highlights the lessons learned from health system changes; and summarizes remaining challenges and future prospects.
9. Appendices: includes references and useful websites.

The quality of HiTs is of real importance since they inform policy-making and meta-analysis. HiTs are the subject of wide consultation throughout the writing and editing process, which involves multiple iterations. They are then subject to the following.

- A rigorous review process.
- There are further efforts to ensure quality while the report is finalized that focus on copy-editing and proofreading.
- HiTs are disseminated (hard copies, electronic publication, translations and launches).

The editor supports the authors throughout the production process and in close consultation with the authors ensures that all stages of the process are taken forward as effectively as possible.

One of the authors is also a member of the Observatory staff team and they are responsible for supporting the other authors throughout the writing and production process. They consult closely with one another to ensure that all stages of the process are as effective as possible and that HiTs meet the series standard and can support both national decision-making and comparisons across countries.

9.4 The review process

This consists of three stages. Initially the text of the HiT is checked, reviewed and approved by the series editors of the European Observatory. It is then sent for review to two independent academic experts, and their comments and amendments are incorporated into the text, and modifications are made accordingly. The text is then submitted to the relevant ministry of health or appropriate authority, and policy-makers within those bodies are restricted to checking for factual errors within the HiT.

9.5 About the authors

Lucie Bryndová is a health policy advisor and researcher at the Organisation for Economic Co-operation and Development and, at the time of writing this Health System Review, she was a Research Fellow at the Faculty of Social Sciences of Charles University in Prague.

Lenka Šlegerová is a PhD candidate at the Institute of Economic Studies at the Faculty of Social Sciences of Charles University in Prague. She focuses on health economics and health policies, especially related to the accessibility and financing of health care.

Jana Votápková (PhD) is a Research Fellow at the Institute of Economic Studies at the Faculty of Social Sciences of Charles University in Prague. She concentrates on the economics of health care. Her research interests comprise economic and statistical assessment of health reforms, efficiency measurements within health economics and public sector economics in general.

Pavel Hroboň (MD, MS) is responsible for strategic management and client relations at the Advance Healthcare Management Institute and was Deputy Minister of Health for Czechia for 3 years, having worked previously for the Czech General Health Insurance Company (VZP) as an advisor and director of strategy.

Nathan Shuftan is a Research Fellow at the Berlin University of Technology's Department of Health Care Management and works at the Berlin Hub of the European Observatory on Health Systems and Policies. He holds a Master's Degree in Public Policy from the Hertie School of Governance in Berlin.

Anne Spranger heads the scientific institute of the German Medical Technology Association and was previously a Research Fellow at the Berlin University of Technology's Department of Health Care Management and at the Berlin Hub of the European Observatory on Health Systems and Policies. She holds a Master's Degree in Public Policy from the Hertie School of Governance in Berlin.

The Health Systems in Transition Series

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The HiTs are building blocks that can be used:

- to learn in detail about different approaches to the financing, organization and delivery of health services;
- to describe accurately the process, content and implementation of health reform programmes;
- to highlight common challenges and areas that require more in-depth analysis; and
- to provide a tool for the dissemination of information on health systems and the exchange of experiences of reform strategies between policymakers and analysts in countries of the WHO European Region.

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(2001^g, 2007^g, 2014^g)

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(2012)

All HiTs are available in English.

When noted, they are also available in other languages:

- ^a Albanian
- ^b Bulgarian
- ⁱ Estonian
- ^c French
- ^d Georgian
- ^e German
- ^k Polish
- ^f Romanian
- ^g Russian
- ^h Spanish
- ⁱ Turkish



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HiTs are in-depth profiles of health systems and policies, produced using a standardized approach that allows comparison across countries. They provide facts, figures and analysis and highlight reform initiatives in progress.

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