Health Systems in Transition
Vol. 21 No. 1 2019

Poland

Health system review

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European Observatory on Health Systems and Policies
a partnership hosted by WHO

Anna Sagan (Editor) and Ewout van Ginneken (Series editor)
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Editorial Board

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The European Observatory on Health Systems and Policies supports and promotes evidence-based health policy-making through comprehensive and rigorous analysis of health systems in Europe. It brings together a wide range of policy-makers, academics and practitioners to analyse trends in health reform, drawing on experience from across Europe to illuminate policy issues.

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KEYWORDS:

DELIVERY OF HEALTH CARE
EVALUATION STUDIES
FINANCING, HEALTH
HEALTH CARE REFORM
HEALTH SYSTEM PLANS – organization and administration
POLAND

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UN City,
Marmorvej 51,
DK-2100 Copenhagen Ø, Denmark

Alternatively, complete an online request form for documentation, health information, or for permission to quote or translate, on the Regional Office website (http://www.euro.who.int/pubrequest)

Suggested citation: Sowada C, Sagan A, Kowalska-Bobko I, Badora-Musiał K, Bochenek T, Domagała A, Dubas-Jakóbczyk K, Kocot E, Mrożek-Gąsiorowska M, Sitko S, Szetela A, Szetela P, Tambor M, Więckowska B, Zabdyr-Jamróz M, van Ginneken E. Poland: Health system review. *Health Systems in Transition*, 2019; 21(1): 1–235.

Print ISSN 1817–6119 Vol. 21 No. 1
Web ISSN 1817–6127 Vol 21 No. 1

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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, 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. 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;
- to describe the institutional framework, the process, content and implementation of health-care reform programmes;
- to highlight challenges and areas that require more in-depth analysis;
- 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 different countries; and
- to 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 the World Health Organization (WHO) Regional Office

for Europe's European Health for All database, data from national statistical offices, Eurostat, the Organisation for Economic Co-operation and Development (OECD) Health Data, data from 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 situation. 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 web site (http://www.healthobservatory.eu).

ACKNOWLEDGEMENTS

The Health Systems in Transition (HiT) profile on Poland was written by Anna Sagan of the Observatory's team at the London School of Economics and Political Science, Christoph Sowada and Iwona Kowalska-Bobko of the Jagiellonian University Medical College and teams of authors guided by Christoph and Iwona:

1. Introduction: C Sowada, E Kocot, I Kowalska-Bobko
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6. Principal health reforms: I Kowalska-Bobko
7. Assessment of the health system: C Sowada, I Kowalska-Bobko, K Badora-Musiał, E Kocot, A Szetela, M Tambor, K Dubas-Jakóbczyk, T Bochenek, A Domagała

It was edited by Anna Sagan, working with the support of Ewout van Ginneken of the Observatory's team at the University of Technology, Berlin. The basis for this edition was the previous HiT on Poland, which was published in 2011, written by a multidisciplinary team of experts on the Polish health care system coordinated by Paweł Goryński, Iwona Kowalska, Dariusz Poznański, Leszek Sikorski, Alicja Sobczak, Christoph Sowada, Maria Świderek, Cezary Włodarczyk and Iwona Wrześniewska-Wal. The Research Director for the 2011 HiT was Reinhard Busse.

The European Observatory on Health Systems and Policies is grateful to Professor Jacek Klich of the Cracow University of Economics and Professor Andrzej Wojtczak of the National Institute of Public Health – National Institute of Hygiene (NIZP-PZH) for reviewing the report.

The authors are grateful to everyone at the Ministry of Health, in particular at the Department of Health Insurance, Department of Health Policy, Department of Analysis and Strategy, Department of Health Care Organization, Department of European Funds and e-Health, Department of Budget, Finance and Investment for their detailed comments and suggestions and the Department of International Cooperation for coordinating the review. Special thanks are due to Grzegorz Juszczyk, Director of the NIZP-PZH, Paulina Karwowska, Director of the WHO Country Office in Poland, and Robert Otok, Director of the Association of Schools of Public Health in the European Region (ASPHER) for reviewing the report and their invaluable comments.

Thanks are also extended to the WHO Regional Office for Europe for their European Health for All database from which data on health services were extracted, to the European Commission for Eurostat data on European Union Member States; to the Organisation for Economic Co-operation and Development for the data on health services in western Europe; and to the World Bank for the data from the World Development Indicators database. Thanks are also due to the Central Statistics Office in Poland (GUS), the National Health Fund (NFZ), the NIZP-PZH, the Centre for Health Information Systems (CSIOZ), and the Centre for Quality Monitoring in Health Care (CMJ) for the provision of data. The HiT reflects data available in September 2018, unless otherwise indicated.

The European Observatory on Health Systems and Policies is a partnership, hosted by the WHO Regional Office for Europe, which includes the Governments of Austria, Belgium, Finland, Ireland, Norway, Slovenia, Spain, Sweden, Switzerland, the United Kingdom, and the Veneto Region of Italy; the European Commission; the World Bank; UNCAM (French National Union of Health Insurance Funds); the London School of Economics and Political Science (LSE), and the London School of Hygiene & Tropical Medicine (LSHTM). The European Observatory has a secretariat in Brussels and hubs in London (at LSE and LSHTM) and at the Berlin University of Technology.

The Observatory team working on HiTs is led by Josep Figueras (Director), Elias Mossialos, Martin McKee, Reinhard Busse (Co-directors), Ewout van Ginneken, and Suszy Lessof. The Country Monitoring Programme of the Observatory and the HiT series are coordinated by Anna Maresso. The production and copy-editing process of this HiT was coordinated by Jonathan North, with the support of Caroline White and Andrea Kay (copy-editing) and Pat Hinsley (typesetting).

LIST OF ABBREVIATIONS

ADL	Activities of Daily Living
ALOS	Average length of stay
AOTMiT	Agency for Health Technology Assessment and Tariffs System (*Agencja Oceny Technologii Medycznych i Taryfikacji*)
ASDK	Ambulatory cost-intensive diagnostic services (*Ambulatoryjne świadczenia diagnostyczne kosztochłonne*)
BMI	Body mass index
C	Capitation
CBOS	Public opinion research centre (*Centrum Badania Opinii Społecznej*)
CE	Continuous education
CEFTA	Central European Free Trade Association
CHF	Swiss Francs
CME	Continuous medical education
CMJ	Centre for Monitoring Quality in Health Care (*Centrum Monitorowania Jakości w ochronie zdrowia*)
COPD	Chronic obstructive pulmonary disease
CSIOZ	Centre for Health Information Systems (*Centrum Systemów Informacyjnych Ochrony Zdrowia*)
CT	Computed tomography
DALY	Disability-adjusted life year
DDD	Defined daily dose
DiLO card	Oncology Diagnostic and Treatment Card (*Karta diagnostyki i leczenia onkologicznego*)
DOK	Coordinated care for children (*Dziecięca opieka koordynowana*)
DPS	Social assistance home (*Dom pomocy społecznej*)
DRG	Diagnosis-related group (*Jednorodne Grupy Pacjentów*)
DSRK	Long-term National Development Strategy (*Długookresowa Strategia Rozwoju Kraju*)
EAN	European Article Number

EC	European Commission
EEA	European Economic Area
EFTA	European Free Trade Association
EHIS	European Health Interview Survey
EU	European Union
EU-12	EU Member States acceding in May 2004 and January 2007
EU-15	EU Member States before May 2004
EU-28	All EU Member States
EUnetHTA	European Network for Health Technology Assessment
EU-SILC	European Union Statistics on Income and Living Conditions
FFS	Fee-for-service
GDP	Gross domestic product
GIS	Chief sanitary inspectorate (*Główny Inspektorat Sanitarny*)
GP	General practitioner
HCC	Home care centre
HDI	Human development index
HMO	Health maintenance organization
HTA	Health technology assessment
HTAi	Health technology assessment international
ICT	Information and Communication Technologies
INAHTA	International Network of Agencies for Health Technology Assessment
IOM	International Organization of Migration
IOWISZ	Evaluation Instrument of Investment Motions in Health Care (*Instrument Oceny Wniosków Inwestycyjnych w Sektorze Zdrowia*)
IPPP	Institute of Public and Private Partnership (*Instytut Partnerstwa Publiczno-Prywatnego*)
ISPOR	International Society for Pharmacoeconomics and Outcomes Research
IT	Information technology
IVF	In vitro fertilization
JGP	Polish DRG system (*Jednorodne Grupy Pacjentów*)
KOC	Coordinated care for pregnant women (*Koordynowana opieka nad kobietą w ciąży*)
KOS	Coordinated specialist care (*Koordynowana Opieka Specjalistyczna*)

KRUS	Agricultural Social Insurance Fund (*Kasa Rolniczego Ubezpieczenia Społecznego*)
KSRR	National Regional Development Strategy (*Krajowa Strategia Rozwoju Regionalnego*)
LDEK	State dental examination (*Lekarsko-Dentystyczny Egzamin Końcowy*)
LE	Life expectancy
LEK	State medical examination (*Lekarski Egzamin Końcowy*)
LTC	Long-term care
MAH	Marketing authorization holder
MEDEV	Medicine evaluation committee
MRI	Magnetic resonance imaging
NCK	National Blood Centre (*Narodowe Centrum Krwi*)
NCP	National Contact Point
NFZ	National Health Fund (*Narodowy Fundusz Zdrowia*)
NGO	Nongovernmental organization
NHA	National Health Accounts
NIZP-PZH	National Institute of Public Health – National Institute of Hygiene (*Narodowy Instytut Zdrowia Publicznego – Państwowy Zakład Higieny*)
NPZ	National Health Programme (*Narodowy Program Zdrowia*)
NZOZ	Non-Public Health Care Unit (*Niepubliczny Zakład Opieki Zdrowotnej*)
OECD	Organisation for Economic Co-operation and Development
OMC	Outpatient managed care (*Koordynowana Opieka Ambulatoryjna*)
OOP	Out-of-pocket
OSR	Regulatory impact assessment (*Ocena Skutków Regulacji*)
OTC	Over-the-Counter
P4P	Payment for performance
PCA	Polish accreditation centre (*Polskie Centrum Akredytacji*)
PD	Per diem
PES	State specialization exam (*Państwowy Egzamin Specjalizacyjny*)
PET-CT	Positron-emission tomography
PFRON	State Fund for Rehabilitation of Persons with Disabilities (*Państwowy Fundusz Rehabilitacji Osób Niepełnosprawnych*)
PHC	Primary health care

PIF	State pharmaceutical inspection (*Państwowa Inspekcja Farmaceutyczna*)
PIOŚ	State Inspection for Environmental Protection (*Państwowa Inspekcja Ochrony Środowiska*)
PIP	State labour inspection (*Państwowa Inspekcja Pracy*)
PiS	Law and Justice political party (*Prawo i Sprawiedliwość*)
PLN	Polish unit of currency (*Złoty*)
PO	Civic Platform political party (*Platforma Obywatelska*)
PPP	Purchasing power parity
PPP$	US dollars purchasing power parity
PSL	Polish Peasants' Party (*Polskie Stronnictwo Ludowe*)
RPWDL	Registry of Entities that Carry Out Therapeutic Activity (*Rejestr Podmiotów Wykonujących Działalność Leczniczą*)
SDR	Standardized death rates
SOR	Hospital emergency ward (*Szpitalny oddział ratunkowy*)
SPZOZ	Independent/Autonomous Public Health Care Unit (*Samodzielny publiczny zakład opieki zdrowotnej*)
UNDP	United Nations Development Programme
URPLWMiPB	Office for Registration of Medicinal Products, Medical Devices and Biocidal Products (*Urząd Rejestracji Produktów Leczniczych, Wyrobów Medycznych i Produktów Biobójczych*)
VAT	Value added tax
VHI	Voluntary health insurance
WB	World bank
WCPR	Voivodeship emergency call centre (*Wojewódzkie Centrum Powiadamiania Ratunkowego*)
WOŚP	Great Orchestra of Christmas Charity (*Wielka Orkiestra Świątecznej Pomocy*)
ZIP	Integrated patient guide (*Zintegrowany Przewodnik Pacjenta*)
ZOL	Chronic medical care homes (*Zakład opiekuńczo-leczniczy*)
ZOZ	Health care unit (*Zakład Opieki Zdrowotnej*)
ZPO	Nursing home (*Zakład pielęgnacyjno-opiekuńczy*)
ZUS	Social insurance institution (*Zakład Ubezpieczeń Społecznych*)

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ABSTRACT

This analysis of the Polish health system reviews recent developments in organization and governance, health financing, health care provision, health reforms and health system performance. In late 2017, the Polish government committed to increase the share of public expenditures on health to 6% of GDP by 2024. If the GDP continues to grow in the years to come, this will present an opportunity to tackle mounting health challenges such as socio-economic inequalities in health, high rates of obesity, rising burden of mental disorders and population ageing that put strain on health care resources. It is also an opportunity to tackle certain longstanding imbalances in the health sector, including overreliance on acute hospital care compared with other types of care, including ambulatory care and long-term care; shortages of human resources; the negligible role of health promotion and disease prevention vis-à-vis curative care; and poor financial situation in the hospital sector. Finally, the additional resources are much needed to implement important ongoing reforms, including the reform of primary care.

The resources have to be spent wisely and waste should be minimized. The introduction, in 2016, of a special system (IOWISZ) of assessing investments in the health sector that require public financing (including from the EU funds) as well as the work undertaken by the Polish health technology assessment (HTA) agency (AOTMiT), which evaluates health technologies and publicly-financed health policy programmes as well as sets prices of goods and services, should help ensure that these goals are achieved. Recent reforms, such as the ongoing reform of primary care that seeks to improve coordination of care and the introduction of the hospital network, go in the right direction; however, a number of longstanding unresolved problems, such as hospital indebtedness, need to be tackled.

EXECUTIVE SUMMARY

Health challenges such as high rates of obesity, rising burden of mental disorders and population ageing will put strain on health care resources

Poland is a European Union (EU) Member State with a population of almost 38 million – the largest in central and eastern Europe and one of the largest in the EU. Like in other countries in Europe, its population is ageing and decreasing (1.7% decrease over the last two decades). Poland's GDP has increased over the years; however, it is still significantly lower that the EU average. In 2017, per capita GDP (PPP$) in Poland reached 71% of the EU average. The economy slowed during the global recession that started in 2008 but did not experience a contraction comparable to other European countries.

Life expectancy at birth has been increasing but it is still lower than the EU average (78 versus 81 years) and the gap between genders (8.1 years) is one of the highest among EU Member States. However, Polish men and women are expected to live a higher proportion of their lives in good health compared with their EU counterparts. Cardiovascular diseases and cancer remain the most common causes of death in both men and women and jointly account for over half of the disease burden. Health challenges include socioeconomic health inequalities, high rates of overweight and obesity, rising burden of mental disorders (and a very high suicide rate – with more people dying due to suicides than due to road accidents and with men accounting for almost 90% of suicides) and population ageing. With older people having on average more chronic and complex health needs, more limitations in activities of daily life and worse health status compared with younger age groups, this is likely to lead to a growing demand for care and necessitate changes in the structure of health care and social care provision.

Contracting of health services has been influenced by the introduction of health needs maps and hospital network

Governance of the public health system is divided between the Minister of Health (and supporting institutions) and three levels of territorial self-government. The National Health Fund (NFZ) remains the sole purchaser in the statutory health care system, although there have been calls to abolish it and transfer the payer function to the Ministry of Health. Purchasing and provision are strictly separated. The 16 voivodeship (district) branches of the NFZ are charged with purchasing services in their respective territories within the internal market which is open to public and private health care providers.

The Polish state health technology assessment agency (AOTMiT) has an important role in determining the basket of guaranteed benefits and since 2015 also in setting tariffs for these services. However, the role of the NFZ remains key: the structure, volume, value, and to some extent also the quality of purchased services, are determined through the NFZ contracts. In 2015, annual health needs maps were introduced as a short-term planning tool and are meant to, among other things, improve contracting of services. Nonetheless, contracting will continue to be largely dependent on the available resources and health system infrastructure. In addition, the NFZ's influence over contracting has been diminished by the introduction, in late 2017, of the hospital network. Hospitals that have been included in this network are automatically granted contracts for the period of 4 years. The network covers about 70% of hospital beds and accounts for over 90% of NFZ's funding for hospital care. Hospitals not included in the network and hospitals included in the network but not providing "network" services participate, as before, in competitive tenders for contracts with the NFZ.

The majority of hospitals are public and operate as "independent public health care units" (SPZOZs). Certain shortcomings of this organizational form had resulted in poor financial management of the SPZOZs and accumulation of debts in the hospital sector. This had led to attempts to transform them into companies under the Commercial Companies Code, but these efforts have not been successful and have recently been halted.

The pharmaceutical sector is extensively regulated. Recent regulations introduced, among others, changes to pricing (to stimulate consumption of generics) and a claw-back on excessive reimbursement expenditures

(to control NFZ's spending). The position of patients has been strengthened over the years. This includes better availability of patient information and improved protection of patient rights. For example, no-fault compensation for medical events in hospitals and special commissions to adjudicate them were introduced in 2012. In late 2014, Poland implemented EU's cross-border care Directive, but in practice access to care abroad within this Directive is limited.

The government has committed to increase the share of public expenditure on health to 6% of GDP by 2024

The share of GDP devoted to health has remained fairly constant over the years and, at 6.7% in 2017, it was lower than in most EU Member States. Public expenditure on health as a share of GDP increased from 3.6% in 2000 to 4.6% in 2017, and the government has recently pledged to increase this share to 6% by 2024. This will translate into substantially higher actual spending if GDP continues to grow in the years to come and if higher public spending does not lead to lower private spending on health..

Health insurance contributions (an earmarked payroll tax) are the major source of public health care funding, accounting for over 60% of total current spending on health and close to 90% of public health expenditure. Households' out-of-pocket (OOP) payments were the second largest source of health financing, accounting for 23% of the current spending on health in 2017. Overall, private sources account for 30% of current spending on health and their role is much larger in Poland than in most EU Member States. The bulk of OOP spending is attributable to pharmaceuticals, both reimbursed drugs and OTC medicines, of which consumption is very high in Poland. NFZ's spending on drug reimbursement decreased from 19.2% of its total expenditure in 2005 to 10.8% in 2017 and patient cost-sharing for reimbursed drugs is substantial. However, there are also exemptions from cost-sharing for certain vulnerable groups and since 2017 people aged 75+ have had free access to a broad range of medicines.

Insurance in the NFZ is obligatory for the vast majority of the (resident) population and it is not possible to opt out. Coverage is almost universal if Polish citizens living abroad who are still registered as residents in Poland are not counted. The scope of benefits is broad, yet access may be limited in practice (e.g. through wait lists) due to the limited financing of the NFZ.

There is no cost-sharing for primary care and outpatient specialist care (although cost-sharing may be applied to outpatient medicines and sanitary transport of patients), emergency medical care and inpatient care (although this excludes inpatient long-term care). People who are uninsured have the right to free outpatient emergency care. Since 2017, all insured persons, even if they are not able to prove their insurance status, have the right to access primary care free of charge.

Allocation of funds to the voivodeship branches of the NFZ takes into account the number and risk profile of the inhabitants as well as (although this is not explicitly stated) the distribution of physical and human resources. The NFZ uses prospective payment methods to pay providers. Service-based payment, such as diagnosis-related groups (DRGs) and fee-for-service (FFS), dominates but pay-for-performance (P4P) is slowly emerging as an additional payment method. For example, within the programme of coordinated care for people after a myocardial infarction the hospital may receive bonus payments if the patient returns to work within 4 months after the infarction. The introduction of the hospital network in October 2017 introduced important changes in hospital payment. Hospitals that have been included in this network receive half-yearly lump sum payments for the provision of complex care, which is meant to cover inpatient care and post-hospital care at specialized outpatient departments. The new Act on Primary Health Care adopted in 2017 attempts to introduce elements of P4P financing in primary care – this is planned for 2020.

Salaries of health professionals are low compared with western Europe and the government has been under strong pressure to improve working conditions in the health sector. Recently introduced legislation (September 2018) committed the government to increase public spending on health to 6% of GDP by 2024 and also increased salaries of resident doctors undergoing specialization training and base salaries of physicians who completed their specialization training.

The structure of both physical and human resources in the health sector is characterized by a number of imbalances

The number of hospital beds is high, with about 6.6 beds per 1 000 inhabitants (4.9 acute beds per 1 000) compared with 5.1 for the EU on average

(2015 data). However, there is a large deficit of long-term care (LTC) beds in residential and nursing facilities – 1.9 beds per 1 000 inhabitants, which is much lower than in the comparator countries. The number of acute hospital beds has been stagnant in recent years and there have been no central initiatives to reduce the number of such beds – the latter may be related to the fragmentation of hospital ownership.

Most public hospitals are owned by the territorial self-governments and type of owner roughly corresponds to the complexity of provided services, with county hospitals providing less complex care than hospitals owned by the voivodeships. The general condition of public hospital infrastructure is poor and many hospitals struggle to meet the technical and sanitary requirements. The availability of specialist medical equipment, which is usually located in hospitals, is lower in Poland compared with the EU averages. Until 2016, there were no direct mechanisms regulating capital investments in the health sector, which may have led to inefficient allocation of resources. This changed with the introduction of a special system (IOWISZ) of assessing investments in the health sector that require public financing, including from the EU funds.

Improving the use of IT and e-health solutions in the health sector has been a policy priority for over a decade, but progress has been slow. Implementation of e-prescriptions and e-referrals has been postponed a number of times (currently until 2020–21, but pilots are already under way). Implementation of e-solutions is more advanced in the hospital sector, especially in the biggest hospitals, compared with ambulatory care.

Planning of the health workforce is not well developed and there are shortages of health professionals. The ratio of practicing physicians per 1 000 inhabitants is very low – 2.4 in Poland in 2016 compared with 3.6 in the EU on average. General practitioners account for 9% of all practicing physicians, which is low compared with the EU average of 23%. The number of practicing nurses is also low – 5.2 per 1 000 inhabitants in 2016 compared with 8.4 for the EU. Migration of medical staff abroad is an important problem in Poland but its exact scale is not known. Key reasons for this phenomenon are poor working conditions at home, including low salaries. To counter these shortages, the number of residency places funded by the state has been increased and in September 2018 the salaries of resident doctors have been raised. In addition, medical degrees have been offered at non-medical universities in the voivodeships with shortages of physicians.

Improving coordination of care is one of the key ongoing changes in the provision of health care services

Public health has been given more importance by the adoption of the Act on Public Health in 2015. The Act has pulled together regulations pertaining to public health in a single piece of legislation; it also changed the focus of the National Health Programme (key strategic and planning document in public health) to fighting risk factors and, for the first time, allocated separate funding for its implementation. Rates of vaccinations are high and incidence of infectious diseases is low. However, anti-vaccination movements have been growing in strength in recent years. A number of preventive programmes is in place, including for cancers, but their effectiveness in terms of reaching their target populations appears to be low.

Primary health care (PHC) is the entry point to the Polish health care system, with PHC providers serving as "gate keepers" to more specialized care. Specialist ambulatory care, which had been separated from inpatient care since early 1990s, is being moved back to hospitals: hospitals belonging to the hospital network are incentivized to provide outpatient ambulatory care (and thus reduce the number of acute beds). Although the number of procedures performed in day care settings has been increasing, the share of one-day hospitalizations in the total number of hospitalizations remains much lower than the OECD average.

Numerous programmes of coordinated care have been implemented since 2015, including for cancer patients, pregnant women and children, improving integration of primary and secondary care. Since late 2017, coordination of care has also been piloted within primary care – care for patients with selected chronic diseases will be coordinated by teams consisting of physician, nurse, school nurse and midwife. Integration of health and social care remains poor.

Provision of rehabilitation and long-term care remains inadequate to the population needs and waiting times are long. The burden of caring for dependent persons remains largely borne by family members. The quality of palliative care is very good compared with other countries in Europe; nevertheless, only about 50% of palliative care needs are met. Mental health care is mainly provided in outpatient mental health care institutions but renewed efforts are being made to shift care into the community. To that end, work on piloting Mental Health Centres has begun since mid-2018.

"Commercialization" of public hospitals has failed to gain momentum and has been halted

Transformation of public health care units into companies under the Commercial Companies Code (known in Poland as "commercialization", and not "privatization", since the public owner retains the majority ownership in the "commercialized" hospitals) was one of key reforms implemented by the government that was in power until late-2015. The goal was to improve the financial condition of public hospitals and reduce health sector's indebtedness. However, uptake of transformations by the hospital owners has been slow and these efforts have been halted by the current government. The government that came to power in 2015 published an ambitious reform plan that included far-reaching changes such as the abolishment of the single payer system but some of the planned changes have quickly been abandoned upon the realization of their potentially destabilizing effects and high administrative costs. Yet, other important changes are being implemented and will likely take up much of the political capital in the years to come: introduction of the hospital network, reorganization of primary care with the goal of improving care coordination and increasing public financing of health care. The government is currently working with health care experts to determine the direction of future changes in the Polish health care sector and new strategic directions are due to be published in mid-2019.

Although certain performance indicators have improved, many remain poor compared with other countries

Health system performance is not explicitly assessed; however, parts of the system are monitored within the governmental and nongovernmental sectors. Key strategic goals for the health system are listed in the Policy paper for health protection for 2014–2020 and their implementation is supported by the EU, with funding decisions vetted by the recently created IOWISZ system.

In terms of health system's impact on population health, both amenable and preventable mortality rates have decreased over the years, thus indicating a positive impact. Circulatory diseases and cancers are the main causes of death in Poland. While much progress has been achieved in the area of cardiology, cancer survival rates remain low, mainly due to late detection

and long waiting times for diagnostics, even though access to diagnostics has recently improved.

Although population coverage is practically universal within the statutory health system, there are key gaps in the scope and depth of public cover. These gaps are particularly large in the area of outpatient medicines, which is the key driver of catastrophic spending on health in households. Waiting times for services, especially for specialist care and diagnostics, can be very long and present another important access barrier. However, efforts have been undertaken in recent years to improve access for certain population groups such as pregnant women and cancer patients.

There are major imbalances in the provision of services, with hospital sector being characterized by excessive infrastructure and low bed occupancy rates and with deficits in the provision of outpatient specialist care, leading to long waiting times. Spending on curative care is relatively high compared with other countries despite efforts to shift service provision to the community. The levels of avoidable hospital admissions for certain conditions are among the highest in the EU. Spending on health promotion and disease prevention remains negligible. The numbers of doctors and nurses per 100 000 inhabitants are one of the lowest in Europe and an overall strategic human resources planning is lacking. A human resources strategy for nurses and midwives was developed in 2017.

The market of generics is well developed and market shares of generics are among the highest in Europe. Price competition in the generics market has been improved in recent years. The health sector is perceived as one of the areas of public sphere with the highest corruption risk in Poland. However, a number of anti-corruption initiatives have been introduced in recent years.

Achieving desired changes requires a holistic approach to the health system and tackling certain longstanding problems that have been neglected

There are a multitude of ongoing health care reforms that are addressing some of the key problem areas; however, there are also a number of challenges that are currently not being tackled. This presents the risk that important changes may be hindered by these unresolved problems. For example, enhanced coordination of care may be difficult to achieve if there are shortages of health workforce workers and if appropriate

skills are lacking. The government's recent commitment to increase public health financing to 6% of GDP by 2024 presents a great opportunity (assuming no major economic crisis occurs in the years to come) for implementing the ongoing reforms and for tackling some of the challenges that have thus far been neglected. Given the multitude of current reform initiatives, achieving the desired changes therefore requires a holistic approach to the health system that addresses all problems in an integrated, coherent and carefully crafted strategy with a well thought-out sequence of changes for the short, medium and long term, and to which all players can be held accountable. This should also involve setting up a system that monitors unintended effects and achievements and health performance in general.

1

Introduction

Summary

- Poland is a European Union (EU) Member State; Poland has the sixth largest population in the EU and the largest in central and eastern Europe. As with other countries in Europe, its population is ageing and decreasing.
- The economy slowed during the global recession that started in 2008 but did not experience a contraction comparable to other European countries. Although the level of GDP has increased over the years, it is still significantly lower than the EU average.
- Life expectancy at birth has been increasing but is still lower than in the EU (78 versus 81 years) and the gap between genders (8.1) is one of the highest among EU Member States. Cardiovascular diseases and cancer remain the most common causes of death in both men and women and jointly account for over half of the disease burden.
- Health challenges include socioeconomic health inequalities, high rates of overweight and obesity, rising burden of mental disorders (and a very high suicide rate in men) and population ageing. With older people having on average more chronic and complex health needs, more limitations in activities of daily life and worse health status compared with younger age groups, this is likely to lead to a growing demand for care and necessitate changes in the structure of the health care and social care provision.

1.1 Geography and sociodemography

The Republic of Poland is the sixth largest country in the European Union (EU)[1] both in population size (38 million in 2017) and area (312 679 km^2) and the largest country in central and eastern Europe. The current Polish borders were established after the Second World War. Poland is bordered by Germany to the west, Czechia and Slovakia to the south, Ukraine and Belarus to the east and Lithuania and Kaliningrad Oblast (a federal subject of the Russian Federation) to the north-east. The Baltic Sea delimits Poland in the north. Poland's border is 3 511 km long in total.

FIG. 1.1 Map of Poland

Source: United Nations (2016).

The territory of Poland is divided into 16 voivodeships (districts) and the capital city is Warsaw (the largest city in Poland, with a population of 1.8 million). In 2017, 60.2% of the country's population lived in urban areas (GUS, 2018f). In terms of ethnicity, language and religion, Poland is more

[1] Unless explicitly stated otherwise, EU refers to all 28 Member States.

homogeneous than most countries in the region. Poles make up 97.1% of the population, with German, Ukrainian and Belarusian minorities accounting for the remainder. The official language is Polish and it is spoken at home by 98.2% of the population. Languages other than Polish are spoken at home by nearly 1 million people (usually as a second language, after Polish) (GUS, 2013). The majority (87%) of the population is Roman Catholic, with the main religious minorities being Orthodox, Jehovah's Witnesses, Protestants and several other very small groups (GUS, 2016).

The share of population aged 65 and above has been increasing steadily (Table 1.1) and in 2014 surpassed the share of population aged 0–14 for the first time (WB, 2018b). The population share aged 0–65 is expected to decrease by about 30% by 2050 whereas the population aged 65+ is expected to grow by as much as 89% (GUS, 2014b).

TABLE 1.1 Trends in population/demographic indicators, 1995–2017 (selected years)

	1995	2000	2005	2010	2015	2017
Total population (million)	38.59	38.26	38.17	38.04	37.99	37.98
Actual resident population (million)[a, b]	–	–	36.72	36.04	35.47	35.44
Population aged 0–14 (% of total)	23.05	19.56	16.61	15.22	14.88	14.82
Population aged 65 and above (% of total)	10.95	12.02	13.08	13.47	15.61	16.76
Population density (people per km^2)	126.01	124.91	124.59	124.21	124.06	124.03
Population growth (annual growth rate)	0.14	–1.04	0.04	–0.29	–0.07	0.02
Fertility rate, total (births per woman)	1.62	1.37	1.24	1.38[c]	1.29[c]	1.45[c]
Rural population (% of total)	38.51	38.28	38.55	39.11	39.72	39.90

Source: WB (2018b).

Notes: [a]Total population less the number of Polish migrants residing abroad; [b]GUS (2018c); [c]GUS (2018g).

In addition to ageing, another important demographic trend is the decreasing total population. A short period of population growth was observed between 2008 and 2011 but, on the whole, total population has decreased by approximately 1.7% over the last two decades. Changes in population size vary geographically. Between 2010 and 2017, five out of 16 voivodeships (Małopolskie, Mazowieckie, Podkarpackie, Pomorskie and Wielkopolskie) have seen their populations increase – in all of them this was due to a positive natural population growth and in four (all except the

Podkarpackie voivodeship) also due to a positive net migration rate (positive net migration was the highest in the Mazowieckie voivodeship, of which Warsaw is the capital) (GUS, 2018d). According to national forecasts, the total population size is expected to decrease by nearly 12% by 2050 compared with 2016 (GUS, 2014b).

The fertility rate has been below replacement level (replacement rate is 2.1 births per woman) since the 1990s and was 1.45 in 2017 (Table 1.1). With the number of deaths exceeding the number of the live births since 2013[2] (by almost 1 000 in 2017; GUS, 2018d), the natural population growth is negative. The net migration for permanent residence has been positive since 2016 (1 400 persons in 2017; for comparison, in 2014, the number of persons who left the country exceeded the number of persons who obtained permanent residency by 15 800), but its value is not high enough to ensure population growth.

1.2 Economic context

In 1989 Poland embarked on a rapid programme of transformation from a centrally planned to a market economy (the so-called "Big-bang approach"). Implementation of this programme, which was also known as "the Balcerowicz plan" after the Minister who introduced it, was accompanied by an intense period of economic downturn, characterized by a considerable drop in GDP, very high inflation (600% in 1989 and 70% in 1990), rising unemployment rates and poverty levels (Sowada, 1995). However, by the mid-1990s, the economy showed signs of recovery, with GDP growing at 7% per year. Inflation also declined steadily, dropping to 2.1% in 2005, which was comparable to rates observed in western Europe. Unemployment remained a serious problem for a long time, with the registered unemployment rate (which underestimates real unemployment) reaching its highest level of 20% in 2002 and 2003 and remaining in double digits until 2006. Economic growth continued until 2001, after which GDP levels stagnated (as elsewhere in Europe) in the context of the global economic recession in 2001 and 2002. Following the next global recession which started in 2008, Poland's per capita GDP growth slowed, but the economy did not experience a contraction comparable to other European countries. In 2010, GDP growth

[2] The last time the number of deaths exceeded the number of live births was 2002–2005.

picked up again to 3.6%. In 2017, GDP grew at 4.8%, the unemployment rate was 4.9% and there was a moderate deflation, as in many other countries in EU (Table 1.2).

TABLE 1.2 Macroeconomic indicators, 1995–2017 (selected years)

	1995	2000	2005	2010	2015	2017	EU (2017)
GDP per capita (PLN)	9 000	19 500	26 000	37 991	47 339	52 371	–
GDP per capita PPP (current international $)	7 664	10 651	13 896	21 069	26 578	29 122	41 327
GDP growth (annual %)	7.0	4.6	3.5	3.6	3.8	4.8	2.4
Total public expenditure (% GDP)	18.9	18.1	18.3	19.1	18.0	17.5	18.9
Government deficit/surplus: net lending/net borrowing (% of GDP)	–4.2	–3.0	–4.0	–7.3	–2.7	–1.4	–1.7[a]
General government gross debt (% of GDP)[a]	47.6	36.5	46.4	53.1	51.3	50.6	81.6
Unemployment rate, total (% of labour force)	13.3	16.3	17.8	9.6	7.5	4.9	7.7
At-risk-of-poverty rate[a]	n/a	16.0	20.5	17.6	17.6	15.0	16.9[b]
Income inequality (Gini coefficient)a	n/a	30.0	35.6	31.1	30.6	29.2	30.3
Inflation, consumer prices (%)	28.1	10.1	2.2	2.6	–0.9	2.1	1.6

PLN = Polish zloty.

Sources: WB (2018b); EC (2019a).

Notes: [a]2016 data; [b]Estimate.

Although the level of GDP per capita has steadily increased over the years, it is still significantly lower than the EU average. In 2017 GDP in the EU was 1.4 times higher than in Poland (Table 1.2). Most of the countries that joined the EU at the same time as Poland, except for Hungary and Latvia, have achieved substantially higher GDP per capita than Poland, including Czechia (PPP$ 35 140), Slovakia (PPP$ 30 706) and Lithuania (PPP$ 29 966) (WB, 2018b). Looking at the Human Development Index (HDI) Poland was ranked 33rd in 2017 (five places higher than in 2010). This is lower than Slovenia (25th), Czechia (27th) and Estonia (30th) (UNDP, 2011; UNDP, 2018).

1.3 Political context

According to the Constitution, from 1997 the Republic of Poland has been a democratic state ruled by law. The legislative power is vested in the Parliament, which is composed of two chambers and is elected by the majority of the electorate for a 4-year term. The lower house, *Sejm*, has 460 seats and its members are elected by a complex system of proportional representation, with an electoral threshold of 5% of votes for a single party and 8% for a coalition party. The upper house, *Senate*, has 100 seats and its members are elected by a majority vote in 100 single-mandate electoral districts. The head of state is the president, elected by a majority of the voters for a 5-year term. The state's internal and foreign policy is decided by the government, i.e. the Council of Ministers, whose activities are directed by its president, i.e. the Prime Minister.

Since 1999, there have been three levels of administrative division in Poland: *gminas*, *powiats* (both are local authorities) and voivodeships/districts (district authorities). At the end of 2017, there were 2 478 *gminas*, 314 *powiats*, 66 cities of *powiat* status and 16 voivodeships (until 1999 there were 49 voivodeships). There is a dual nature of administration in the voivodeships: they are administrated by the voivode (*wojewoda*), who is appointed by the central government, and the voivodeship marshal (*marszałek województwa*), who is elected by the Executive Council elected by the regionally elected residents assembly (*sejmik wojewódzki*).

The last presidential election took place in May 2015. Andrzej Duda of the Law and Justice political party (PiS) was elected president. The most recent parliamentary election took place in October 2015. The 100 Senat seats were divided as follows: PiS – 61, Civic Platform (PO) – 34, Polish Peasants' Party (PSL) – 1, and independent candidates – 4. In the *Sejm*, out of 460 seats, the PiS won 235 (51%) becoming the first political party in the postcommunist era to win an outright majority in parliamentary elections. PO won 138 seats (30%). The next parliamentary elections are due in 2019 and next presidential elections in 2020.

Poland is a member of the United Nations, the Council of Europe (since 1991), the OECD (since 1996), the North Atlantic Treaty Organization (since 1999), the Central European Free Trade Association (CEFTA) and the Central European Initiative. Poland is also a member of major international treaties and strategies that have an impact on health, e.g. WHO's

Framework Convention on Tobacco Control, the UN's Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, and the EU's Health 2020 strategy (2013).

1.4 Health status

A substantial improvement in the health status of Poles has been achieved over the past decades. This progress can be attributed to the improvements in access to and quality of health care and to improvement in the economic situation of the population. However, despite this progress, there is still a gap between the health status of the population in Poland and in countries in western Europe.

Life expectancy in Poland increased to 78.0 years in 2016. The discrepancy in life expectancy between the sexes is relatively large – at 8.1 years this gap was lower compared with only three other EU countries – Estonia, Latvia and Lithuania (EC, 2018b). Life expectancy, and in particular male life expectancy, decreased in the countries of the former Soviet Union during the economic transformation. This was caused by excessive alcohol consumption, suicides and other risky health behaviours (Goryński & Cianciara, 2016). The overall life expectancy, for males and females, is 3 years lower in Poland than in the EU and the gap is larger for males (4.3 years) than for females (1.6 years) (Table 1.3). Consequently, women are expected to reach the current average EU life expectancy earlier than men – in 2025–2030 compared with 2035–2040 for men (EC, 2018d). It is worth noting, however, that Polish females and males are expected to live a higher proportion of their lives in good health compared with their EU counterparts – Polish women are expected to live 77% of their lives in good health compared with 76% in the EU and for Polish men the figure is 82% compared with 80% in the EU (EC, 2019a).

Infant mortality fell from over 13 deaths per 1 000 live births in 1995 to 4 in 2017 (GUS, 2018m). Over half of infant deaths are caused by diseases and conditions of the perinatal period (deaths in the first week of life and fetal deaths) and a third of deaths are due to congenital disorders (GUS, 2014a). The maternal mortality rate in Poland is one of the lowest in Europe – three deaths per 100 000 in 2015 (Table 1.3).

TABLE 1.3 Mortality and health indicators, 1995–2016 (selected years)

	1995	2000	2005	2010	2015	2016	EU (2016)
Life expectancy at birth, total (years)	72.0	73.8	75.0	76.4	77.5	78.0	81.0
Life expectancy at birth, male (years)	67.7	69.6	70.8	72.2	73.5	73.9	78.2
Life expectancy at birth, female (years)	76.4	78.0	79.3	80.7	81.6	82.0	83.6
Mortality (total SDR for all ages, per 100 000 population)	1 804.50	1 619.1	1 481.50	1 328.5	1 273.62	n/a	1 035.96[a]
Infectious and parasitic diseases	8.8	8.8	7.9	9.0	5.72	n/a	17.42[a]
Circulatory diseases	1 000.70	847.2	741.5	650.6	610.48	n/a	381.39[a]
Ischaemic heart disease	164.4	250.2	209.2	166.5	128.79	n/a	127.39[a]
Acute myocardial infarction	n/a	n/a	90.0	60.7	43.27	n/a	46.07
Malignant neoplasms	318.6	329.8	325.8	304.2	304.48	n/a	260.6[a]
Colorectum	32.3	35.6	35.9	37.0	37.83	n/a	30.4
Bronchus, trachea, lung	n/a	n/a	74.6	71.6	69.55	n/a	53.98
Breast	18.7	18.1	18.4	17.1	19.28	n/a	18.78
Prostate	n/a	n/a	n/a	n/a	15.94	n/a	14.84
Mental and behavioural disorders	7.4	4.7	5.4	4.4	6.11	n/a	43.44[a]
Diabetes mellitus	21.8	22.0	21.6	23.0	26.68	n/a	23.23[a]
External causes	94.5	82.8	76.7	67.5	56.14	n/a	46.65[a]
Infant deaths per 1 000 live births	13.6	8.1	6.4	5.0	4.0	4.0	3.6
Maternal deaths per 100 000 live births (WDI, modelled estimate)	13.0	8.0	6.0	4.0	3.0	n/a	8.0

SDR; standardized death rate; n/a: not available.

Source: EC (2018b).

Notes: [a]2015 data

In 2015, the age-standardized death rate for all causes of death was 25% higher in Poland than in the EU on average – 1 274 versus 1 036 per 100 000 people (Table 1.3). Between 1995 and 2015 this rate declined by 29%. The crude number of deaths has remained almost constant over this period. However, it is expected to increase by 17–25% by 2030, mainly due to population ageing (Poznańska, Wojtyniak & Seroka, 2011).

The main causes of death in Poland are similar to those in other EU Member States. Diseases of the circulatory system were responsible for

about 48% of deaths in Poland in 2015 (compared with 37% in the EU on average); down from 55% in 1995. The standardized death rate (SDR) from circulatory diseases in Poland was 611 per 100 000 people in 2015 compared with 381 in the EU on average. SDR from cancers was also higher in Poland compared with the EU average (305 versus 261) and it has been increasing over the years. The third largest cause of death was external causes – SDR of 56 in Poland compared with 47 in the EU. SDR from mental and behavioural disorders was much lower in Poland compared with the EU average (6 versus 43), but the disease burden of mental disorders measured as the share of disability-adjusted life years (DALYs) has been growing and reached 8.7% of the total in 2015 (Table 1.4). The number of deaths due to suicides in Poland exceeds the number of deaths due to road accidents (15.9 per 100 000 compared with 10.3 per 100 000; Wojtyniak & Goryński, 2018).

TABLE 1.4 Estimated DALYs by cause, as a share (%) of all causes, 2000–2015 (selected years)

	2000	2005	2010	2015
All causes (thousands)	12 655.7	12 557.8	12 382.0	12 268.3
Communicable, maternal, perinatal and nutritional conditions	**5.3%**	**5.0%**	**5.1%**	**4.8%**
Respiratory infections	1.7%	1.9%	2.0%	2.0%
Neonatal conditions	1.4%	1.3%	1.2%	1.0%
Infectious and parasitic diseases	1.1%	1.0%	1.0%	1.0%
Noncommunicable diseases	**83.3%**	**84.1%**	**85.1%**	**86.2%**
Cardiovascular diseases	30.4%	28.8%	27.8%	27.3%
Malignant neoplasms	17.6%	18.4%	19.0%	19.4%
Mental and substance use disorders	8.1%	8.5%	8.6%	8.7%
Musculoskeletal diseases	4.8%	5.0%	5.3%	5.7%
Neurological conditions	4.0%	4.4%	4.7%	5.0%
Digestive diseases	4.3%	4.6%	4.7%	4.6%
Injuries	**11.4%**	**10.9%**	**9.8%**	**9.0%**
Unintentional injuries	8.1%	7.4%	6.4%	5.8%
Intentional injuries	3.3%	3.4%	3.4%	3.2%

Source: WHO (2018d).

In 2016, there were 5 405 suicides, with males accounting for over 86% of deaths (GUS, 2017a). In 2015, the death rate due to suicides in Polish men was 26.2 per 100 000 compared with 17.85 on average in the EU (EC, 2019a).

Crude death rates are expected to increase for all major causes of death, except for deaths by external causes, which tend to occur more frequently in younger people. If there is no significant improvement in the prevention of cardiovascular diseases, these diseases will make up an increasingly large proportion of the major causes of death (Cierniak-Piotrowska, Marciniak & Stańczak 2015).

In 2015 over 12 million of healthy life years were lost to disability in Poland (Table 1.4). Cardiovascular and cancer diseases were responsible for almost half of the disease burden (27.3% and 19.4% of the total number of DALYs lost, respectively). The overall burden of diseases decreased slightly (by about 3%) between 2000 and 2015 (total the population decreased by 0.7% in the same period, which means it was not the main cause of the decline in DALYs). The biggest decline was observed for neonatal conditions, injuries and infectious diseases, though the share of neonatal conditions and infectious diseases is very small in the total disease burden. The share of cardiovascular diseases declined from 30.4% to 27.3% of the total number of DALYs.

The self-perceived health status in Poland has improved slightly in recent years (Table 1.5). In 2014, over 58% of the population reported being in very good or good health compared with 56.1% in 2009 (however, there are large variations in the self-perceived health status across socioeconomic groups; see Box 1.1). This is lower compared with the EU average of 67.4% in 2014. At the same time the share of the population with bad or very bad reported health status has decreased – 13.7% in 2014 in Poland compared to 16.5% in 2009 but this share was still higher than the EU average of 9.8%. Despite the relatively worse self-perceived health status in Poland compared with the EU, a lower share of the population report diabetes, asthma and depressive symptoms in Poland compared with the EU countries on average. Over a third (34.1%) of the Polish population reported long-lasting (6 months and longer) health problems in 2016 (GUS, 2018e).

TABLE 1.5 Morbidity and factors affecting it (%), Poland, 2009, 2014 and 2018, and selected countries, 2014

	POLAND (2009)	POLAND (2014)	POLAND (2018)		CZECHIA (2014)	GERMANY (2014)	LITHUANIA (2014)	SLOVAKIA (2014)	EU (2014)
			Men	Women					
Self-perceived health status									
Very good or good	56.1	58.1	72.6	71.0	60.7	65.2	44.9	64.7	67.4
Bad or very bad	16.5	13.7	6.2	6.2	11.6	8.0	17.9	12.7	9.8
Persons reporting a chronic disease									
Diabetes	5.2	6.6	n/a	n/a	7.7	7.2	4.4	6.9	6.9
Asthma	3.6	4.1	n/a	n/a	4.5	6.1	2.7	3.9	5.9
Current depressive symptoms									
Major depressive symptoms	2.1[a]	2.0	n/a	n/a	1.1	3.6	1.4	1.2	2.9
Other depressive symptoms	2.1[a]	3.3	n/a	n/a	2.1	4.9	2.5	2.2	3.8
BMI									
Overweight	37.6	53.3	43.4	31.0	55.4	50.7	53.2	53.0	50.2
Obesity	16.4	16.7	25.4	25.7	18.7	16.4	16.6	15.9	15.4
Smoking of tobacco products									
Daily smokers	24.7	22.7	27.8c	15.4c	21.5	15.9	20.4	22.9	19.2

	POLAND (2009)	POLAND (2014)	POLAND (2018)		CZECHIA (2014)	GERMANY (2014)	LITHUANIA (2014)	SLOVAKIA (2014)	EU (2014)
			Men	Women					
Alcohol heavy episodic drinking									
At least once a week	n/a	2.8	n/a	n/a	2.1	9.3	2.7	1.4	5.5
Every month	n/a	14.6	n/a	n/a	12.8	23.7	17.4	11.4	14.4
Nutrition									
Fruit consumption at least once a day	61.6	58.5	n/a	n/a	46.8	47.3	47.9	47.4	55.7
Vegetable consumption at least once a day	63.2	55.7	n/a	n/a	41.4	34.1	54.5	44.0	50.1
At least five portions of fruit and/or vegetables daily	n/a	10.1	n/a	n/a	9.1	9.9	14.1	10.8	14.3
Physical activity									
Walking to get to and from place	55.2[b]	84.9	n/a	n/a	92.2	77.7	76.5	89.2	78.4
Cycling to get to and from place	55.2[b]	26.6	n/a	n/a	35.5	32.3	19.2	33.3	19.7
Aerobic sports	55.2[b]	22.0	n/a	n/a	34.7	65.7	24.1	33.7	44.4
Muscle-strengthening	55.2[b]	7.7	n/a	n/a	19.3	44.1	13.2	16.6	24.2

n/a: not available.

Sources: EC (2018a); 2018 data for Poland from Wojtyniak & Goryński (2018).

Notes: [a]Reported as "depressive disorders", without breakdown between major and other depressive symptoms; [b]Reported as "practice of daily physical activities", without breakdown between various types of activities; [c]Without e-cigarettes.

BOX 1.1 Health inequalities

Inequalities in the health status are observed along several dimensions. As outlined before, there are differences between the genders, with men having a much lower average life expectancy than women. Differences in life expectancy among social groups can be as high as 12–16 years (Wojtyniak & Goryński, 2018). Mortality rates between males and females also differ, with excessive mortality rates* in men aged 15–69 being 2–3 times higher than in women (Wojtyniak & Goryński, 2018). For example, in 2016, the mortality rate for cardiovascular diseases was three times higher for men compared with women and three times higher for external causes of death. Differences in mortality rates between genders are lower at older ages (GUS, 2018g). Differences in life expectancy are also linked to the level of socio-economic deprivation, especially for men. In 2012–2014, life expectancy for men living in powiats with the highest value of the socioeconomic deprivation index was almost 5% lower (72.2 years compared with 75.7 years) than in powiats with the lowest value of this index. Similar differences were observed for cardiovascular diseases with SDRs higher by 39% and 29%, respectively for men and women, in powiats with the highest values of the deprivation index (Wojtyniak, 2017).

There are no large disparities in mortality rates between rural and urban areas: overall, in 2017, the mortality rate in the urban population was only 4.9% higher than in the rural population. Interestingly, the mortality rate in the rural population was higher than in the urban population until fairly recently (2010) but the reasons for this reversal of trend are unknown (GUS, 2018g). There was no difference in average female life expectancy between urban and rural areas; the difference for men was 1.1 years in 2017 (74.4 in urban and 73.3 in rural areas) (GUS, 2018k). In terms of causes of death, mortality rates due to cardiovascular diseases, accidents and injuries are higher in the rural population; mortality rate due to cancers is higher in the urban population (GUS, 2018k).

In terms of geographical differences, the highest mortality rate (SDR) in 2016 was observed in the Łódzkie voivodeship (1 113 per 100 000) and the lowest in Małopolskie (934 per 100 000) and Podkarpackie (935 per 100 000) voivodeships. Life expectancy is also lowest in the Łódzkie voivodeship (71.9 for men and 80.8 for women in 2017) and highest in the Małopolskie and Podkarpackie voivodeships (75.4 and 75.6 for men and 82.6 and 83.1 for women, respectively) (GUS, 2018k).

Self-perceived health status is strongly linked to the socioeconomic differences in the population. For example, in 2015, 56.9% of people with more years of education (upper-secondary and post secondary education) perceived their health to be very good and good compared with 38.9% of people with fewer years of education (no more than lower-secondary education). Only 12.8% of people in the former group assessed their health as bad or very bad compared with 28.4% of people in the latter group. The difference in average life expectancy between people with more years of education and those with fewer years is significant: 77.6 years for the former group and 72.3 years for the latter in 2016 (EC, 2019a; see also Murtin et al., 2017).

* Excessive mortality rate is the extra number of deaths observed beyond that expected per person-years.

Obesity and overweight is a serious health problem in Poland as it is other EU countries. Over 16% of the Polish population reports being obese, which is higher than the EU average, with overweight and obesity affecting men more than women (EC, 2018a). According to a recent survey, 59% of men and 41% of women were overweight in 2018 (obesity rates were 11.2% and 11.3% respectively), but rates of overweight were lower than in 2014 for both sexes (Wojtyniak & Goryński, 2018). Obesity is also a serious problem among children and adolescents. In 2013/2014, 14.8% of Polish children aged 11–15 were overweight or obese (Inchley et al., 2016), although this share has been decreasing over recent years (for example, it was 17% in 2010) (Zgliczyński, 2017).

Oral health in children and adolescents is poor (no up-to-date information is available for adults): 79.6% of children aged 12 (2016 data) and 96.1% of adolescents aged 18 (2014 data) had dental caries (MZ, 2018b). One of the reasons for poor dental health among children is poor dental hygiene and infrequent visits to the dentist or dental hygienist (see section 5.12).

Population ageing and health problems related to this phenomenon (chronic diseases, multi-morbidity) are among the major health challenges facing the Polish population. The population aged 65+ and the population aged 80+ are expected to increase to, respectively, 33% and 10% of the total population by 2050 compared with 17% and 4% currently (GUS, 2014b). Older people are frequently affected by disability; for example, 64% of people aged 75+ are disabled in Poland, compared with the EU average of 46% (EC, 2017a). Older people are also more likely to be affected by limitations in everyday activities – according to EU-SILC data (2015), 24% of the Polish population reports longstanding limitations in everyday activities due to health problems – this share increases to 46% for people aged 65–74 and to 64% for people aged 75+ (EC, 2017b). With older people having on average a worse health status compared with younger age groups, the ageing population is expected to lead to a growing demand for care services and necessitate changes in the structure of service provision, both in the health care and the social care sectors.

2

Organization and governance

Summary

- Governance of the health system is divided between the Minister of Health (and supporting institutions) and three levels of territorial self-government. The diversity of competencies, and the insufficient coordination among these levels, obstructs coordination of activities in the health system.
- The National Health Fund (NFZ) remains the sole purchaser in the statutory health care insurance system, although there have been calls to abolish it and transfer the payer function to the Ministry of Health. The NFZ's influence over contracting has been weakened by the introduction, in late 2017, of the hospital network. Qualifying hospitals are automatically granted contracts for a period of 4 years without the need to participate in tenders.
- Purchasing and provision are strictly separated. The majority of hospitals are public and operate as "independent public health care units" (SPZOZs) and certain shortcomings of their legal form resulted in poor financial management. This led to attempts to transform them into companies under the Commercial Companies Code, but these efforts have recently been halted.
- Annually updated health needs maps were introduced in 2015 as medium- and long-term planning tools and are intended to

improve contracting of services, planning of investments and health policy planning.

- The Polish state health technology assessment agency (AOTMiT) has an important role in determining the basket of benefits and since 2015 also has a role in setting tariffs for these services. However, NFZ continues to play an important role in setting tariffs, where tariffs have not yet been set by the AOTMiT. AOTMiT is also responsible for the appraisal of public health policy programmes. Overall, the role of HTA is strong in Poland compared with other countries in Europe.
- The pharmaceutical sector is extensively regulated. Recent regulations introduced, among others, are changes to pricing (to stimulate consumption of generics) and a claw-back on excessive reimbursement expenditures (to control NFZ's spending) (both introduced in 2012).
- The position of patients has been strengthened over the years. This includes better availability of patient information and improved protection of patient rights (e.g. the introduction, in 2012, of no-fault compensation for medical events in hospitals and special commissions to adjudicate them). In late 2014, Poland implemented the EU Directive on Patient Rights in Cross-border Health Care, but in practice access to care abroad under this Directive has been limited for Polish patients.

2.1 Organization and governance

According to Article 68 of the 1997 Constitution of the Republic of Poland, all citizens, regardless of their financial circumstances, have the right to equal access to health services that are financed from public funds. The article also guarantees the right to health protection as a human right. After the Constitution, the key legal acts that govern the health system are the 2004 Act on Health Care Services Financed from Public Sources and the 2011 Act on Therapeutic Activity. The former regulates the operation of the National Health Fund (*Narodowy Fundusz Zdrowia*, NFZ) and the breadth, scope and depth of statutory health insurance. The latter regulates the activities of all therapeutic entities (irrespective of their ownership – private and public, and type of care provided), including employment of medical professionals

(e.g. working times, etc.). Patients' rights are regulated by a dedicated law – the 2008 Act on Patient's Rights and Patient Rights Ombudsman. The 2015 Act on Public Health is the first act that comprehensively regulated public health services in Poland (see section 5.1).

The health system is regulated by the Parliament via the passing of legal acts. The president can veto legal acts, which leads to their suspension (this veto can be overruled by a 3/5 majority in the *Sejm*), or direct them to the Constitutional Tribunal, where their compliance with the Constitution is evaluated. Further, the health system is also regulated by the Minister of Health (via the issuance of executive regulations in areas pertaining to the health sector, e.g. regulations delineating the guaranteed benefits) and the Council of Ministers (via the issuance of executive regulations concerning intersectoral issues, e.g. the National Health Programmes (*Narodowe Programy Zdrowia*, NPZs); see section 2.3). Administrative courts rule on issues of competence conflicts between public institutions (e.g. between the Minister of Health and the president of the NFZ and civil courts rule in cases of conflicts between the NFZ and contracted health care providers). The Supreme Audit Office (*Najwyższa Izba Kontroli*, NIK), which is subordinated to the lower house of the Parliament, performs in-depth audits of public services, including public health care services.

The health system has historically been highly centralized (see Box 2.1) and the payer function remains centralized within the NFZ. However, contracting of services has been deconcentrated to the voivodeship level – the 16 voivodeship branches of the NFZ are charged with purchasing services in their respective territories within the internal market open to public and private health care providers. Financing comes mainly from mandatory health insurance contributions (which are in fact a dedicated tax) (see section 3.3.2). Health care services for populations exempted from paying insurance contributions (such as children), as well as emergency medical services and certain highly specialized services, are financed from the state budget (i.e. from general tax revenues).

An overview of the health system is depicted in Fig. 2.1. Public responsibilities in the area of health are divided between the central government and territorial self-governments. The Minister of Health is in charge of the health section (*dział zdrowie*) of the central administration. The voivode represents the central administration at the voivodeship. Responsibilities of the central administration within the health section comprise financing of health care

BOX 2.1 Historical background

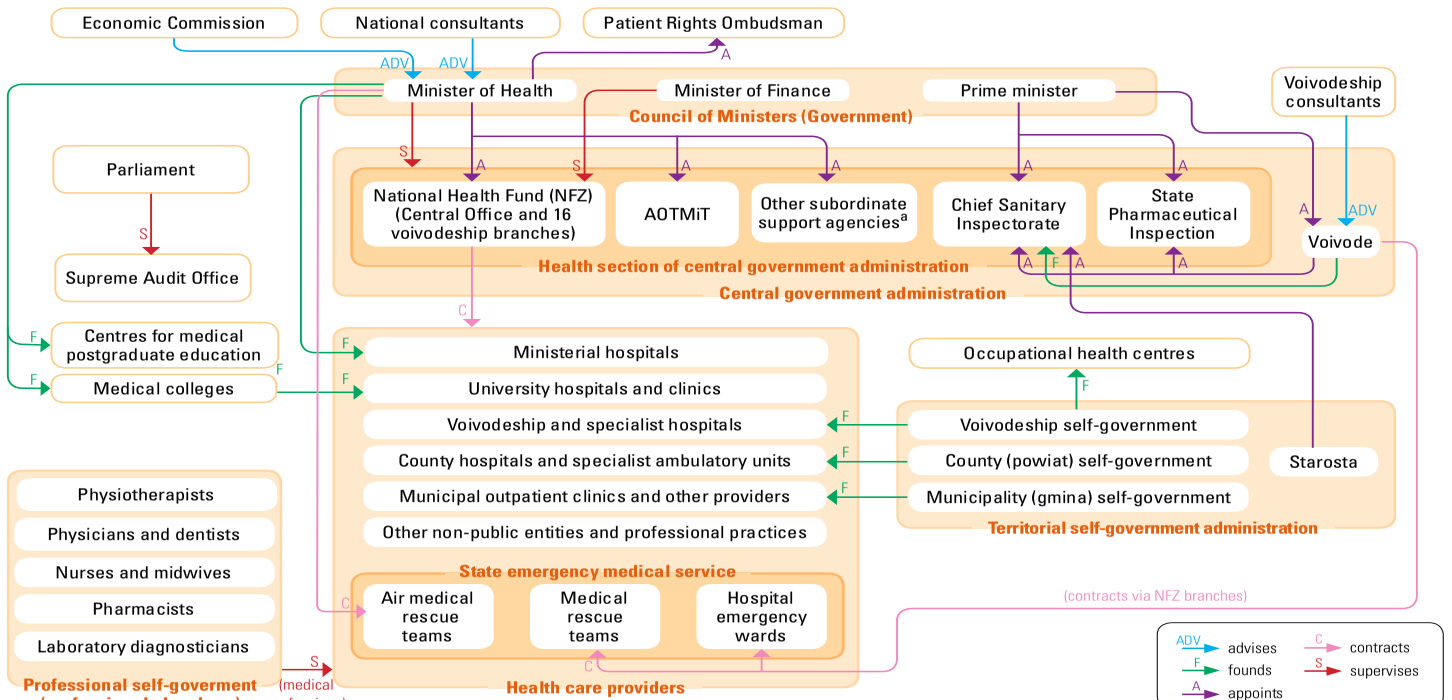
Before the fall of the communist government in 1989, the Polish health care system was based on the Soviet model of health care, the so-called Semashko model – it was strictly centralized, primarily administered via executive regulations and with funding coming predominantly from the state. The entire public administration was also firmly centralized – there were no territorial or other (e.g. professional) self-governments. The Act on Health Care Units of 1991 enabled the transfer of ownership of public health care providers (*Zakłady Opieki Zdrowotnej*, ZOZs) from the Ministry of Health to the local self-governments and the creation of Non-Public Health care units (NZOZs). During the 1990s, the administration of most health care services and the ownership of most public health care facilities were transferred from the Ministry of Health initially to the voivodeships and *gminas* (municipal self-governments were introduced in 1990) and later also to *powiats* (see section 1.3), which were re-established as an intermediate level of public administration in 1999. In the same year, the basic framework of mandatory health insurance was introduced. This framework comprised 17 sickness funds – 16 voivodeship funds, one in each voivodeship, and one fund for the uniformed services (members of the police, the military and the state rail). They were charged with contracting health care services provision in the internal market of private and public providers, with the latter owned by the state or by the territorial self-governments. In 2003 the payer function was recentralized with the introduction of the NFZ, with 16 voivodeship branches. This structure is still in place today, with the addition of several supporting institutions added in later reforms.

For more information on the history of the Polish health system, see Sagan et al. (2011).

services (via the NFZ), establishing the statutory basket of benefits (via the Agency for Health Technology Assessment and Tariff System, *Agencja Oceny Technologii Medycznych i Taryfikacji*, AOTMiT); and a range of public health functions performed by the subordinate agencies (see Table 2.1).

National and voivodeship consultants support the Minister of Health, the voivodes as well as other institutions of the health section of the central government administration (including the NFZ and the AOTMiT) with expert opinions in various areas of medicine, pharmacy and health sciences (83 areas in total). Through these opinions, the consultants influence provision of health services and professional education. They are appointed for 5-year terms. Each voivodeship has to appoint a consultant in each of the 83 areas. The same person can act as voivodeship consultant for more than one voivodeship.

FIG. 2.1 Overview of the health system, 2018



Source: Based on Zabdyr-Jamróz et al. (2012).

Notes: [a]National Institute of Public Health – National Institute of Hygiene, Centre for Monitoring Quality in Health Care, Centre for Health Information Systems, national centres and research institutes, National Blood Centre. The Starosta (who is the elected head of the county's executive board) appoints the County Sanitary Inspector; the voivode appoints the Voivodeship Sanitary Inspector and the Voivodeship Pharmaceutical Inspector; the Prime Minister appoints the Patient Rights Ombudsman, voivodes, the Chief Sanitary Inspector and the Chief Pharmaceutical Inspector; the Minister of Health appoints the president of the NFZ (central office and voivodeship branches), the president of the AOTMiT, and the heads of other subordinate agencies. The voivode founds voivodeship Sanitary-Epidemiological Stations and county Sanitary-Epidemiological Stations.

TABLE 2.1 Key agencies subordinated to the Ministry of Health

Agency for Health Technology Assessment and Tariff System (*Agencja Oceny Technologii Medycznych i Taryfikacji*, AOTMiT)	AOTMiT has existed since 2005 (initially known as AOTM) as an advisory body to the Ministry of Health and since 2009 as an organizational part of the health section of the government administration under the Ministry of Health. In 2009, the Minister of Health became responsible for establishing the guaranteed benefits basket through executive regulations[a] and the Agency became essential in advising on the inclusion of services among guaranteed benefits. Since 2015 the Agency has also been involved in calculating the costs of services and translating them into tariffs (points), which are the basis of NFZ's contracts with providers. The Agency is also responsible for the (obligatory) appraisal of public health policy programmes. The president of the Agency is appointed by the Minister of Health for a 5-year term. The 20-member Transparency Council (*Rada Przejrzystości*) within the Agency advises its president in matters of services and pharmaceuticals and the 10-member Tariffs Council (*Rada do Spraw Taryfikacji*) advises in matters related to tariffs. Members of the two Councils are appointed by the Minister of Health for 6-year terms.
National Institute of Public Health – National Institute of Hygiene (*Narodowy Instytut Zdrowia Publicznego – Państwowy Zakład Higieny*, NIZP-PZH)	NIZP-PZH was established in 1918 and is the key research and advisory institution in the Polish health system. It is responsible for monitoring and surveillance of the population's health and health promotion and is involved in the preparation of the National Health Programmes, which are the main strategic planning documents in the area of public health (see section 2.4). Since 2015 the Institute has been responsible for the preparation of the voivodeship and nationwide health needs maps (see section 2.4).
Chief Sanitary Inspectorate (*Główny Inspektorat Sanitarny*, GIS)	GIS, also known as SANEPID (i.e. Sanitary-Epidemiological Inspection), has been traditionally located within the health section of the central administration with a shared supervision from the Minister of Health and the Prime Minister, with the former supervising its operations (the Minister of Health is the founder of the Chief Sanitary Inspectorate) and the latter appointing the Chief Sanitary Inspector. GIS is organized as a three-tier deconcentrated structure within the central administration – with entities at the central, voivodeship, and county levels. In addition, Border Sanitary Inspectorates operate at the country's borders. The voivodes are the founders of the voivodeship and county Sanitary-Epidemiological Stations.
State Pharmaceutical Inspection (*Państwowa Inspekcja Farmaceutyczna*, PIF)	PIF supervises the conditions of production and import of medicinal products and veterinary medicinal products, as well as the quality of and trade in medicinal products and medical devices (except for veterinary medicinal products). This supervision covers pharmaceutical wholesalers, pharmacies and other trade outlets.
Centre for Monitoring Quality in Health Care (*Centrum Monitorowania Jakości w Ochronie Zdrowia*, CMJ)	The CMJ was established by the Minister of Health in 1994 in order to initiate and support activities aimed at improving the quality of health care services. This includes organization of training courses; developing of accreditation standards; conducting accreditation assessments of health care facilities; monitoring of quality indicators (medical and quality of life indicators as well as subjective indicators collected in patient satisfaction surveys); and evaluation of quality of highly specialist benefits financed from the state budget.
Centre for Health Information Systems (*Centrum Systemów Informacyjnych Ochrony Zdrowia*, CSIOZ)	CSIOZ was established in 2000 and is a budgetary unit (*jednostka budżetowa*). The main scope of activity of CSIOZ is the implementation of tasks related to the development of the information society, which comprise organization and protection of health and carrying out analyses to support the Minister of Health.

National Blood Centre (*Narodowe Centrum Krwi*, NCK)	NCK was established by the Minister of Health in October 2006. The Centre is entrusted with organization and coordination of safe supply of blood, blood components and blood products.

Source: Authors.

Note: [a]Previously, the guaranteed benefits baskets were set through internal regulations of the NFZ and contracts signed between the NFZ and health care providers.

2.1.1 *Minister of Health*

The Minister of Health has overall responsibility for health sector governance and its organization. The Minister supervises the health section of the central government administration and the institutions within it (see Table 2.1). The Minister is also responsible for the national health policy, including issuing executive regulations concerning the health sector (for example, on medical standards and baskets of guaranteed health care services) and advocating for inclusion of health perspective in other policies.

The Minister of Health is the founder of, and has a supervisory role over, specialist hospitals and medical colleges (including university clinics). (As a remnant of the past socialist regime, some specialist hospitals are still owned by the Ministry of Defense and the Ministry of Internal Affairs and Administration.) Within this role, the Minister is responsible, jointly with the territorial self-governments, for major capital investments and for medical research and education. Together with the respective professional chambers (see below in this section), the Minister is responsible for regulating the medical professions. The Minister of Health is also directly responsible for financing part of the emergency medical services (jointly with the voivodeship self-governments).

2.1.2 *Territorial self-governments*

Territorial self-governments are tasked with a variety of public health and health care responsibilities within their territories, including the implementation of the National Health Policy programmes and maintaining the infrastructure of health care providers for which they are the founders (major capital investments are funded jointly with the Ministry of Health) (see section 2.2 for more details). Voivodeship self-governments are also the

founders of Voivodeship Centres of Occupational Medicine (*Wojewódzkie Ośrodki Medycyny Pracy*) and are thus responsible for their infrastructure and supervision.

2.1.3 *The National Health Fund*

The NFZ is the sole (monopsonistic) payer in the health system, tasked with contracting health care services included in the statutory benefits basket (and financed from insurance contributions) for the insured population. The NFZ maintains the Central Register of the Insured, which allows it to confirm patients' insurance entitlements. Contracting is deconcentrated to the 16 voivodeship branches. The value, volume, structure and – to some extent – also the quality of purchased services are determined through these contracts. The NFZ also determines the details of the contracting process. The Fund is also responsible for contracting emergency medical services (with the exception of air medical rescue teams, which are contracted directly by the Minister of Health) for which it receives financing from the voivodeships and the Health Ministry's budgets (see section 3.7). The NFZ also reimburses the costs of health care services provided in other EU Member States (see section 2.4.5).

The NFZ operates as an arm's length agency of the Ministry of Health, with its own legal personality and budget. It has to operate on a non-profit basis and is legally banned from operating, owning or co-owning health care providers – this prohibition institutes the internal market of health care provision. Its activities are supervised by the Council of the NFZ's Central Office in Warsaw, which consists of 10 members appointed by the Minister of Health for 5-year terms. The NFZ's Central Office is managed and represented by its president who is appointed by the Minister of Health, with advice from the NFZ's Council (until 2015, the president was appointed by the Prime Minister with advice from the Minister of Health). The president prepares the annual financial plan of the NFZ with inputs from the Council of the NFZ's Central Office and the Parliamentary Commissions for Health and Public Finance. The financial plan must be approved by the Minister of Health in consultation with the Minister of Finance.

Voivodes appoint all members of the Councils of the NFZ's voivodeship branches – each Council has nine members appointed for 4-year terms. Presidents of the voivodeship branches are appointed by the Minister of Health, with advice from the Councils of the respective NFZ branches. Council members (in the branches and in the Central Office) are selected from among the candidates proposed by various actors and institutions within the health system, such as the Human Rights Commissioner, registered patient organizations, etc.

Professional chambers

Physicians, dentists, pharmacists, nurses and midwives, laboratory diagnosticians and, since 2016, physiotherapists are associated in professional chambers. The chambers represent their interests by, among other things, providing expert opinion or arbitrating on matters of professional responsibility, and protect public health by making sure that provision of health care services is consistent with medical ethics, deontology and medical knowledge. Chambers participate in the establishment of education standards, maintain registers of licensed and active professionals and monitor their participation in continuous education (see also section 4.2.1). They also develop ethical codes of practice and may impose disciplinary measures on their members (see section 2.5.3). Membership in the chambers is compulsory for all practicing professionals.

Patient Rights Ombudsman

The Office of Patient Rights Ombudsman (*Rzecznik Praw Pacjenta*) was established in 2009 to protect interests of patients, in line with the 2008 Act on Patient's Rights and Patient Rights Ombudsman. It replaced the Office of Patient Rights that since 2005 had been part of the health section of the central government administration (the Office is no longer part of the central administration). The Ombudsman investigates infringements of patient rights, initiates new legislation and promotes awareness of issues related to patient rights (see section 2.5.3). The Ombudsman is appointed by the Prime Minister.

2.2 Decentralization and centralization

Health system reforms since 1989 followed the very quick transition from centrally planned to market economy and changes in the administrative division of the country (see section 1.2 and Box 2.1). Initial health sector reforms, introduced between 1991 and 1998, focused on the decentralization of health tasks and functions. Another goal was decentralization of the management and ownership of public health care provision to the lower levels of territorial self-government and development of private medical practice (Kowalska 2005, 2006, 2009; Kowalska & Mokrzycka, 2012; Kowalska-Bobko, 2017). Health care financing was decentralized in 1999, with the introduction of 17 largely autonomous sickness funds (see Box 2.1) that replaced the tax-funded Semashko-style national health service. The lack of a unified strategy and contracting principles for the sickness funds as well as the application of different payment mechanisms for contracted services across the voivodeships resulted in considerable regional differences in access and quality of health services, potentially infringing the "equity" rule prescribed in the Constitution. Consequently, after being in existence for only three years, in 2003/4, sickness funds were replaced by a single insurance institution – the NFZ, and the purchasing function was thus recentralized (see Sagan et al., 2011). Contracting was deconcentrated to 16 voivodeship branches. To eliminate differences in access to health care across the voivodeships, uniform contracting procedures and point limits for contracted services were introduced. Points were used to determine the value of services – each service was assigned a number of points and points had a monetary value. This structure is still in place today (although there have been proposals to abolish it; see section 6.2).

Beginning in 1991, much of the authority over public health care facilities was transferred from the Ministry of Health down to the voivodeships and, to a lesser extent, to the municipalities – they were given, among others, the right to establish health care units and were awarded ownership of public health care facilities. Counties took over responsibility for county-level hospitals. Publicly owned health facilities were given substantial autonomy and responsibility for managing their own budgets.

The Constitution of 1997 decentralized public power by allowing territorial self-governments to perform public tasks not exclusively reserved for public authorities at higher levels. In the area of health care, territorial

self-governments are mainly responsible for health promotion and prevention (particularly in the area of occupational medicine, and mental health care, as well as for alcohol and tobacco addiction and related problems) (Kowalska-Bobko, 2017). They also have responsibilities stemming from their function as the founders of public health care providers (public providers typically operate as independent public health care units (SPZOZs); see Box 2.3): they are responsible for their financial results (including for covering outstanding liabilities), and covering the costs of equipment and the maintenance of facilities. Territorial self-governments at voivodeship, county and municipal levels are also responsible for monitoring, organization and governance of health care provision at various levels of complexity: municipalities are responsible for primary health care, *powiats* for smaller hospitals with basic specialties and voivodeships for larger hospitals offering more complex procedures (see section 4.1). National health institutes and medical university clinics, for which the Minister of Health is the founder, provide services of the highest complexity.

The diversity of competencies and responsibilities, and the independence of each level of territorial self-government, obstructs coordination of activities in the health system. Presently, voivodes are responsible for coordination of activities aimed at protecting the health and lives of populations in their respective territories. This includes, for example, planning of the medical rescue system and oversight over sanitary inspection in their territories. Current reform proposals postulate an increased role of the voivodeships in coordinating health care activities of the lower levels of territorial self-government (Kowalska-Bobko, 2017) and the coordinating role of a voivode in the health care system is becoming increasingly visible (e.g. in the mapping of health needs; see section 2.4).

2.3 Intersectorality

A variety of regulations concerning legislation and strategic planning at the central level require that health should be taken into consideration outside of the health section of central government administration. For example, each new piece of legislation or change in existing legislation must be preceded by a regulation impact assessment (*Ocena Skutków Regulacji*, OSR), which determines, via a questionnaire filled in by the relevant ministries, the

potential impact of the proposed regulation on population health. Further, any legal act that the government intends to put forward to the Parliament must be preceded by an interdepartmental consultation, where, if relevant, its potential impact on population health will be considered. The 2015 Act on Public Health established a Public Health Council as a consultative and advisory body to the Minister of Health. The Council is tasked with ensuring that public policies follow a "health in all policies" approach and fostering intersectoral cooperation.

The drafting and implementation of the National Health Programme (NPZ), which is the key strategic and planning document in the area of public health (see sections 2.4 and 5.1), necessitate an intersectoral approach. The NPZ is issued as an executive regulation of the Council of Ministers, which is aimed at ensuring involvement of all ministries. The NPZ's Steering Committee, which coordinates its implementation, includes representatives of all of ministers involved in the implementation of activities foreseen in the Programme.

Health is taken into account in policy decisions in a wide range of sectors outside health – cooperation with the health sector is achieved through the works of special inter-ministerial teams. The sections of central government administration that are of particular relevance for the health sector are the ones that are coordinated by the Minister of Family, Labour and Social Policy. A variety of initiatives that are implemented within this section, such as those targeted at the elderly (e.g. the Senior+ Programme for 2015–2020, which is aimed at increasing the social participation of older people in their local communities), or those involving the voluntary sector (especially those performed by public benefit organizations, i.e. special NGOs that can be contracted to implement public tasks and functions) that are of particular relevance for health promotion. Other sections of the central administration are also of relevance, in particular those that are involved in monitoring health risks to the population (and thus complement the activities of the Chief Sanitary Inspectorate). For example, the Minister of Agriculture and Rural Development supervises the State Veterinary Inspection, which is responsible for food production and processing; the State Labour Inspection (*Państwowa Inspekcja Pracy*, PIP) supervised by the Council of Labour Protection under the Speaker of the lower house of the Parliament, is responsible for safety in the workplace; the State Inspection for

Environmental Protection (*Państwowa Inspekcja Ochrony Środowiska*, PIOŚ) under the Ministry of Environment monitors environmental hazards. The Ministry of Health is also represented in the Crisis Management Group, which oversees crisis-response planning and implementation, as well as in the works of the Road Safety Council under the Ministry of Infrastructure.

2.4 Regulation and planning

2.4.1 *Planning*

Planning in the health system is the responsibility of the central government administration, particularly of the Minister of Health and the voivodes. The Minister of Health and the voivodes are supported in this function by a variety of institutions, many of them created fairly recently. Key planning documents include:

- **The Long-term National Development Strategy: Poland 2030. Third wave of modernity** (*Długookresowa Strategia Rozwoju Kraju: Polska 2030. Trzecia fala nowoczesności*), complemented by the Strategy for Responsible Development until 2020 (with perspective until 2030) (*Strategia na rzecz Odpowiedzialnego Rozwoju do roku 2020 (z perspektywą do 2030 r.)*),[3] which is the key strategic document in the area of national economic policy. These documents, developed by the Ministry of Regional Development, define the vision for the country's development in the medium- and long-term.

- **The National Strategic Framework. Policy paper for health protection for 2014–2020**, which sets out priorities for the health system in connection with the planned measures that are to be financed with the support from EU structural funds allocated for the years 2014–2020 (for more information on the strategic objectives stated in this document, see section 7.1).

[3] This Strategy updated the Medium-Term National Development Strategy and Nine Horizontal Strategies (until 2020). For more information see: https://www.miir.gov.pl/strony/strategia-na-rzecz-odpowiedzialnego-rozwoju/informacje-o-strategii/

- **The National Health Programmes (NPZs)** are the key medium-term national health strategy documents in the area of public health. The current Programme was formulated for the 2016–2020 period.

- Annual **Health needs maps**, introduced in 2015, are the key medium- to long-term health policy planning document.

Health needs maps were introduced as a decision-support tool, at both operational (i.e. at the level of health care providers) and strategic (local and national) levels. Their purpose is to identify current and future health needs and demand for health care services (Więckowska, 2017). This may be used to improve contracting (though contracting will also largely be determined by the available resources and existing health system infrastructure) (see sections 3.3.3. and 3.3.4) and to determine priorities for the health policy. Regional health needs maps are developed by the voivode (based on drafts prepared by the NIZP-PZH; see Table 2.1) in consultation with the Voivodeship Health Needs Councils composed of voivodeship consultants and representatives of institutions such as the NFZ, Voivodeship Statistical Offices, Voivodeship Marshals, medical colleges, employers' organizations, etc. Regional health needs maps are approved by the Minister of Health. The first maps were published in December 2015 and focused on oncology and cardiology treatment. Since then maps have been issued in various areas of hospital care, outpatient specialist care and primary care and further maps are under preparation.

Planning of health-services provision is largely determined by the AOTMiT (see Table 2.1) and the NFZ. AOTMiT, with the advice from the national consultants, makes recommendations on the guaranteed benefits and their tariffs to the Minister of Health, who approves them. The president of the NFZ prepares the annual financial plan for the Fund. This plan must be approved by the Minister of Health in agreement with the Minister of Finance. According to this plan, NFZ's voivodeship branches contract services with health care providers. If demand for services exceeds what had been budgeted for, non-urgent services are rationed via waiting lists and are accounted for in the next year's budget. The voivodes are responsible for planning the provision of emergency medical services. This is done via the Voivodeship Emergency Rescue System Operation Plans (which are approved by the Minister of Health). Plans for managing emergencies and

providing assistance to victims of major disasters are also developed at the regional level and are coordinated centrally.

The Minister of Health and the voivodes, with the aid of national and voivodeship consultants, are responsible for planning of medical training based on the assessment of the population's health needs and training capacities. This involves determining the admission limits of particular medical colleges (only for physicians and dentists; see section 4.2.1) and the number of residency positions to be allocated for each voivodeship in each medical specialization. The inclusion in the hospital network (see section 3.3.4) as well as planning on the part of the NFZ (which determines how many services will be contracted and from how many service providers outside the hospital network) influence the planning of medical training in the voivodeships.

BOX 2.2 Evaluating priority-setting and planning

Despite the existence of a number of strategic documents the health care system lacks a long-term strategic vision and a unified strategy. However, in early 2018, the Minister of Health initiated a nationwide experts' debate entitled "Together for Health – we talk, listen, act". The aim of this debate is to create a strategy for the health system through a series of public consultations on selected topics (https://razemdlazdrowia.pl). Apart from health care experts, representatives of patient organizations, local self-governments, universities and trade unions have been invited to these debates.

Setting priorities in health care is done in accordance with the electoral declarations and political programmes of the parties in power. This also involves, although not always,* a "social dialogue" with patients, medical professionals, experts, employers and the wider public, including communicating with the public via press conferences, governmental websites and other channels, and public consultations on strategic planning documents in health, such as the NPZ.

Proposals for new regulations and changes to existing regulations (in the form of draft laws) are submitted by the Ministry of Health. Draft laws are then subject to public and professional (by medical chambers, specialists and medical schools) consultations and are further examined in Parliament. Some regulations, particularly on sensitive issues such as financing of contraception, may also be the result of bottom-up initiatives (e.g. by civil society groups). On adoption of a draft law by Parliament, the Ministry of Health prepares executive regulations to implement the law. These executive regulations indicate institutions responsible for the implementation of the law and delineate their respective competencies.

* In extreme cases, the public may resort to mass protests, such as those against the tightening of the reproductive rights in 2017 and 2018 or protests of resident doctors in 2017 (see Box 6.2).

2.4.2 *Regulation*

The health sector is extensively regulated. Regulations regarding standard setting and implementation mainly concern health care financing, training of medical personnel, conditions in which health services are delivered to patients, operation of service providers, assuring availability of health care services and medicines (including the level of cost-sharing) and assuring observance of patient rights (Table 2.2). Some of the regulations, such as those on cross-border care and marketing authorization for medicines, stem from Poland's membership in the EU and ensure conformity with the relevant EU directives and other regulations.

TABLE 2.2 Regulatory functions and institutions in Poland

FUNCTION	REGULATORY INSTITUTION	ROLE
Regulation and planning	Parliament	Enacts health care legislation
	Minister of Health	Prepares drafts of legal acts, enacts executive regulations (including executive regulations on the guaranteed benefits baskets); Approves National Health Programmes, NFZ financial plans, health needs maps, quality standards for health care providers, applications for major investment grants, etc.; Establishes national health policy programmes; Coordinates activities in the area of public health; Monitors quality and accessibility of care in the health care institutions for which it is the founding body
	NFZ president	Issues ordinances that specify the rules for contracting of services; Prepares NFZ's financial plans
	Voivodes	Develop regional medical emergency care plans
Implementation	NFZ voivodeship branches	Contract with health care providers in their geographical areas
	Office for Registration of Medicinal Products, Medical Devices and Biocidal Products (URPLWMiPB)	Evaluates quality, efficacy and safety of medicinal products, medical devices and biocidals, as well as decides on marketing authorizations
	Agency for Health Technology Assessment and Tariff System (AOTMiT)	Makes recommendations on inclusion/exclusion of benefits in the guaranteed benefits baskets and their tariffs

Monitoring	Voivodes	Supervise activities carried out by the regional offices of the Chief Sanitary Inspectorate; Maintain registers of health care providers and monitor functioning of the national emergency care system
	Territorial self-governments	Monitor quality and accessibility of care in the health care institutions for which they are the founding bodies
	Professional self-governments	Monitor fulfilment of continuous education requirements by health professionals
	National and voivodeship consultants	Perform advisory and supervisory tasks for the central administration
	Patient Rights Ombudsman	Monitors whether patient rights are respected and intervenes in case of their violation; Promotes awareness of patient rights in the population
	NFZ voivodeship branches	Monitor fulfilment of contracts by health care providers
	Chief Sanitary Inspectorate	Monitors and controls fulfilment of sanitary standards by health care providers, workplace safety conditions (jointly with the National Labour Inspectorate), compliance with environmental norms (jointly with the State Inspection of Environmental Protection)
	Centre for Monitoring Quality in Health Care (CMJ) and others	Monitors fulfilment of quality standards

Source: Based on Sagan et al. (2011).

In the process of decentralization, some of the regulatory functions have been transferred to the territorial self-governments. Local authorities may adopt resolutions on various matters which have indirect (e.g. resolutions banning coal use for heating) or direct (resolutions concerning financing of in vitro fertilization (IVF)) relevance for health. Local authorities also plan and implement local health policy programmes and perform regulatory functions related to their ownership of public health care providers.

Monitoring and evaluation functions are institutionally not sufficiently developed or coordinated. They are carried out by various supervisory bodies, among which the Chief Sanitary Inspectorate has the strongest position. Deficiencies in the area of monitoring are particularly evident in relation to private health care entities that do not receive public financing (i.e. entities that are not contracted by the NFZ). For example, such entities often do not monitor and evaluate the services they provide, which is required from all providers contracted by the NFZ (although the largest private providers do so voluntarily for reputational reasons).

2.4.3 *Regulation and governance of third-party payers*

The NFZ is the sole payer in the mandatory health insurance system. It operates on a non-profit basis. Its annual financial plan must be approved by the Minister of Health and the Minister of Finance. The NFZ must assure transparency of public financing by granting public access to key information about its annual financial plan and its implementation as well as on the contracts concluded with health care providers. The legislation prohibits the NFZ from any involvement in the provision of health care services thus creating a strict separation between public financing and the internal market of health care provision. The 16 voivodeship branches of the NFZ are subordinate to the NFZ's Central Office (deconcentration) and are responsible for contracting services.

Lists of health services financed from public sources (NFZ or other), including levels of patient cost-sharing, price limits and conditions in which these services should be rendered (such as requirements on medical personnel and medical equipment), were specified in 2009 by way of 13 executive regulations of the Minister of Health (see section 3.3.1). Prior to that, the benefits basket was defined through a variety of legal acts, but was nevertheless very explicit. Drug reimbursement (list of reimbursed drugs and the level of reimbursement) is regulated by the 2011 Act on the Reimbursement of Pharmaceuticals, Foodstuffs for Special Nutritional Use and Medical Devices ("Act on Reimbursement"). Until recently, contracting of services by the NFZ was done via competitive tenders (see section 3.3.4) and was based on the Plans for Purchase of Benefits developed by the NFZ. Since the introduction of the hospital network in October 2017, qualifying hospitals have been automatically granted a contract with their local NFZ branch for a period of four years. Traditional contracting only applies to hospitals not included in the network, to certain non-hospital services, and to certain hospital services that are not covered within the hospital network, e.g. one-day orthopaedics surgery. The NFZ is not permitted to have debts. If demand for services is higher than the number of contracted services, services are rationed via waiting lists.

Regulation of third-party health care payer institutions is primarily focused on the public system and on the NFZ as its core. Existing legislation (the 2004 Act on Health Care Services Financed from Public Sources) does

not allow for the establishment of private complementary health insurance that covers benefits that are excluded from the statutory benefits baskets or only partly covered. Private supplementary voluntary health insurance (VHI) exists, mainly in the form of medical pre-paid subscriptions (a quasi-insurance product) offered by private health care provider companies that also provide medical services themselves (treatment can also be received within the network of providers belonging to the company offering subscriptions or from cooperating providers) (Sobczak, 2016; see also section 3.5). This system, also termed "quasi-insurance", follows the United States of America's example of Health Maintenance Organizations (HMOs), where financing is integrated with health-services provision. However, the majority of medical subscriptions' providers have contracts for provision of services with health insurance companies (Wiedziuk, 2018). Subscriptions are not legally recognized as an insurance product and do not fall under the 2003 Act on Insurance Activity; they are therefore not part of the financial sector and not subject to supervision in the same way as registered health insurers (which may be considered to constitute unfair competition). Medical subscriptions are rooted in employers' legal obligation to provide employees with occupational health services. However, they often also cover other medical services for employees and their families, giving their beneficiaries access to health services in the event of health problems (akin to an insurance product).

Private supplementary VHI is also offered by registered insurance institutions (often together with other insurance products, such as life insurance) and may allow for the reimbursement of treatment received from any chosen health care provider (including ones located abroad) or be based on contracts with selected providers. It is prohibited for an insurance company to provide any other activity that is not directly related to insurance such as provision of health care services. In most cases private health insurance benefits are provided in kind, on the basis of contracts with health care providers (Osak, 2016). Commercial health insurance falls within the 2015 Act on Insurance and Reinsurance Activity and thus under the general supervision by the Minister of Finance and the Polish Financial Supervision Authority.

2.4.4 *Regulation and governance of provision*

All entities that provide health services in Poland are included in a central register that holds information on the types of services they provide (*Rejestr Podmiotów Wykonujących Działalność Leczniczą*, RPWDL). Supervision of health care providers is exercised by the Minister of Health (overall activity), the voivodes and professional chambers (registration process), within the system of the Chief Sanitary Inspectorate (covering sanitary requirements for health care facilities), and by the NFZ (supervision of contracts).

The legal status of entities providing health services was specified in the 2011 Act on Therapeutic Activity. The majority of public hospitals operate as independent public health care units (*samodzielny publiczny zakład opieki zdrowotnej*, SPZOZ) (see Box 2.3).

Founders of health care providers (in case of public providers these are the Minister of Health and the territorial self-governments) must ensure that services are accessible and of adequate quality. Health care facilities must meet standards regarding the premises (minimum room standards), medical equipment and medical personnel (minimum standards for the number and qualification of personnel) – these requirements must be met by any provider rendering services included in the statutory benefits basket.

Accreditation was introduced in 1998 for hospitals and in 2016 for primary care providers. The principles and procedures concerning the process of granting accreditation are laid down in the 2008 Act on Accreditation in Health Care (originally laid down in the 1991 Act on Health Care Units). Accreditation of health care providers is voluntary. For hospitals, benefits of accreditation include a 10% reduction in the cost of insurance against adverse medical events, extra points in public tenders for contracts with the NFZ, and larger budgets (by 1–2%, depending on the number of accreditation points) for hospitals included in the hospital network. So far, no such benefits are available for primary care providers. Primary care providers that seek to obtain accreditation can receive support (e.g. training) in the accreditation process. Accreditation is granted by the Minister of Health, on the basis of recommendations from the Accreditation Council that follows an evaluation by the Centre for Quality Monitoring in Health Care (CMJ). Hospitals must obtain at least 75% of the maximal number of accreditation points. Accreditation is granted for the period of 3 years. The website of the Polish

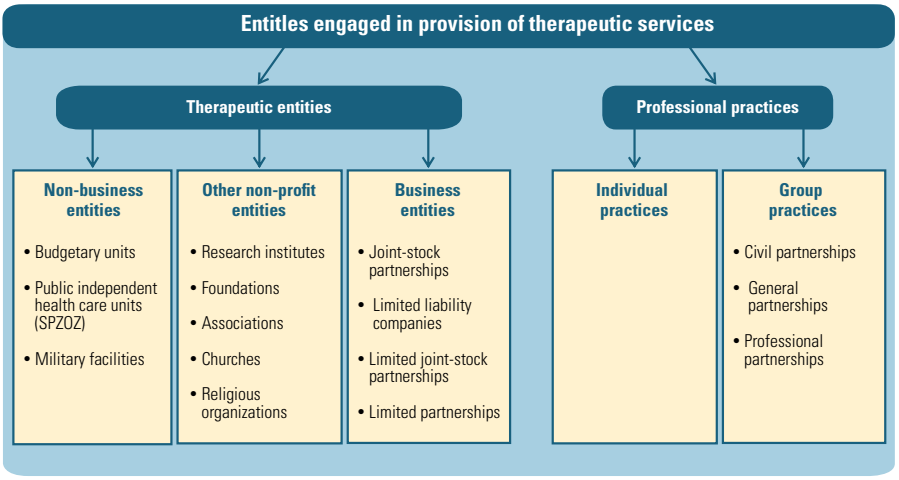
BOX 2.3 "Commercialization" of hospitals

An SPZOZ is a special legal form of hospital ownership that guarantees immunity from bankruptcy. It has been widely criticized due to the limited decision-making power it vests in hospitals' directors (a consent from the SPZOZ's owner is required for any key decision); strong dependency on the contract with the public payer (the NFZ) and limited scope for generating additional revenues (a ban on treating private patients) (Golinowska, Sowada & Woźniak 2012; NIK, 2015). These shortcomings resulted in the SPZOZs accumulating debts with impunity, even in cases where there was no need for borrowing (see Box 4.1). Some experts saw "commercialization" (which in the context of the Polish health care sector is understood as transformation into companies under the Commercial Companies Code, i.e. limited-liability or joint-stock companies, and it is not to be confused with "privatization" as the public owner retains the majority ownership in "commercialized" hospitals) as a potential remedy for the unsound financial management of the SPZOZs (Sagan et al., 2011). According to the 2011 Act on Therapeutic Activity, territorial self-governments became responsible for covering the net loss of the hospitals they own within 3 months of having approved their financial statements. If this was not possible they would have to transform them into companies under the Commercial Companies Code or budgetary units. The main goal of hospital commercialization was to improve the effectiveness of the management and the accountability of the hospitals' owners (WB, 2014).

The possible legal forms allowed under the 2011 Act are listed in Fig. 2.2.

Between 2011 and 2014, only 174 SPZOZs were transformed into companies under the Commercial Companies Code (49 were transformed on the basis of the 2011 Act; NIK, 2015) and SPZOZs still account for the majority of all hospital beds (see Table 4.1). Some of the reasons for the low uptake of "commercialization" are explained in Box 6.1. In 2016, the new PiS government amended the 2011 Law in an attempt to halt the process of commercialization: the amendment prohibits selling shares or stakes in the commercialized SPZOZs to private entities unless the public owner retains the majority ownership (Kowalska & Mokrzycka, 2016). The financial situation of the SPZOZs remains poor as local politicians, under pressure from their electorates, continue to support the SPZOZs (the majority of the SPZOZs are owned by the local self-governments), for example via subsidies, thus allowing them to function inefficiently (Kowalska-Bobko, 2017). At the end of September 2018, the total debt of public hospitals reached PLN 12.7 billion (0.6% of GDP), of which about 14.5% were arrears (overdue liabilities) (MZ, 2019). Currently, hospitals are being restructured via mergers and scaling down of activities rather than via transformation into companies under the Commercial Companies Code.

FIG. 2.2 Types of health care providers



Source: Adapted from Zabdyr-Jamróz et al. (2012).

Accreditation Centre (*Polskie Centrum Akredytacji*, PCA) lists all accredited hospitals and primary health care units. As of November 2018, 190 hospitals (less than 20% of the total number) and 42 primary care providers (less than 1% of the total number) were accredited (CMJ, 2018b).

Clinical pathways depend in most cases on the attending primary care physician or specialist. However, care coordination is progressively being introduced for various patient groups and conditions (see Table 5.2).

TABLE 2.3 Overview of the regulation of providers

	LEGISLATION (PRIMARY)	PLANNING	LICENSING/ ACCREDITATION	PRICING/ TARIFF SETTING	QUALITY ASSURANCE	PURCHASING/ FINANCING
Guaranteed health care services (all levels and all types of care)	• 2004 Act on Health Care Services Financed from Public Sources • 2011 Act on Therapeutic Activity • 2017 Act on Special Solutions Ensuring the Improvement of the Quality and Accessibility of Health care Services • 1996 Act on the Professions of Physician and Dentist • 2011 Act on the Professions of Nurse and Midwife • 2009 Act on the Chambers of Physicians • 2011 Act on the Self-Government of Nurses and Midwives • 1991 Act on the Pharmaceutical Chambers Acts listed above are complemented by specific executive regulations by the Minister of Health and specific ordinances of the president of the NFZ • Additional acts regulating specific types of care: ◦ Primary care: 2017 Act on Primary Health Care ◦ Psychiatric care and addiction treatment: 2005 Act on Counteracting Drug Addiction, 1994 Act on Mental Health Protection ◦ Therapeutic rehabilitation: 2015 Act on the Profession of Physiotherapist ◦ Health resort treatment: 2005 Act on Spa Treatment, Spas, Spa Protection Areas and Spa Municipalities ◦ Pharmaceuticals and medical devices: 2001 Act on the Pharmaceutical Law, 2011 Act on the Office for Registration of Medicinal Products, Medical Devices and Biocidal Products, 2011 Act on Reimbursement Emergency Medical Services: 2006 Act on the State Medical Rescue	• Minster of Health • NFZ • IZP-PZH • Voivodes • National and voivodeship (regional) consultants • Voivodeship Health Needs Councils[a] • Additionally, for emergency medical services: voivodes + Minister of Health	• Voivodes • Voivodeship Chambers of Physicians and Dentists • Voivodeship Chambers of Nurses and Midwives	• AOTMiT • NFZ • Additionally, for pharmaceutical and medical devices: Economic Commission (negotiating prices and advising the Minister of Health)	• AOTMiT • NFZ • National and voivodeship consultants • Other[b] • Additionally, for pharmaceuticals and medical devices: PiS, URPLWMiPB	• Voivodeship Branches of the NFZ • Additionally, for emergency medical services: voivodes via Voivodeship Branches of the NFZ • Additionally, for public health policy programmes: Minister of Health, territorial self-governments
University education of personnel	• 1996 Act on the Professions of Physician and Dentist • 2011 Act on the Professions of Nurse and Midwife • 2009 Act on the Chambers of Physicians • 2011Act on the Self-Government of Nurses and Midwives • 1991 Act on the Pharmaceutical Chambers • 2015 Act on the Profession of Physiotherapist	• Minister of Health • Voivodes • National and voivodeship consultants	As above	As above	• Minister of Health • Minister of Science and Higher Education	• Minister of Health • Minister of Science and Higher Education

Source: Authors.

Notes: [a]The Council is comprised of the representatives of the voivode, NIZP-PZH, voivodeship branch of the NFZ, Voivodeship Statistical Office, Medical Colleges in the voivodeship, voivodeship self-government, Voivodeship County Conventions, civil society organizations in the voivodeship, etc. [b]Central Institution for Quality Research in Laboratory Diagnostics, Central Institution for Quality Research in Microbiological Diagnostics, Medical Examinations Centre, Centre of Postgraduate Education for Nurses and Midwives, Centre of Postgraduate Education, "Poltransplant" Centre for Organization and Coordination of Transplantation), Centre of Health care Information Systems, National Bureau for Drug Prevention, National Centre for AIDS, National Centre for Radiological Protection in Health Care in Łódź, National Blood Centre, State Agency for the Prevention of Alcohol-Related Problems.

2.4.5 *Regulation of services and goods*

Basic benefit package

The 2009 Act on the Amendment of the Act on Health Care Services Financed from Public Sources and the Act on Prices ("Act on Health Benefits Package") introduced the basic package of statutory health care benefits. In accordance with this Act, the Minister of Health determines lists of statutory health care benefits via executive regulations, although the 2011 Act on Reimbursement provides some exceptions to this rule. These regulations cover primary health care services; outpatient specialist care; inpatient care; mandatory vaccinations; therapeutic health programmes, and highly specialized benefits.

The Minister of Health decides on the inclusion (or exclusion) of a particular service in the guaranteed benefits basket, changes in the level of public financing, and changes in the conditions in which the service is rendered. These decisions are informed by the AOTMiT (see the Health technology assessment section). Apart from the Minister of Health, the president of the NFZ and the national consultants as well as (via the national consultants) national scientific associations and NGOs involved in patient rights protection may initiate the procedure for including a particular service in the guaranteed benefits basket (or its removal).

Health technology assessment

The Agency for Health Technology Assessment and Tariff System (AOTMiT) was established in 2005 as an advisory body to the Minister of Health. Its role has grown gradually and in 2015 the Agency became responsible for setting tariffs for health care services (see Table 2.1). Before the Agency was created, there was no public entity in the Polish health care system whose main activity was the assessment of medical technologies financed from public sources. However, some activities related to HTA were undertaken by the NFZ and by the Centre for Monitoring Quality in Health Care (CMJ), which was established in 1994.

The Agency's main area of activity is appraisal of medicines, although health care services and public health policy programmes are also appraised. In 2018, the Agency carried out 235 appraisals commissioned by the Ministry of Health (207 in 2017, 227 in 2016 and 219 in 2015) (AOTMiT, 2019). For medicines, the procedure is initiated by the Marketing Authorization Holder (MAH) who submits a standard application for the inclusion of the medicine in the list of publicly reimbursed medicines. In case of innovative products (without any equivalents on the reimbursement list), in case of a new clinical indication for a product that is already included in the reimbursement list, or if the MAH is asking for a higher price for a product that is already reimbursed, the MAH must additionally submit an HTA report. The full report consists of decision problem analysis,[4] clinical analysis, economic analysis and analysis of impact on the health care system (including a budget impact assessment) (AOTMiT, 2016). The report should be prepared following the HTA guidelines which have been issued and periodically updated by the HTA state agency in 2007, 2009 and 2016 (AOTMiT, 2016). The report is critically assessed by the AOTMiT staff and, independently, by the Transparency Council (see Table 2.1). The president of the Agency submits their final recommendation to the Minister of Health, together with the results of these assessments. The recommendations are made public but they are partly censored in order to protect trade secrets or personal data. The extent of censoring used to be high, but transparency of the process improved since 2014 following changes in the interpretation of the existing legislation (Bochenek et al., 2016). Before the Minister of Health announces the final decision on the reimbursement, the applicant negotiates it with the Economic Commission, which convenes regularly at the Ministry of Health in Warsaw.

The AOTMiT has developed collaborations with its counterparts in other countries, including Health Technology Assessment International (HTAi), International Network of Agencies for Health Technology Assessment (INAHTA), Medicine Evaluation Committee (MEDEV), International Society for Pharmacoeconomics and Outcomes Research (ISPOR), and the European Network for Health Technology Assessment (EUnetHTA). Collaboration mainly covers methodological issues.

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[4] This includes an overview of the basic information pertaining to the assessed technology and the given health problem, its target population, achieved health outcomes and alternative technologies.

2.4.6 *Regulation and governance of pharmaceuticals*

For information on pharmaceutical care, see section 5.6.

Regulation of pharmaceutical products

Market authorization

The regulatory body which is responsible for the issuance of marketing authorizations, i.e. registration of medicines in Poland (as well as their withdrawal) is the Office for Registration of Medicinal Products, Medical Devices and Biocidal Products (*Urząd Rejestracji Produktów Leczniczych, Wyrobów Medycznych i Produktów Biobójczych*, URPLWMiPB). The Office is subordinated to the Minister of Health, who appoints its president and supervises its operations. The Office can withdraw a previously granted market authorization in case of unexpected and severe or life-threatening adverse effects. Authorization may also be withdrawn in case of lack of declared therapeutic efficacy or when the risk of applying the product is incommensurate with its therapeutic effect.

The process of issuing marketing authorizations for medicines has been harmonized with EU regulations. The following procedures are used for registration of medicinal products in Poland: centralized procedure (performed at the level of the European Commission and the European Medicines Agency (EMA)), national procedure, decentralized procedure and mutual recognition procedure – all four compliant with EU standards. Medicinal products authorized in Poland are registered by the president of the URPLWMiPB. Market authorizations are valid for 5 years but can be extended (even indefinitely) on request of the responsible entity (i.e. a pharmaceutical company). The following products may be sold in Poland without a marketing authorization: magistral formula (medicinal product prepared in a pharmacy in accordance with a physician's prescription for an individual patient), officinal formula (medicinal product prepared in a pharmacy in accordance with the prescriptions of a pharmacopoeia and intended to be supplied directly to the patients served by the pharmacy), radiopharmaceutical products, blood and plasma, pharmaceutical raw materials not intended for production of medicines, veterinary immunological products and tested medicinal products exclusively used for clinical or scientific trials.

Quality of medicines

The State Pharmaceutical Inspection (PIF) supervises the quality of medicines on the Polish market (see Table 2.1). This includes monitoring the conditions of the manufacture, import and distribution of medicinal products and active substances, as well as marketing of medicinal products (URPLWMiPB, 2018). Basic quality requirements and testing methods for medicinal products and their packaging and for pharmaceutical raw materials are specified in the Polish Pharmacopoeia, which is fully compatible with the European Pharmacopoeia.

Pharmacovigilance

The pharmacovigilance system was put in place in 1971 and, since 2013, not only representatives of medical professions, but also patients are able to report adverse reactions to medicinal products. Safety of medicines is supervised by the president of the URPLWMiPB. Entities that have obtained market authorization for medicinal products must continuously monitor their safety by keeping records of all adverse effects reported by physicians, pharmacists or patients undergoing treatment and to present yearly reports to the Pharmacovigilance Department at the URPLWMiPB.

Patent protection

Medicinal products in Poland have been able to be protected by patents since 1993. Since its EU accession in 2004, Poland has granted the same period of market exclusivity as in the EU, which is typically 20 years. Poland also agreed to introduce a supplementary patent protection (Supplementary Protection Certificate), which grants up to 5 years of additional patent protection (Kęska, Sławatyniec & Deloitte Legal, 2015). The research exemption (safe harbour exemption) is recognized in Poland, meaning that generic manufacturers are allowed to prepare generic drugs in advance of the patent expiration, without infringing the patent protection.

Advertising

Advertising of medicinal products is regulated by the 2001 Act on the Pharmaceutical Law. The Act bans public advertising of prescription medications and of medicinal products containing narcotic and psychotropic substances, drugs used exclusively in hospital treatment, prescription drugs and drugs not authorized for sale in the Polish market. However, this rule does

not pertain to obligatory vaccinations. An advertisement may not be misleading and it should objectively inform about the properties of the product. It cannot target children. Publicly known persons, scientists, pharmacists or doctors (or persons appearing to have such professional background) cannot advertise drugs. Companies are not allowed to offer any benefits in return for purchasing drugs. Moreover, the advertisement must not suggest that by taking the advertised medication a person can avoid seeing a physician; that one's health will deteriorate by not taking it (excluding the mandatory vaccinations); that the medicinal product is a foodstuff, cosmetic or other consumer product; or that the efficacy or safety of the medicinal product results from its natural origin. The allowed content of the advertisement is also regulated. For example, an advertisement cannot use inappropriate, disturbing or misleading terms for graphically depicted lesions, injuries or effects of the medicinal product on the human body.

Advertising of medicinal products to persons qualified to prescribe or market them, e.g. physicians, nurses, pharmacists, must contain clinical information (in line with the Summary of Product Characteristics) and information on the public availability (i.e. OTC or prescription). In case of publicly reimbursed products, this should also include information on the official retail price and maximum patient co-payment. Free marketing samples may be supplied only to persons qualified to prescribe but this excludes narcotic or psychotropic substances. The number of free samples is limited to no more than five packages of the product per year and the value of any marketing and promotional items cannot exceed PLN 100. Apart from this, it is prohibited to provide, offer or promise any material benefits (including gifts, prizes and excursions) or organize and finance promotional meetings for medicinal products, in which hospitality is incommensurate with the main purpose of the meeting.

Regulation of wholesalers and pharmacies

Entry requirements for new pharmacies

A permission issued by the Chief Pharmaceutical Inspector and an entry into the National Register of Manufacturers, Importers and Distributors of Active Substances (maintained by the Chief Pharmaceutical Inspector) is needed in order to undertake entrepreneurial activities related to the

production, import or distribution of medicinal products and active pharmaceutical substances. Rules on Good Manufacturing Practice and Good Distribution Practice defined in the Act on the Pharmaceutical Law must be observed. Entities purchasing and selling medicinal products (with the exception of wholesale trade) must be registered in the National Register of Intermediaries in Trade in Medicinal Products (also maintained by the Chief Pharmaceutical Inspector). In order to operate, pharmaceutical wholesalers need an authorization to operate from the Chief Pharmaceutical Inspector and have to be registered in the Register of Authorizations for Pharmaceutical Wholesale. They must observe regulations on the wholesale trade of medicines, including the Good Distribution Practices, as set out in the Act on the Pharmaceutical Law.

There are several categories of pharmaceutical retail outlets in Poland. Outpatient pharmacies need a valid authorization from the Voivodeship Pharmaceutical Inspector in order to operate. The authorization can be granted if the number of inhabitants per one outpatient pharmacy is at least 3 000 and the distance from the planned location of the pharmacy to the nearest pharmacy is at least 500 metres (these rules can be waived in individual cases by the Minister of Health). A single authorization holder cannot operate a pharmaceutical wholesale point or run or control more than four outpatient pharmacies (or more than 1% of outpatient pharmacies) in the voivodeship. The head of pharmacy has to be a pharmacist (with a master degree in pharmacy) with at least 5 years of experience of working in a pharmacy, or 3 years of experience if they have a postgraduate specialization in pharmacy, and must be present within the opening hours. One pharmacist can be the head of only one pharmacy. Only pharmacists and pharmaceutical technicians may be employed in a pharmacy. Moreover, since 2017 only a pharmacist can obtain an authorization to run a pharmacy (the goal was to reduce the number of pharmaceutical chains) (Kawalec and Kowalska-Bobko, 2018).

Opening times of outpatient pharmacies should be adapted to the needs of the population – they are determined by the county councils in consultations with the territorial self-government units and the professional self-government of pharmacists. Access to pharmaceuticals should be ensured at night, during weekends and public holidays. Outpatient pharmacies must stock medicinal products, foodstuffs for special nutritional use and medical devices in the quantities and assortment which are necessary to meet the health needs of the local population.

Generic substitution

Generic substitution is well developed in Poland. It has been stimulated by the changes to the pharmaceutical pricing and reimbursement introduced in 2012 which led to a decrease of their prices: according to these changes the first generic equivalent applying for reimbursement must be 25% cheaper than the branded product on the reimbursement list and any products subsequently added to the reimbursement list cannot be more expensive than the current reimbursement limit.

Mail-order / internet pharmacies

The mail order or Internet trade of medicines is allowed but only for OTC medicines and with the exception of medicinal products that can only be dispensed to patients of certain age. Only outpatients pharmacies and pharmacy outlets can sell medicinal products by mail order or Internet.

Regulation of counterfeit drugs

According to the Act on the Pharmaceutical Law, a falsified medicinal product is a medicine that:

- does not meet the established quality requirements for medicines;
- has been produced illegally without the knowledge of the manufacturer;
- has been produced without the consent of the State Pharmaceutical Inspection.

In 2007, the Minister of Health appointed the Team for Counterfeiting and Illicit Trade in Medicinal Products and Other Counterfeit Medicinal Products Fulfilling the Criteria of a Medicinal Product. The main tasks of this team include minimizing the extent of trade in counterfeit drugs and trade in unauthorized sales points, provision of information about falsified medicinal products, and conducting educational campaigns about the risks associated with purchasing medicines in unauthorized places (MZ, 2018e). Controls of medicines in pharmacies, pharmaceutical outlets and pharmaceutical wholesalers, which have been performed so far by national laboratories cooperating with the State Pharmaceutical Inspection, have not found falsified medicines in these facilities (GIF, 2018b; GIF/rynekaptek.pl, 2018).

Pricing of prescription pharmaceuticals

Profit control scheme

A claw-back system, understood as a process by which the relevant authority can recoup some of the profits made by pharmacies via their dispensing margins, is not applied in Poland. However, a claw-back on excessive reimbursement expenditures has been applied since 2012 at the level of the health system (see section 3.2). If the set cap is exceeded, pharmaceutical companies are expected to pay back 50% of excessive expenditure. So far, the cap has not been reached.

Reference pricing

Both external and internal reference pricing is used in the reimbursement of pharmaceuticals in Poland. External reference pricing takes into consideration prices of medicines from all EU and EFTA Member States. Within the internal reference pricing system, reference groups are established for medicinal products having the same international name or other international names but a similar therapeutic effect and mechanism of action. Medicines in the same reference group should have the same indications or uses in which they are reimbursed and similar effectiveness. The reference price in a given reference group of medicines used in outpatient care is based on the highest among the lowest wholesale prices for a Defined Daily Dose (DDD) of a medicine whose volume turnover crosses the 15% threshold of the total volume turnover in that reference group. Reference prices are periodically updated. Different rules apply for establishing reference prices for medicines used in chemotherapy and within pharmaceutical programmes.

Direct price controls

Direct price controls are extensively used in pharmaceutical pricing and reimbursement in Poland. All reimbursed medicines are assigned officially established prices, which are set by the Minister of Health for 2–3 years.

Composition of prices

Prices are negotiated between the Minister of Health and the producers and are published as statutory pricing decisions of the Minister of Health. Statutory prices of medicines within inpatient care are interpreted as

maximum prices and purchasers may negotiate lower prices in the purchasing process. Statutory reference prices are also applied to outpatient medicines and set the reimbursement limit above which hospitals cannot be reimbursed by the NFZ. This prevents manufacturers or wholesalers from proposing prices that are higher than reference prices. Prices of reimbursed outpatient medicines are also published as statutory pricing decision of the Minister of Health. They are determined as follows: the official net selling price (ex-factory price) is negotiated between the Minister of Health and the Marketing Authorization Holder (MAH); to this price the wholesaler adds the official margin (since 2012 5% of the official selling price; down from 9% previously) and the pharmacy adds the official retail margin, which depends on the medicine's wholesale price. VAT (8%) is added on top. Since 2012, the pharmacies' margin has been linked to the price limit established for a particular group of medicines (instead of the price of a particular medicine) in order to remove the incentive to sell more expensive medicines from the same group.

Prices and wholesale and retail margins of medicines that are not reimbursed can be set freely by the pharmaceutical wholesalers and retailers.

Public reimbursement of pharmaceuticals

Reimbursement of medicines, foodstuffs for special nutritional use and medical devices in Poland is based on positive lists (see section 2.4.3). Reimbursement decisions are taken by the Minister of Health and are based on recommendations of the Economic Commission and the president of AOTMiT and a number of criteria, including efficacy, safety, budget impact, etc. As of January 2018, the following items were included in these positive lists:

- **Lists A1-A3**: medicines (4 263 items identified with the European Article Number (EAN) or equivalent code), foodstuffs for special nutritional use (72 items) and medical devices (567 items) available in pharmacies on prescription; these items are available to patients free of charge or against cost-sharing (see Table 3.8) up to an appropriate reimbursement limit;
- **List B**: medicines (usually new and innovative and usually also expensive) that are covered by special pharmaceutical programmes (programy lekowe) and are exempted from cost-sharing (379 items);

- **List C**: medicines used in chemotherapy that are exempted from cost-sharing (466 items);
- **List D**: medicines that are available free of charge to persons aged 75+ (1 656 items).

Medicines provided as part of inpatient treatment are financed by the NFZ and are provided free of charge. Prices of some medicines that are provided as part of guaranteed health care services financed by the NFZ are set by the Minister of Health through administrative decisions and are not published in the positive lists.

2.5 Patient empowerment

2.5.1 *Patient information*

Availability of patient information has improved in recent years but is still deficient in certain areas, such as quality of care (Table 2.4). Further, little is known about the actual use of available information or its usefulness. With increased use of channels such as the Internet to disseminate information, older population groups may struggle to find the information they need.

General information about the health care system and patients' rights is provided on the websites of the Ministry of Health and the NFZ. Information about health care services financed by the NFZ is provided by its voivodeship branches. Basic information about health care providers, such as their addresses and areas in which they are accredited, is available at the website of the RPWDL register. Health care facilities have to provide information about the type and scope of services they provide. This information should be provided in writing and be easily accessible. Upon request, patients should be given detailed information such as types of diagnostic and therapeutic services provided, their quality and associated risks, civil liability insurance schemes, etc. Basic information on physicians and dentists (address, specialization and the right to practice) is provided by the Chamber of Physicians and Dentists. Voluntary hospital rankings have been compiled and published in the last couple of years by some newspapers (e.g. Wprost, Rzeczpospolita) and NGOs (e.g. the Society for the Promotion of Quality (*Towarzystwo Promocji Jakości*)), but not necessarily

on a regular basis. Assessment criteria used in these rankings are usually prepared in cooperation with the CMJ or the Society for the Promotion of Quality and mainly include management and quality assurance aspects. There are also unofficial online rankings of doctors, which are based on patients' opinions (e.g. http://www.dobrylekarz.info/ranking-lekarzy or https://www.znanylekarz.pl/).

TABLE 2.4 Patient information

TYPE OF INFORMATION	IS IT EASILY AVAILABLE? (Y/N)	COMMENTS
Information about statutory benefits	Y	Ministry of Health (website), NFZ (website and voivodeship branches)
Information on hospital clinical outcomes	N	
Information on hospital waiting times	Y	Indirectly available through a dedicated NFZ website that provides information about the earliest available treatment dates (https://terminyleczenia.nfz.gov.pl/)
Comparative information about the quality of other providers (e.g. GPs)	N	Only informal rankings and opinions of patients published via Internet portals
Patient access to own medical record	Y	Integrated Patient Information (*Zintegrowany Informator Pacjenta*, ZIP) contains information about patients' rights to health care services; available treatments; health care services and other benefits provided to the patient; prescribed medicines and on the financing of the treatment. In future, ZIP will be part of the Online Patient Account (*Internetowe Konto Pacjenta*, www.pacjent.gov.pl), which was introduced in May 2018 and will provide access to e-health solutions such as e-prescriptions and e-referrals
Interactive web or 24/7 telephone information	N	There is no dedicated website or information telephone line
Information on patient satisfaction collected (systematically or occasionally)	Y	Occasionally collected by the NFZ
Information on medical errors	N	

Source: Authors.

Information for ethnic minorities is provided mostly by the NGOs and intercultural mediators. Information for migrants is provided by the International Organization of Migration (IOM) in Warsaw and NGOs. Information for patients insured in other EU Member States is provided

by the National Contact Point for cross-border care (see section 2.5.4.). The Institute of Patients' Rights and Health Education (*Instytut Praw Pacjenta i Edukacji Zdrowotnej*) supports education of patients in the area of patient rights.

There is no recording of medical errors. However, the increasing number of legal proceedings against doctors or health care units indicates that there is greater awareness in this area (PK, 2017) (see also section 2.5.3).

The Centre for Quality Monitoring in Health Care (CMJ; see Table 2.1) publishes information about quality in the health sector. It also publishes lists of health care providers with accreditation and offers providers access to a tool for assessing patient satisfaction. The CMJ also runs training programmes for doctors, dentists, nurses and pharmacists in the areas of quality improvement and patient safety.

2.5.2 *Patient choice*

With regards to services covered by the NFZ, patients have the choice of service provider (among providers who signed contract with the NFZ) and treatment (among those that are financed) (Table 2.5). In case of diagnostic tests, the test and the place where it should be performed is decided by the referring physician. However, the patient can choose the location of separately contracted cost-intensive tests such as CT and MRI scans, gastroscopy and colonoscopy and several others (ambulatory cost-intensive diagnostic services, *ambulatoryjne świadczenia diagnostyczne kosztochłonne*, ASDK). Choice of providers and treatments in the private sector is only constrained by the patient's ability to pay. There is no choice of insurer in the public health system as the NFZ is the sole insurer. It is possible to purchase supplementary health insurance in the private sector and an increasing number of patients opt to do so, mainly due to long waiting times in the public sector (see section 3.5).

Participation in treatment decisions is guaranteed in the Patient's Rights Act. This right may be limited in some cases, for example in case of psychiatric care (compulsory admission) and certain infectious diseases. A patient has the right to receive easily understood information concerning their health status, diagnosis, proposed and possible diagnostic and therapeutic procedures, likely consequences of their application (or non-application), results of

TABLE 2.5 Patient choice

TYPE OF CHOICE	IS IT AVAILABLE? (Y/N)	DO PEOPLE EXERCISE CHOICE? ARE THERE ANY CONSTRAINTS (E.G. CHOICE IN THE REGION BUT NOT COUNTRYWIDE)? OTHER COMMENTS?
Choices related to coverage		
Choice of being covered or not	N	Health insurance in the NFZ is obligatory for most people (it is voluntary only for some minor groups)
Choice of public or private coverage	N	Public insurance in the NFZ is obligatory (see Section 2.5.2)
Choice of purchasing organization	N	Based on residence (NFZ regional branches are responsible for purchasing of services)
Choice of provider		
Choice of primary care practitioner	Y	Switching is restricted (see section 5.2) (for asylum seekers, choice of provider is limited to the one with whom the Office for Foreigners had signed a contract)
Direct access to specialists	N/Y	A referral is needed to see a specialist within the public system; direct access is available for certain specialists (gynaecologist-obstetrician, oncologist, psychiatrist, venereologist, dentist) and for certain groups of patients (e.g. patients with disabilities)
Choice of hospital	Y	
Choice to have treatment abroad	N	Elective treatment abroad requires prior consent of the NFZ (see section 2.5.4)
Choice of treatment		
Participation in treatment decisions	Y	
Right to informed consent	Y	Informed consent is necessary before any procedure; in some cases written consent is necessary (surgery, experimental procedures)
Right to request a second opinion	Y	Right to request a second opinion or to convene a case conference with other physicians
Right to information about alternative treatment options	Y	

Source: Authors.

treatment and prognosis. In case of experimental procedures patients have to be informed that their consent may be withdrawn at any time if the withdrawal will not cause any damage to their health, with no implications for further treatment.

2.5.3 *Patient rights*

A Patient Rights Ombudsman is responsible for disseminating information about patients' rights. Numerous NGOs, organized around specific medical conditions, also provide information about patients' rights. The list of such NGOs can be found on the website of the Institute of Patients' Rights and Health Education (*Instytut Praw Pacjenta i Edukacji*), which supports education of patients, including in the area of patient rights. There is no information on the level of awareness of patients' rights in the population.

Patient rights have been codified in the 2008 Act on Patient's Rights and Patient Rights Ombudsman (Table 2.6). They include the right to health services, information, secrecy of information, informed consent, respect of intimacy, dignity and private life, access to medical documentation, objecting the opinion of physician, pastoral care (in hospital) according to patient's beliefs and the right to store patient's valuables in a safe deposit (in hospital). Patients' rights are regulated in the 1994 Act on Mental Health Protection – these regulations concern involuntary admission (treatment), coercion and privacy.

Complaints about statutory services or providers (contracted by the NFZ), such as no or limited access to service (e.g. absence of a physician during office hours) or having to pay for service that are fully financed by the NFZ may be reported to the NFZ's voivodeship branch. In case of complaints regarding NFZ's administrative decisions (e.g. refusal to pay for care within the cross-border care Directive), patients may file a complaint to the Regional Administrative Court. Complaints concerning the right to secrecy and related issues may be lodged to the Inspector General for the Protection of Personal Data. The Patients Rights Ombudsman may intervene in case of violation of collective patient rights. These comprise unlawful activities or lack of activities on the part of health care providers or organization of protest actions or strikes that contravene the provisions on resolution of collective disputes that deprive patients of their rights or restrict them, especially if they are aimed at achieving a financial gain.

In case of medical errors, patients may seek compensation for damages. The Civil Code regulates civil liability (contractual or tortious) based on fault. (There is no information on the number of such claims). Since 2012, no-fault compensation has been available for medical events. Claims should be filed to the voivodeship commissions for the adjudication of medical events. In

TABLE 2.6 Patient rights

	Y/N	COMMENTS
Protection of patient rights		
Does a formal definition of patient rights exist at national level?	Y	Patient Rights Act
Are patient rights included in specific legislation or in more than one law?	Y	One main act – Act on Patient's Rights and Patient Rights Ombudsman; specific rights or rights for specific groups of patients (e.g. patients with mental health problems) are included in other acts
Does the legislation conform with WHO's patient rights framework?	Y	
Patient complaints avenues		
Are hospitals required to have a designated desk responsible for collecting and resolving patient complaints?	Y	Each psychiatric hospital must have a Patients Rights Ombudsman
Is a health-specific Ombudsman responsible for investigating and resolving patient complaints about health services?	Y	Patients Rights Ombudsman investigates infringements of collective patients' rights and can also be involved in individual cases; there are Patient Rights Ombudsmen in psychiatric hospitals
Other complaint avenues?	Y	Voivodeship committees for adjudication of medical events[a]; NFZ; medical professional chambers; Commissioner for Human Rights
Liability/compensation		
Is liability insurance required for physicians and/or other medical professionals?	Y	
Can legal redress be sought through the courts in the case of medical error?	Y	
Is there a basis for no-fault compensation?	Y	Since 2012, for medical events[a] in hospitals
If a tort system exists[b], can patients obtain damage awards for economic and non-economic losses?	Y	
Can class action suites be taken against health care providers, pharmaceutical companies etc.?	Y	

Source: Authors.

Note: [a]A "medical event" is defined as infecting patient with a pathogen, causing bodily injury, health impairment or death that result from diagnosis, treatment or use of medical products that do not comply with the current state of medical knowledge; committees are located in each voivodeship. [b]The Polish tort system is governed by the Civil Code. The general clause of article 415 of the Civil Code establishes tortious liability based upon proven fault. It is supplemented by a number of separate provisions located in the Civil Code and in other pieces of legislation that regulate tortious liability in specified situations, including medical events (Bagińska, 2015).

2017, the commissions received 828 claims (986 in 2016 and 1 310 in 2013) (RPP, 2018).

Criminal responsibility is based on the Penal Code and may be applied in case of errors that have led to damage to the patient's health or their death (e.g. incorrect diagnosis, leaving a surgical tool inside the patient, etc.). In 2017, prosecutors pursued almost 5 700 such cases (PK, 2018). Since 2016 special departments dealing with medical errors resulting in death can be created within prosecutors' offices. If the violation of patient rights is the result of an action or inaction that contravenes the principles of ethics and medical deontology, the case may be reported to the Regional Ombudsman for Professional Responsibility (*Rzecznik Odpowiedzialności Zawodowej*) (within the voivodeship medical chambers) and then, if justified, to the professional court (within the relevant professional chamber). This may result in reprimands, fines, and limitations in professional practice (but no financial compensation for the patient is available). The number of cases tried in professional courts is approximately 500 per year (2016 data; PK, 2018).

2.5.4 *Patients and cross-border health care*

In October 2014, Poland implemented Directive 2011/24/EU on the application of patients' rights in cross-border health care and set up a National Contact Point (NCP) for cross-border health care within the NFZ (Kowalska-Bobko et al., 2016). The regulations implementing the Directive into Polish law provide for reimbursement by the NFZ of health services purchased in another EU Member State upon submission of an invoice. The reimbursed amount cannot be higher than what the NFZ pays for the same service to Polish health care providers or higher than the actual cost incurred. Reimbursement only applies to services included in the basket of guaranteed health care services in Poland, with the exception of services that are excluded from the scope of the Directive, such as obligatory preventive vaccinations, long-term care, transplants, etc.[5] For certain benefits such as hospital treatment and a number of specialist ambulatory procedures the reimbursement is conditional upon receiving a prior authorization from the NFZ's voivodeship branch. If a particular service requires a prior referral

[5] A list of examples of guaranteed services together with the average amount paid for these services by the NFZ to Polish health care providers can be found on the NCP's website.

in Poland, a proof of referral will be required to obtain reimbursement of the cost of this service received in another EU Member State (even if this service does not require a referral in that Member State).

In addition, Polish patients may use the following two avenues to obtain health care services abroad at the expense of the NFZ:

- health care benefits covered by the EU regulations on the coordination of social security systems (Regulations EC 883/2004 and 987/2009) – these can be accessed in any EU or EFTA Member State in case of acute emergency while abroad but require a prior authorization from the regional branch of the NFZ when planned;

- treatments or diagnostic tests that are included in the guaranteed benefits baskets but cannot be provided in Poland (e.g. due to the lack of adequate medical infrastructure – in this case the provider rendering the service is paid directly by the NFZ) – these can be accessed in any country (including outside the EU or EFTA) and require a prior authorization from the president of the NFZ.

In practice, access to health care abroad within Directive 2011/24/EU may not be easy for Polish patients (Goscinska, 2014; Azzopardi-Muscat et al., 2018). So far, the number of applications for planned treatment abroad (cross-border care) has been very low and the majority of them were turned down as they did not meet the formal requirements (NIK, 2017d). Between 2014 and 2016, 86 applications have been submitted and one of them has been accepted. This number is likely to remain low as accessing such care is cumbersome and not affordable for many patients. The number of Polish patients accessing outpatient care abroad (which does not require a prior authorization) is also low. This is because the public payer reimburses the costs according to the Polish tariffs, which in most case will be lower than abroad and the patients also have to cover the cost of transportation.

In the same period, over 17 thousand claims for reimbursement of costs of unplanned treatment abroad within the regulations on the coordination of social security systems were submitted with a total value of approximately PLN 55 million. This amounts to about 0.1% of the total cost of treatments provided in Poland (according to NFZ's financial plans) (NIK, 2017d).

According to EC data, about 3 300 foreigners from other EU Member States received treatment in Poland.

The number of patients visiting Poland to seek medical treatment has been growing. According to the estimates from the Institute of Analysis and Development of Medical Tourism, 170 thousand medical tourists visited Poland in 2017, which is 10 thousand more than in the year before (Prawo.pl, 2018). Patients mainly come from Germany and the Scandinavian countries and the most popular medical services are dental care services.

3

Financing

Summary

- The share of GDP devoted to health has remained fairly constant over the years and, at 6.7% in 2017, it was among the lowest in the WHO European Region. Public expenditure on health as a share of GDP increased slightly from 4.2% in 2000 to 4.6% in 2017, and the government has recently pledged to increase this share to 6% by 2024.
- Health insurance contributions (an earmarked payroll tax) are the major source of public health care funding, accounting for over 60% of total current spending on health and close to 90% of public health expenditure.
- Households' OOP payments were the second largest source of health financing, accounting for 22.6% of the current spending on health in 2017. The bulk of this spending is attributable to pharmaceuticals, both reimbursed drugs and OTC medicines, of which consumption is very high in Poland.
- Insurance in the NFZ is obligatory for the vast majority of the (resident) population and it is not possible to opt out. Coverage is almost universal, if Polish citizens living abroad but still registered as residents in Poland are not counted. People who are uninsured have the right to free outpatient emergency care. Uninsured children and pregnant women have the right to the same services as people who are insured.

- The scope of benefits is broad, yet access may be limited in practice due to the limited financing of the NFZ and limited human resources in health. There is no cost-sharing for primary care and outpatient specialist care (although cost-sharing is applied to outpatient medicines) and inpatient care. Patient cost-sharing for reimbursed drugs is substantial but there are important exemptions; for example, since 2017, people aged 75+ have free access to a broad range of medicines. There are also exemptions from cost-sharing for certain vulnerable groups.
- Purchasing of services is deconcentrated to the 16 voivodeship branches of the NFZ. Allocation of funds to these branches takes into account the number and risk profile of the inhabitants as well as (although this is not explicitly stated) the distribution of physical and human resources.
- Key changes to the provider payment methods in recent years were the introduction of lump sum financing for hospitals included in the hospital network and introduction of elements of pay-for-performance (P4P), both in outpatient and inpatient care.
- Salaries of health professionals are low compared with western Europe and the government has been under strong pressure to improve working conditions in the health sector.

3.1 Health expenditure

Since 1989, the system of health care financing in Poland has undergone several major changes (see section 2.1). Until 1999, financing of health care was based on the Semashko model and was funded from the central budget, i.e. general tax revenues. In the wake of the administrative reform in 1999, 17 sickness funds were created within a moderately decentralized system of mandatory universal statutory health insurance. Income dependent health insurance contributions (a payroll tax) subsequently became the major source of public health care funding, relegating the central and local budgets to a complementary role. After only 4 years of activity, in 2003, sickness funds were replaced by a single quasi-fiscal institution – the NFZ. Although the wording of the 2003 Act on Universal Health Insurance in the National Health Fund and the 2004 Act on Health Care Services Financed from

Public Sources suggests that the NFZ is an insurance institution, health insurance contributions are in reality an earmarked income tax.

Although the level and structure of health care financing have undergone substantial changes in the last 15 years, the share of GDP devoted to health has changed only modestly (Table 3.1). At 6.7% in 2017, it was 1.4 percentage points higher than in 2000 but lower than in most of the comparator countries) (see Figs. 3.1 and 3.2). Current health expenditure as a share of GDP has seen a decreasing trend in recent years in Poland, falling from a high point of 6.6% in 2008. In contrast, EU countries have seen, on average, an increasing trend in the share of GDP spent on health.

TABLE 3.1 Trends in health expenditure in Poland, 2000–2017 (selected years)

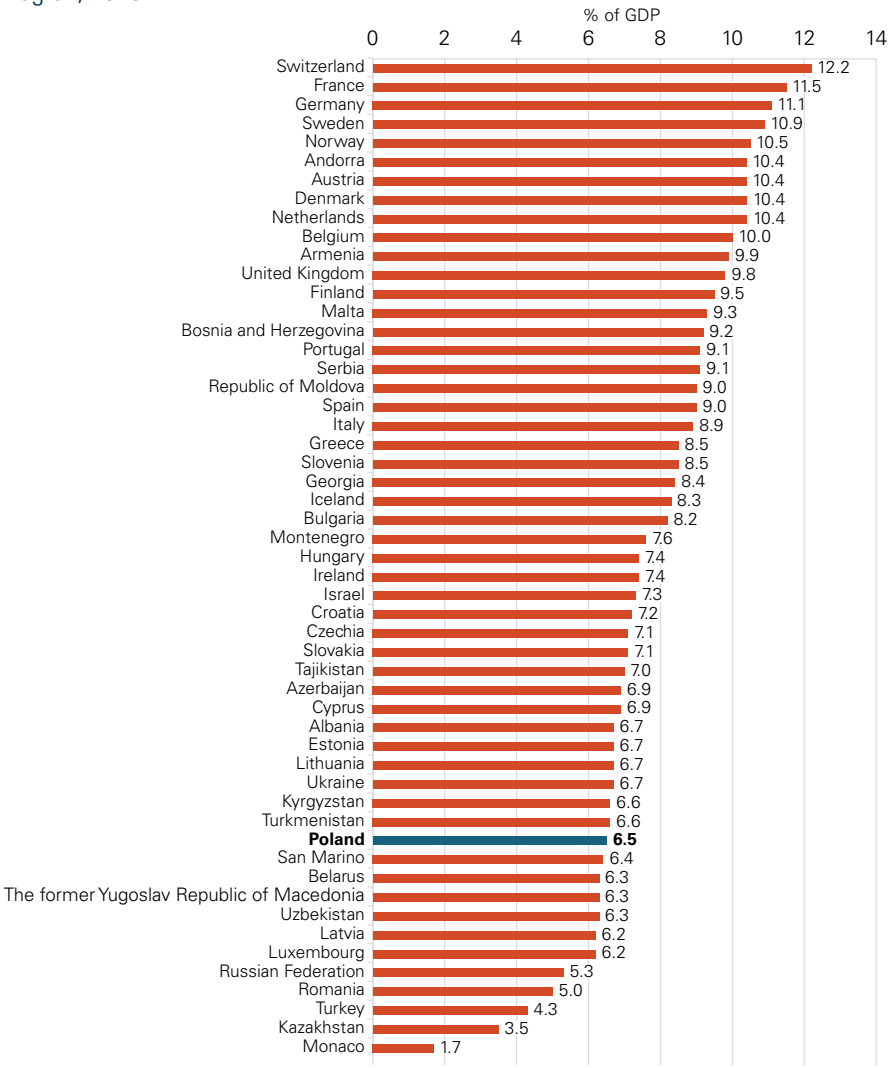
	2000	2005	2010	2015	2017
Current health expenditure per capita in US $ (PPP) (current prices)	564.3	807.0	1 352.4	1 687.0	1 955.1
Current health expenditure as % of GDP	5.3	5.8	6.4	6.3	6.7
Public[a] expenditure on health per capita in US.$ (PPP)	388.4	554.1	970.8	1 180.7	1 352.2
Public[a] expenditure on health as % of GDP	3.6	4.0	4.6	4.4	4.6
Public[a] expenditure on health as % of current expenditure on health	68.9	68.7	71.7	70.0	69.2
Private expenditure on health as % of current expenditure on health	31.1	31.3	28.3	30.0	30.8
General government expenditure on health as % of general government expenditure	8.6	9.0	10.0	10.7	n/a
OOP payments as % of current expenditure on health	n/a[b]	27.7	23.7	23.2	22.6
OOP payments as % of private expenditure on health	n/a[b]	88.5	83.7	77.3	73.4
Private insurance as % of private expenditure on health	n/a[b]	1.9	2.5	16.8	n/a

Sources: OECD (2018a); GUS (2019).

Notes: n/a: not available. [a]General government schemes and compulsory contributory health care financing schemes; [b]National statistics; see Table 3.2.

Current per capita spending on health adjusted for purchasing power parity (PPP) increased over threefold between 2000 and 2017, to PPP$ 1 955 in 2017 (Table 3.1). Despite this substantial increase, Poland was among the EU countries with the lowest per capita health expenditure in 2016, with only

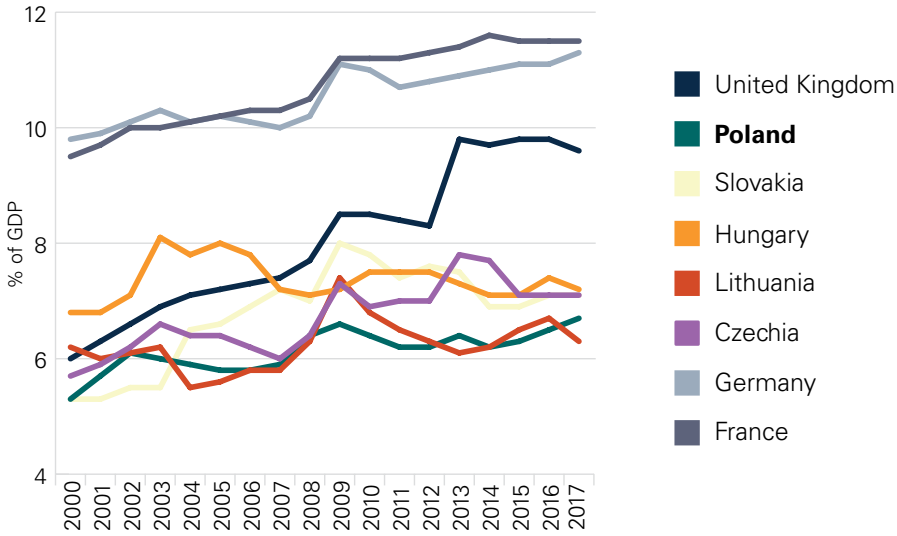
FIG. 3.1 Current health expenditure as a share (%) of GDP in the WHO European Region, 2016



Source: WHO (2018c).

Latvia, Romania, Bulgaria and Croatia ranking lower among EU countries (Fig. 3.3). To a large extent, these health spending disparities correspond to variations in GDP among EU Member States. However, Poland's relatively low per capita spending on health is also due to the low share of GDP devoted to health and the low initial spending level. Between 2000 and 2016, current expenditure on health (in PPP$) increased by 1 561 in Czechia and 2 779 in Germany but only by 1 220 in Poland. Among the comparator countries,

FIG. 3.2 Trends in current health expenditure as a share (%) of GDP in Poland and selected countries, 2000–2017



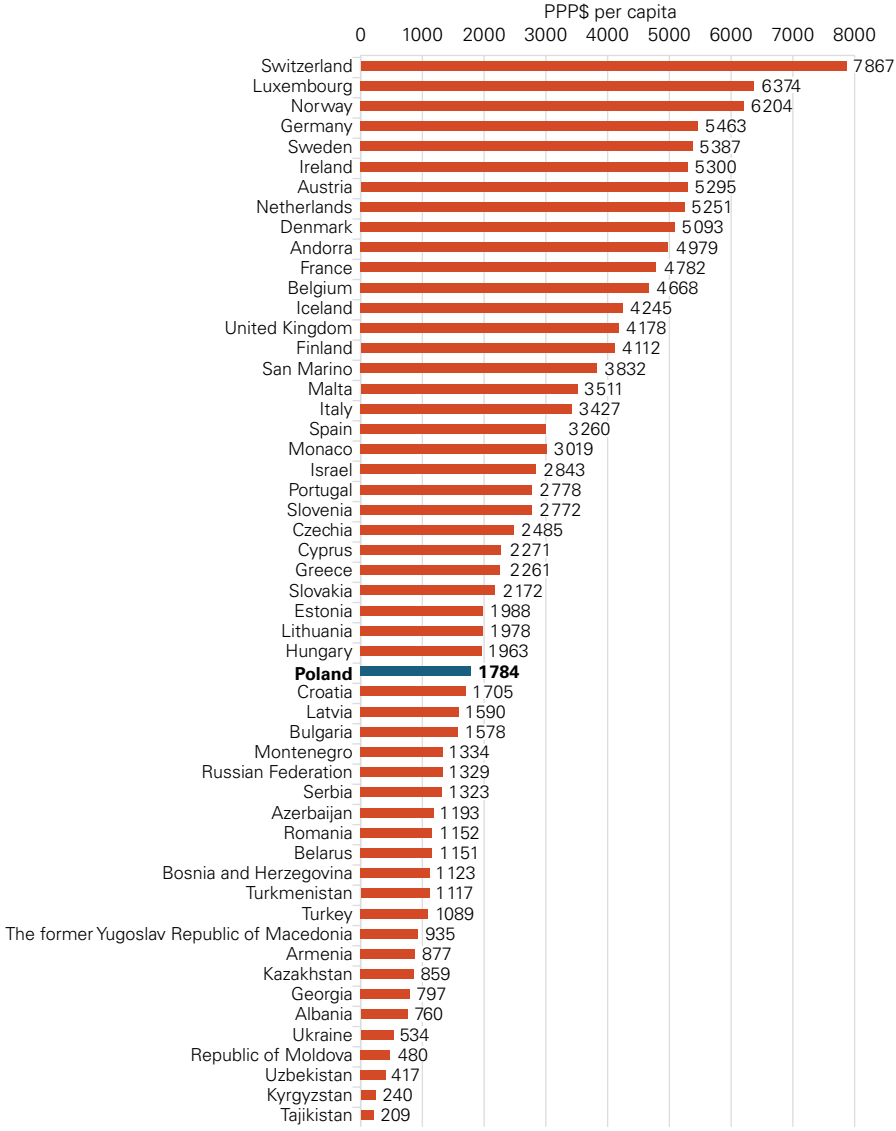
Source: OECD (2018a).

only Hungary had an increase in per capita expenditure lower than in Poland between 2000 and 2016 (PPP$ 1 161; Fig. 3.4). However, conclusions on the actual availability of health care services drawn from health care financing indicators such as per capita expenditure and the share of expenditure in the GDP may be misleading. This is because such country rankings mask important differences in the production costs of health services, misrepresenting the position of countries with low labour costs.

Public sources accounted for nearly 70% of current health care expenditure in Poland in 2017 (Table 3.1 and Fig. 3.5). This is lower than the EU-28 average of 79% (2016 data; EC, 2019a). Only 11% of current public expenditure was dedicated to health, and this share was lower than in Poland in only a few EU countries (Greece, Cyprus, Hungary and Latvia) (Fig. 3.6). Public expenditure on health as a share of GDP increased from 4.2% in 2000 to 4.6% in 2017 (Table 3.1) and the government has recently pledged to increase this share to 6% by 2024 (see Table 6.2).

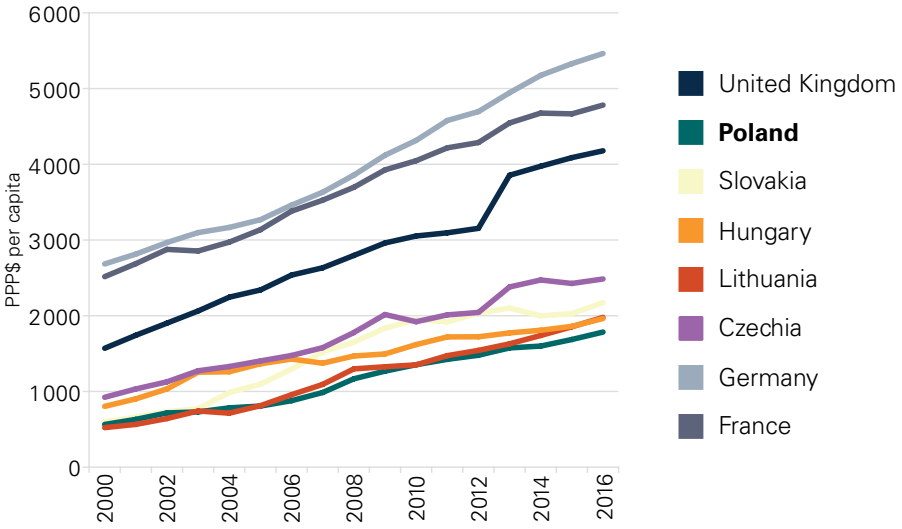
Private health care financing plays a much larger role in Poland than in most other EU Member States and accounted for 30.8% of current spending on health in 2017 (Table 3.1). Out-of-pocket (OOP) payments account for

FIG. 3.3 Current health expenditure per capita in PPP$ in the WHO European Region, 2016



Source: OECD (2018a).

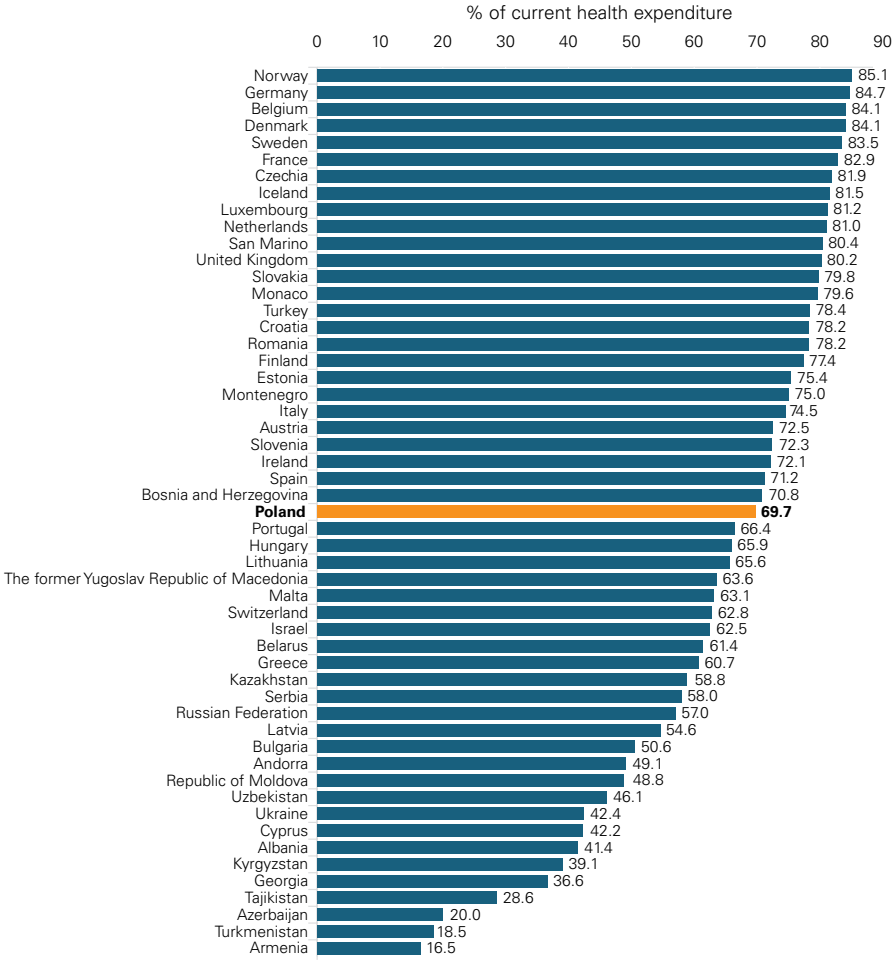
FIG. 3.4 Per capita health expenditures in PPP$ in Poland and selected countries, 2000–2016



Source: WHO (2018c).

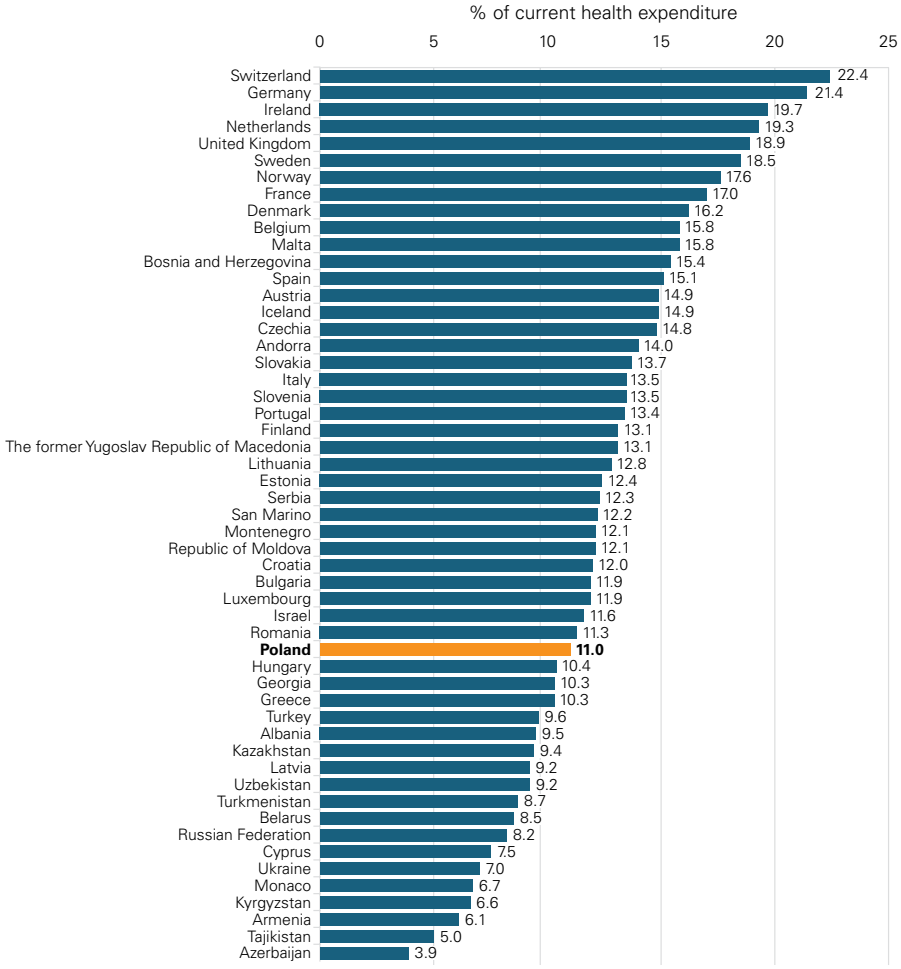
the majority of private spending on health and the share of private voluntary health insurance (VHI) is very small, albeit growing. The rapid growth of VHI as a share of private spending on health since 2013 (Table 3.1) is mostly the result of changes in National Health Accounts (NHA) reporting: in 2013, medical subscriptions paid by employers, which account for the bulk of VHI spending (see section 3.5), were classed under HF.2.1 "Voluntary health insurance schemes" instead of HF.2.3 "Enterprise financing schemes".

FIG. 3.5 Public sector health expenditure as a share (%) of total current health expenditure in the WHO Region, 2016



Source: WHO (2018c).

FIG. 3.6 Public sector current expenditure on health as a share (%) of total government expenditure in the WHO Region, 2016



Source: WHO (2018c).

3.2 Sources of revenue and financial flows

Table 3.2 shows current spending on health by source of financing between 1999 and 2016. Table 3.3 shows spending on health in 2016 broken down by the type of provider. In that year, statutory health insurance contributions channelled via the NFZ accounted for the majority (nearly 60%) of

TABLE 3.2 Structure of current health expenditure by source (in %), 1999–2016 (selected years)

	1999[a]	2005	2010	2015	2016
General government:	13.6	7.2	5.9	9.5	10.0
State government	–	5.5	2.0	5.5	6.1
Territorial self-governments	–	1.7	3.8	4.0	4.0
NFZ (sickness funds until 2003)	57.6	61.5	65.8	60.6	59.8
OOP payments	26.6	27.7	23.7	23.2	22.9
VHI	0.4	0.6	0.7	5.0	5.4
Other:					
Corporations	1.0	1.9	2.6	0.7	0.9
Non-profit institutions	0.8	1.1	0.8	1.1	0.9

Sources: Authors', based on GUS (2006a, 2006b, 2011, 2017b, 2019).
Notes: [a]Reported expenditure includes investments; 2000 data was not available.

total current spending on health and 85.7% of public spending on health. These funds go mostly towards financing of inpatient curative care (50.7% of NFZ's expenditure in 2017; Table 3.4). NFZ's spending on inpatient care increased from 44.2% of the total NFZ expenditures in 2005, which can be seen as an indication that reforms since 1999 have failed to reduce the share of expenses on inpatient care by transferring less serious cases to more cost-efficient outpatient services (see sections 5.3 and 5.4). However, some of this increase may be due to the fact that the lump sums received by hospitals since 2017 are meant to cover both inpatient and outpatient care (see section 3.7.1). According to NHA, 91% of hospital care was financed by the NFZ in 2016 (Table 3.3). The share of NFZ's resources spent on primary care increased slightly from 11.0% in 2005 to 13.4% in 2017 and for outpatient specialist care from 7.1% to 7.4%.

NFZ's spending on the reimbursement of medicines decreased from 19.2% of its total expenditure in 2005 to 10.8% in 2017 (Table 3.4). This could be attributed to reimbursement policies becoming more restrictive (e.g. some reimbursed medicines have been shifted from outpatient use to hospital use only), a cap on NFZ's spending on pharmaceuticals (in 2012,

TABLE 3.3 Current expenditure on health by type of provider and financing scheme (in million PLN), 2005–2016 (selected years)

	YEAR	HOSPITALS[a] NO. (%)	PROVIDERS OF AMBULATORY HEALTH CARE[b] NO. (%)	RESIDENTIAL LONG-TERM CARE FACILITIES NO. (%)	PHARMACIES NO. (%)	OTHER RETAILERS AND OTHER PROVIDERS OF MEDICAL GOODS NO. (%)	PROVIDERS OF PREVENTIVE CARE[b] NO. (%)	PROVIDERS OF HEALTH CARE SYSTEM ADMINISTRATION AND FINANCING[b] NO. (%)	OTHER PROVIDERS[c] NO. (%)	TOTAL NO. (%)
General government	2005	808 (20%)	146 (4%)	14 (0%)	0 (0%)	259 (6%)	838 (20%)	492 (12%)	1 561 (38%)	**4 118 (7%)**
	2015	1 433 (14%)	462 (4%)	35 (0%)	24 (0%)	25 (0%)	8 (0%)	2 910 (24%)	6 010 (57%)	**10 907 (10%)**
	2016	1 597 (13%)	606 (5%)	39 (0%)	150 (1%)	27 (0%)	12 (0%)	3 388 (28%)	6 321 (52%)	**12 140 (10%)**
Statutory health insurance contributions (NFZ)	2005	15 370 (43%)	10 769 (30%)	480 (1%)	6 322 (18%)	453 (1%)	–	419 (1%)	1 568 (4%)	**35 383 (61%)**
	2015	37 182 (54%)	17 631 (25%)	1 262 (2%)	8 074 (12%)	1 010 (1%)	–	791 (1%)	3 385 (5%)	**69 334 (61%)**
	2016	38 512 (53%)	18 694 (26%)	1 385 (2%)	8 222 (11%)	1 091 (2%)	–	842 (1%)	3 706 (5%)	**72 452 (60%)**
OOP payments	2005	66 (0%)	4 314 (27%)	286 (2%)	10 508 (66%)	790 (5%)	–	–	–	**15 964 (28%)**
	2015	697 (3%)	7 951 (30%)	65 (0%)	15 731 (59%)	1 527 (6%)	–	–	563 (2%)	**26 534 (23%)**
	2016	776 (3%)	8 199 (30%)	16 (0%)	16 528 (59%)	1 667 (6%)	–	–	600 (2%)	**27 786 (23%)**
VHI	2005	132 (39%)	32 (9%)	–	68 (20%)	62 (18%)	–	–	46 (14%)	**340 (1%)**
	2015	996 (17%)	4 080 (71%)	–	–	–	–	–	676 (12%)	**5 752 (5%)**
	2016	1 142 (17%)	4 640 (71%)	–	–	–	–	–	759 (12%)	**6 541 (5%)**

NPISH financing schemes and enterprise financing schemes[d]	2005	115 (7%)	957 (56%)	213 (12%)	51 (3%)	5 (0%)	–	–	371 (22%)	**1 714 (3%)**
	2015	395 (20%)	1 077 (55%)	202 (10%)	42 (2%)	28 (1%)	140 (7%)	–	85 (4%)	**1970 (2%)**
	2016	263 (12%)	1 186 (54%)	228 (10%)	77 (4%)	63 (3%)	163 (7%)	–	209 (10%)	**2 189 (2%)**
Total	2005	16 491 (29%)	16 218 (28%)	993 (2%)	16 949 (29%)	1 572 (3%)	838 (1%)	913 (2%)	3 545 (6%)	**57 519 (100%)**
	2015	40 703 (36%)	31 201 (27%)	1 564 (1%)	23 871 (21%)	2 590 (2%)	148 (0%)	3 700 (3%)	10 719 (9%)	**114 497 (100%)**
	2016	42 290 (35%)	33 325 (28%)	1 668 (1%)	24 977 (21%)	2 848 (2%)	175 (0%)	4 230 (3%)	11 595 (10%)	**121 107 (100%)**

Sources: GUS (2007, 2017b, 2019).

Notes: NPISH: Non-profit institutions serving households. [a]This includes inpatient curative care as well as part of the (often expensive) services that are contracted separately (e.g. haemodialysis), highly specialized services as transplantations etc.; [b]In 2013, there was a change in the methodology of the System of Health Accounts and the names of Financing Agents changed slightly; further, "Provision and administration of public health programmes" was changed to "Providers of preventive care" and "Providers of ancillary services" were separated into "Providers of ambulatory health care" and "Other providers"; [c]Providers of ancillary services, rest of the economy, rest of the world; [d]Non-profit institutions and enterprises.

TABLE 3.4 NFZ expenditure on health by type of service (%), 2005, 2015 and 2017

	2005	2015	2017
Primary health care	11.0	13.0	13.4
Outpatient specialist care	7.1	8.3	7.4
Inpatient curative care	44.2	49.2	50.7
Psychiatric care and addiction treatment	3.3	3.6	3.5
Therapeutic rehabilitation	2.8	3.3	3.1
Long-term and hospice care	1.6	2.4	2.8
Dental care	2.9	2.6	2.3
Health resort treatment	1.0	0.9	0.8
First aid and medical transport[a]	2.9	0.1	0.1
Prevention	0.2	0.3	0.2
Separately contracted services[b]	2.6	2.7	2.8
Orthopaedic equipment, medical aids and prostheses	1.4	1.3	1.3
Reimbursement of pharmaceuticals	19.2	11.8	10.8
Cost of services provided abroad	0.1	0.6	0.6
Total	**100**	**100**	**100**

Sources: Authors, based on NFZ (2006, 2016b, 2018c).

Notes: [a]The state took over financing of emergency services (with the exception of hospital emergency wards) in 2007. [b]These services are paid for on a fee-for-service (FFS) basis to ensure that the cost of each provided service is covered by the payer.

NFZ's annual budget on pharmaceuticals[6] has been capped at 17% of its total spending), and savings achieved thanks to the use of risk sharing instruments (according to estimates, the claw-back system brings about PLN 200 million of savings per year; see section 2.4.6). However, it is more likely that this declining trend in NFZ's spending on the reimbursement of medicines is the result of increasing NFZ's budget and increased spending on other items in the NFZ's budget (other than medicines).

Households' OOP payments were the second largest financing source, accounting for nearly 23% of the current spending on health in 2016. The

[6] This cap applies to medicines, foodstuffs for special nutritional use and medical devices that are reimbursed and can be purchased in community pharmacies, medicines included in pharmaceutical programmes and medicines used in chemotherapy.

TABLE 3.5 State expenditure on health (in million PLN), 2000–2017 (selected years)

	2000	2005	2010	2015	2017
Clinical hospitals	291.1 (7%)	342.8 (9%)	257.5 (4%)	477.8 (6%)	856.0 (9%)
Sanitary inspection	500.1 (12%)	688.0 (18%)	844.1 (12%)	971.9 (13%)	1 047.9 (11%)
Emergency medical services	14.1 (0.3%)	43.7 (1%)	2 102.3 (31%)	1968.4 (27%)	2 074.0 (27%)
Public health programmes	440.0 (10%)	541.4 (14%)	766.8 (11%)	917.8 (13%)	1 036.3 (11%)
Highly specialist services	641.4 (15%)	390.0 (10%)	288.4 (4%)	396.1 (5%)	495.2 (5%)
Contributions to health insurance[a]	757.0 (18%)	702.5 (18%)	1 560.6 (23%)	1 619.5 (22%)	1 315.8 (14%)
Other[b]	1 656.3 (39%)	1 155.5 (30%)	3 146.9 (46%)	973 (13%)	2 772.4 (29%)
Total	**4 300.0 (100%)**	**3 863.9 (100%)**	**6 864.3 (100%)**	**7 324.5 (100%)**	**9 597.6 (100%)**

Sources: GUS (2001, 2006b, 2011, 2017b, 2019).

Notes: [a]Benefits for and contributions to health insurance on behalf of persons exempted from the health insurance mandate. [b]Including expenditure on general hospitals, chronic medical care homes and nursing homes, psychiatric medical care, outpatient medical care, public blood service, pharmaceutical inspection, medical internships, the Office for Registration of Medical Products, Medical Devices and Biocidal Products, etc.

bulk of this spending is attributable to pharmaceuticals – households pay close to 66% of the cost of medicines out if their own pockets (59.5% of households' OOP spending goes on medicines and medical non-durables; see section 3.4). Consumption of OTC medicines is very high in Poland. The OECD health expenditure statistics show that Polish households spend more on OTC medicines than on prescribed medicines (316 PLN versus 89 PLN per capita in 2015), and that expenditure on OTC medicines has been growing more rapidly (OECD, 2018b). Expenditures of VHI schemes are concentrated in the ambulatory health care sector (see section 3.5).

After the introduction of the universal health insurance system (1999), the importance of the state budget as a source of health care financing decreased. In 2016 general government accounted for 10% of current spending on health (Tables 3.2 and 3.3).

Since 2007, when the state took over the financing of medical outpatient emergency services (see section 5.5), they have become the largest item in its health budget (Table 3.5). Another large item in the state's health budget is the financing of health insurance contributions (see section 3.3.2) and other benefits for uninsured children and pregnant women. The state also covers

TABLE 3.6 Health expenditure of territorial self-governments (in million PLN), 2000–2017 (selected years)

	2000	2005	2010	2015	2017
General hospitals	860.4 (32%)	1 029.6 (40%)	1 421.5 (36%)	1 306.5 (33%)	1 258.6 (36%)
Outpatient health services	160.0 (6%)	113.8 (4%)	157.3 (4%)	48.8 (1%)	59.6 (2%)
Occupational medicine	77.1 (3%)	66.61 (3%)	91.0 (2%)	77.7 (2%)	81.5 (2%)
Alcoholism counteraction	295.6 (11%)	515.1 (20%)	611.4 (15%)	692.4 (18%)	735.5 (21%)
Contributions to health insurance and benefits for persons not subject to health insurance	493.4 (18%)	398.8 (15%)	1 072.7 (27%)	1 097.0 (28%)	783.0 (23%)
Other[a]	811.5 (30%)	458.0 (18%)	608.1 (15%)	684.1 (18%)	560.3 (16%)
Total expenditure on health	**2 698.0**	**2 581.9**	**3 962.0**	**3 906.5**	**3 478.5**

Sources: GUS (2001, 2006b, 2011, 2017b, 2019).

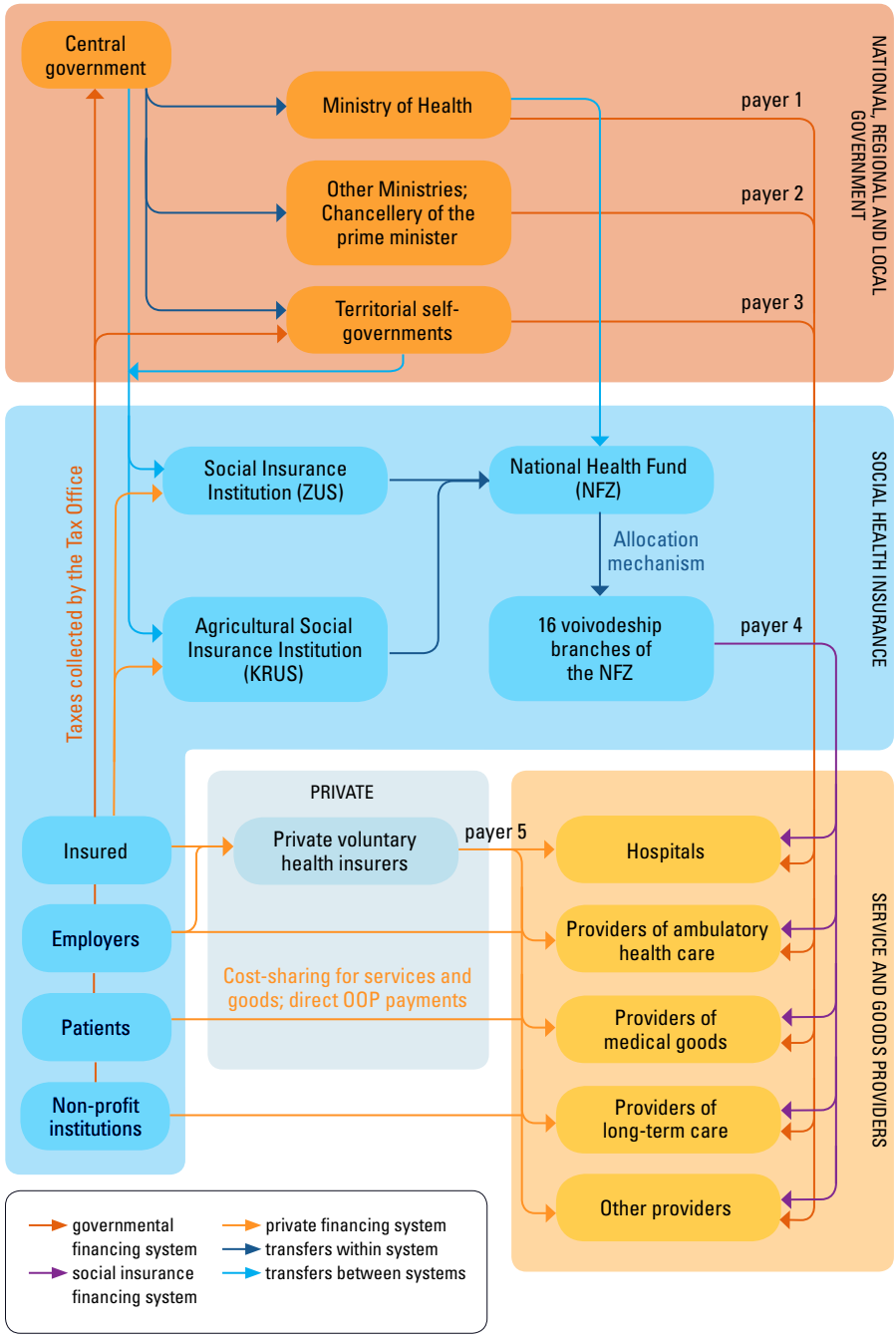
Notes: [a]Including expenditure on chronic medical care homes and nursing homes, psychiatric medical care, emergency medical services, health policy programmes, sobering-up chambers, etc.

the cost of certain highly specialized services (e.g. organ transplants) and publicly-financed health policy programmes as well as the sanitary inspection.

Health budgets of territorial self-governments go mainly towards funding investments in the hospitals they own (36% of their total budget in 2017; Table 3.6; see also section 4.1), financing of services and insurance premiums for non-contributing persons (23%) and financing of programmes to prevent and counteract alcohol addiction (21%).

An outline of the resource flow for funds allocated to health care in the Polish health care system is presented in Fig. 3.7.

FIG. 3.7 Financial flows



Source: Authors.

Notes: The Social Insurance Institution (ZUS) and the Agricultural Social Insurance Fund (KRUS) are responsible for collecting health insurance premiums and transferring them to the NFZ. For more details see sections 3.3.1 to 3.3.3.

3.3 Overview of the statutory financing system

3.3.1 *Coverage*

Who is covered?

The Constitution of the Republic of Poland guarantees the right of all citizens to equal access to health care financed from public sources. According to the 2004 Act on Health Care Services Financed from Public Sources, entitlement to health services covered by the NFZ is based on the insurance status. Additionally, certain uninsured population groups are also given the right to publicly financed health care.

Insurance in the NFZ is obligatory for the vast majority of the (resident) population and it is not possible to opt out. Article 66 of the 2004 Act specifies which population groups are subject to the statutory health insurance mandate. These are, among others, employees, old age and disability pensioners, the unemployed, the self-employed and farmers. Spouses and children up to age 18 (or 26 if they are in full-time education) of the insured persons, as well as their parents and grandparents (if they live in the same household), can be covered as co-insured family members with no additional contribution paid to the insurance fund. However, they must be registered as such in order to be covered. The right to health care services for most insured groups is preserved for 30 days after the insurance ceases (though this period can be longer for certain population groups; for example, 4 months for students).

Insurance contributions for certain population groups are financed from the state budget (see section 3.3.2). This applies, for example, to individual farmers with small farms (smaller than 6 hectares); the unemployed who do not receive unemployment benefits; the refugees covered by an individual integration programme; children, pupils and students who are not insured as co-insured family members (see above); childcare providers or parents on unpaid childcare leave.

People who are not covered by the health insurance mandate (e.g. persons who work on the basis of a contract for a specified task) may opt to purchase health insurance cover in the NFZ on a voluntary basis. Those who do so (as well as their co-insured family members) can thus gain the right to the same benefit package as those who have the mandatory NFZ cover. Persons who are insured on a voluntary basis have to pay a fee if there is a

discontinuity in the payment of their health insurance contributions. This additional fee can range from 20% to 200% of their income, depending on the length of the gap in payments.

The following groups have the right to benefits covered by the NFZ regardless of their insurance status: children up to 18; women during pregnancy, childbirth and the postpartum period; low-income individuals (upon the decision of the local authorities the right is granted for up to 90 days); and prisoners. Additionally, uninsured persons with substance dependence are entitled to free health services related to addiction treatment; uninsured persons with mental illnesses are entitled to free mental health care; uninsured persons with certain infectious diseases have the right to free treatment of these diseases; and uninsured foreigners of Polish origin (holders of the Pole's card – *Karta Polaka*) have the right to emergency health care.

In case of medical emergencies, pre-hospital emergency services are provided regardless of the insurance status (also to foreigners, migrants). These services are financed from the state budget. Hospital emergency care will also be provided; however, afterwards hospitals might charge uninsured patients for the cost of services provided.

According to the Central List of Persons Insured in the NFZ (*Centralny Wykaz Ubezpieczonych*), 35.5 million people (approx. 91% of the population) had the right to receive health benefits financed by the NFZ at the end of 2017. Among them, about 26 million (73%) paid mandatory health insurance contributions or had their health insurance contributions covered by the state (or territorial self-governments) and 7.9 million (22%) were covered as co-insured family members. Less than 0.1% of people with the right to receive health benefits financed by the NFZ were insured in the NFZ on a voluntary basis. About 1.6 million people (5%) received health care benefits covered by the NFZ on the basis of special entitlement (e.g. uninsured children up to 18 years old) (NFZ, 2018d).

Some of the 9% of citizens without a confirmed right to publicly financed health care meet NFZ's coverage conditions and may be able to obtain coverage (also retrospectively) after enrolment. This figure includes Polish citizens living abroad who are still registered as residents in Poland. These people have no right to the NFZ coverage but they might be entitled to health coverage in the country of their stay. Thus, in reality, public health insurance coverage might be more universal than indicated by the NFZ statistics.

What is covered?

Executive regulations of the Minister of Health specify lists of guaranteed benefits within primary health care, ambulatory specialist care, hospital care, therapeutic rehabilitation, psychiatric care and addiction treatment, nursing and long-term care (LTC), dental care, health resort treatment, emergency medical care, palliative and hospice care, highly specialized medical services (e.g. transplants), and publicly-financed health policy programmes. Separate lists also exist for pharmaceuticals and medical devices. Lists of medicines are published and updated bi-monthly, based on non-binding recommendations of the AOTMiT in the case of innovative medicines or new indications (see section 2.4.3).

The list of guaranteed primary care services, outpatient specialized services and hospital services is comprehensive, while coverage of other services is less generous. For example, only the most essential dental services are covered. In addition, coverage of some benefits is subject to limitations on their number or frequency (e.g. a dental exam is covered once every 12 months; see section 5.12). Certain vulnerable population groups, such as children and pregnant women, are entitled to a more generous dental benefits package; for example, children under 12 are entitled to orthodontic treatment. There are no cash benefits within health insurance.

Benefits that are formally guaranteed are not always available in practice. This is due to limits in the NFZ's budget and human resources – these lead to limitations in the access to benefits, such as long waiting times for specialist services (see sections 2.4.3 and 4.2). As a result some patients pay for these services out of pocket or purchase VHI cover (see sections 3.4.2 and 3.5).

How much of the benefit cost is covered?

Primary care, outpatient specialist care and hospital care within the publicly financed health system are provided free of charge. Inpatient stays in sanatoria and LTC institutions are subject to a payment of fee to cover the cost of room and board (see sections 5.7 and 5.8). Cost-sharing is widely applied to outpatient pharmaceuticals (pharmaceuticals received as a part of inpatient care are free of charge), including co-payment and co-insurance, as

well as indirect cost-sharing (reference pricing). Cost-sharing is also applied to medical devices (see section 3.4). Certain population groups (e.g. war veterans, children or older people) are exempted from some cost-sharing obligations (see section 3.4.1).

An assessment of statutory health insurance coverage is presented in Box 3.1.

BOX 3.1 Assessing coverage

Population coverage of the mandatory health insurance is almost universal for people residing in Poland. Uninsured are people who fail to enrol themselves or (more frequently) their family members into the mandatory insurance scheme. However, this can be rectified by retrospective enrolment (within 30 days from using services or obtaining a request to pay for services) – patients who enrol retrospectively will not be required to pay for services they had used. People who nevertheless remain uninsured still have the right to emergency pre-hospital medical care, although they may be liable to pay for hospital emergency care. For certain population groups (e.g. pregnant women and children under 18) the right to publicly financed health care is granted irrespective of their insurance status.

The scope of statutory coverage is broad for primary care services, outpatient specialist services and hospital services. Yet, access to these services might be limited in practice due to the limited financing of the NFZ and long waiting times for certain services. Benefits packages for dental services, rehabilitation and medical devices are limited due to restrictions in the scope of services or reimbursement. Certain vulnerable groups, such as pregnant women and children under 18, also have the right to a broader scope of dental benefits (e.g. orthodontic treatment for children under 12).

There is no cost-sharing for primary care, outpatient specialist care and hospital care provided within the publicly financed system. Patient cost-sharing is present in the area of outpatient medicines, where it is substantial (see section 3.4.1), as well as medical devices, LTC care and health resort treatment. The share of OOP payments in health financing is high compared with other EU Member States.

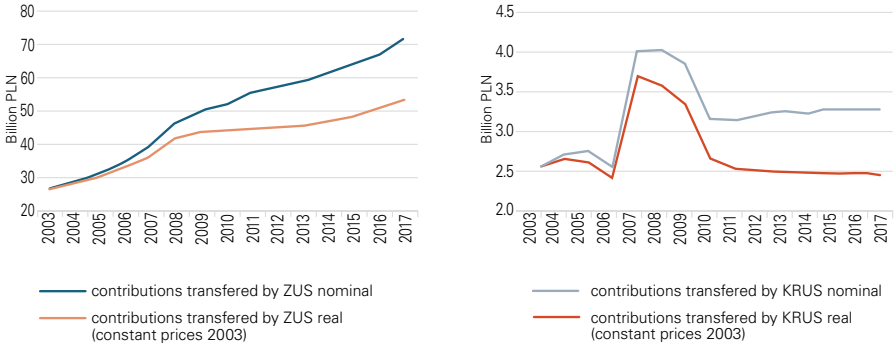
Gaps in the scope and depth of statutory coverage have negative consequences for financial protection, especially of the more vulnerable population groups.

3.3.2 *Collection*

Health insurance contributions

Health insurance contributions are collected by two intermediary organizations – the Social Insurance Institution (*Zakład Ubezpieczeń Społecznych*, ZUS) and the Agricultural Social Insurance Fund (*Kasa Rolniczego Ubezpieczenia Społecznego*, KRUS) – for which they charged a small fee of 0.2% on all contributions transferred. Collection used to be challenging in the era of the sickness funds (mainly due to the lack of well-functioning information systems), particularly for the ZUS, but this has improved with the introduction of the NFZ and collection rate surpassed 99% in 2008 (Sagan et al., 2011). Between 2003 and 2017, revenues from contributions increased from 28.8 billion PLN to 74.4 billion PLN, i.e. by approximately 160% in nominal terms and by almost 94% in real terms (see Fig. 3.8). This was largely thanks to the increase in contributions collected by the ZUS, which in 2017 accounted for 96% of total contributions transferred to the NFZ. Contributions collected by the KRUS decreased slightly between 2003 and 2017.

FIG. 3.8 Contributions to health insurance transferred by the ZUS and KRUS in current and constant prices, 2003–2017



Sources: Based on Zespół ds. przygotowania raportu (2004), NFZ (2018c).

Since 2007, the health insurance contribution has been calculated as 9% of the contribution base (e.g. gross income from gainful employment after deducting social security contributions, old age pensions or unemployment benefits). This rate has risen over the years, from 7.5% in 1999. Until 2002, it could be deducted in full from personal income tax. Currently, up to 86% of

statutory health insurance contributions paid in a given year can be deducted from the income tax owed. Out of the 9 percentage points of the contribution rate, 7.75 percentage points can be deducted from the income tax due and the remaining 1.25 percentage points cannot. This deduction applies to taxes owed and not to taxable income thus preserving the progressive nature of the income tax.

For employees, the contribution rate is calculated as a percentage of their gross wages net of social insurance contributions made for old age pension, disability pension and sickness insurance.[7] The contribution takes the form of a withholding tax paid entirely by the employee; it is not split with or matched by the employer. For people receiving an old age or disability pension, the health insurance contribution is based on their gross benefits. For self-employed individuals who work in the non-agricultural sectors, the contribution is based on either (a) their gross profit/income or (b) 75% of the average earnings in their sector in the fourth quarter of the previous year, whichever is greater. For recipients of unemployment benefits, health insurance contributions are based on the total amount of benefits received. However, the majority of jobless people (over 80%) are not eligible for unemployment benefits. For this group, health insurance contributions are paid for from the state budget. Until 2001, this contribution was calculated on the basis of the standard rate of social assistance allowance. At the end of 2001, the basis for calculating the contributions for these people was reduced to 40% of the standard rate of social assistance allowance and from January 2011 it has been calculated on the basis of unemployment benefits paid after the first 3 months of receiving such benefits (unemployment benefits received in the first 3 months are higher).

Health insurance contributions paid by farmers are collected by the KRUS. Until 2012 they were calculated by multiplying the number of hectares of cropland (up to a maximum of 50) on a given farm by the price of half a quintal of rye. Since 2012 the contribution rate has been set at 1 PLN for each hectare of cropland, which results in much smaller variations in contribution rates. The state pays contributions on behalf of farmers whose farms are smaller than 6 hectares.

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[7] One characteristic of the system after the 1999 reform is the separation of health and sickness insurance. Sickness insurance contributions go towards cash benefits (maternity, illness) as predicated by the 1999 Act on Cash Benefits from Social Insurance in Case of Sickness and Maternity.

General government budget

Revenues of the central budget comprise general taxation (revenues from the personal income tax, corporate taxes, value added tax (VAT), excise tax) and non-tax revenues, such as revenues from state-owned enterprises, fines, administrative fees, etc. Revenues of the territorial self-governments include

BOX 3.2 Assessing progressivity and equity of health financing

The Polish health care system is financed from many different sources and it is difficult to assess the overall progressivity of health care financing.

The majority of financing (70%) comes from public sources and health insurance contributions account for its largest share (87% of public health financing or 61% of total spending on health). This contribution is proportional, i.e. the rate is the same (9%) for everybody, irrespective of income level. However, this contribution is not paid on all incomes, but mainly on income from work and pensions. Income from capital (e.g. dividends, interest on deposits, and rental income from real estate) is not taken into account in the calculation of the contributions, which means that the contributions may in fact be regressive. For most self-employed people, their health insurance contribution does not depend on their real incomes but is based on the average income in the industry sector. It is therefore difficult to make an exact statement on the progressivity of health financing for this group other than that it is not progressive and at best proportional. Health insurance contributions paid by farmers depend on the size of the cropland and the state makes contributions on behalf of those with less than 6 hectares of cropland. But also in this case it is difficult to make a statement about the progressivity of financing as the contribution does not include any other incomes, such as income from capital. Moreover, because cropland may be a poor proxy for total income, farmers with higher incomes may not necessarily pay higher contributions.

About 13% of public spending on health comes from general taxation revenue. Taxation revenue comes from both progressive taxes (e.g. income tax) and regressive taxes on consumption (VAT and excise taxes). Recent assessments have found the Polish tax regime to be regressive on the whole (Tomkiewicz, 2016).

Private expenditure accounts for a large proportion of health financing in Poland – at 23% of current spending on health, it is higher than in most other EU Member States. OOP payments account for the most part of private spending (77.5%). Within the statutory system, OOP payments are particularly high for outpatient medicines. There are no studies on the progressivity of OOP payments in Poland. However, data on the share of OOP spending on health as a share of total consumption expenditure of households indicate that such payments are progressive as richer households devote higher share on total consumption expenditure than poorer households (Tambor & Pavlova, forthcoming).

revenues from local taxes (e.g. transportation tax), revenues from alcohol sales licenses which are earmarked for programmes to prevent and counteract alcohol addiction, a share in personal income tax and corporate income tax (collected by the tax office) as well as subsidies from the central budget. Apart from revenues from alcohol sales licenses, none of these revenues is specifically earmarked for health. The amount allocated for health by the state and by the territorial self-government is not fixed and is determined annually.

3.3.3 *Pooling of funds and allocation*

Allocation from collection agencies to pooling agencies

Revenues from health insurance contributions collected by the ZUS and KRUS and contributions made by the state on behalf of populations who are not required to pay them are pooled by the NFZ. The Ministry of Health transfers funds to the NFZ to cover the costs of pre-hospital emergency care, some health policy programmes and innovative highly specialized services, such as transplantations of the larynx, face, upper limbs and intestines.

Allocating resources to purchasers

Revenues centrally collected by the NFZ are divided by its Central Office into the 16 voivodeship branches. This allocation is based on an algorithm defined annually by the government (by means of executive regulations of the Minister of Health). This algorithm has been changing over the years[8] and there are ongoing efforts to improve it. However, the fundamental determinants have remained constant and are reflected in the current allocation

[8] Certain more controversial changes have been introduced to the algorithms over the years to account for regional differences in production costs (e.g. differences in the remuneration of medical personnel) and in health care consumption. For example, in 2008, average monthly household income in each voivodeship was used to reflect differences in the regional labour costs among the regions (as a proxy for regional differences in production costs of health care services). In 2006 and 2010, changes in the algorithms were made to account for the regional differences in the provision of highly specialised services. However, these solutions reinforced either the differences in the remuneration of medical personnel or regional inequalities related to the availability of specialized services, or both. As such, these variables are no longer used in the allocation algorithms.

formula: number, gender and age structure of the insured population, with age and gender being proxies for the health risk, and the amount of previous allocations – the allocation must not be lower than that made in the previous year. The algorithm also takes into account provision of health care services in the region, including provision of highly specialized services.

As a result of these allocations, individual NFZ branches have various amounts of money at their disposal. In 2017, the NFZ branch with the highest per capita allocation (*Dolnośląskie*) spent almost 7.4% more per insured person compared with the branch with the lowest per capita allocation (*Wielkopolskie*) (NFZ, 2018c). The NFZ branches are responsible for contracting health services for their insured populations. Since 2015, this has been done on the basis of voivodeship maps of health needs (see section 2.4), priorities for regional health policy, available financial resources and experience from previous years (inspections of health care service providers, etc.). This results in differences in spending structures among the branches (Table 3.7), with more considerable variation for certain types of services, especially for primary care and specialist outpatient care. However, these differences have somewhat diminished in recent years. Although a certain degree of convergence may be desirable, achieving identical expenditure structures among the voivodeships is not the ultimate goal of having a centralized insurance fund (the aim of having a central NFZ was rather to standardize contracting rules and mechanisms). Differences in allocation across the voivodeships will persist because of differences in the health care needs of the respective populations and variations in the geographical distribution of health care infrastructure.

TABLE 3.7 Shares of selected health services in planned total expenditure on health services in the voivodeship NFZ branches (in %), 2018

	PRIMARY HEALTH CARE	OUTPATIENT SPECIALIST CARE	INPATIENT CURATIVE CARE	PSYCHIATRIC CARE AND ADDICTION TREATMENT	LONG-TERM AND HOSPICE CARE	THERAPEUTIC REHABIL-ITATION	OTHER SERVICES CONTRACTED SEPARATELY[a]	DENTAL CARE
Dolnośląskie	13.13	6.42	51.26	3.97	2.15	3.08	2.32	2.11
Kujawsko-Pomorskie	13.78	4.81	51.55	3.70	1.65	2.85	2.74	2.46
Lubelskie	13.09	5.26	52.06	4.01	2.04	3.05	2.77	2.99
Lubuskie	14.24	5.62	51.68	4.79	1.58	2.81	2.87	2.04
Łódzkie	13.27	5.31	53.20	3.71	1.47	2.63	2.75	2.46
Małopolskie	14.35	5.81	50.10	3.18	2.51	3.53	3.10	2.96
Mazowieckie	13.71	5.54	53.92	3.67	1.88	3.91	1.70	1.96
Opolskie	13.86	5.25	50.80	3.66	3.22	2.97	2.56	2.37
Podkarpackie	13.44	5.61	51.41	3.32	3.05	3.70	2.41	2.87
Podlaskie	13.95	5.90	53.01	3.88	1.64	2.70	2.82	2.76
Pomorskie	14.55	5.75	49.91	4.00	1.38	2.98	2.93	2.65
Śląskie	13.13	6.67	50.16	3.74	2.77	3.13	2.80	2.23
Świętokrzyskie	12.53	5.76	52.24	3.50	2.34	3.20	2.18	2.70
Warmińsko-Mazurskie	13.85	5.87	51.81	3.91	1.71	2.83	2.48	3.13
Wielkopolskie	13.72	6.16	51.43	3.42	1.31	2.65	3.16	2.21
Zachodniopomorskie	13.45	5.44	52.52	3.20	1.56	2.46	3.81	2.63

Source: Based on NFZ (2018b).

Note: [a]Separately contracted services are paid for on a fee-for-service (FFS) basis to ensure that the cost of each provided service is covered by the payer. Services contracted separately include cost-intensive services and diagnostic tests such haemodialysis and positron-emission tomography (PET) scan.

BOX 3.3 Assessing allocative efficiency

Allocative efficiency is not systematically monitored or assessed (see Chapter 7). Over recent years, measures have been put in place to improve allocative efficiency in the health system. One of the key measures was the introduction of health needs maps (in 2015) in order to improve contracting and policy planning and make them more based on actual needs. However, contracting remains to a large extent determined by the available resources and health system infrastructure and there are no specific plans (for example within the hospital network introduced in late 2017) to reduce the excess number of hospital beds (see section 4.1), and the share of the NFZ's budget spent on hospital care has continued to increase over the years (see Table 3.4).* There are also no specific plans to reconfigure available inpatient beds and, for example, transform some of them into LTC beds, which are in deficit in Poland. However, thanks to the introduction of the hospital network, ambulatory care in hospital outpatient departments is being better integrated/coordinated with inpatient care.

The share of NFZ's resources allocated to primary care increased slightly over the years – from 11% in 2005 to 13.4% in 2017. The increase is mainly owed to the introduction of the oncology pathway (see section 5.2). Introduction of coordinated care pathways in 2016–17 and pay-for-performance financing (to be implemented in late 2020) are likely to further strengthen primary care.

In terms of allocation of resources across voivodeships, there are ongoing efforts to improve the allocation formula between the NFZ's Central Office and its voivodeship branches (see section 3.3.3). The current formula takes into account the risk structure of the population (with gender and age structure used as proxies) as well as the previous year allocations and provision of services, including provision of specialist services. Introduction of the Evaluation Instrument of Investment Motions in Health Care (IOWISZ) in late 2016 (see section 4.1) is another measure that may help improve the allocation of resources in the health sector. IOWISZ is meant to ensure that resources for investments in health care are spent efficiently and that investments are tailored to the health needs of the local populations.

* However, it has to be noted that part of this increase is due to the introduction of "hospital network" and inclusion of ambulatory specialist care in the lump sums received by the "network" hospitals (see section 3.7).

3.3.4 *Purchasing and purchaser–provider relations*

Since 1999 purchasing and provision of health services have been separated. Purchasing has been based on contracting between the sickness fund and later the NFZ branches and health care providers (see section 2.2). Contracts are regulated by the Civil Code and the principles of contracting are defined in the 2004 Act on Health Care Services Financed from Public Sources. According to these regulations, the NFZ (via its voivodeship branches) is responsible for the entire process of contracting: organizing competitive tenders for contracts, conducting negotiations, concluding contracts, monitoring their implementation, and contract settlement. Monitoring of contract performance is carried out on an ongoing basis, both by verifying reports on provided services supplied by contracted providers and through inspections carried out by the NFZ.

Contracts can be awarded by means of competitive tenders (usually) or negotiations (rarely). Regional NFZ branches initiate competitive tenders by placing an advertisement, which includes criteria (such as technical standards) that determine which providers are eligible to compete. Health care providers may only conclude contracts for provision of services that are listed in their statutes and in the executive regulations of the Minister of Health on guaranteed benefits (see sections 2.4.3 and 3.3.1). Criteria for selecting providers in competitive tenders were updated in August 2016 to give preference to providers that are able to provide the most comprehensive scope of health care services, irrespective of their ownership (public or private), and are thus better able to meet health care needs of the population.

All health care providers that meet these criteria may compete for NFZ contracts. To ensure the transparency of the process, the NFZ publishes information on all contracts on its website. This information includes the maximum amount of the NFZ's financial commitment according to the type, number and price of purchased services and the maximum amount of NFZ's financial commitment for each provider (based on all contracts concluded with this provider). Providers that have been granted contracts are obliged to inform the NFZ about any changes that could affect their ability to meet their contractual obligations. Contracts are monitored by the directors of the voivodeship NFZ branches. They also control health care providers regarding the organization and provision of health care services and their accessibility. Since 1 January 2015, the AOTMiT, which is independent from the NFZ, has been tasked with setting prices for health care services (see Table 2.1

and section 2.4.3). However, the NFZ continues to set prices for services that have not yet been priced by the AOTMiT.

A major change in contracting of hospital services was introduced on 1 October 2017, with the introduction of the hospital network (see sections 3.7.1 and 5.4.2). Qualifying hospitals are automatically guaranteed a contract with their local NFZ branch for a period of 4 years and do not need to participate in competitive tenders. They receive a lump sum, which is calculated according to an agreed algorithm (see section 3.7). Approximately 70% of hospital beds (in 594 facilities; see section 3.3.4) are covered by the hospital network. These hospitals receive 93% of the NFZ's funding for hospital care. Hospitals that have not qualified to be part of the network can participate in competitive tenders as before – the NFZ allocates the remaining 7% of the resources for inpatient care to these hospitals.

In certain cases, for example when there is an urgent need to conclude a contract for provision of services or when there is no more than five providers that can provide a particular service, a contract may be awarded by means of negotiations with a set of providers selected and invited by the NFZ.

Since 2016, territorial self-governments (municipalities, powiats and voivodeships) may (on a voluntary basis, depending on local health policies and the availability of financing) contract and finance health care services for their local residents. This is meant to supplement NFZ's financing and is only possible for services that are covered by the NFZ in cases when local demand for services exceeds NFZ's contract limits. This will depend on the implemented local health policies and the availability of funds, as no additional funding has been made available to the territorial self-governments for this purpose. This new financing channel has not yet been used in practice.

The Minister of Health is responsible for the financing of some innovative highly specialized health care services (i.e. transplantations of larynx, face, upper limbs and intestines). However, it is the NFZ that is responsible for their contracting and monitoring (on behalf of the Minister of Health).

3.4 Out-of-pocket payments

The level of out-of-pocket (OOP) payments made by households has been increasing over the years. Nevertheless, this growth has been less significant than the growth of public spending on health, resulting in a decreasing

share of OOP spending in the current spending on health – from 27% in 1999 to 23% in 2016 (GUS, 2019) (see Table 3.2). Nearly 60% of this OOP expenditure is spent on medicines. Spending on curative care accounted for 30% of total OOP expenditure in 2016 and was mainly used to pay for dental care, followed by outpatient curative care. Approximately 6% of OOP spending was spent on therapeutic appliances and other medical durable goods (GUS, 2019).

3.4.1 *Cost-sharing (user charges)*

There is no formal patient cost-sharing in primary care, outpatient specialized care and hospital care provided within the publicly financed system. Hospitals are only allowed to charge a fee (for bed and board) if a family member stays overnight with a hospitalized child, or is present during childbirth. Cost-sharing is also not applied to dental care but most dental services are excluded from the benefits package and there is no possibility of extra billing. For example, it is not possible to pay extra for better dental materials than those that are statutorily covered (see section 5.12).

While inpatient pharmaceuticals are available free of charge as part of hospital treatment, outpatient medicines are subject to direct patient cost-sharing, such as co-payment or co-insurance (Table 3.8). Additionally, there is indirect cost-sharing, i.e. patients pay the difference between the reimbursement limit for a given group of medicines (i.e. reference price) and the price of drugs. The prices of reimbursed medicines are uniform (fixed) across the country. Pharmacists are obliged to inform patients about the availability of cheaper generics to avoid indirect cost-sharing (see section 5.6).

Certain medicines with proven efficacy in treating selected health problems are exempted from direct cost-sharing and are only subject to reference pricing. Special reimbursement privileges (mostly exemptions from direct cost-sharing) are granted to certain population groups including war veterans with disabilities and their spouses, repressed individuals[9] and their spouses, military veterans, servicemen, blind victims of war, and honorary blood and organ donors. Since September 2016, people aged 75+ can receive a broad range of prescription medicines free of charge (see section 5.6).

[9] i.e. victims of war and post-war repressions.

TABLE 3.8 Cost-sharing for health services financed by the NFZ from health insurance contributions

TYPE OF USER CHARGE IN PLACE	EXEMPTIONS AND/OR REDUCED RATES	CAP ON OOP SPENDING	OTHER PROTECTION MECHANISMS
Primary care			
None	n/a	n/a	none
Dental care			
None (but most dental care services are excluded from the benefits package)	n/a	n/a	none
Outpatient specialist visit			
None	n/a	n/a	n/a
Outpatient prescription drugs			
Direct cost-sharing: co-payment 3.20 PLN per package of 30 DDDs or co-insurance (30% or 50% of the reference price, i.e. the appropriate reimbursement limit) Additionally, 100% of the difference between the actual price and the reference price for medicines with prices that are higher than the reimbursement limita (indirect cost-sharing)	Exception from all cost-sharing (for certain medicines) for people aged 75+ and for certain vulnerable or distinguished population groups Exemption from direct cost-sharing (co-payment or co-insurance) for certain vulnerable or distinguished population groups and for medicines with proven efficacy in treating certain health problems[a]	none	Financial assistance may be available for poor households within the social assistance system Since 2012, categories of patient cost-sharing have been linked to the cost of pharmacotherapy (financial burden for patients) and its duration (section 5.6)
Medical devices			
Direct cost-sharing: co-insurance (10% or 30% or 50% of the statutory price) for certain devices, depending on the type of device Additionally, 100% of the difference between the actual price and the reimbursement limita (indirect cost-sharing)	Exemptions from co-insurance for certain vulnerable or distinguished population groups and for children under 18 (for most devices)		Financial assistance may be available for poor households within the social assistance system

Medical emergency care			
None for outpatient services; none for hospital services (SOR) for all insured in the NFZ	n/a	n/a	none
Inpatient care in hospitals			
None	n/a	n/a	n/a
LTC institutions (ZOLs and ZPOs; see section 5.8)			
Monthly co-payment (for room and board): 250% of the lowest pension (200% for children under 18 and full-time students under 26)	none	Monthly fee capped at 70% of the monthly income of the beneficiary (70% of the household income per household member in case of children)	none
Health resort treatment in sanatoria			
Daily co-payment (for room and board) ranging from 9.4 PLN to 36.1 PLN (depending on the type of accommodation and season); patients also pay daily tourism tax (max. 4.24 PLN)	Exemptions from cost-sharing for children under 18 (or 26 if in full-time education), severely disabled children, as well as children entitled to survivors' pension	none	none

Source: Authors.

Notes: DDD: Defined Daily Dose; n/a: not applicable; [a]Malignant tumours, psychotic states, mental retardation, developmental problems, or contagious diseases posing a special epidemiological risk for the population.

Patient cost-sharing also applies to medical devices such as orthopaedic equipment or urine incontinence products, for which reimbursement limits are in place. Co-insurance (payment of a given proportion of the cost) is additionally applied to certain devices. Veterans, blind victims of war, repressed individuals, soldiers or persons in the treatment of injuries or illnesses acquired while on duty outside Poland are exempted from co-insurance. Also, children up to age 18 are largely exempted from co-insurance.

Cost-sharing is also applied in LTC institutions and sanatoria – patients have to contribute towards the cost of room and board (see sections 5.7 and 5.8).

There is generally no cap on patient cost-sharing in the statutory health system, with the exemption of monthly fees in the LTC institutions. However, people with low incomes who are beneficiaries of social assistance might apply for financial support; for example, to cover the cost of purchased medicines.

The Polish population has always been opposed to the idea of obligatory charges for primary care or specialized services and this has never been put forward on the political agenda (Tambor et al., 2015). There have been some discussions about allowing hospitals to charge an additional fee for higher standard of services compared with those offered as part of the statutory benefits basket; for example, for the use of better quality lenses in a cataract surgery. However, there is no consensus about the legality of such extra charges. The NFZ considers them to be illegal and their application is very limited (see section 3.4.3).

3.4.2 *Direct payments*

Direct patient payments mainly apply to purchasing non-prescription OTC medicines, of which consumption is very high in Poland. In the 2014 European Health Interview Survey (EHIS), 52% of Polish people aged 15 and over reported having consumed non-prescription medicines during 2 weeks prior to the survey compared with the EU average of 35% (EC, 2017c). Direct payments apply to dental care as it is largely excluded from the statutory benefits basket and there is no possibility of extra billing for better quality dental materials (see section 5.12). Thus, better dental equipment and better dental materials offered in the private sector are the most common reasons for using private dental services (GUS, 2018e). Direct

payments are also made for outpatient specialist care as due to long waiting times in the statutory system patients have been increasingly using outpatient specialist services in the private sector (see sections 3.5 and 7.3).

3.4.3 *Informal payments*

Older reports noted that the scale of informal payments has been decreasing (e.g. Golinowska, 2010) and no more recent data is available. The average value of payments in 2013 was equivalent to €13.5 per outpatient visit, and €28 for hospitalization (Tambor et al., 2013). According to the Special Eurobarometer report on corruption (2017), 7% of respondents in Poland who had visited a public health care practitioner or institution in the previous 12 months reported having to make an extra payment or give a valuable gift to a nurse or doctor, or make a donation to the hospital, compared with an EU-28 average of 4% (EC, 2017d). The Polish Social Diagnosis survey (2015) revealed that 2.2% households paid informally for health care, and 2.3% of households gave in-kind presents during the 3 months prior to the survey (Czapiński & Panek, 2015). Informal payments might not be fully reflected in statistics on health expenditure as households might be reluctant to report such payments in household budget surveys.

There are also quasi-formal payments, such as fees charged by some hospitals for additional services or increased standard of care. However, their legality has not been confirmed and they have been prohibited by the NFZ.

3.5 Private health insurance

Statutory health insurance in the NFZ offers a very broad range of health services and its population coverage is very broad. This means that there is little scope for the development of a complementary voluntary health insurance (VHI) market covering excluded services or cost-sharing for services that are only partly covered. However, limited financial resources in the public system mean that these services are not always available in practice (see section 2.4.3), potentially creating scope for supplementary VHI. Despite several government initiatives, a strong VHI market has so far failed to develop (Sagan et al., 2011; Sobczak, 2016). Currently, there are

no financial incentives (such as tax relief) to purchase VHI. In 2016 VHI accounted for 5% of current spending on health (Table 3.3) and the rapid growth of this share visible in the NHA statistics after 2013 is mainly due to a change in reporting methodology (see section 3.1). Although group contracts predominate, it is individual contracts that are the fastest growing segment of the VHI market, with growth rates as high as 58% per year (PIU, 2018a).

In 2017 more than 2.27 million Polish residents had private health insurance cover (PIU, 2018b). Medical subscriptions, which are another form of private health insurance, are held by approximately 3 million people (75% of them are covered by group policies sponsored by the employers; PIU, 2017) (see section 2.4.1). Services are provided in kind and cover usually includes outpatient occupational health services (periodic check-ups and preventive care), i.e. services which the employers are obligated to provide under the 1997 Act on Occupational Health Service. These are usually group products that are renewed annually and are concentrated in the working population (under 65). Expanded subscription packages facilitate faster access to health care services (with the longest waiting times) and guarantee a higher standard of non-medical aspects of care (e.g. Internet registration for appointments). The most expensive packages (VIP category) are aimed at top executives and wealthy individual clients. They also include other services such as coordination of hospital care, home visits, or sanitary transport. Monthly premiums are not high, starting from 40 PLN (approximately €10) for a basic package.

VHI sector is part of the financial services sector and is regulated accordingly (see section 2.4.1). The lack of a detailed legal definition of VHI and its complex classification within the life and non-life insurance sectors make it difficult to assess the size of "pure" VHI market offering indemnity insurance cover of health care costs. Official statistics on VHI do not distinguish between indemnity insurance and travel insurance (covering health care costs abroad), disability insurance, critical illness insurance and all other "health" non-indemnity insurance that grant lump sum pay-outs upon the occurrence of certain critical illnesses, such as cancer. In 2017 there were 27 life insurance companies – all of them were allowed to offer additional VHI insurance but not many offered "pure" VHI cover. In the same year there were 34 non-life insurance companies – 29 offered stand-alone products such as accident, sickness or travel insurance, and no more than seven of them offered "pure" VHI cover (KNF, 2018).

3.6 Other financing

3.6.1 *Parallel health systems*

Before the NFZ replaced the sickness funds in 2003 there was a separate sickness fund and separate health care providers for people working in the uniformed services (e.g. police, army) and their families (although in practice anybody could be part of it). Since 2003 the NFZ has covered all insured population and there are no parallel health systems for special population groups.

3.6.2 *External sources of funds*

European Union's Structural Funds constitute an important source of external funds for the Polish health sector. Between 2004 and 2013 Poland received approximately PLN 6.1 billion of EU co-financing for health-related projects and a further PLN 12 billion were made available for the period 2014 to 2020 (Dubas-Jakóbczyk, 2014; MR, 2017; MZ, 2015). The majority of projects in the previous financing period (2007–2013) were dedicated to developing infrastructure – emergency care, pan-regional hospitals and local and regional health care providers (MR, 2017). In the current financing period more emphasis has been put on publicly-financed health policy programmes (e.g. programmes in the area of healthy and active ageing), development of e-health solutions and improving quality of care (CHAFEA, 2016). Since 2016, in order to receive funding, proposals must receive a positive evaluation within a special Evaluation Instrument of Investment Motions in Health Care (IOWISZ) (see section 4.1.1). Decisions on investments are then taken by the Minister of Health or the voivode, depending on the type of health care provider.

Beginning in 2004, the Polish health sector has also received support from the European Economic Area (EEA) Financial Mechanism and the Norwegian Financial Mechanism (the so-called Norway grants) as well as from the Swiss-Polish Cooperation Programme (the so-called Swiss Contribution funds). The Norway grants provided a total of approximately PLN 535 million in funding between 2004 and 2014 (MRR, 2011; MZ, 2018a) and projects focused on improving access to and quality of care as well as on health promotion and disease prevention and, more recently,

on adjusting health care provision to the changing demographic and epidemiologic trends and reducing social inequalities. The Swiss Contribution funds provided approximately PLN 62 million between 2007 and 2017 for health promotion and disease prevention. In addition, CHF 21 million (PLN 80 million) was spent on social care sector projects. These projects included, among others, training of medical staff working in social care facilities (MZ, 2018d).

3.6.3 *Other sources of financing*

Employers are obliged to finance occupational health services for their employees and such services are not covered by the NFZ. To that end, some employers offer medical subscriptions (a quasi-insurance product; see section 3.5).

Nongovernmental organizations (NGOs) are active in both health and social sectors in Poland. In 2016, there were 92 thousand registered NGOs, of which 4% of the NGOs were active in the area of health care (GUS, 2018i). Of all NGOs, 9 100 were public benefit organizations, which means that they are eligible to benefit from tax deductions (1% can be deducted from income tax due and donated to a public benefit organization of choice). The NGOs provide financial support to patients and their families as well as fund medical equipment and certain health services. For example, the Great Orchestra of Christmas Charity (*Wielka Orkiestra Świątecznej Pomocy*, WOŚP) organizes an annual fundraiser to collect money for purchasing medical equipment for different types of hospital wards. During the 2018 fundraiser, approximately PLN 126 million was raised for neonatology and geriatric inpatient wards (WOŚP, 2018).

3.7 Payment mechanisms

Different types of payment mechanism are used depending on the type of care and payer (Table 3.9). The main purchaser of health care services is the NFZ. The NFZ uses prospective payment methods since total budgets for the majority of contracted services are fixed in advance. Service-based payment (DRGs, fee-for-service) dominates but pay-for-performance (P4P) is slowly emerging as an additional payment method.

TABLE 3.9 Provider payment mechanisms

	NFZ	MINISTRY OF HEALTH/ OTHER MINISTRIES	TERRITORIAL SELF-GOVERNMENTS	PRIVATE HEALTH INSURERS
Public health services	FFS	FFS, budget	Budget, FFS	
Primary care	C, FFS, lump sum (elements of P4P to be introduced in 2020)	–	–	FFS
Dental care	FFS	–	–	FFS
Outpatient specialist care (non-hospital based)	Per visit (based on DRGs); elements of P4P (for coordinated care[b]; see Box 5.3)	–	–	FFS
Hospital based outpatient care:				
• within hospitals in the hospital network	Lump sum (calculated on the basis of DRGs)[a] – this sum is meant to cover both outpatient and inpatient care; FFS; elements of P4P (for coordinated care[b]; see Box 5.3)	–	–	FFS
• within other hospitals (outside the "network") (this also applies to outpatient specialist care that is not covered within the hospital network and is provided in hospitals that are included in the hospital network)	Per visit (based on DRGs); FFS; elements of P4P (for coordinated care[b]; see Box 5.3)	–	–	FFS
Acute hospital care:				
• within hospitals in the hospital network	Lump sum (based on DRGs)[a] – this sum is meant to cover both outpatient and inpatient care; elements of P4P (for coordinated care[b]; see Box 5.3)	–	–	FFS
• within other hospitals (outside the "network") (this also applies to acute hospital care that is not covered within the hospital network and is provided in hospitals that are included in the hospital network)	DRGs; elements of P4P (for coordinated care[b]; see Box 5.3)	–	–	FFS

	NFZ	MINISTRY OF HEALTH/ OTHER MINISTRIES	TERRITORIAL SELF-GOVERNMENTS	PRIVATE HEALTH INSURERS
Mental health care	FFS; PD; lump sum	–	–	
Medical emergency services	Per diem[c]; lump sum[f]	Lump sum[d,e]	–	FFS
Long-term care	PD (inpatient and outpatient LTC)	–	Lump sum, FFS	FFS

Source: Authors.

Notes: FFS: Fee-for-Service; C: Capitation; P4P: Pay-for-Performance; DRGs: Diagnosis-Related-Groups; PD: Per Diem.
[a]Services provided within the "network", i.e. complex care; for other services DRGs are used; [b]For example, within the programme of coordinated care for people after a myocardial infarction; [c]For emergency medical services provided by the hospital emergency wards (SORs), trauma centres and highly specialized hospitals or hospital wards cooperating with the National Medical Emergency System; Per diem rate is calculated taking into account the number of patients in different health status categories as well as structural components (staffing, equipment); [d]For medical air rescue; [e]Medical emergency teams and medical emergency dispatch services are financed from a portion of the state budget that is administered by the voivodes; [f]The NFZ pays a lump sum for having medical emergency teams and medical emergency dispatch services on standby (in the state of "readiness") in the SORs.

3.7.1 *Paying for health services*

Public health services

Public health services are financed by the NFZ and from the budgets of the state and territorial self-governments. The NFZ applies FFS for services provided by contracted health care providers within preventive health programmes, such as breast cancer or cervical cancer prevention programmes (see section 5.1). Similarly, territorial self-governments and the state pay on a FFS basis for prevention services purchased from health care providers. Some public health tasks of the central and territorial self-governments (e.g. health promotion) are delegated to the NGOs, for which they receive grant financing (through calls for proposals). The functioning of governmental institutions responsible for public health (e.g. the Chief Sanitary Inspectorate) is financed through budgets.

Primary care

Primary care services are paid for via annual capitation. GPs receive capitation payment for each patient on their list (up to 2 500 per doctor). This payment is adjusted for patient age (currently, six age groups are distinguished), with higher capitation rates for children and older people. Additionally, a higher rate is applied for patients in social assistance homes (DPS). The capitation fee is also expected to cover the cost of diagnostics; thus, primary care physicians sometimes limit the number of diagnostic services in order to limit the costs (NIK, 2017a), and to secure care during nights and holidays and, partly, for transporting patients. Other payment methods within primary care include FFS payments (payment per consultation); for example, for consultations with patients not registered on the list, for services within cardiovascular diseases prevention, for patients with a DiLO card (see Box 5.3) and monthly lump sum payment for securing care during nights and holidays and for transporting patients.

The new Act on Primary Health Care adopted in 2017 introduced elements of pay-for-performance (P4P) financing. Starting in October 2020, the above financing methods will be supplemented by: a special budget (lump sum) for providing coordinated care; a special activity-based budget for

providing preventive care; special budgets for diagnostic care and specialist ambulatory care; and elements of incentive pay depending on treatment outcomes and quality of provided care.

Primary care nurses and midwives also receive capitation payments for each patient (up to 2 500 patients per nurse, with higher rates for children, older people and people in social assistance homes, and up to 6 600 patients per midwife). In addition, nurses also receive FFS payments (payment per consultation) for patients not on their lists and for services provided within tuberculosis prevention. Midwives receive FFS (payment per consultation or visit) for patients not on their lists, patronage visits, collecting sample for cytology test, managing antenatal care, antenatal visits, and postoperative visits. School nurses and hygienists receive capitation payments for pupils on their list (up to 1 100 pupils). Additional capitation payment is received for providing group fluoride prophylaxis.

Outpatient specialist care

Outpatient specialist consultations are paid on a per visit basis, with the level of payment depending on the services provided during the visit. Since 2011, this has started resembling case-based payment: all services have been bundled into economically homogeneous groups. The combination of services provided during the visit determines the classification of visit into one of the predefined groups, and thus also the payment for the visit. The number of visit types has increased over years in order to more closely reflect the cost of provided care.

Acute hospital care, including specialist care in outpatient hospital departments

Case-based payment based on the Polish DRG system (*Jednorodne Grupy Pacjentów*, JGPs) is the main method used for financing hospital care by the NFZ. JGPs, which are a modification of the English DRG system, have been in use since 2008. The introduction of the hospital network in October 2017 (see section 5.4) introduced important changes in hospital payment. Hospitals that have been included in this network receive a biannual lump sum payment for the provision of complex care, i.e. most hospital services (including certain types of one-day hospitalizations) and outpatient specialist

services, including post-hospital care at specialized outpatient departments.[10] To calculate its amount, the DRGs system is applied (DRGs also continue to be used for services and hospitals outside the hospital network). The lump sum amount is higher for hospitals that have accreditation or other quality certificates and for hospitals that provide more services in their outpatient departments – budgets of hospitals that increase provision of care in outpatient settings by at least 10% compared with the previous period are increased by 1%; conversely, hospitals in which provision of care in outpatient settings falls by at least 5% will see their budgets reduced by 1%. Factors such as accomplishment of previous plans (in terms of provision of planned services) and excess capacity are also taken into account. Lump sums are meant to allow for a more flexible management of financial resources compared with DRGs and streamline provision of hospital care between inpatient and outpatient departments (with the goal of improving continuity and comprehensiveness of care). Lump sums may help eliminate overprovision of services: once the lump sum has been exhausted, the hospital will not receive any additional payment. Non-complex services,[11] such as cataract surgery, planned orthopaedic surgery or endoprosthetics, one-day surgery in orthopaedics and traumatology, are financed via DRGs. Hospitals that are not included in the hospital network participate, as before, in tender procedures and their contracts are based on DRGs.

In addition to the lump sums and DRGs, other payment methods include FFS (e.g. chemotherapy in outpatient departments) and per diem (e.g. emergency department). Elements of pay-for-performance (P4P) are also used. For example, within the programme of coordinated care for people after a myocardial infarction (see Table 5.2) the hospital may receive bonus payments if the patient returns to work within 4 months after the infarction.

Emergency medical care

Services provided by medical emergency teams and the medical emergency dispatch services are funded from portions of the state budget that are administered by the voivodes and contracted by the regional NFZ branches. Emergency medical services provided by the hospital emergency wards (SORs), trauma centres and highly specialized hospitals or hospital wards cooperating with the National Medical Emergency System are reimbursed

[10] Such care is covered by "hospital network" regulations.
[11] Such care is *not* covered by "hospital network" regulations.

separately by the NFZ from its budget, based on the regional medical emergency care plans prepared by each voivodeship. Regulations issued by the Minister of Health in 2014 set out detailed requirements for these plans as well as the criteria for calculating costs of medical emergency care services. Medical air rescue is subordinated to the Ministry of Health and funded from the central budget.

Pharmacological care

Prices of reimbursed medicines are regulated by statutory legislation, i.e. they are established by the Minister of Health as statutory prices (*ceny ustawowe*). Within inpatient care, they are interpreted as the maximum prices (which means that the actual process may be lower). Medicines received as part of inpatient care are free of charge for the patients.

Cost-sharing is applied to medicines administered in the outpatient settings and its extent is substantial (see section 3.4.1). Prices of reimbursed medicines are fixed in the outpatient sector, i.e. these prices cannot be higher or lower than these fixed prices (see section 2.4.4).

3.7.2 *Paying health care professionals*

The majority of health professionals work under employment contracts (Labour Code) and receive a salary. Health professionals working in hospitals may also work under Civil Code contracts.[12] Salaries of doctors who are employed under a residency programme are funded from the budget of the Ministry of Health. As of 1 July 2018, salaries range from PLN 4 000 to 4 700 in the first 2 years of residency (depending on the specialization) and from PLN 4 600 to 5 400 thereafter. For comparison, the minimum gross salary in Poland was PLN 2 100 (approx. €500) (as of January 2018) and the average monthly gross salary was PLN 4 798 (approx. €1 100) (August 2018). As of 1 July 2018, salaries of doctors with a medical specialization

[12] According to Polish law a person (of almost all professions) may be employed with a contract of employment (Labour Code) or a civil contract (Civil Code). Contract of employment gives them stronger protection and a number of rights, including the right to join trade unions, the right to annual leave, the right to fair remuneration and many others. Termination of such contract and many details of the contract are strictly regulated by law. Civil Code contracts give the working person a greater autonomy; for example, the place and time of work may be specified in the contract but this is not mandatory; but persons working under Civil Code contracts also have less protection (fewer rights, less social security protection).

increased to PLN 6 750 on the condition that they work in only one hospital (specialist doctors may additionally be employed in clinics, hospices, medical care homes and nursing homes, medical rehabilitation, and LTC facilities). The 2017 Act on the Method for Determining the Lowest Basic Salary for Employees Performing Medical Professions Employed in Health Care Entities regulates comprehensively minimum basic salaries of medical professionals employed in health care institutions (Table 3.10).

TABLE 3.10 Minimum basic monthly salaries of selected medical professionals, 2019 and 2021

HEALTH CARE PROFESSIONAL	LOWEST BASIC GROSS SALARY UNTIL 31 DECEMBER 2019 (PLN)	LOWEST BASIC GROSS SALARY IN 2021 (PLN)
Doctor or dentist, second grade specialist or holder of the degree of specialist in a specific field of medicine (who work in more than one facility)	4 953	6 351
Doctor or dentist, first grade specialist in a specific field of medicine (who work in more than one facility)	4 563	5 851
Doctor or dentist without a specialization	4 095	5 251
Pharmacist, physiotherapist, laboratory diagnostician with higher education and specialization	4 095	5 251
Pharmacist, physiotherapist, laboratory diagnostician with higher education, without specialization	2 847	3 651
Nurse or midwife with a master degree in nursing or obstetrics, with specialization	4 095	5 251
Nurse or midwife with specialization	2 847	3 651
Nurse or midwife without specialization	2 496	3 201

Source: Sejm RP (2017).

Note: The minimum basic salary is the lowest remuneration received, excluding various allowances, such as traineeship grant, allowance for on-call time, night shift allowance, allowance for work on Sundays and public holidays.

In recent years, the government has been under strong pressure from all medical professional groups to increase salaries in the health sector. The most powerful of these groups are the medical doctors and they have recently used measures such as strikes and refusal to sign the so-called "opt-out clause" to negotiate increases in salaries and improvement in working conditions. This clause waives their rights to EU working time restrictions

and in practice means that doctors may take up additional work shifts and thus work longer than the legal limit of 48 hours a week (Badora-Musiał & Kowalska-Bobko, 2018a).

Health care professionals, such as doctors, dentists and nurses may also establish their own practices (i.e. be self-employed) and receive payment for services according to the payment methods described in section 3.7.1.

4

Physical and human resources

Summary:

- The number of hospital beds is high, with about 6.6 of beds per 1 000 inhabitants in 2016 (4.9 acute beds) compared with 5.1 for the EU (2015 data). However, there is a deficit of long-term care (LTC) beds in residential and nursing facilities – 2.6 beds per 1 000 inhabitants in Poland compared with the EU average of 7.5.
- The majority of hospitals are public and most of them are owned by the territorial self-governments and the Ministry of Health. The types of owner roughly correspond to the types of services provided, with county hospitals providing less complex care than hospitals owned by the voivodeships and the Ministry of Health. This is also reflected in the classification of hospitals introduced within the hospital network in 2017.
- The general condition of public hospital infrastructure is poor and many hospitals struggle to meet the technical and sanitary requirements. In general, availability of specialized medical equipment is lower in Poland compared with the EU averages. Improving the use of IT and e-health solutions in the health sector has been a policy priority for over a decade, but progress has been slow.
- Planning of the health workforce is not well developed and there are shortages of health professionals. These shortages have become more acute due to migration abroad of nurses and physicians. The

ratio of practicing physicians per 1 000 inhabitants is very low – 2.4 in 2016 compared with 3.6 in the EU average.
- The number of practicing nurses is also low – 5.2 per 1 000 inhabitants in 2016 compared with 8.4 for the EU. Identified obstacles to increasing the number of nurses include lack of professions that support the work of nurses and poor working conditions.

4.1 Physical resources

4.1.1 *Capital stock and investments*

Current capital stock

In 2016 there were 926 hospitals in Poland, most of them (65%) public (Table 4.1). The majority of public hospitals (462 or 77%) operate in the form of the so-called independent public health care units (SPZOZs; see Box 2.3). Their ownership structure is fragmented: it is divided between the three levels of territorial self-government (*gmina*, *powiat*, voivodeship), ministries and medical universities. The majority of the SPZOZs (84%) are owned by the territorial self-governments. About a fifth (21%) of public hospitals operate as companies under the Commercial Companies Code with the majority of (or all) shares belonging to the territorial self-governments (given this majority ownership, we classify them as public rather than private).

The types of legal forms under which health care providers may operate are explained in section 2.4.2. Private hospitals operate mainly as companies governed by the Commercial Companies Code. They account for 12% of the total number of hospital beds and are usually small, single specialty units – in 2016, 52% of private hospitals had fewer than 50 beds (Tables 4.1 and 4.2). However, the number of private hospitals has grown in recent years and the number of public SPZOZs has decreased (Dubas-Jakóbczyk, 2017). This was due to transformation of SPZOZs into companies under the Commercial Companies Code, and also to mergers and liquidations. Since private hospitals are not immune from bankruptcy, they are generally more financially stable than their public counterparts. The problem of debts in the public hospital sector has been longstanding (see Box 4.1).

TABLE 4.1 Number of hospitals and beds by type of hospital and ownership form, 2016

TYPE AND OWNERSHIP	NUMBER[a]	BEDS (NUMBER)	BEDS (PERCENTAGE)
SPZOZs:			
Territorial self-governments	389	123 369	58.1
Medical universities	36	19 514	9.2
Ministries	37	7 497	3.5
Total SPZOZs	**462**	**150 380**	**70.8**
Medical institutes	15	6 290	3.0
Commercialized public[b]	123	30 017	14.1
Total public	**600**	**186 687**	**87.9**
Private	326	25 687	12.1
Total	**926**	**212 374**	**100.0**

Source: Based on Dubas-Jakóbczyk (2017).

Notes: [a]Only includes entities with more than 10 beds. This may not be consistent with other statistics as there is no official definition of "hospital" in Poland. For example, hospitals with fewer than 10 beds and/or having only day care beds are also included in the official register of hospitals. [b]Until 2017, official data did not include information on the percentage of shares owned by a public body (usually territorial self-governments). In Table 4.1 we assume that commercialized hospitals with public ownership are public, i.e. they have majority or full public ownership.

TABLE 4.2 Number of hospitals by size, 2016

	PUBLIC				
NUMBER OF BEDS	SPZOZS	MEDICAL INSTITUTES	COMMERCIALIZED PUBLIC[a]	PRIVATE	TOTAL
>500	127 (27.5%)	6 (40.0%)	15 (12.2%)	5 (1.5%)	153 (16.5%)
251–500	144 (31.2%)	4 (26.7%)	36 (29.3%)	19 (5.8%)	203 (21.9%)
151–250	96 (20.8%)	1 (6.7%)	41 (33.3%)	36 (11.0%)	174 (18.8%)
51–150	71 (15.4%)	4 (26.7%)	29 (23.6%)	96 (29.4%)	200 (21.6%)
11–50	24 (5.2%)	0 (0.0%)	2 (1.6%)	170 (52.1%)	196 (21.2%)
Total	**462 (100%)**	**15 (100%)**	**123 (100%)**	**326 (100%)**	**926 (100%)**

Source: Based on Dubas-Jakóbczyk (2017).

Notes: [a]Until 2017, official data did not include information on the percentage of shares owned by a public body (usually territorial self-governments). In Table 4.1 we assume that commercialized hospitals with public ownership are public, i.e. they have majority or full public ownership. The number commercialized public hospitals reported in this table (123) is consistent with the estimates of the Supreme Audit Office (NIK, 2015).

BOX 4.1 The longstanding debt problem of the SPZOZs

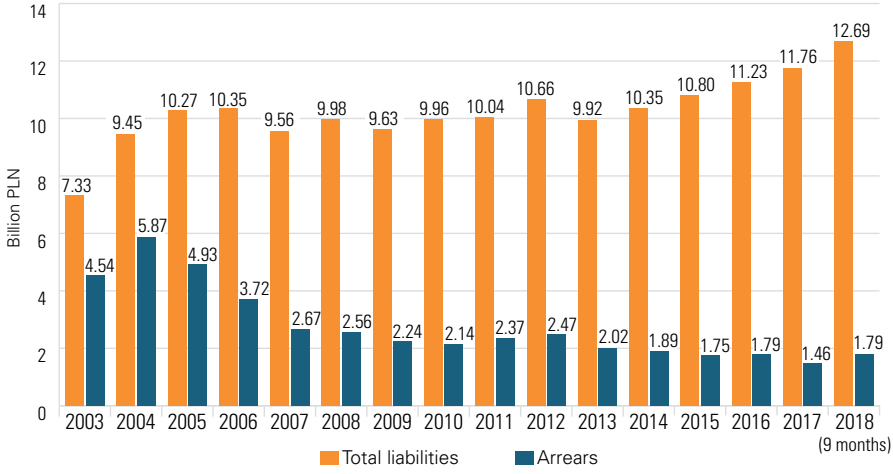
Until the late-1990s the vast majority of public hospitals in Poland operated as budgetary units financed from budgetary sources. They were owned and run by the Ministry of Health (and some other ministries), medical academies, and the voivodeships and these owners were ultimately responsible for their financial obligations. Due to poor management and certain external/structural factors, including insufficient budgets (Sowada, 2014; Sagan & Sobczak, 2014), debts had accumulated in the hospital sector.

In 1991, the legal form of the SPZOZ was introduced by the Act on Health Care Units. This legal form was modelled after the British NHS trusts and was designed to facilitate the development of an "internal market" in health care, ahead of the introduction of universal health insurance in the sickness funds (and later in the NFZ). Between 1993 and 1997 about 100 public health care units were transformed into SPZOZs. The legal form of the SPZOZ has a number of advantages compared with the budgetary units; for example, SPZOZs have the obligation to cover all the costs of their activities from their revenues and follow general accounting regulations (Sagan & Sobczak, 2014). However, it also had a number of shortcomings (for example, the public owners of the SPZOZs were ultimately responsible for their financial obligations and the State has periodically cleared the debts), which resulted in their poor financial management (see Box 2.3). External factors, such as undervaluation of some services by the NFZ and insufficient public sources, have contributed to the accumulation of debts in the hospital sector, which reached PLN 8.5 billion in 1997/98 (Zespół ds przygotowania raportu, 2004; Golinowska et al., 2007). At this point, the government decided to clear the accumulated debts and transform all remaining public hospitals into SPZOZs.

This second "wave" of transformations took place in 1997–1998 and was legally "imposed" by the introduction of universal health insurance in 1999. These transformations had to be done quickly, often with no or minor organizational changes. Debts that had been generated prior to the transformations were cleared. In the same year (1999), a new administrative organization of the country was introduced (see section 1.3 and Box 2.1) and the ownership structure of public hospitals became more complex and fragmented.

Accumulation of debts by public hospitals has continued. Since debts had been cleared or repaid by the state on several occasions, some SPZOZs accumulated debts with impunity, using debts to develop infrastructure, increase wages and employment, etc., expecting that their debts would be extinguished in the future. In 2005, the aid and debt reduction programme for public hospitals was launched. This programme helped stabilized total liabilities of the SPZOZs at the level of around PLN 10 billion and the arrears at under PLN 2 billion. However, the problem of financial instability of the SPZOZs has not been solved, with a large portion of arrears simply rolled over and are covered with new long-term loans (Sowada, 2014). Total liabilities started increasing again after 2013; reaching almost PLN 12 billion in mid-2018 (see Fig. 4.1).

FIG. 4.1 Evolution of the indebtedness of the SPZOZs, in billion PLN, 2003–2018



Sources: Based on Sowada (2014) and MZ (2019).

Classification based on ownership structure was partially reflected in the hospital network implemented in October 2017. Hospitals were divided into seven levels depending on types of services provided (Table 4.3) and were guaranteed public funding for 4 years, without having to participate in competitive tenders for NFZ contracts (see section 3.7.1). The network covers 594 hospitals, the vast majority of them public, representing approximately 145 thousand beds. The network covers only predefined specialties – indicated types of hospitals wards/ ambulatory clinics. Thus in some hospitals (with wards structures substantially different from those proposed in regulations) half of the wards and outpatient services might be included in the network, while the remaining are contracted on unchanged principles, outside the network. Services provided within the network include, in addition to inpatient care, ambulatory specialist care in outpatient hospital departments, rehabilitation services and out-of-hours care provided during night time and holidays. Psychiatric hospitals and long-term care facilities are not included.

Although there are no formal reference levels for hospitals, for public hospitals the type of owner usually corresponds with the type of services provided. Thus, counties and cities with a county status usually own general hospitals, which provide basic services for the local communities; voivodeships own more specialized hospitals that cover their respective populations

TABLE 4.3 Hospitals included in the hospital network, October 2017

HOSPITAL NETWORK LEVEL		TYPE OF HOSPITALS	NUMBER OF HOSPITALS
Basic	Level 1	Hospitals with four departments: surgery, internal diseases, gynaecology and obstetrics, and paediatrics (mainly county hospitals)	283
	Level 2	Hospitals with four basic departments and at least two specialized departments, including anaesthesiology and intensive therapy (usually larger county and some city hospitals)	96
	Level 3	Hospitals with four basic departments and at least eight specialized departments, including anaesthesiology and intensive therapy, and infectious diseases (usually regional hospitals)	62
Specialist	Paediatric	Single specialty – paediatrics	13
	Oncology	Single specialty – oncology	20
	Pulmonology	Single specialty – pulmonology	30
	Pan-regional or national	Institutes and clinics, university hospitals	90
Total			**594**

Source: MZ (2018f).

and provide more complex services, while universities and ministries own highly specialized units that provide care of the highest complexity to the entire population of the country.

Condition of facilities

There are no regular, comprehensive surveys of condition of hospital facilities. According to the Ministry of Health the general condition of health care infrastructure is poor and in need of investment, with numerous hospital buildings being older than 100 years (MZ, 2017c). Indeed, old and largely obsolete infrastructure constitutes a major problem for many hospitals: many hospitals struggle to meet the technical and sanitary requirements set by the Ministry of Health. As a result, the official deadline until which hospitals need to meet predefined technical standards had to be postponed several times. The final deadline was set as 31 December 2017. Providers that failed to meet this deadline were obligated to undergo a formal assessment by the Chief Sanitary Inspectorate (the assessment is meant to determine whether

the failure to meet the standards poses any risk to patients and issues an administrative decision on whether the provider should be allowed to continue providing the services).

Regulation of capital investment

Until 2016, there were no direct mechanisms regulating capital investments in the health sector. As a consequence, investments were largely uncoordinated and similar investments (e.g. in MRI scanners) were made in neighbouring hospitals or investments did not reflect the actual health needs (NIK, 2013b; MZ, 2015). In September 2016 the "Evaluation Instrument of Investment Motions in Health Care" (*Instrument Oceny Wniosków Inwestycyjnych w Sektorze Zdrowia*, IOWISZ) was introduced to improve the allocation of resources in the health sector. Plans for new investments in the health sector that require public co-financing, including from the EU (see section 3.6.2), must undergo a formal assessment by the IOWISZ. (Initially the assessment was obligatory for all with the value of more than PLN 3 million spent over 2 years. This threshold was abolished in April 2018.) The assessment takes into consideration regional health policy priorities, identified health needs (in accordance with the health needs maps (see section 2.4), existing resources, current (evidence-based) medical standards and whether the investment contributes to the improvement of health care organization). In the first year of operation of IOWISZ, 1 000 applications were submitted and 70% received a positive appraisal (Dubas-Jakóbczyk et al., 2018).

Investment funding

Capital investment is funded separately from financing of health services delivery (which is contracted by and paid for by the NFZ). Public hospitals can receive a dedicated subsidy for investment purposes from their owners (i.e. territorial self-governments in most cases) and from the state budget (in 2017, the Ministry of Health pledged to increase investment in highly specialized hospitals; MZ, 2017a). Investments can also be funded from other sources, including external funds (e.g. EU funds), commercial bank loans as well as charitable donations. From 2004, EU structural funds have been

an important source of capital investment funding (see section 3.6.2), with hospital owners usually co-financing the investment (typically 15–30% of the total). Investments in private hospitals are funded from the owners' own capital and/or bank loans (Dubas-Jakóbczyk & Kamińska, 2017).

Investment funding via public–private partnership initiatives is not very popular in the Polish health sector (Herbst et al., 2014). Although appropriate regulations exist (the 2008 Act on Public–Private Partnership) only four public–private partnership agreements were concluded in the health care sector between 2009 and mid-2017. Their total value was PLN 150 million and they accounted for 2.6% of the total value of all public–private partnership agreements concluded in that period (IPPP, 2017).

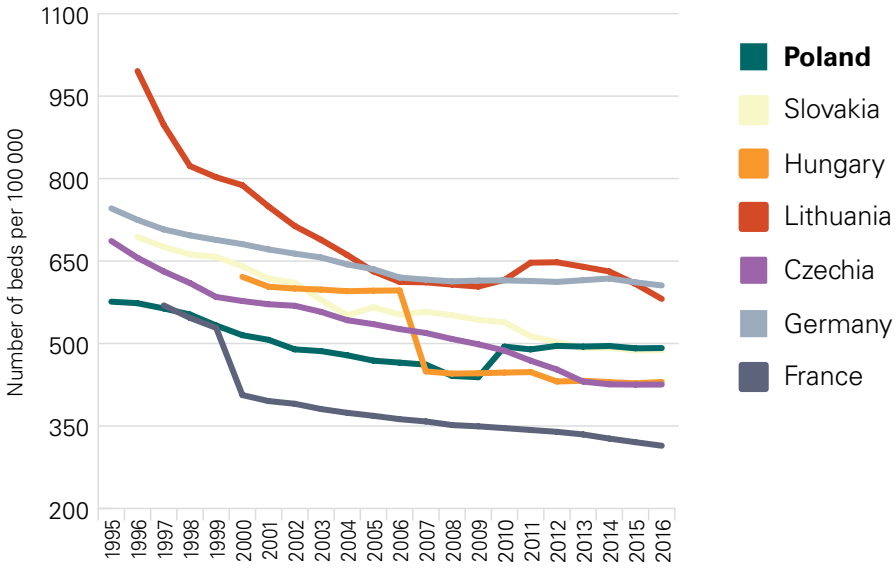
4.1.2 *Infrastructure*

Between 1990 and 2009 the number of acute hospital beds decreased significantly – from 6.3 to 4.4 per 1 000 inhabitants, which was in line with the trend observed in western Europe (Fig. 4.2). The ratio then stagnated at approximately 4.9[13] beds per 1 000 inhabitants between 2010 and 2016 while it continued to fall in western Europe: the average for EU-15 Member States fell to 3.8 in 2014. There have not been any central initiatives to reduce the number of beds – this can probably be explained by the fragmentation in hospital ownership (see section 4.1.1).

In general, although the total number of hospital beds is higher in Poland (6.6 per 1 000 inhabitants in 2016) than in the EU on average (5.1; 2015 data), there is a deficit of long-term care (LTC) beds in nursing and residential care facilities. In 2016 there were 1.9 LTC beds per 1 000 inhabitants in Poland, which is very low in relation to the comparator countries, where this figure ranged from 6.8 per 1 000 in Czechia to 11.4 in Germany (EC, 2019a).

[13] This higher figure (4.9) compared with the 2009 figure (4.4) is the result of a change in the methodology, i.e. the inclusion of beds and incubators for new-borns in the number of general hospital beds.

FIG. 4.2 Beds in acute hospitals per 100 000 population in Poland and selected countries, 1995–2016



Source: EC (2019a).

BOX 4.2 Assessing the geographical distribution of health resources

The number of general (i.e. not specialist) hospitals beds per 1 000 inhabitants varies between the voivodeships. In 2017, this ranged from 3.9 in the Pomorskie voivodeship to 5.5 in the Śląskie voivodeship (for the location of voivodeships/districts see Fig. 1.1). There are also significant regional differences in the availability of highly specialized medical equipment. For example, in 2017, the number of MRI scanners per 100 000 inhabitants ranged from 0.3 in the Opolskie voivodeship to 1.2 in the Kujawsko-Pomorskie voivodeship. Two (out of 16) voivodeships had no PET-CT scanners although there were 24 such scanners across the country (with 10 of them located in two voivodeships) (CSIOZ, 2018b).

4.1.3 *Medical equipment*

Regulation of medical devices and aids

Procurement of equipment and medical supplies by public health care providers is regulated by the Act on Public Procurement and usually takes the form of open tenders. There are no formal joint procurement schemes but joint procurement does take place; for example, procurement can be coordinated for all hospitals owned by one voivodeship.

Equipment infrastructure

In theory, contracts with the NFZ for the provision of guaranteed services should be sufficient to cover the cost of medical equipment required for the provision of these services. In practice, such investments are funded by the Ministry of Health (mainly in highly specialized hospitals), hospital owners (territorial self-governments), external sources (e.g. EU funds) or from individual and institutional donations (e.g. WOŚP) (see section 3.6.2).

In general, the availability of specialized medical equipment is lower in Poland compared with the EU (on average) (Table 4.4). The majority of this equipment is located in hospitals.

TABLE 4.4 Number of equipment per 100 000 inhabitants and share of equipment in hospital settings (%) in Poland (2017) and selected EU countries (2016)

	POLAND[a]	CZECHIA	SLOVAKIA	HUNGARY	LITHUANIA	GERMANY	FRANCE
CT *% in hospitals*	1.6 *79*	1.6 *92*	1.7 *77*	0.9 *n/a*	2.3 *79*	3.5 *54*	1.7 *75*
MRI *% in hospitals*	0.8 *67*	0.9 *84*	0.9 *37*	0.4 *n/a*	1.2 *49*	3.5 *35*	1.4 *66*
PET-CT *% in hospitals*	0.1 *71*	n/a –	n/a –	n/a –	n/a –	n/a –	n/a –
Gamma camera *% in hospitals*	0.4 *85*	1.2 *90*	0.5 *85*	1.2 *n/a*	0.3 *100*	0.7[b] *n/a*	0.7 *78*

Sources: CSIOZ (2018b); EC (2019a).

Notes: n/a: not applicable; [a]For Poland 2017; [b]Only in hospitals.

4.1.4 *Information technology and e-Health*

The main legal act regulating IT development in the health sector is the 2011 Act on Information Systems in Health Care. This Act sets out the rules for organization, management and coordination of information systems in the health sector. The Centre for Health Information Systems (CSIOZ) is the key institution responsible for the implementation of IT solutions in the health system (see Table 2.1). Between 2011 and 2015, strategic direction for e-Health development was guided by IT directions "e-Health Poland" for 2011–2015 (*Kierunki informatyzacji „e-Zdrowie Polska" na lata 2011–2015*). A new strategic document in the area of e-health is currently being developed as a part of a wider strategy of IT development in public institutions in Poland coordinated by the Ministry of Digital Affairs (MC, 2016).

Access to information technology has improved considerably in recent years. According to official statistics, the share of households having a computer increased from 54% to 82% between 2007 and 2017, while the share of households with Internet access increased from 41% to 84.2% in the same period (GUS, 2008; GUS, 2018j). The gap between Poland and the EU decreased significantly – in 2015 both indicators were lower than the respective EU averages but only by a few percentage points. According to Eurostat data, the share of Poles seeking health information online increased from 22% in 2009 to 48% in 2018 (for the EU, the figures were 33% in 2009 and 52% in 2018) (EC, 2019b).

Although development of IT and e-health solutions in the health sector have been official policy priorities for over a decade, in practice, implementation has been slow and patchy (NIK, 2013a; Kautsch, Lichoń & Matuszak, 2016). For example, the official deadline for the implementation of electronic medical documentation within the project titled "Electronic Platform for Collection, Analysis and Sharing of Digital Medical Records (P1)", which includes e-prescriptions and e-referrals, was initially planned for 2014 but has been postponed several times. E-prescriptions have been piloted since February 2018 with the aim of achieving national coverage by 2020 and e-referrals have been piloted since mid-October 2018 and their full implementation is planned in 2021. According to a survey conducted in 2018 over half of medical providers had the necessary infrastructure to introduce electronic documentation (CSIOZ, 2018a). Yet, the rate of progress varied between different types of providers (Table 4.5). Conducted

audits identified several reasons for these delays: lack of a reliable analysis of existing IT resources at the level of individual health care providers; lack of coordination and compatibility among central, regional and local IT systems; and delays in developing executive regulations specifying technical requirements for IT solutions in health care (NIK, 2013a; Kautsch, Lichoń & Matuszak, 2016; MC, 2016).

In general, computers with Internet access are used in the vast majority of health care providers, regardless of the level and/or type of care. In ambulatory care units they are mainly used for registering patients and other administrative purposes. Use of IT solutions during medical consultations in primary and specialist ambulatory care is low, particularly in solo doctor practices and small to mid-size ambulatory care units. Implementation of IT solutions is more advanced in the hospital sector compared with outpatient care, yet still requires much progress. In 2018, 66% of hospitals had the infrastructure allowing them to use electronic medical documentation, 47% used e-registration and 40% used telemedicine. The biggest hospitals (with more than 500 beds) and some university and/or highly specialized hospitals were the most advanced in terms of the implementation of IT solutions (NIK, 2013a).

TABLE 4.5 Progress in implementing IT solutions by type of provider, 2018

	AMBULATORY CARE[a]	HOSPITALS	LONG-TERM CARE
	PROVIDERS WITH A POSITIVE ANSWER (%)		
IT strategy for the years ahead?	37.9	53.1	46.2
IT infrastructure that allows the introduction of basic electronic medical documentation (allowing collection of individual data)?	53.2	66.3	50.6
Use of e-services in cooperation with other providers?	14.8	24.2	15.6
Availability of e-registration?	27.7	46.7	24.0
Use of electronic systems to support medical decisions?	4.5	7.8	5.5
Use of electronic systems to support management decisions?	4.1	13.2	8.7
Use of telemedicine (e.g. e-diagnostics, tele-consultations)?	10.9	40.4	22.7

Source: CSIOZ (2018a).

Notes: Based on survey data covering 4 184 medical providers representing 12% of all ambulatory care units, 53% of hospitals and 59% of LTC institutions. [a]The results are representative for larger ambulatory care units.

4.2 Human resources

4.2.1 *Planning and registration of human resources*

Planning of the health workforce is not well developed, partly due to the lack of comprehensive data and analysis in this area (Domagała & Klich 2018). According to the Polish Supreme Audit Office, training of medical workers does not assure a sufficient number of medical specialists adapted to the changing health care needs of the population (NIK, 2016a). A comprehensive human resources strategy, taking into account epidemiological and demographic trends, is also lacking (NIK, 2016a). However, efforts are being made to develop strategies for health professions with particularly acute shortages. To that end, in December 2017 the government published a strategic document that sets out short-, medium- and long-term goals for the development of nursing and midwifery in Poland (MZ, 2017d).

The Minister of Health has the ultimate responsibility over the number of medical training places (for physicians and dentists). The Minister of Health, in consultation with the Minister of Higher Education, sets admission quotas for medical studies – in each academic year and for each university. Admission quotas for other health professions were abolished in 2012/13. These quotas depend on the teaching capacities of universities (e.g. teaching staff, available infrastructure for clinical courses, etc.). Medical training for physicians used to be typically offered at medical universities; however, there were shortages of physicians, especially in voivodeships with no medical universities. In order to fill this gap, medical studies have been offered in non-medical universities in these voivodeships (Olsztyn (since 2008), Rzeszów, Kielce, Zielona Góra (since 2015) and Opole (since 2017)). These initiatives were supported by the voivodeship self-governments and the voivodeship chambers of physicians. In 2017, physicians were trained at 17 public universities, of which 12 were medical universities. There are also three private universities providing medical training for physicians – one in Krakow (since 2016), one in Warsaw (since 2017) and one in Katowice (since 2018).

Undergraduate education is financed from the state budget, although the majority of universities also offer the so-called "extra-mural" studies, for which students have to pay for. The content and form of "extra-mural"

(paid) studies is the same as for regular studies, which are free of charge. In 2015/2016, there were about 3 200 medical graduates (Table 4.6). Dental education may be obtained at 10 medical universities.

TABLE 4.6 Numbers of medical graduates (medical doctors and dentists), 2010/11–2015/16

	MEDICAL DOCTORS			DENTISTS		
ACADEMIC YEAR	REGULAR STUDIES[a]	EXTRA-MURAL STUDIES[b]	TOTAL	REGULAR STUDIES[a]	EXTRA-MURAL STUDIES[a]	TOTAL
2010/2011	2 610	116	**2 726**	828	51	**879**
2011/2012	2 674	149	**2 823**	792	51	**843**
2012/2013	2 831	143	**2 974**	742	102	**844**
2013/2014	2 763	207	**2 970**	743	65	**808**
2014/2015	2 875	312	**3 187**	734	95	**829**
2015/2016	3 000	238	**3 238**	702	105	**807**

Source: Domagała (2017).

Notes: The numbers exclude foreign students. [a]Full-time studies that are free of charge and are funded from the state budget; [b]Studies that are paid for by the students.

Nurses and midwives can be trained at both public and private higher education institutions (including universities). In 2017, 54 public and 36 private higher education institutions were accredited by the Minister of Health for nurse training and 18 public institutions for training in midwifery (MZ, 2017d). In that year, 4 090 students graduated with a bachelor's degree in nursing (749 in midwifery) and 3 039 with a master's degree in nursing (444 in midwifery) (Table 4.7). In 2016, 13.4% of practicing nurses and 17% of practicing midwives had a master's degree.

All Polish physicians, dentists, pharmacists, nurses, midwives, laboratory diagnosticians and medical rescuers have to participate in continuous medical education (CME). This is monitored by the relevant professional chambers (by the voivodes for medical rescuers). Medical professionals who have been professionally inactive for more than 5 years must notify the relevant professional chamber and be retrained at their own expense or their right to practice will be suspended.

TABLE 4.7 Number of graduates of nursing and midwifery, 2013/14–2016/17

	NURSING		MIDWIFERY		
ACADEMIC YEAR	BACHELOR'S DEGREE	MASTER'S DEGREE	BACHELOR'S DEGREE	MASTER'S DEGREE	TOTAL
2013/14	5 609	2 344	828	510	**9 291**
2014/15	4 383	3 080	764	568	**8 795**
2015/16	3 826	2 353	745	253	**7 177**
2016/17	4 090	3 039	749	444	**8 322**

Source: MZ (2017d).

Registration of human resources

Polish physicians, dentists, pharmacists, nurses and midwives, laboratory diagnosticians, pharmacists and physiotherapists are associated in professional chambers (see section 2.1). Membership in a professional chamber is obligatory for all practicing health professionals. Chambers maintain central registers of licensed (with the right to practice) and actively practicing professionals. The national chambers collect detailed data regarding age, sex, geographical distribution and specialization of their members. The chambers are also responsible for monitoring participation in CME.

Physicians, dentists, nurses, midwives and pharmacists can apply (within their professional chambers) for certificates confirming their professional qualifications and giving them the legal right to practice in other EU countries on the basis of EU Directive 2005/36/EC.

4.2.2 *Trends in the health workforce*

According to information collected by the national professional chambers about 567 thousand health professionals had the right to practice in Poland in 2017. Out of these, there were 146 thousand physicians (25.7%), 292 thousand nurses (51.4%), 41.3 thousand dentists (7.3%), 37.7 thousand midwives (6.6%), 34.8 pharmacists (6.1%) and 16 thousand diagnosticians (2.8%) (GUS, 2019). The numbers of actually practicing health care professionals employed in health care units are presented in Table 4.8. Human resources

statistics are collected by several institutions and this results in inconsistencies in official statistics. It also makes it difficult to accurately assess how many health professionals work in the health care system. It is hoped that the online Medical Registers Platform, which is currently in development, will improve the situation.

TABLE 4.8 Number of health professionals working in health care units by profession, 2015–2017

	2015	2016	2017
Medical doctors	86 533	89 819	88 351
Dentist	12 579	13 283	13 307
Nurses	185 860	184 400	183 687
Midviwes	22 051	22 400	22 257
Physiotherapists[a]	17 491	24 022	24 421
Medical rescuers	13 083	13 217	13 900
Laboratory diagnosticians	8 284	8 975	9 566

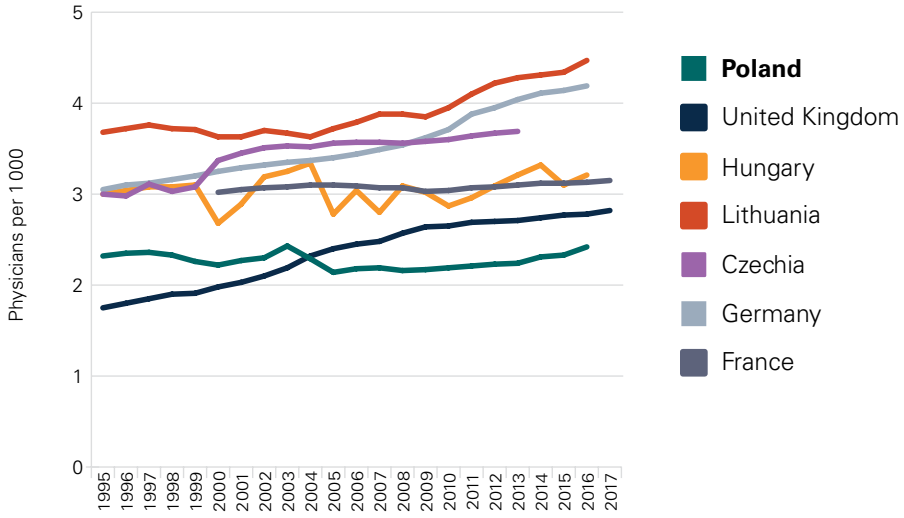
Source: CSIOZ (2018b).

Notes: Pharmacists are not included since the majority of pharmacists work outside health care units. [a]New legislation regarding registration of physiotherapists came into force in 2016 (Act on the Profession of Physiotherapist).

According to 2015 OECD data, employment in health and social work as a share of total employment in Poland was only 5.9% compared with 10.1% in OECD countries on average (OECD, 2017). Poland has the lowest ratio of practicing physicians per 1 000 population among the EU countries – 2.4 in Poland in 2016 compared with 3.6 in the EU on average (2016 data; OECD, 2018a). Further, the number of practicing doctors per 1 000 inhabitants has remained reasonably constant in Poland, although some growth can be seen since 2013 (Fig. 4.3). The majority of Polish doctors are females – 56.9% in 2015 compared with the OECD average of 46.5%. According to data published by the National Chamber of Physicians, the average age of medical doctors in Poland in 2017 was 50.2 (or 54.2 for specialists). Over 26% of Polish physicians are over 60 and only about 22% are younger than 35 (NIL, 2018a).

In 2017, about 66% of Polish physicians were specialists (NIL, 2018b). Postgraduate training in family medicine was introduced in Poland in 1993.

FIG. 4.3 Number of physicians per 1 000 population in Poland and selected countries, 1995–2017



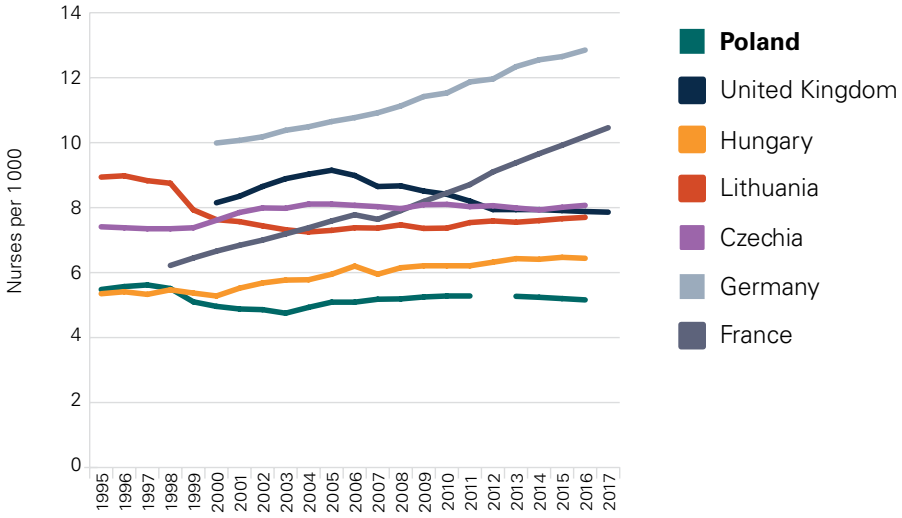
Source: OECD (2018a).

However, family medicine is not a popular specialization (see section 4.2.4) and in 2017 only 11% of all physicians were family medicine specialists (CSIOZ, 2018b). Given the low number of such specialists, internal medicine specialists and paediatricians are allowed to work as family medicine physicians (Mokrzycka et al., 2016). According to OECD data, about 9% of all physicians in Poland work as general practitioners. This is low compared with the average among 23 EU countries where it is 23% of all physicians (2016 data; OECD, 2018a). Currently, development of family medicine and primary care is one of the key issues of health care reforms implemented in Poland (see section 6.1). The available data does not allow us to say what share of specialists work in ambulatory versus hospital settings and what share work in academia.

In 2016, the number of practicing nurses per 1 000 population was 5.2 and it was significantly lower than the EU average of 8.4 (OECD, 2018a). About a third of practicing nurses were aged 46–55 (NIPiP, 2017). To offset the low number of nurses, in 2007 the profession of medical caregiver (*opiekun medyczny*) was introduced. Since they are auxiliary staff, medical caregivers cannot establish individual practices and be directly contracted by the NFZ and hence there is no data on the exact number of medical caregivers

employed within the health care system. In spite of this, the Strategy for the Development of Nursing and Midwifery in Poland published by the Ministry of Health in 2017 found that one of the obstacles in this area was the lack of care professions supporting the work of nurses (MZ, 2017d). Other identified obstacles include insufficient regulations regarding the number and qualifications of nurses and midwives performing guaranteed services (and insufficient definition of their roles and competences in the health care system); not meeting the minimum employment standards by health care providers operating under contracts with the NFZ; and poor working conditions (MZ, 2017d).

FIG. 4.4 Number of nurses per 1 000 population in Poland and selected countries, 1995–2017



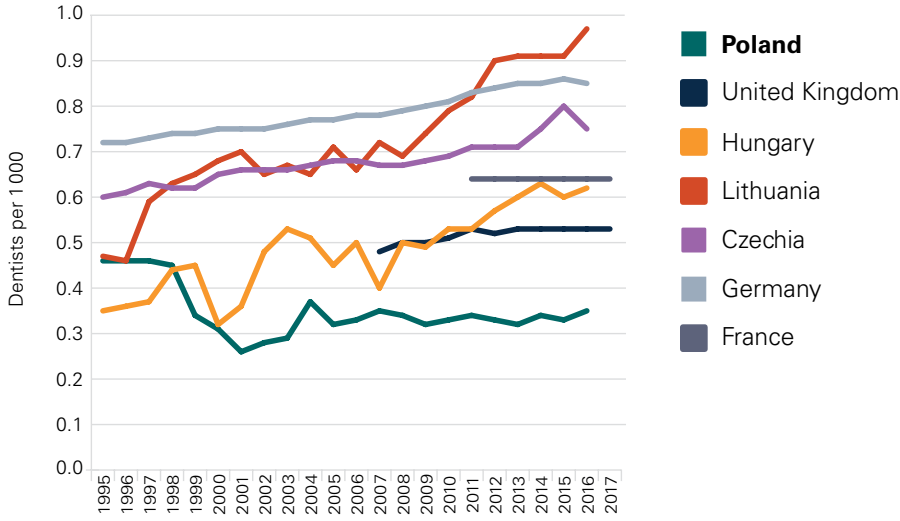
Source: OECD (2018a).

Note: Data for France relates to professionally active nurses.

In 2017, the number of practicing dentists per 1 000 inhabitants in Poland was 0.35 (Fig. 4.5). In 2017, 2 850 dentists (20.9% of all dentists) had a specialization (CSIOZ, 2018b).

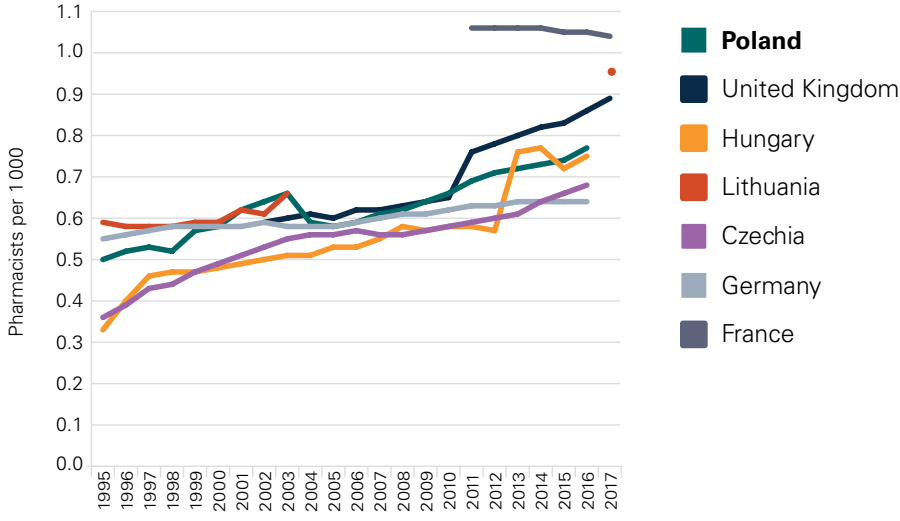
In 2017, 26 495 among the 34 797 registered pharmacists (79%) were actively practicing. The number of practicing pharmacists per 1 000 inhabitants was 0.77 (Fig. 4.6). According to the National Statistical Office, 90% of practicing pharmacists were working directly with patients in pharmacies

FIG. 4.5 Number of dentists per 1 000 population in Poland and selected countries, 1995–2017



Source: OECD (2018a).

FIG. 4.6 Number of pharmacists per 1 000 population in Poland and selected countries, 1995–2017



Source: OECD (2018a).

(GUS, 2019). There is no information about the share of pharmacists working in community pharmacies and in hospital pharmacies.

Managerial staff

The profile of the managerial staff in the health systems has changed significantly over the years. Currently, there are no clearly defined formal requirements regarding the qualifications of managerial staff, although they generally include a university degree, work experience and no criminal record.

Managers typically have a medical degree, although the share of managers with a medical background has been falling (Czabanowska et al., 2017), and a postgraduate degree in management studies, often specifically in health care management.

BOX 4.3 Evaluating the geographical distribution of health workers employed in health care units

The geographical distribution of medical staff working in health care units is an important factor that affects access to health care services. In 2017, there were significant differences among the voivodeships in the distribution of various types of health professionals (Table 4.9). For example, the number of doctors per 10 000 population ranged from 15.6 in the Wielkopolskie voivodeship to over 26.3 in the Łódzkie voivodeship. Similar differences were also observed for other types of health professionals. The largest concentrations of physicians are observed in the voivodeships with medical universities and highly specialized medical centres and there are shortages of physicians in the voivodeships with no medical universities (see section 4.2.1). In order to fill this gap, since 2008 medical studies have been offered in non-medical universities in these voivodeships. Further, the density of health workers is much lower in rural areas compared with urban settings, reflecting the distribution of the health care infrastructure.

TABLE 4.9 Geographical distribution of health care workers employed in health care units (per 10 000 inhabitants), 2017

VOIVODESHIP	PHYSICIANS	DENTISTS	NURSES	MIDWIVES	LABORATORY DIAGNOSTICIANS
Poland (average)	**23.0**	**3.5**	**47.8**	**5.8**	**2.5**
Dolnośląskie	21.8	3.0	47.1	5.0	2.4
Kujawsko-pomorskie	24.1	3.8	49.3	5.8	2.8
Łódzkie	26.3	3.8	46.2	6.3	2.4
Lubelskie	24.4	3.9	55.5	7.0	2.5
Lubuskie	20.0	5.8	44.2	5.4	1.5
Małopolskie	24.0	4.4	50.8	5.9	3.2
Mazowieckie	25.5	2.9	48.6	5.5	3.0
Opolskie	19.8	3.9	46.4	5.0	1.8
Podkarpackie	21.4	4.5	55.3	7.3	2.6
Podlaskie	24.1	3.8	48.6	6.4	2.7
Pomorskie	23.0	3.5	39.1	4.9	2.5
Śląskie	24.8	3.3	53.4	5.9	2.4
Świętokrzyskie	23.5	3.9	55.6	6.4	2.6
Warmińsko-mazurskie	19.9	3.7	43.1	4.8	1.8
Wielkopolskie	15.6	0.7	36.7	5.9	2.1
Zachodniopomorskie	24.6	4.8	42.1	5.3	1.8

Source: CSIOZ (2018b).

Note: Pharmacists are not included since the majority of pharmacists work outside health care units. Areas marked in blue have the highest numbers of health care workers per 10 000 inhabitants; yellow areas have the lowest health care workers ratios.

4.2.3 *Professional mobility of health workers*

Migration of medical staff abroad is an important problem in Poland. The main reasons for this are difficult working conditions, with low salaries, heavy workload and long hours; barriers to professional development, including problems related to postgraduate medical education (limited number of residencies for certain medical specialties, low remuneration of resident doctors undergoing specialization training). For the same reasons, Poland is

not an attractive destination for foreign-trained health workers. In 2015 the share of foreign-trained doctors in Poland was only 1.8% of the total number of medical doctors compared with the average of 28 OECD countries of 16.9% (OECD, 2017). The share of foreign-trained nurses, midwives and other health professionals is even lower and is not included in the official statistics. The exact scale of health workforce migration abroad is not known due to incomplete data and does not allow for effective monitoring of the problem (NIK, 2016a; Domagała & Klich, 2018).

For physicians and nurses the scale of outward migration is estimated on the basis of the number of certificates issued by the respective professional chambers confirming professional qualifications that give legal right to practice in other European Union Member States (EU Directive 2005/36/EC). Between Poland's EU accession in 2004 and mid-2016, almost 9 400 certificates were issued for physicians (about 7.1% of practicing doctors) (Domagała & Klich, 2018). According to the National Chamber of Nurses and Midwives, between Poland's EU accession and end-2017, over 20.5 thousand nurses obtained such certificates (NIPiP, 2018).

Many nurses undertake jobs in EU countries as medical caregivers and do not apply for certificates confirming their professional qualifications. According to data published by the destination countries, over 6 500 decisions regarding the recognition of qualifications were taken between 2004 and September 2018 regarding Polish nurses (over 5 300 were positive) and over 600 regarding Polish midwives (almost 450 were positive) (Rutkowska, 2018). The majority of nurses had their qualifications recognized in the United Kingdom, Germany, Ireland, Norway and Belgium, while the majority of midwives had their qualifications recognized in Germany and the United Kingdom (MZ, 2016c).

4.2.4 *Training of health personnel*

The standards of education for health personnel are defined by the Minister of Science and Higher Education in consultation with the Minister of Health. These standards take into account EU regulations on the requirements for education and training to practice as a medical doctor, dentist, pharmacist, nurse and midwife.

Physicians and dentists

It takes 6 years to complete undergraduate education for medical doctors (at least 5 700 hours of theoretical and practical training) and 5 years for dentists. All medical graduates have to complete a postgraduate internship at an accredited hospital. This internship lasts 13 months for medical and 12 months for dental graduates and ends with the State Medical Examination (*Lekarski Egzamin Końcowy*, LEK) or the State Dental Examination (*Lekarsko-Dentystyczny Egzamin Końcowy*, LDEK). Exams are carried out by the Medical Examination Centre and are offered twice a year (in spring and autumn). Students who passed the exam and completed the postgraduate internship receive the full right to practice and can be listed in the register of physicians and dentists. They can then apply for postgraduate specialist training in the chosen discipline. However, specialization places are limited and specializations with the highest numbers of places available are not necessarily popular among physicians (e.g. family medicine). According to data from the Chief Medical Chamber about 25% of available residency places are not filled (NIL, 2015). Foreign physicians and dentists need to obtain consent from the Ministry of Health to enter specialty training in Poland.

Until 1999, specialization training was divided into two levels: level I specialization was awarded after 2–3 years of training, and those who decided to continue were awarded level II specialization after further 2 years of training. In 1999, this two-level system was abolished and replaced by "basic" and "specific" specialization training, with specialist training for "basic" specialties, such as internal medicine or family medicine, usually lasting between 4 and 6.5 years and "specific" training lasting a further 2–3 years and covering specialties such as vascular surgery, endocrinology and geriatrics. Further changes have been implemented since October 2014: the 2011 amendment to the Act on the Professions of Physician and Dentist replaced the system of "basic" and "specific" specialties with a modular system. Specialist training in a specific area of medicine currently consists of a core module, covering basic theoretical knowledge and practical skills in a given field of medical specialization (there are five basic modules: general surgery, otorhinolaryngology, pathology, paediatrics and internal medicine) and a subsequent specialist module, corresponding to the chosen area of specialization in which physicians may continue specialist training after completing the chosen basic module (there are 41 specialties). There are also 28 specialties within

uniform modules (integrating training of both basic and specialist modules). In total, there are 77 medical and nine dental specialties under the current system. Specialist training for medical doctors usually lasts between 4 and 6 years and for dentists between 3 and 6 years.

There are five ways of undergoing specialist training: residency training (it is financed from the state budget and guarantees employment during the training period), under an employment contract, training while on paid study leave (granted to hospital employees for the period of training), training as part of PhD studies and volunteering. Specialty training can be undertaken only in institutions accredited by the Ministry of Health that meet certain educational standards. In 2012 the Ministry of Health classed 16 specialties as priority specialties (anaesthesiology and intensive therapy; oncological surgery; geriatrics; oncological gynaecology; haematology; emergency medicine; family medicine; neonatology; paediatric neurology; clinical oncology; oncology and paediatric haematology; pathology; paediatrics; psychiatry of children and adolescents; oncological radiotherapy; paediatric dentistry) – this classification takes into account shortages in particular medical fields. Another response to physician shortages was increasing the total number of residency places funded from the state budget in 2015 (Table 4.10).

Specialty training is concluded with the State Specialization Exam (*Państwowy Egzamin Specjalizacyjny*, PES), which is organized twice a year and awards a specialist diploma. The Centre for Medical Examinations is responsible for the organization of the PES and other exams related to postgraduate and continuous education (CE) programmes for physicians, pharmacists and other health professionals (see below).

TABLE 4.10 Residency places for medical specializations (excluding dental specializations), 2012–2016

YEAR	SPRING SESSION	AUTUMN SESSION	TOTAL
2012	420	2 441	**2 861**
2013	511	2 388	**2 899**
2014	462	2 441	**2 903**
2015	1 545	5 667	**7 212**
2016	1 864	3 966	**5 830**

Source: Domagała (2017).

Physicians and dentists are obliged to continue acquiring new skills and advancing their professional qualifications throughout their professional lives. This obligation can be fulfilled through self-education and participation in various forms of CE training, for which educational points are awarded. Physicians must collect 200 educational points within 4 years. Failure to fulfil this requirement can lead to the physician having to undertake mandatory training at their own expense.

Nurses and midwives

In 1995, the traditional study programme at nursing and midwifery colleges was replaced by a new system based on bachelor's and master's degrees that conform to EU standards (Directive 2005/36/EC). Nurses and midwives who had previously graduated from nursing and midwifery colleges or medical vocational schools have been able to upgrade their education in the so-called bridging studies since 2004. Completion of the bridging studies is equivalent to a bachelor's degree.

Based on the 1996 Act on the Professions of Nurse and Midwife, nurses and midwives have the obligation to continuously update their knowledge and skills and the right to participate in different forms of voluntary postgraduate training (however, there is no minimum requirement on the number of educational points they have to acquire). Nurses can choose from 13 areas of postgraduate specialist training, midwives from two, and there are two areas of training that can be attended by both nurses and midwives (neonatal nursing and epidemiological nursing). The number of nurses and midwives who have completed their specialization training was 55 286 in 2018, which is less than 20% of the total number of registered nurses and midwives (CKPPiP, 2018). Specialist training is subsidized by the Ministry of Health. Enrolment limits and subsidies vary from year to year, depending on the demand in the various areas of specialization. Next to specialist training, postgraduate training is also available in the forms of qualification courses, specialist courses and CE courses (*kursy dokształcające*).

Pharmacists

According to the 1999 Act on the Pharmaceutical Chambers, pharmacist licenses are awarded to those who have graduated from 5-year university-level studies in pharmacy, completed a 6-month traineeship and obtained the professional qualification of master in pharmacy (or an equivalent diploma granted by an EU country). Graduates in pharmacy can obtain postgraduate specialist training in 12 specialties.

Physiotherapists

In 2015 the Act on the Profession of Physiotherapist was passed – the first legal act dedicated specifically to this professional group. In order to become a physiotherapist one should: complete a uniform 5-year master's programme in the field of physiotherapy, undergo a 6-month professional practice and pass the State Physiotherapy Examination. Specialization training is available and ends with the State Specialization Physiotherapy Examination.

4.2.5 *Physicians' career paths*

After completing the medical studies, passing the state examination and completing the 13-month practical training, the physician obtains the right to practice and can begin specialty training. After completing specialty training and passing the state examination, the physician obtains the title of a specialist in a particular medical discipline. Many physicians undertake PhD studies and may pursue academic career. The PhD title will also facilitate professional progression outside the academia. The prevailing model of hospital management in Poland is a system based on heads of wards. Physicians with managerial positions often undertake postgraduate studies in health care management as obtaining higher professional titles, such as head of ward, requires additional training.

4.2.6 *Other health care workers' career paths*

Health care workers other than medical doctors may also advance professionally by undergoing specialty training or postgraduate studies (which entails the assumption of more responsibilities) or by assuming managerial positions. For example, nurses and midwives may be promoted to chief nurse or midwife in a ward or part of a ward, or may be promoted to hospital vice-director responsible for nursing. Promotion is based on competitive selection procedures.

5

Provision of services

Summary:

- The adoption of the Act on Public Health in 2015 has enhanced the status of public health in Poland. The Act has pulled together regulations pertaining to public health in one piece of legislation; it also changed the focus of the National Health Programme to fighting risk factors and, for the first time, allocated separate funding for its implementation.
- Numerous programmes of coordinated care have been implemented since 2015, including for cancer patients, pregnant women and children, improving integration of primary and secondary care. Since late 2017, coordination of care has also been piloted within primary care – care for patients with selected chronic diseases will be coordinated by teams consisting of a physician, nurse and midwife. Integration of health and social care remains poor.
- Pharmaceutical pricing and reimbursement policy has been reformed: reimbursement rules have been made more transparent and a number of cost-saving measures has been introduced, including a cap on the NFZ's pharmaceutical spending and risk sharing instruments.
- Provision of rehabilitation and long-term care remains inadequate to the population needs and waiting times are long. The burden of caring for dependent persons remains largely borne by their family

members. The quality of palliative care is good; however, only about 50% of palliative care needs are met.

- Mental health care is mainly provided in outpatient mental health care institutions and renewed efforts are being made to shift care into the community. To that end, work on piloting Mental Health Centres has begun since mid-2018.
- The scope of publicly financed dental health services is very narrow and most dental care financing comes from private sources. Incidence of dental caries in children is very high. In 2017, the Minister of Health purchased 16 mobile dental clinics ("dento-buses") to improve access to dental health for children.

5.1 Public health

National policy in the area of public health is set out in the National Health Programmes (NPZ). The first National Health Programme was developed in 1990 as a response to the Global Strategy for Health for All by the year 2000. It was the first attempt to coordinate efforts of different units of government administration, NGOs and local communities in order to protect, maintain and improve the health of the population. The fourth edition of the NPZ covered the 2007–2015 period (see section 2.5 in Sagan et al., 2011) and the current version is in place for the years 2016–2020. Its goals are described in Box 5.1.

Until the adoption of the Act on Public Health in 2015, there was no single legislative act comprehensively regulating public health services in Poland. Regulation was scattered over a number of acts regulating specific public health issues, such as control of alcohol and drug consumption, control and prevention of infectious diseases, control of hygiene and sanitary conditions, and acts setting out the tasks of public health institutions. The Act on Public Health aims to increase the recognition of the importance of public health, which has been traditionally low, and to contribute to a systematic and multidisciplinary approach to public policy in this field. The Act changed the strategic focus of the NPZ from disease prevention to fighting risk factors and allocated (for the first time) separate funding for its implementation. From 2017 onwards the NFZ has been obliged to spend 1.5% of its overall budget on preventive services. To put this in context, spending on prevention

BOX 5.1 Strategic and operational goals of the National Health Programme 2016–2020

The strategic goals of the NPZ for the 2016–2020 period are to extend life expectancy, improve health-related quality of life, and reduce health inequalities. It has six operational objectives:

(1) improving diet, nutrition and physical activity;
(2) preventing and reducing problems associated with the use of psychoactive substances, addiction and other risky behaviours;
(3) preventing mental health problems and improving the mental health and well-being of the population;
(4) reducing health risks arising from physical, chemical and biological hazards in the environment, workplace, and areas of residence, recreation and education;
(5) promoting healthy and active ageing;
(6) improving reproductive health.

accounted for 0.2% of the NFZ's total budget in 2016 (see Table 3.4). The Minister of Health, supported by the Public Health Department of the Ministry, is responsible for managing public health services and coordinating public health activities. The Act gives the Minister the right to establish a plenipotentiary for these tasks. The Act also established a Public Health Council as a consultative and advisory body to the Minister of Health. The Council is tasked with ensuring that public policies follow a Health in All Policies approach and fostering intersectoral cooperation.

Key national institutions with responsibilities over public health include the National Institute of Public Health – National Institute of Hygiene (NIZP-PZH), the Chief Sanitary Inspector and the State Pharmaceutical Inspectorate (see Table 2.1). Other national level actors with responsibilities in certain areas of public health include specialized research institutes (the Nofer Institute of Occupational Medicine, the Institute of Occupational Medicine and Environmental Health, the Institute of Agricultural Medicine, and the National Food and Nutrition Institute) and state agencies (the Agency for Health Technology Assessment and the Tariffs System (AOTMiT), which evaluates publicly-financed health policy programmes; the Centre for Health Information Systems (CSIOZ); the National Bureau for Drug Prevention;

the State Agency for the Prevention of Alcohol-Related Problems; and the National AIDS Centre).

Local authorities finance local health policy programmes and can independently decide on how to spend their budgets, depending on the local needs. Local health policy programmes are usually carried out by health care providers owned by the local authorities. The main exceptions are the programmes to control consumption of alcohol and illicit drugs which are implemented by the entities of the local self-governments. In 2017, alcohol control measures accounted for the largest part (68.3%) of health care expenditure of the municipalities and the second largest part (25.6%) of health care expenditure of cities with the county status (GUS, 2019). In terms of the number of local health policy programmes, the majority (e.g. in 2018, 108 out of 352 programmes as of November 2018) were related to vaccinations (AOTMiT, 2018b).

5.1.1 *Prevention and screening*

The Polish immunization programme includes the mandatory immunization programme for children and youth, mandatory immunization programme for risk groups (e.g. vaccination against hepatitis B for medical personnel at risk, vaccination against chickenpox for people with immunodeficiency – mainly children in nurseries), post-exposure immunization (e.g. rabies vaccination) and the programme of recommended immunizations for children and adults. Vaccinations included in the mandatory immunization schedule for children are compulsory to all children residing in Poland for at least 3 months and are available free of charge. The current immunization schedule (2018) includes 11 mandatory vaccines (see Table 5.1). Parents who refuse to vaccinate their children must pay a monetary fine. The recommended immunization schedule includes additional vaccines that are recommended but that are not publicly financed, e.g. a rotavirus vaccine or meningococcal vaccine (NIZP-PZH, 2017b).

National screening programmes currently in place include:

- Breast cancer prevention programme offering mammography to women aged 50–69;
- Cervical cancer prevention programme offering cytology to women aged 25–59;

TABLE 5.1 Mandatory vaccinations for children and youth, 2018

AGE		TUBERCULOSIS	HEPATITIS B VIRUS	DIPHTHERIA	TETANUS	PERTUSSIS	*HAEMOPHILUS INFLUENZAE* TYPE B	POLIO	MMR	*STREPTOCOCCUS PNEUMONIAE*
1 year	At birth	x	x							
	2 months		x	x	x	x	x			x
	4 months			x	x	x	x	x		x
	5–6 months			x	x	x	x	x		
	7 months		x							
2 years	13 months								x	x
	16 months			x	x	x	x	x		
6 years				x	x	x		x		
10 years									x	
14 years				x	x	x				
19 years				x	x					

Source: Communication of the Chief Sanitary Inspector from 31 October 2017 on the Protective Vaccination Programme for 2018.

- Colorectal cancer prevention programme offering free colonoscopy and personal (one-off) invitations for colonoscopy for persons aged 55–64;
- Tuberculosis prophylaxis programme addressed to people over 18 years old with no previously diagnosed tuberculosis;
- Prenatal testing programme for pregnant women who meet at least one of the following criteria: (a) are aged 35+; (b) experienced the occurrence of fetal or child chromosomal abnormalities in a previous pregnancy; (c) are themselves affected (or their partner is affected) by structural chromosomal aberrations; (d) have a significantly increased risk of giving birth to a child afflicted with a monogenetically or multifactorial disease; (e) whose pregnancy has a confirmed (via an ultrasound or biochemical tests) increased risk of a chromosomal aberration or fetal defects;
- Cardiovascular disease prophylaxis programme for people aged 35, 40, 45, 50 or 55 years old;
- Programme for the prevention of tobacco-related diseases (including COPD).

According to a recent audit by the Supreme Audit Office (NIK, 2017c), participation in cancer prevention programmes is not very high, which indicates that educational campaigns related to these programmes are not very effective. For example, approximately 16% of the target group participate in the colorectal cancer prevention programme; just over 20% in the cervical cancer prevention and about 40% in the breast cancer prevention programme. The outreach of the cardiovascular disease prophylaxis programme was also low: in 2012–2015, screening reached less than 5% of the target population (NIK, 2017c).

5.1.2 *Occupational health services*

Occupational health services are provided by local occupational health practices and medical centres. Their scope is limited to individual periodic health exams and fitness checks. Focus on working conditions and work environment is weak and workplace health promotion activities are restricted to individual projects. There are no system-wide activities in this area.

BOX 5.2 Assessing the effectiveness of public health interventions that address risk factors

The NPZ addresses major health risks, such as obesity, smoking and consumption of alcohol (see section 1.4). It aims to reduce the share of smokers in the population by 2% by 2020, halve the growth in obesity and diabetes rates by 2025, and reduce the number of persons abusing alcohol by 10% by 2025. These targets are pursued with a variety of means. For example, measures aimed at tackling rising obesity rates include mass media campaigns to promote healthy eating and increase fruit and vegetable consumption, regulation of advertising and sales of certain foods sold in primary and secondary schools. For example, since 1 September 2015, it has been explicitly forbidden to sell products with added sugar or salt, white bread and coffee, certain drinks, fast food, etc. on the premises of educational facilities. Economic levers such as taxes and broader sales regulations (similar to the strategies used for limiting alcohol and tobacco consumption) have not been adopted (EC, 2017e).

Interventions to address antimicrobial resistance

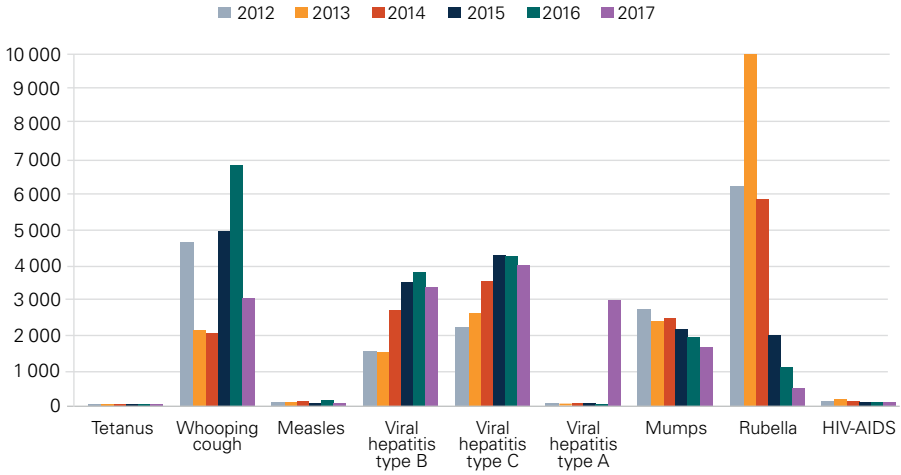
The National Programme to Protect Antibiotics 2016–2020 (MZ, 2016b) is aimed at reducing the irrational use of antibiotics in hospitals and thus slow down the rise of drug resistance. An important part of the programme is educating the society about the rational use of antibiotics.

Coverage of preventive care

Vaccinations in children are carried out in accordance with the mandatory immunization schedule (Table 5.1), which is updated every year. From 2017, vaccinations against pneumococci have been added to the list of mandatory vaccinations. Rates of mandatory vaccinations were at about 95% in recent years and incidence of infectious diseases is low (Fig. 5.1). However, the number of persons forgoing mandatory vaccinations for their children has been increasing (Fig. 5.2) due to strong anti-vaccines movements.

According to a recent audit by the Supreme Audit Office, the effects of prophylactic programmes are unsatisfactory in relation to the funds spent (NIK, 2018). For example, between 2011 and 2016 over PLN 1.1 billion was spent on the National Programme for Combating Cancer (over PLN 2.6 billion from the beginning of its implementation in 2006); however, none of the main objectives of the Programme has been achieved. The number of people attending prophylactic examinations, including screening, has not increased; and the detection of tumours has not improved either. According to the NIK report, this is due to, among others, lack of coordinated education of patients; lack of cohesive system of secondary cancer prophylaxis; and difficulties in obtaining a DiLO cards (see Table 5.2) for some patients.

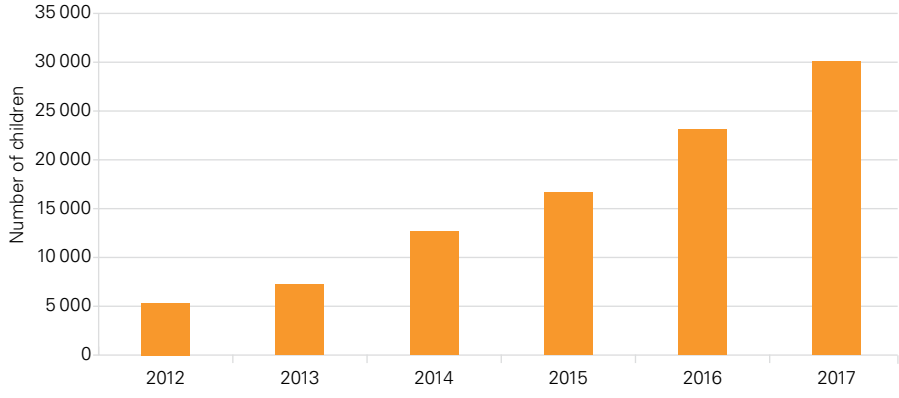
FIG. 5.1 Incidence of infectious diseases in Poland, 2012–2017



Sources: NIZP-PZH (2013a, 2014a, 2015a, 2016a, 2017a, 2018a).

Note: Incidence of rubella in 2013 was 38 548. Periodic increase in the number of cases of some of the diseases are natural and result from their epidemic cycle that includes compensatory epidemics – as in the case of rubella in 2013.

FIG. 5.2 Number of children who have not received mandatory immunizations, 2012–2017



Sources: Based on NIZP-PZH (2013b, 2014b, 2015b, 2016b, 2017c, 2018b).

5.2 Patient pathways

Patient pathways in the statutory health system are similar across the country and for everybody, except for patients with suspected cancer and other patients who are covered by coordinated/integrated care models (see Box 5.3). A typical pathway will depend on the urgency of care. If immediate care is needed, patients can access emergency care directly (without a referral; see Fig. 5.3), in both ambulatory setting (within "night and holiday care") and, for more serious problems, in the hospital emergency ward (SOR), irrespective of their insurance status. However, after the patient has been stabilized, uninsured persons may be required to cover the cost of subsequent care out of their pocket.

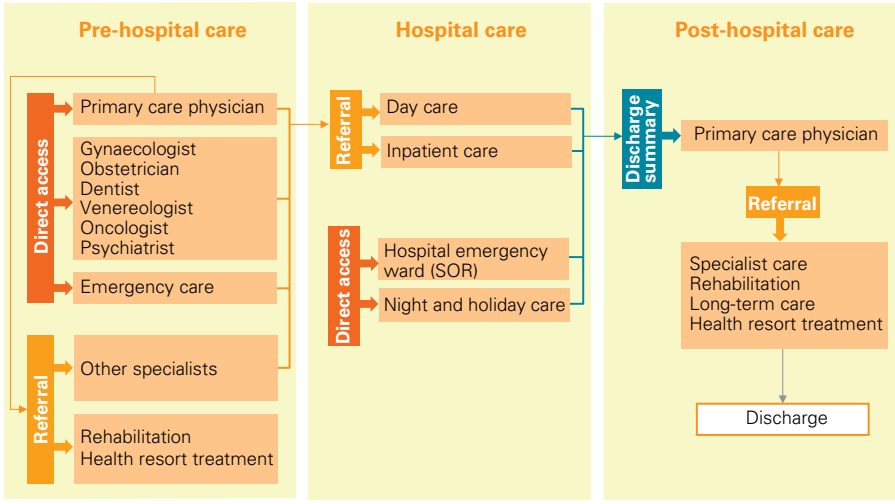
BOX 5.3 Beginnings of care integration

Care is mostly integrated vertically, i.e. across different types of care. Within the public sector, integration of care occurs often within the same health care provider. For example, within the organizational structures of a hospital there may be a GP clinic, a specialist outpatient clinic, a diagnostic laboratory and a rehabilitation clinic. Vertical integration is particularly well developed within the private sector, but across distinct providers rather than within the same provider.

In recent years, numerous programmes of coordinated/integrated care targeted at specific conditions and/or particular population groups have been created. These are summarized in Table 5.2. Provision of coordinated care is incentivized financially (see section 3.7) and also by preferential treatment of health care providers providing complex care (which includes coordinated/integrated care) in the contracting process. The Act on Primary Health Care that came into force in 2017 increased coordination of primary health care services (see section 5.3).

In case of non-urgent care, a patient's journey usually begins with a visit to their "first-contact physician" (typically a GP/family physician or a paediatrician in case of children). Patients can enrol with any primary health care (PHC) physician who has signed a contract with the NFZ. There are no territorial restrictions in the choice of GP, such as place of residence. Patients can switch to a different PHC physician free of charge up to two

FIG. 5.3 Provision of health care services



Source: Based on Sagan et al. (2011).

times during the calendar year. For each subsequent change a fee of PLN 80 is due. This fee is waived if patients switch their GP because of the change of the place of residence; if their previous GP ceases to provide services; or for any other reason for which their previous GP was responsible. The PHC physician should be able to help with common health issues. If a specialist treatment is needed, the PHC physician will refer the patient to a diagnostic examination or a specialist doctor and/or hospital. In future, according to the 2017 Act on Primary Health Care, a PHC physician will also be responsible for coordinating the entire process of treatment (see section 5.3). There is no need to have a referral to see the following specialists: gynaecologist and obstetrician, oncologist, psychiatrist, venereologist and dentist (until the end of 2014, referrals were also not required for consultations with a dermatologist or ophthalmologist). Certain population groups are exempted from having to have a referral to access outpatient specialist care.[14] All care provided by

[14] The following population groups can access outpatient specialist care without a referral: war invalids and persecuted persons, combatants, anti-communist opposition activists and people repressed for political reasons, and civilian blind victims of war; persons with addictions to alcohol and narcotic drugs or psychotropic substances(for addiction treatment, this includes persons in a relationship with an addict); soldiers or civil servants (for treatment of injuries or illnesses incurred while on duty outside the country); war veterans (for treatment of injuries or illnesses incurred while on duty outside the country); children under 18 suffering from congenital diseases diagnosed in prenatal tests; persons with tuberculosis; HIV-positive patients.

PHC physician and all specialist care with a referral is free of charge as long as the health care provider has a contract with the NFZ. Prescribed outpatient medicines may be subject to cost-sharing but all medicines received as inpatients are free of charge (see section 3.4).

A referral will usually remain valid until it is actually used (there is no time-limit).[15] Patients can freely choose among all specialist service providers (public or private) that have a valid contract with the NFZ – the exception to this are coordinated care programmes (see Box 5.3 and section 5.3). Once they have chosen the provider, they have to register with them (they can only register with one provider – this also applies to services that do not require a referral and oncological services) and are entered onto a waiting list. The patient has access to the publicly available information on the waiting times in individual hospitals – through their websites and through a dedicated website; see Table 2.4). The date of appointments can only be brought forward due to medical considerations. If the patient does not want to wait for the procedure, they can have it done at a non-contracted private or public provider and pay for it out of pocket.

If additional diagnostic examinations are required, a referral will be issued by the specialist attending the patient. If the patient fails to come to the appointment, unless this has been caused by a force majeure, they will be deleted from the waiting list. After specialist treatment has been completed the patient is discharged and receives a discharge summary that describes the treatment (s)he received and recommendations for further care. If necessary, the PHC physician refers the patient for further care. Referrals for health resort treatment are submitted to the voivodeship branch of the NFZ where decisions are made concerning the necessity of treatment, its setting (health resort hospital, sanatorium, spa outpatient clinic), type of therapy as well as its duration.

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[15] Exceptions include referrals for health resort treatment (which are verified every 18 months from the date they are issued and become invalid if the verifying physician asserts that the patient is no longer in the need of such treatment); referrals to outpatient physiotherapeutic procedures (they become invalid if the patient is not registered at the rehabilitation institution within 30 days from the date referral was issued); referral to a psychiatric hospital (they become invalid after 14 days).

TABLE 5.2 Existing programmes of coordinated/integrated care, July 2018

CARE PATHWAY	DATE INTRODUCED	DETAILS
Fast track pathway for cancer patients	1 January 2015	Patient with a suspicion of cancer receives the Diagnostic and Oncological Treatment Card (DiLO card – *Karta diagnostyki i leczenia onkologicznego*, also called the "oncology green card") from their PHC physician, which gives them faster access to diagnostics and treatment. After issuing the DiLO card, the PHC physician may order additional diagnostic tests in order to make a more accurate diagnosis (MZ, 2018h).
Coordinated care for pregnant women (*koordynowana opieka nad kobietą w ciąży*, KOC) at the 1st level of perinatal care (complex pregnancies)	1 July 2016	This is a comprehensive system of medical care for women during pregnancy, childbirth and postpartum and for their newborn children until they are 6 weeks old. Complex care is provided by a team composed of a gynaecologist, midwife and hospital doctors.
Coordinated care for pregnant women at the 2nd or 3rd level of perinatal care (KOC II/III)	1 January 2017	This is a comprehensive system of medical care for women and their newborn children with developmental defects or severe diseases diagnosed during pregnancy. Care is provided in specialist centres for pathological pregnancies. Particular emphasis is put on providing psychological support to the patient.
Coordinated care for children (*dziecięca opieka koordynowana*, DOK)	1 January 2017	This programme is for children up to 3 years of age who have been diagnosed with severe and irreversible impairment or an incurable life-threatening illness that has developed during the prenatal period of child development or during birth. This service is also available for prematurely born children (less than 33 weeks of gestation) and children with very low birth weight (VLBW). Provision of care is coordinated across different health care providers.
Coordinated specialist care for people after a myocardial infarction (*koordynowana opieka specjalistyczna*, KOS-infarction)	1 October 2017	Patients with myocardial infarction receive complex care, comprising interventional cardiology services, comprehensive rehabilitation and education, electrotherapy, and specialist cardiac care including consultations with a cardiologist. The first cardiac consultation should take place no later than 6 weeks following the patient's discharge from the hospital. The number of consultations and their frequency depend on the clinical condition of the patient. Hospitals providing KOS-infarction should look after the patient for 12 months; this comprises hospitalization, rehabilitation and specialist visits after hospital discharge.

Source: Authors.

5.3 Primary/ambulatory care

5.3.1 *Scope*

Primary health care (PHC) constitutes the main entry point to the Polish health care system. PHC providers serve as "gate keepers" and the patient must obtain a referral before accessing more specialist care, although exceptions are made for certain types of specialists and certain population groups (see section 5.2).

Statutory PHC services are provided by PHC physicians, nurses and midwives, school nurses and hygienists (see Table 5.3). The scope of services covers diagnostics, treatment, rehabilitation, and nursing services in the scope of general medicine, family medicine and paediatrics; as well as health promotion and disease prevention. The latter are specified in the 2005 Executive Regulation of the Minister of Health on the Scope of Tasks of Primary Care Physician, Nurse and Midwife Working in PHC and include: indication and diagnosis of health risk, health education, advice on healthy lifestyles, education in hygienic nursing of neonates, education in prevention of gynaecological diseases. National preventive programmes are also implemented within PHC, including prevention of cardiovascular diseases, prophylaxis of tuberculosis, prevention of cervical cancer, prevention of tobacco-related diseases (including COPD) (see section 5.1). In addition, guaranteed PHC services include night time and holiday care and sanitary transport.

The Act on Primary Health Care that came into force in 2017 introduced important changes in the organization of PHC. It introduced PHC teams consisting of a PHC physician, a nurse, a school nurse and a midwife and, optionally, a physical therapist. The PHC physician will coordinate the care over the patient provided by the PHC team as well as provide necessary referrals to specialist care and diagnostics and collaborate with specialists during the patient's hospital stay. Patients with selected chronic diseases will be able to choose between integrated care specific to their condition and coordinated by the PHC physician and specialist care provided by a specialist physician. Coordinated PHC is currently being piloted (see section 6.2). The objectives of the reform are to provide comprehensive and high quality PHC that is centred on the patient and well-coordinated, which includes coordination between the PHC physician, nurse and midwife and coordination between

TABLE 5.3 Primary care services provided by different types of primary health care providers

PROVIDER	SERVICES
Primary care physician	• Medical advice (preventive and curative) • Preventive health services (e.g. cardiovascular prevention programme) • Periodic health assessment • Vaccinations • Diagnostic tests • Referrals to the higher level of health care (specialist, hospital, rehabilitation) • Issuance of DiLO card (see Table 5.1)
Primary care nurse	• Nurse visit • Patronage (community) visit • TB preventive health visit (e.g. health education, collection of samples for preventive diagnostics) • Screening tests • Care for patients staying in a social care home
Primary care midwife	• Midwife visit • Patronage visit • Preventive health visit (e.g. health education, advice on nutrition)
School nurse or hygienist	• Planning the screening process • Conducting screening tests and interpreting results • Active guidance for pupils with health problems • Paramedical services (in a specified cases) • Guidance for the school director in common health problems • Education in oral health • Participation in planning, realization and evaluation of health education

Source: Adapted from Mokrzycka et al. (2016).

the various levels of care; and increase the role of prevention and health education. Chronically ill patients who wish to receive coordinated PHC must declare this in writing. Choice of coordinated PHC means that the patient will no longer be able to see specialist of his/her choice – the choice of specialist will be determined by the PHC physician coordinating care.

5.3.2 *Organization of provision*

In 2017, approximately 33 500 PHC physicians (98 per 100 000 population), approximately 21 400 nurses (60 per 100 000 population) and 6 200 midwives (38 per 100 000 female population) provided health care services financed by the NFZ (NFZ, 2018d). The vast majority of PHC physicians, nurses and

midwives (over 90%) work in therapeutic entities as defined in the 2011 Act on Therapeutic Activity (see section 2.4.2). In practice, more than one PHC physician and nurse work together in one clinic (and in many cases also a midwife) to provide easy access to PHC services. Patients have a free choice of PHC physician, nurse and midwife and switching is generally possible up to twice a year (see section 5.2).

Physicians with a specialization in family medicine (or physicians undergoing such specialization) and physicians with level II specialization in general medicine can work as PHC physicians. In addition, due to the shortage of family medicine specialists, until the end of 2024 physicians with grade I specialization in general medicine or internal medicine and paediatricians may work as PHC physicians (paediatricians can only look after patients up to 18 years old) (Badora-Musiał & Kowalska-Bobko, 2017; Mokrzycka et al., 2016).

According to NFZ regulations, the maximum number of patients registered with one PHC physician cannot exceed 2 500. The maximum number of patients registered with one nurse is also 2 500 and up to 6 600 patients can be registered with one midwife. The average actual numbers of registered patients are 1 020 – for PHC physicians (more than 96% of the population is registered), 1 532 – for nurses (92% of the population is registered), and 2 573 – for midwives (80% of the female population is registered) (NFZ, 2018d).

PHC physicians must be available to their patients 10 hours per day (from 8am until 6pm) from Monday to Friday, excluding official holidays. PHC services are also available after 6pm on work-days, as well as on Saturdays, Sundays and during official holidays in entities that have signed contracts with the NFZ for provision of "night and holiday health care". The on-call physician can provide medical advice at the clinic, by telephone or at patient's home (if the patient's condition is serious). No referral is needed to access night and holiday health care and patients can seek care at any entity that signed contract with the NFZ, irrespective of whether they are registered on the patients list or not. Since 1 October 2017, hospitals that are included in the hospital network (level 1–3 and paediatric hospitals; see Table 4.3) have been obliged to provide "night and holiday care". The "night and holiday" services function concurrently with the hospital emergency wards (SORs). Patients who report to a hospital without a referral are admitted and sent to either the SOR or to the "night and holiday health care" unit.

BOX 5.4 Assessing the strength of primary care

Access to PHC is good and patients can usually be seen on the same day (in smaller, private GP practices*). Opening hours of GP practices are long (50 hours a week) and PHC is also easily available out-of-hours, on weekends and during public holidays. PHC doctors can be consulted in person, on the phone or at the patient's home. Patients may get repeated prescriptions by authorized nurses without seeing a doctor. Access to PHC is usually positively evaluated by both patients and medical staff (CBOS, 2018). However, there are some inequalities in access, with patients living in rural areas having worse access compared with urban patients.

Key weaknesses of PHC include shortage of family medicine specialists (specialists in internal medicine and paediatrics, who are also allowed to work as PHC doctors, have limited competencies in the area of family medicine), a shortage of PHC doctors in general (with low PHC doctors-patients ratio), shortages of nurses and midwives, and limited use of modern IT tools (see section 4.1.4) (Zespół do opracowania strategii rozwiązań systemowych w zakresie POZ, 2016). A further weakness stems from the fact that the capitation fee is expected to cover also the cost of diagnostics – as a result, PHC physicians sometimes limit the number of diagnostic services in order to limit the costs (see section 3.7.1).

* This may not be the case in large public health care entities where waiting times may be very long.

5.4 Specialized ambulatory care/ inpatient care

5.4.1 *Specialized ambulatory care*

Until 1990, hospitals were responsible for the provision of specialist outpatient services and laboratory and imaging diagnostics. The separation of inpatient and ambulatory care since 1991, which was aimed at shifting care to (cheaper) outpatient settings, marked the beginning of privatization of ambulatory care, with physicians, nurses, and other medical practitioners and commercial companies establishing non-public ambulatory care facilities (Kaczmarek et al., 2013).

Nowadays, specialist ambulatory care is predominantly provided in private facilities (however, there are no public statistics on the number of private and public ambulatory care facilities). There is no information on the split

between various care settings (e.g. share of specialists working in their own practices and specialists working in outpatient departments of hospitals).

The Act on Primary Health Care that came into force in 2017 aims to improve coordination between primary care and specialist care (see section 5.3). It is difficult to say how this will affect the accessibility, adequacy and quality of specialized ambulatory/outpatient care. Meanwhile, in September 2018, in order to improve the availability of outpatient specialist care, the president of the NFZ proposed to reward ambulatory health care providers that reduce wait times by at least 20%. The following categories of outpatient services were included: endocrinology and paediatric endocrinology, gastroenterology and paediatric gastroenterology, cardiology and paediatric cardiology, neurosurgery and paediatric neurosurgery, ophthalmology and paediatric ophthalmology.[16]

5.4.2 *Inpatient care*

In 2016 there were 926 hospitals in Poland, of these 600 (88% of all hospital beds) were public. There are significant geographical differences in the ratios of hospital beds to the number of inhabitants as well as in the availability of highly specialized medical equipment (see section 4.1).

Quality assurance in hospital care (as well as in the health care sector in general) is not formally regulated. Although preliminary projects of such regulations were proposed by the Ministry of Health in 2011 and 2017, they have not yet been developed. There are also no standardized methods for routinely monitoring patient satisfaction (see Box 5.5). Acquisition of accreditation certificates is voluntary (see section 2.4.2) although it is financially incentivized in the NFZ contracts. In November 2018, only about 20% of hospitals had a valid accreditation certificate (CMJ, 2018b).

There is no integration between health and social care in Poland. Primary and secondary health care are also not well integrated, although efforts are undertaken to improve this (see section 5.3 and Box 5.3). The poor integration of primary and secondary care is partly due to the low level of IT use in health

[16] Executive regulation No. 22/2018/DSOZ of the President of National Health Fund on the terms of concluding and implementing contracts for provision of health care services: outpatient specialist care.

BOX 5.5 Patient evaluation of the care they receive

Assessment of patient experience is done on a voluntary basis, with individual hospitals using different methods and time frames. According to the annual survey conducted by the Public Opinion Research Centre (*Centrum Badania Opinii Społecznej*, CBOS), the share of respondents that were satisfied with the public health care system in Poland increased from 23% in 2016 to 30% in 2018. Yet, the majority of respondents remains unsatisfied (in 2018, 27% were "definitely" while additional 39% "rather" unsatisfied). The key reasons for dissatisfaction were long waiting times for diagnostic tests and specialist consultations. At the same time, respondents appreciated doctors' professional skills and work ethics (CBOS, 2016, 2018).

In 2017, 3 966 formal complaints were submitted to the NFZ. Most of them (61%) were related to the issue of access to services, while the remaining ones were focused on issues related to the quality of care (NFZ, 2018a).

care, including lack of access to electronic patient records across different levels of care (see section 4.1.4). There are no formal national strategies and/or policies that support shifting care from inpatient to cheaper outpatient and/or home care, although the importance of such shift has been recognized (see for example NFZ, 2016a). However, some efforts are being made in this direction. For example, elements of coordinated care for certain conditions have been piloted since 2017 and a coordinated fast track pathway for cancer patients has been available since January 2015. Further, financial incentives to shift patients from hospital to outpatient care (for services provided within the network) were introduced within the hospital network, which has been implemented since 2017 (see section 3.7.1).

The number of total and acute hospital beds per 100 000 inhabitants is higher in Poland compared with the respective EU averages (see section 4.1). This is accompanied by a relatively low bed occupancy ratio – 65.8% for general hospitals in 2017 (the average for 20 EU countries was 77% for acute hospital beds in 2016) (OECD, 2018a; CSIOZ, 2018b), pointing towards overcapacity in the hospital sector. The average length of stay (for all causes) was comparable with other EU countries (5.3 days in Poland in 2017 (CSIOZ, 2018b) and 6.4 in the EU on average in 2014) (WHO, 2018a).

BOX 5.6 Assessing the appropriateness of care

The rate of avoidable hospitalizations in Poland (high admission rates for conditions that are manageable in the outpatient settings) is one of the highest in the EU (EC, 2017e), which indicates that care may not be used appropriately. There is no other information that would allow an assessment to be made of whether health care services are used appropriately or whether there is under- or over-provision of care in comparison to evidence-based standards.

One of the major challenges in the public hospital sector is the fragmentation of the ownership structure, with ownership scattered across the three levels of territorial self-government and the state. As a result, decisions on investments and hospital liquidation and/or mergers are largely influenced by local politics rather than being the result of strategic planning at the national level (Dubas-Jakóbczyk et al., 2018).

5.4.3 *Day care*

The Central Statistical Office defines day care as services which are expected to be provided within a time frame of maximum 24 hours (GUS, 2019). These services can be provided by both inpatient hospitals at dedicated wards, hospitals providing solely day care as well as long-term care units.

In 2017, there were 5.3 thousand day care beds available in Polish hospitals, including 4.2 thousand in inpatient hospital wards. Hospitals providing solely day care services, although numerous (166 hospitals in 2017), are usually very small and represent only 20% of the total number of day care beds. In 2017, there were 3.4 million day care patients (in comparison, 7.8 million patients were treated as inpatients in that year). Within the last decade both the number of day care hospital beds and treated patients increased significantly (from 3.6 thousand beds and 0.9 million patients in 2005) (GUS, 2006b, 2019). Long-term care units provide day care (and home care) in addition to inpatient care. In 2017, approximately 43 thousand patients received inpatient long-term care, and 72 thousand were day care patients (NFZ, 2018d).

The number of procedures performed in day care setting has been increasing. For example, in 2016, 35% of all cataract surgeries were performed in day care settings compared with 17% in 2010. Yet, in comparison to other European countries the share of day care procedures remains low – for example, the share of cataract surgeries performed in day care setting in France was 91% in 2016 (EC, 2018c).

5.5 Emergency care

Organization, operation and financing of emergency care services in Poland are regulated by the 2006 Act on the State Medical Rescue. Emergency care is defined as medical care provided to patients with life-threatening conditions who require urgent treatment that is supplied by emergency care personnel in non-hospital settings or in hospital emergency wards (*Szpitalny Oddział Ratunkowy*, SOR) or by a person present at the location of medical emergency. Emergency care is directly accessible (without a referral). Pre-hospital emergency care is free for all persons on the Polish territory, regardless of their insurance status or any other characteristics (see section 3.3).

The State Medical Rescue system comprises SORs and medical emergency teams, including air rescue teams. In addition, there are 14 trauma centres and 46 highly specialized hospitals or hospital wards cooperating with the State Medical Rescue system (early 2018 data; MZ, 2018g). The latter provide care in cases such as strokes, heart attacks or burns. Both trauma centres and the highly specialized hospitals/hospital departments are included in the annual emergency care plans of the voivodeships. The State Medical Rescue system also cooperates with other emergency systems, such as the police or fire-fighting service.

In 2018, there were 229 SORs and 1 543 medical emergency teams, out of which 23 were medical air rescue teams (MZ, 2018g). Medical air rescue infrastructure consists of 27 helicopters (with 17 dispatch locations) and two airplanes. Only a few helicopters are authorized for night flights. The voivodes (accountable to the Ministry of the Interior and Administration) are responsible for the design, organization, coordination and supervision of emergency medical services in their voivodeships and the Minister of Health is responsible for the overall supervision of the State Medical Rescue system.

Medical air rescue is subordinated to the Ministry of Health and funded from the central budget.

The role of the SORs is to diagnose and stabilize the patient and transfer them (typically within 24 hours since admission) to a non-emergency hospital department or discharge them. A SOR can be established in hospitals that have the following facilities: a general surgery department with a trauma unit (or a children's surgery department in case of hospitals providing health care services to children), an internal diseases department (a paediatric ward in case of hospitals providing health care services to children), an anaesthesiology and intensive care unit, and an imaging diagnostics laboratory. In addition, a SOR must have 24-hour access to diagnostic tests, CT and endoscopic examinations, and certain examination equipment at the patient's bedside (a device for analysing vital functions, bedside X-ray kit and mobile ultrasound scanner). From January 2021, all SORs will be required to have a 24-hour landing facility located on site or nearby (patient transport from the landing field cannot exceed 5 minutes). In early 2018, 181 SORs had a landing facility (MZ, 2018g).

Medical emergency teams are classed into basic and specialized teams. A basic team consists of a nurse and a medical rescuer (a basic ambulance is marked with a "P"); a specialized emergency team must additionally include a medical physician (ambulance marked with an "S"). Ambulances are stationed by the hospitals or in other designated dispatch posts to evenly cover the area of the voivodeship. In 2017, there were 1 519 ambulances, of which 68% were of type "P" (GUS, 2019). Ambulances are typically able to transmit patient data (such as electrocardiogram data) electronically to a specialized hospital unit and their location is monitored by a medical dispatcher via GPS.

There are 17 voivodeship emergency call centres[17] (*Wojewódzkie Centrum Powiadamiania Ratunkowego*, WCPR) receiving 112 calls (EU-wide emergency number), and also the "old" 999 (medical), 998 (fire) and 997 (police) calls as well some local 7-digits emergency number calls. After collecting the basic information the operator semi-automatically redirects the calling person to the relevant dispatcher(s) (medical, fire brigade or police), together with all relevant data (including data supplied by geo- and cellular/phone-systems). Medical emergency teams are subsequently sent to the site of

[17] Two in Warsaw – one serving the capital and the other one serving the voivodeship (being also the reserve for the whole country) – and one in each of the other voivodeships.

emergency (Box 5.7). If the firemen, policemen or other emergency services are directed to the emergency site and arrive before the ambulance they will start the necessary medical rescue procedures – these will be continued by the ambulance staff, once they arrive.

BOX 5.7 Patient pathway in an emergency care episode

In Poland, someone with symptoms of acute appendicitis on a Sunday morning would take the following steps:

- this person (or someone else on their behalf) calls* the 112 (999 or other local) emergency number;**
- the call will be answered directly by the nearest medical emergency dispatcher (MED) (numbers other than 112) or by the nearest voivodeship emergency call centre (WCPR)(112 calls) and transferred to a medical emergency dispatcher;
- if the call is transferred to the emergency dispatcher at WCPR, he or she will collect the basic data and transmit it to the MED;
- MED decides whether and which emergency medical team should be dispatched;* in case the decision is affirmative a team will be sent to the location of the call;
- once the medical emergency team arrives, it provides the necessary medical services and transports the patient to the nearest hospital emergency ward (SOR), a trauma centre or a highly specialized hospital or hospital ward cooperating with the National Medical Emergency System;
- at the SOR the person responsible for triage estimates the urgency of the case and orders examination/diagnostics or sends the patient directly to the operating theatre of the hospital at which it is located;
- in other cases (in a trauma centre, etc.) the pathway is similar and starts with triage at the admissions department.

* In order to improve the operation of the medical emergency care system, medical emergency teams sometimes (informally) divide the area of their operation into zones, which determine the dispatch origin of the ambulance and the emergency hospital ward to which the patient is sent.

** Another possibility is that the person goes on his own (or is transported by someone else e.g. family member) directly to the SOR or to the admissions department of another hospital (without a SOR). The patient may also contact a PHC unit that provides services on that day and the on-call physician will decide on the further course of action.

The accessibility and quality of emergency care services are good. In 2016, target median response times (8 minutes in cities with over 10 thousand inhabitants and of 15 minutes in other areas) were reached in nearly all voivodeships (GUS, 2017b) since then most voivodeships have struggled to meet these targets (GUS, 2019). In recent years, various components of the emergency medical services system have been modernized and equipped with the use of EU funds.

5.6 Pharmaceutical care

5.6.1 *Manufacturing and distribution*

Poland has a longstanding tradition of manufacturing medicines. In February 2018, 223 manufacturers and importers of medicinal products and 142 producers, importers and distributors of active product ingredients were listed in the registers of the Chief Pharmaceutical Inspector (GIF, 2018a). The pharmaceutical market is dominated by foreign pharmaceutical firms – in 2016, among the 50 companies that accounted for the largest share of NFZ's expenditure on pharmaceuticals, only 11 had (majority) Polish capital and only nine had manufacturing facilities in Poland (MZ, 2018c). Since the 1990s, the Polish pharmaceutical market has been characterized by a high trade deficit. In 2016, pharmaceutical exports amounted PLN 11.7 billion while imports amounted to PLN 22.3 billion. Over 70% of exports and 82% of imports were to or from the EU (MZ, 2018c).

Pharmaceutical manufacturing and distribution are almost fully privatized. In 2016, only three entities were still supervised by the Minister of Treasury: one pharmaceutical wholesaler (Cefarm), one manufacturer of vaccines and sera (Biomed), and one pharmaceutical manufacturer and wholesaler focusing on the generics market (Polfa) (Sejm/rynekaptek.pl, 2016).

Medicines can be sold or dispensed to the public through several types of retail outlets:

- pharmacies:
  - outpatient pharmacies;
  - hospital pharmacies – dispensing medicines to hospitalized patients only;

  - dispensaries not for general public, operating in health care units under jurisdictions of the Ministry of National Defense or the Ministry of Justice (e.g. in penitentiary institutions);
- pharmacy outlets – usually operating in rural areas and offering a limited assortment of medicines;
- "non-pharmacy trade outlets":
  - herbal-medical stores;
  - specialty shops selling medical supplies; and
  - general stores (e.g. grocery stores, petrol stations).

At the end of 2017 there were 13 363 outpatient pharmacies, almost all of them privately owned, 24 dispensaries not for general public and 1 284 pharmacy outlets. Internet sale of medicinal products (which is allowed for over-the-counter (OTC) products only; see section 2.4.4) was performed by 280 pharmacies and four pharmacy outlets (GUS, 2018b; GUS, 2019). Independent pharmacies dominate among outpatient pharmacies (56.9% of the total number; 41.1% of the total value of sales) but the importance of network pharmacies (with five or more pharmacies belonging to the same network) have been increasing both in terms of their number and total value of sales (IQVIA, 2018).

The mail order and Internet sale (via e-pharmacies) of pharmaceuticals has been increasing. In 2017, the total value of these sales (retail prices) exceeded PLN 466 million and the market grew by 20.5% compared with the previous year. Vitamins and minerals dominated these sales (15.9% of the value), followed by milk products for children (11.6%), cosmetics for women (8.8%), digestion and digestive system products (6.9%), flu and respiratory system products (6.7%) and other categories (IQVIA, 2018).

5.6.2 *Consumption*

According to the 2001 Act on the Pharmaceutical Law, four types of prescriptions may be issued:

- Rp (or Rx)– medicines dispensed with physician's prescription;
- Rpz – medicines dispensed with physician's prescription for restricted use;

- Rpw – medicines dispensed with physician's prescription and containing certain narcotic or psychotropic substances;
- Lz – medicines used in hospital settings.

The number of products available to the general public has been increasing in recent years and many products that were formerly available only in pharmacies can now be purchased in general stores. The share of OTC pharmaceuticals and food supplements has been growing as a share of the total volume of pharmaceutical market. OTC medicines and other products available without prescription in outpatient pharmacies (such as dietary supplements and cosmetics) account for 35.3% of the pharmaceutical market (2017 sales data; IQVIA, 2018). They are followed by sales of prescription-only (Rx) reimbursed medicines sold in outpatient pharmacies (32.3%), and Rx non-reimbursed medicines sold in outpatient pharmacies (15.7%), hospital sales (15.5%) and mail order (including Internet) sales (1.2%) (IQVIA, 2018).

5.6.3 *Accessibility, adequacy and quality of pharmaceuticals and pharmaceutical care*

The network of outpatient pharmacies is well developed and is among the densest in Europe. In 2017, there were on average 2 665 inhabitants per outpatient pharmacy or pharmacy outlet, compared with 3 214 inhabitants on average in the EU (PGEU, 2018). In rural areas, there were on average 7 114 inhabitants per outpatient pharmacy in 2017. The average number for Poland is 2 876 (GUS, 2019). The night duties were fulfilled permanently by 2.9% and temporarily by 21.7% of outpatient pharmacies (GUS, 2017b).

According to the official list maintained by the President of the Office for Registration of Medicinal Products, Medical Devices and Biocides (*Urząd Rejestracji Produktów Leczniczych, Wyrobów Medycznych i Produktów Biobójczych*, URPLWMiPB), in March 2017 there were 10 220 medicinal products authorized for trade on the territory of Poland by the URPLWMiPB, 2 339 medicinal products authorized for trade through approvals issued by the Council of the European Union or the European Commission, and 3 640 medicinal products authorized for trade through a

parallel import licence, with the role of parallel imports growing in recent years (URPLWMiPB, 2018). Based on these numbers, one can say that the accessibility of medicines in Poland is similar to other countries in the EU. However, actual accessibility is limited by parallel exports[18] of drugs reimbursed in Poland to other countries in the EU and a high degree of cost-sharing. Poland is one of the major parallel exporters of medicines among the EU Member States. This also concerns parallel export of reimbursed pharmaceuticals, the so-called "reverse chain of drug distribution", which is illegal and has been one of reasons for shortages of medicines on the Polish market in recent years (Kawalec, Kowalska-Bobko & Mokrzycka, 2015).

Per capita expenditure on retail pharmaceuticals in Poland is one of the lowest among the OECD countries in 2015 it amounted to PPP$ 352 in Poland compared with the average of PPP$ 553 for 31 OECD countries (OECD, 2017). However, a high share of this expenditure has to be covered by patients out of their own pockets. Cost-sharing is widely applied to outpatient pharmaceuticals and OOP spending on drugs is very high – for retail pharmaceuticals it amounts to 66% of total expenditure on retail pharmaceuticals (see sections 3.2 and 3.4).

In January 2018, 4261 medicines were included in the reimbursement list and were available to patients free of charge or with a co-payment (flat rate co-payment or co-insurance of 30% or 50%) – up to an appropriate reimbursement limit (see section 3.4.1). Expensive medicines, usually new and innovative, can be covered within special medication programmes and are available free of charge to patients covered by these programmes. In January 2018, 397 medicines with distinct EAN codes were included in such programmes. A further 466 medicines were available free of charge within chemotherapy programmes. Finally, since 2016, people aged 75+ are exempted from paying for certain medicines – 1 657 products as of January 2018. Efficiency in pharmaceutical care is evaluated in Box 5.8.

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[18] Parallel imports/exports refer to cross-border sales of goods by independent traders outside the manufacturer's distribution system without the manufacturer's consent. Parallel traders generate profit by buying goods in one EU Member State at a relatively low price and subsequently reselling them in another Member State where the price is higher.

BOX 5.8 Evaluating efficiency in pharmaceutical care

Measures aimed at improving cost-effective use of medicines are mainly focused at ensuring that a certain cost–effectiveness threshold is met for new medicines (or new indications) accepted for public reimbursement. Such a threshold has been used since 2012 (see section 2.4.4). However, cost–effectiveness is only one of the 13 criteria of pharmaceutical pricing and reimbursement decision-making and it is not obligatory – there are many examples of reimbursed medicines that are not cost-effective, including orphan medicines.

Polish physicians do not have dispensing budgets and there is no prescribing by active ingredient/International Nonproprietary Name (INN). There are no officially adopted guidelines for cost-effective prescribing. Prescribing is controlled by the NFZ but mainly for administrative purposes, rather than to influence prescribing behaviour. Pharmacy margins are linked to the price limit established for a particular group of medicines rather than the price of a particular medicine in order to remove incentives to sell more expensive medicines from the same group. Pharmacies have to inform patients about available substitutes (the same INN, dose and therapeutic indication, the same or equivalent form) that are publicly reimbursed and be able to supply them to patients.

The use of generics is high. According to 2017 data, among the reimbursed prescription (Rx) medicines the share of generics was 27% by value and 89% by volume in hospitals and, respectively, 66% and 76%, in outpatient pharmacies (MZ, 2018c).

5.7 Rehabilitation/intermediate care

Medical rehabilitation has a long tradition in Poland which goes back to the sixteenth century.[19] The Polish model of rehabilitation was developed by Professors Wiktor Dega, Aleksander Hulek and Marian Weiss in the 1970s and it was recognized internationally and recommended by WHO. It is based on the assumption that rehabilitation should be complex and continuous, widely available and introduced early (Lubecki, 2011).

Rehabilitation care is mainly provided within the health sector and is financed by the NFZ. Rehabilitation care is also available within the social care sector, in which case it is financed by the social security funds (ZUS, KRUS

[19] The publication date of *Cieplice* by Wojciech Oczko (1578) is symbolically considered to be the foundation of the first sanatorium at Iwonicz-Zdrój.

and PFRON – *Państwowy Fundusz Rehabilitacji Osób Niepełnosprawnych*, State Fund for Rehabilitation of Persons with Disabilities). Coordination between rehabilitation financed by the NFZ and rehabilitation financed by the social security funds is poor.

Rehabilitation care financed by the NFZ comprises therapeutic rehabilitation and health resort treatment in contracted health care providers. Therapeutic rehabilitation may be provided in ambulatory, home, day care and stationary settings. Setting and length of treatment depend on the medical condition. For example, home rehabilitation is usually provided for up to 80 days per calendar year (no more than five interventions per day) and is available to patients who cannot move independently. In 2017, 2.8 million people received medical rehabilitation care in ambulatory settings, about 287 thousand patients in day care and almost 221 thousand people in inpatient settings (with the average length of stay of 24 days), while 38 thousand persons received rehabilitation services at home (NFZ, 2018d). In 2016 household OOP payment accounted for 20.8% of total expenditure for rehabilitation care (GUS, 2019).

Health resort treatment is provided in health resort hospitals and sanatoria as well as in spa outpatient clinics. It comprises rehabilitation services based on natural therapeutic resources, such as thermal water or special micro-climate. It is not suitable for all medical conditions and there are some medical contraindications against treatment in health resorts (2017 Executive Regulation of the Minister of Health Amending the Regulation on Guaranteed Services in the Field of Spa Treatment). There are 45 towns (or parts of towns) that are officially recognized as health resorts. Treatment in a health resort hospital is usually a continuation of hospital treatment; patients with less-severe conditions are treated in sanatoria. A referral from a NFZ-contracted physician and a confirmation from a patient's local NFZ branch are required before treatment can commence. Stays in health resort hospitals last 27 days for children and 21 days for adults and 21 or 28 days, respectively for adults and children, in sanatoria, and cover at least three to four physiotherapy treatments/ interventions per day. Health resort treatment is also available in the ambulatory setting and can last between 6 and 18 days. Adult patients staying in sanatoria must cover part of the costs of accommodation and food (there are no such fees for children) (see section 4.4.1). Accommodation and board in health resort hospitals are free for both children and adults. In 2017 there were about 44.4 thousand health

resort beds, out of which about 20% are in health resort hospitals (there are about 50 such hospitals) and 80% in sanatoria (there are 191 sanatoria). Their geographical distribution is uneven and is related to the geological and climatic characteristics of their locations. In 2016, more than 400 thousand children and adults received balneotherapy and other treatments financed by the NFZ in health resort hospitals and sanatoria. The majority of them were adults and were treated in sanatoria (GUS, 2019).

Waiting time for rehabilitation services is very long. Waiting time for rehabilitation in health resort hospitals is usually about 3–4 months and for rehabilitation in sanatoria about 12–18 months but in some cases wait times are longer than 24 months. At the end of 2017, more than 765 thousand people waited for rehabilitation in a sanatorium, among them 339 thousand people waited more than 1 year (NFZ, 2018d).

Waiting times are shorter (8 weeks on average) in case of rehabilitation financed by ZUS and KRUS. According to the 1998 Act on Social Insurance System, implementation of the disability pension prevention programme is one of the most important programmes financed by ZUS and KRUS. This programme covers medical rehabilitation of persons at risk of full or partial incapacity to work and recipients of disability pension who are likely to recover after rehabilitation. ZUS has financed rehabilitation since 1996. Rehabilitation care is provided in rehabilitation centres (over 100 rehabilitation centres are selected per year in tender procedures in order to ensure the availability of such services). In 2016, 85.4 thousand persons underwent medical rehabilitation programme financed by ZUS (the most common indication were diseases of the motor system) (ZUS, 2017). Rehabilitation care financed by ZUS and KRUS (which finances rehabilitation for farmers) is entirely free for the patients (including accommodation, board and transportation).

Social and professional rehabilitation is financed by PFRON – the state's targeted fund established in 1991. It mainly comprises occupational therapy workshops and stays in rehabilitation centres but also includes occupational retraining and employment support for people with disabilities. The fund is financed mainly by mandatory contributions from employers who employ at least 25 full-time employees but fail to achieve the required rate of employed people with disabilities (6% of the total number of employees), and also by subsidies from the state budget and other subsidies. In 2016, PFRON provided funding for rehabilitation of over 61 thousand people (PFRON, 2017).

So far, the effectiveness and quality of medical rehabilitation has not been assessed. In 2017, AOTMiT has begun evaluating the effectiveness of rehabilitation services and work is under way to reform the rehabilitation system in Poland with the goal of improving access and shortening waiting times.

5.8 Long-term care

Traditionally, the burden of caring for dependent persons has been borne by their immediate family members. However, over the years, changes in the family model, demography and economic situation have reduced the extent to which long-term care needs of dependent people can be met by their next of kin and led to increased need for formal care. Yet, provision of formal care is underdeveloped and there are shortages of financial and human resources. Over 90% of dependent people in need of long-term care (LTC) do not receive any form of formal in-kind LTC services (EC, 2018d). There is no statutory LTC insurance or any specific piece of legislation comprehensively regulating LTC. Formal LTC is provided in both the health sector and the social assistance sector, with poor coordination between them (Golinowska & Sowa, 2017).

In the health sector, long-term care services have a medical nature and are financed by the NFZ. They are only available to people with 40 points or less on the Barthel Index of Activities of Daily Living (ADL), which means a relatively high level of dependence. This index is used to evaluate a person's level of independence in 10 basic activities of daily life: bowels, bladder, grooming, toilet use, feeding, transfer, mobility, dressing, stairs, bathing. Services can be provided in patients' homes or in residential facilities. Home-based long-term care services include home visits by a long-term care nurse who works in cooperation with a PHC physician, as well as home visits by a long-term care team consisting of a physician, nurse and physiotherapist for patients with chronic conditions who require to be mechanically ventilated. Residential care is provided either in chronic medical care homes (*Zakład opiekuńczo-leczniczy*, ZOL) or in nursing homes (*Zakład pielęgnacyjno-opiekuńczy*, ZPO). Care in ZOLs and ZPOs is provided to people who no longer require to be hospitalized but need to continue their treatment and are in need of 24/7 nursing and care services and/or rehabilitation services. ZOL and ZPO residents receive health services, medicines and medical

products free of charge, but they need to cover the cost of room and board (see section 3.4.1). At the end of 2017, there were 5 764 ZOLs and ZPOs (general and psychiatric), with the total number of beds of approximately 33.1 thousand (i.e. 0.85 beds per 1 000 population). The majority of residents are older people, mostly women (GUS, 2019). Patients have to wait over one year for stays in ZOLs and ZPOs and the wait time has been increasing over the years (AOTMiT, 2017).

Long-term care within the social assistance system is organized and largely financed by the territorial self-governments. It is available to people with chronic conditions or disability who are no longer able to live independently and who face difficult social circumstances (limited financial means, lack of family support). It covers in-kind benefits, such as home-based care services, and care in day care facilities. For people requiring 24 hours assistance which cannot be provided within home-based care or in day care facilities, long-term care can be provided in residential setting. Cash benefits from social assistance system are also available in certain cases. However, the main cash benefit – care allowance – is available as part of old age pension or disability pension within the social insurance system.

In-kind benefits such as home-based care services are provided by the municipal self-governments (*gminas*). They include assistance in daily functioning, e.g. cleaning, washing, shopping, preparing meals, personal care. Home care services can also be provided by qualified carers if more specialized care is required (e.g. due to specific health problems). Depending on the regulations set by the territorial self-governments (and their financial resources) and the household's economic situation, care services can be free of charge or partially or fully paid for by their recipients. In 2017, 105.7 thousand people received home-based care services provided by the municipal self-governments, whereas the amount spent on these benefits by *gminas* was PLN 562 million (MRPiPS, 2018). Because of limited funding of the *gminas*, in 2018 a governmental programme "Opieka 75+" was launched to provide small rural *gminas* with additional resources for improving access to care services.

Day care is provided in support centres (*ośrodki wsparcia*) such as day social assistance homes (*dzienne domy pomocy*). These institutions provide support for families in caring for older and disabled family members, and at the same time preventing them from being placed in residential homes. Many of such centres were established as a result of governmental programme "Senior – Wigor"; however, they are still not commonly available in all municipalities.

Residential care is provided in social assistance homes (*domy pomocy społecznej*, DPS). There are several types of social assistance homes: for older people, for people with chronic conditions, for people with chronic mental disorders, for people with cognitive impairment (for adults and children separately) and for people with physical disabilities. The cost of a stay in public social assistance homes is financed by the resident (up to 70% of resident's income). If the resident's contribution is not sufficient to cover the cost of stay, the resident's family and, failing that, the territorial self-government pays the remaining amount. In 2017, there were 859 social assistance homes with 81.2 thousand places (GUS, 2018l). There are also family assistance homes (*rodzinne domy pomocy*) which are run by private individuals or NGOs (for 3–8 persons), based on contracts with the territorial self-government. However, this form of residential care is poorly developed (47 such homes in 2017).

Care allowance within the social insurance system (*dodatek pielęgnacyjny*) is available for persons aged 75+, and for younger disabled (fully dependent) persons. It is paid on the top of the old age or disability pensions to help cover the costs of care. This is the main cash benefit provided in Poland, with the highest budget among all cash benefits. A cash benefit is also available as part of family benefits within the social assistance system and is granted to disabled persons and people aged 75+ who do not receive a care allowance from the social insurance system. The level of these cash benefits is low – PLN 210 and PLN 153 per month, within care allowance and family benefits respectively. Nevertheless, these benefits are granted to all people aged 75+, irrespective of their incomes, and thus they account for a significant portion of the overall long-term care spending in Poland. Family benefits can also include cash benefits for informal caregivers to compensate them for their reduced incomes if they give up employment to care for their next of kin (see section 5.9). Additionally, a temporary cash allowance can be granted within the social assistance system to chronically sick and disabled persons with incomes below a defined threshold.

Formal long-term care services are also available in the private sector. Private residential facilities can be non-profit (e.g. established by churches, NGOs) or for profit. The former have had a long tradition in Poland, while the latter have only emerged in the 1990s. Fees that are charged by these facilities are not regulated. However, the facilities must meet certain standards of living (these are monitored by the voivodes). In 2017, there were

313 residential facilities (with 11.3 thousand places) providing care for people with disabilities, chronically ill or old age people (GUS, 2018l).

5.9 Services for informal carers

Shortages of formal long-term care and the traditionally high reliance on care provided by next of kin, make the family (spouses, children) the main source of care for people who are not able to live independently. Caregivers are mostly women (women leave the labour market earlier than men, at 60 compared with 65 for men). Informal care also includes carers informally employed by wealthy families but the extent of this is not known (Sobiesiak-Penszko, 2015).

The support for informal care is mainly cash benefits, with carers of disabled children receiving a greater financial support compared with carers of persons whose disability occurred in adulthood. Parents or other family members who give up employment in order to care for a disabled person whose disability occurred before the age of 18 (or 25 if they were studying) are entitled to cash benefits (*świadczenie pielęgnacyjne*) of PLN 1 477 per month (2018), irrespectively of their income (before 2013, the amount was PLN 520 per month but it has been progressively increased since then). In 2016, approximately 117.2 thousand people (on average) received this benefit in a given month (MRPiPS, 2017).

Since 2013, for persons not entitled to the above allowance, i.e. who care for a disabled spouse, parent, or child whose disability occurred after age 18 or 25, and who for this reason are unable to undertake employment, a special care allowance (specjalny zasiłek opiekuńczy) of PLN 620 is available. This allowance is granted only to low-income households, with the net monthly income of the household lower than PLN 764 per household's member. In 2016, 39.3 thousand people on average received this allowance in a given month (MRPiPS, 2017). Since 2014, carers of disabled persons, who do not meet the income criterion for receiving a special care allowance and who do not receive the cash benefit of PLN 1 477 per month, can receive carer's allowance (*zasiłek dla opiekuna*) of the same amount as the special care allowance (PLN 620 per month). In 2015 the number of recipients of carer's allowance was 57.6 thousand (MRPiPs, 2016). A person who provides care for a disabled family member can receive only one of the above-mentioned

cash benefits. Additionally, the contributions for old age or disability pensions for informal carers who do not have a formal employment is covered from public resources.

A caregiver who is employed can be granted leave to care for a sick family member. During this leave, he or she is entitled to receive cash benefit equal to 80% of his/her income base used for the calculation of their social security contributions. This allowance is granted for up to 60 days per calendar year for care provided to a healthy child under 8 years of age or a sick child under 14 years of age, or up to 14 days per calendar year for care provided to a child over 14 years of age or to another family member.

Informal carers can also receive non-financial support. Care support (home-based or in a day care centre) is provided by the territorial self-governments (see section 5.8). Support might also be provided by volunteers and NGOs. Psychological assistance and legal counselling are also offered by the territorial self-governments as well as by the NGOs. There are also self-help groups, which are usually organized around various conditions, e.g. people with Alzheimer's disease.

5.10 Palliative care

Palliative care societies, initially informal, have been formally registered in Poland since 1981.[20] The first home hospice – Hospice Pallottinum – was established in Gdańsk in 1983. Since then hospices and home hospices had been established in other larger cities. In 1991, the Act on Health Care Units provided the legal basis for the provision of palliative and hospice care as part of the guaranteed health care services. The Polish Psycho-Oncological Society and the National Council for Palliative and Hospice Care were established in the early 1990s. Around the same time the palliative care team for children was set up at the Institute of Mother and Child in Warsaw. In 1998, the National Programme for the Development of Palliative and Hospice Care in Poland was adopted with the goal to improve access, quality and continuity of palliative care services across the country. One year later, in 1999, a postgraduate specialization in palliative medicine was introduced for both physicians and nurses (Kurczewska, Jasińska & Orszulak-Michalak, 2010).

[20] The first such society was called *Towarzystwo Przyjaciół Chorych "Hospicjum"* and was based in Kraków.

Palliative care is focused on improving quality of life by preventing and alleviating pain and other somatic symptoms as well as mitigating mental, spiritual and social suffering in patients with terminal diseases which cannot be treated symptomatically and in patients with progressive and life-limiting diseases (cancers and non-cancerous diseases – there are lists of specific diseases that qualify patients for palliative care, separate for children and adults). In practice, the vast majority of patients in hospices are people with advanced cancer. Palliative care is financed by the NFZ. To access palliative care, patients need a referral issued by a physician contracted by the NFZ. Care is provided free of charge to the patient. Palliative and hospice care may also be financed by the local self-governments, NGOs and religious organizations. NGOs also provide other forms of support to patients and their families, such as legal advice, psychological and financial assistance.

Guaranteed palliative care services financed by the NFZ are provided in three types of settings: stationary/inpatient settings – in a stationary hospice or in a palliative care unit/hospital ward; community setting (home care) – in a home hospice for adults or for children; and ambulatory settings – in outpatient palliative care clinics. Multidisciplinary teams work in hospices (both in stationary and home hospices) and consist of many specialists, including: doctors, nurses, psychologists and physiotherapists, as well as social workers, medical caregivers, complementary therapists, spiritual counsellors and volunteers. Length of stay in palliative care units is not limited. The most developed form of palliative care is the home hospice for adults. In 2017, there were 186 providers of stationary care, 441 providers of home care and 161 providers of ambulatory palliative care (NFZ, 2018d).

The network of palliative care units is well developed and the range of available services is broad. In 2007, the International Observatory on End of Life placed Poland at the fifth place in Europe in terms of the development of palliative care. Poland was ranked fourth in terms of coverage of home care teams (Centeno et al., 2016). However, access to services is limited. Of the estimated 200 000 patients who require palliative care every year, only about half (mainly patients with advanced cancer) receive palliative care services financed by the NFZ. More than half of palliative care patients (55%) are treated in a home hospice (AOTMiT, 2018a; NFZ, 2018d). The burden of caring for other persons with palliative care needs rests on their immediate family (AOTMiT, 2018a).

5.11 Mental health care

According to the 1994 Act Mental Health Protection, provision of mental health care is the responsibility of the central and local self-governments and certain institutions established for this purpose, such as the Institute of Psychiatry and Neurology in Warsaw. Mental health care patients are mostly treated in institutionalized settings, the majority of them as outpatients (Table 5.4). Although there is a general shift from institutionalized mental care towards community-based care, institutionalized care is still the dominant form of mental care provision in Poland.

In 2016, approximately 1.6 million people with mental disorders were registered in outpatient clinics or centres – about 75% in mental health clinics and 10% in alcohol dependence therapy outpatient centres (GUS, 2018h). The core of stationary mental care is provided in psychiatric hospitals and in psychiatric and addiction treatment wards within general hospitals (90% of all inpatients) (Table 5.5).

TABLE 5.4 Number of treated patients by type of mental health disorder, per 100 000 inhabitants, 2016

DIAGNOSIS	NUMBER OF TREATED PATIENTS	
	OUTPATIENTS	INPATIENTS
Organic mental disorders (incl. symptomatic mental disorders)	543.2	76.7
Schizophrenia	367.4	87.7
Mood (affective) disorders	816.6	60.5
Neurotic, stress-related and somatoform disorders	1 058.7	56.6
Mental and behavioural disorders caused by alcohol	429.7	206.9
Mental and behavioural disorders caused by psychoactive substances	104.8	43.9

Source: Based on data from the Institute of Psychiatry and Neurology (Wojtyniak & Goryński, 2018).

TABLE 5.5 Inpatient mental care settings, 2017

	NUMBER OF FACILITIES	NUMBER OF BEDS (THOUSANDS) (% OF TOTAL)	NUMBER OF PATIENTS (THOUSANDS) (% OF TOTAL)	AVERAGE LENGTH OF STAY (IN DAYS)
Psychiatric hospitals	48	17.8 (52%)	195.8 (63%)	30.7
Psychiatric wards in general hospitals / Addiction treatment wards in general hospitals	155/ 46	5.7/ 1.0 (20%)	67.2 / 19.4 (27%)	28.5/ 17.1
Rehabilitation centres for addicts from psychoactive substances	29	1.3 (4%)	3.9 (1%)	102.7
MONAR[a]	26	1.1 (3%)	4.2 (1%)	82.7
Alcohol treatment centres	26	1.3 (4%)	13.9 (4%)	29.0
Regional centres of forensic psychiatry[b]	5	0.2 (1%)	0.3 (0.1%)	188.2
Psychiatric chronic medical care homes	56	5.5 (16%)	6.9(2%)	270.5
Psychiatric nursing homes	6	0.4 (1%)	0.6 (0.2%)	246.7

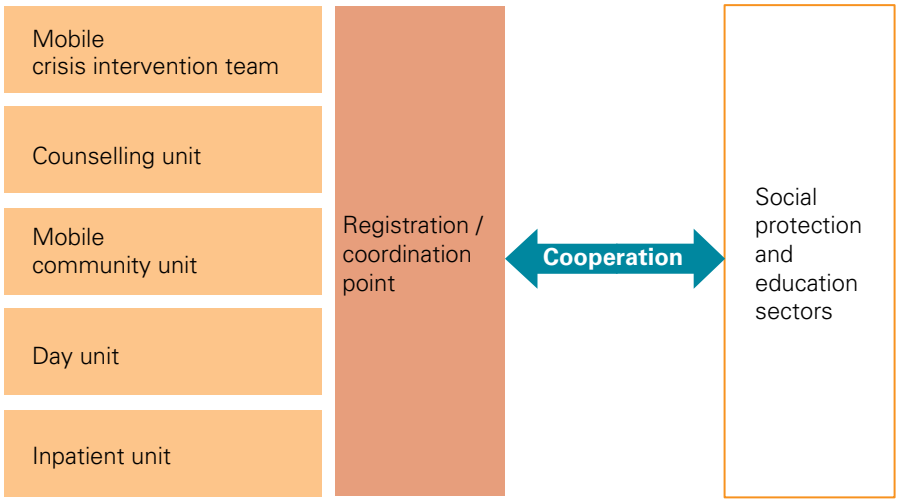
Source: GUS (2019).

Notes: [a]MONAR is a Polish NGO that was established as an association in 1981. It provides support to drug addicts, homeless persons, persons with HIV or AIDS and other groups in need of help. [b]Centres for persons with a mental illness, mental retardation or other mental disorders who committed an illegal act and were ordered to the centre by the Court.

An important amendment to the 1994 Act was made in 2008 to allow for the implementation of the National Mental Health Programme. The first edition of this Programme was in place for the 2011–2015 period and its key goal was to shift provision of mental care from hospitals to the community, with Mental Health Centres (to be piloted within the Programme) as the core of community mental care. These Centres were meant to improve the availability, continuity and effectiveness of psychiatric treatment, reduce the extent of hospitalizations, and thus reduce the cost of care and improve patient outcomes. However, for a variety of reasons, including lack of financial resources and poor coordination, the Centres had not been established and the Programme largely failed to achieve its objectives. These objectives are now pursued within the second edition of the Programme, which covers the 2017–2022 period.

The structure of the Mental Health Centres proposed by the Programme is depicted in Fig. 5.4. They are to cover populations of up to 200 000 people

FIG. 5.4 Proposed structure of Mental Health Centres



Source: Based on the Regulation of the Council of Ministers of 8 February 2017 on the National Mental Health Programme for 2017–2022.

and provide comprehensive psychiatric care through diverse types of services that are coordinated and adapted to the local needs. They are meant to provide short- and long-term outpatient care, counselling, and – to the extent necessary – hospital care. If possible, Mental Health Centres should provide immediate assistance in urgent cases and liaise with social welfare institutions. In July 2018 work has started on piloting 29 Mental Health Centres over a period of 36 months (Regulation of the Minister of Health of 27 April 2018 on the Pilot Programme in the Field of Mental Health Centre).

In 2017 there were only 2 469 psychiatrists in Poland – 8.5 per 100 000 population (GUS, 2019). This is much lower than the EU average of 17.16 per 100 000 (data for 2015, WHO, 2018b) and likely insufficient to meet the growing mental health care needs of the population (see section 1.4). In 2015, spending on mental health in the EU averaged 1.31% of GDP (or about 13% of health spending). In Poland, the respective figure was 1.19% of GDP, which is higher than in Slovakia, Lithuania and Czechia but lower compared with France, Germany and the United Kingdom where it was higher than 1.3% of GDP (OECD, 2018a).

5.12 Dental care

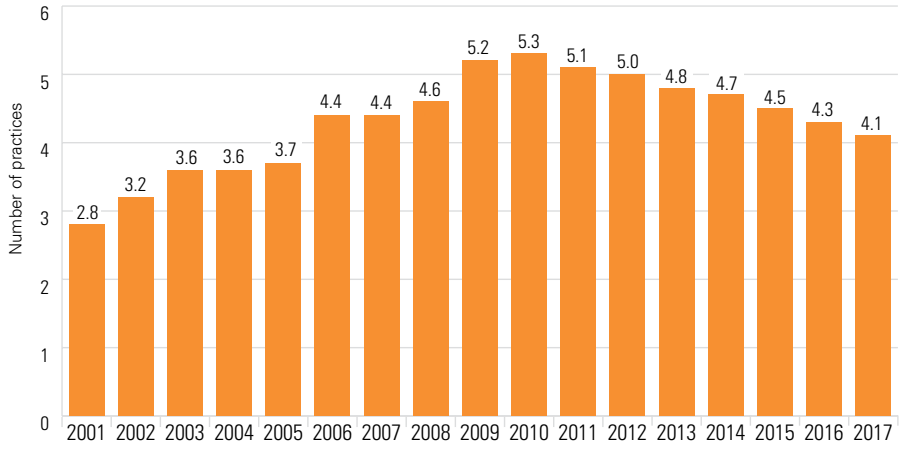
Dental services available to the insured population are listed in the 2004 Act on Health Care Services Financed from Public Sources and the 2013 Executive Regulation of the Minister of Health on the Guaranteed Benefits in the Area of Dental Treatment. These benefits can be accessed free of charge in any dental health care provider contracted by the NFZ.

About 88% of dental care financing comes from households' OOP spending (GUS, 2019). This is mainly because the scope of statutory dental benefits is narrow and the most advanced dental procedures (such as prosthetic crowns and bridges) and materials (such as titanium implants or porcelain crowns) are only available in the private sector, where prices are not regulated. Statutory benefits include general dental services, including regular check-ups (three times in 12 months) and dental hygiene advice (once in 12 months), dental surgery and periodontology and urgent dental assistance (patients with pain will be seen on the same day). Once every 5 years patients are entitled to prosthetic treatment of 5 to 8 missing teeth with the use of mobile partial dentures. In case of total lack of teeth the patients are entitled to a complete prosthesis once every 5 years (persons who have undergone surgery of tumours within the facial skeleton are granted a prosthesis without any time constraints). Patients are also entitled to free prosthesis repair once every 2 years. Children and teenagers under 18 are entitled to additional benefits. These include orthodontic treatment for children under 12 (MZ, 2018b). The 2013 Regulation also specifies dental materials that are covered. Costs of dental treatments or materials that are not included in the list of guaranteed benefits have to be paid for by the patients.

Dental care is mainly provided by solo private dental practices. According to a 2016 survey, 46% of dentists worked in their own dental practices and a fourth were employed in therapeutic entities (NIL, 2016) (for types of health care providers see Fig. 2.2). The number of dental care providers contracted by the NFZ to provide statutory dental care has been decreasing in recent years (Fig. 5.5).

Dental health care can be divided into primary dental care, provided mainly by dental practitioners with no specialization; secondary dental care, provided by specialists in dental practices (about a fifth of all dentists had a specialization in 2016; see section 4.2); and tertiary dental care provided at

FIG. 5.5 Number of dental practices providing services financed by the NFZ (in thousands), 2001–2017



Sources: GUS (2017b, 2018a).

wards of maxillofacial surgery (located mainly in public hospitals). In 2017, there were 444 beds in maxillofacial surgery wards (CSIOZ, 2018b).

Fluoride prophylaxis is available for primary school pupils in grades 1–6. It is performed six times a year by school nurses (hygienists). However, incidence of dental caries in children is very high (see section 1.4) and surveys of parents of children aged 3 and 6 showed that one in four has never taken their child to the dentist and one in three indicated that their child cleans their teeth only once a day or less often (1–3 times a week or sporadically).[21] In order to improve access to dental care to children, particularly in smaller towns with no dental clinics in schools or elsewhere in the area, in 2017 the Minister of Health purchased 16 mobile dental clinics ("dentobuses"), one for each voivodeship. Dentobuses are fully equipped treatment rooms with X-ray machines and dental treatment tools. Dentobuses are available free of charge to dental care providers contracted by the NFZ. Costs of dental services are covered by the NFZ and maintenance and running costs are met by the providers (Badora-Musiał & Kowalska-Bobko, 2018b).

[21] Justification for the draft Act of 15 September 2017 on specific solutions ensuring the improvement of the quality and accessibility of health care services.

6

Principal health reforms

Summary:

- Transformation of public health care units into companies under the Commercial Companies Code was one of the key reforms implemented by the previous government. The goal was to improve the financial condition of public hospitals and reduce the indebtedness of the health care sector. However, uptake has been slow and these efforts have been halted by the current government.
- The government that came to power in 2015 published an ambitious reform plan that included far-reaching changes such as abolishment of the NFZ and a shift to a budgetary system of health care financing. Many of the planned changes have quickly been abandoned; yet, other important changes are being implemented, as of late 2018. They include the introduction of the hospital network and reorganization of primary care with the goal of improving care coordination.
- These key reforms will likely take up much of the political capital in the years to come. The government is currently working with health care experts to determine the direction of future changes in the Polish health care sector.

6.1 Analysis of recent reforms

Health sector reforms that took place between the publication of the last Health in Transition report (2011) and the cut-off date of the current report (August 2018) can be divided into two periods: (1) reforms implemented between 2011 and late 2015, under the Civic Platform and the Polish People's Party coalition government (in power since 2008), and (2) reforms implemented under the rule of Law and Justice, which started at the end of 2015.

6.1.1 *Reforms in the 2011–2015 period*

The most important changes proposed and/or implemented in the 2011–2015 period are summarized in Table 6.1.

The most controversial reform in the 2011–2015 period was the transformation (known as "commercialization") of health care providers operating as SPZOZs into companies under the Commercial Companies Code. This was initially implemented through the so-called plan B "Save Polish Hospitals" introduced in 2009 and then through the 2011 Act on Therapeutic Activity (for more information see Box 2.3 and Sagan et al. (2011)). It was hoped that commercialized hospitals would adopt governance principles set out in the Commercial Companies Code, such as strict control of the management board over the hospital's finances (Kowalska-Bobko, 2017), and that this would help resolve the problem of indebtedness in the hospital sector. Overall, due to numerous obstacles (see Box 6.1), the effect of this reform was limited.

TABLE 6.1 Key health care reforms and reform proposals between 2011 and late 2015

YEAR	REFORM	GOALS	IMPLEMENTATION STATUS
2011	Commercialization of public hospitals Act on Therapeutic Activity	Transformation of SPZOZs into companies under the Commercial Companies Code; reduction of debts in the hospital sector	Under implementation (see Box 2.3); however, commercialization of hospitals was halted in 2016 and reform was further revised in 2017 with the introduction of the hospital network (see Table 6.2)
2011	Changes to pharmaceutical pricing and reimbursement policy Act on Reimbursement	Achieving compliance with the Transparency Directive; increasing efficiency of and control over public spending on medicines; improving access to innovative medicines	Implemented
2014	Implementation of Directive on Cross-Border Care Act on the Amendment of the Act on Health Care Services Financed from Public Sources and certain other acts	Implementation of the Cross-Border Care Directive giving Polish patients the right to receive planned medical treatment abroad in case of barrier to accessing such treatment at home (e.g. long waiting times, lack of specialists/service)	Implemented
2015	Introduction of "waiting times package" Act on the Amendment of the Act on Health Care Services Financed from Public Sources and certain other acts	Shortening waiting times for specialist outpatient and inpatient services, including via better monitoring of waiting lists (to prevent patients from being enrolled into multiple lists), introduction of a dedicated helpline run by the NFZ and differentiated tariffs for the first visit and ongoing treatment	Implemented and partly revised in 2017 with the introduction of the hospital network (see Table 6.2)
2015	Introduction of the "oncology package" Act on the Amendment of the Act on Health Care Services Financed from Public Sources and certain other acts	Introduction of coordinated/integrated care for cancer patients giving them fast track access to care, with a maximum waiting time for oncological services of 7 weeks from the time of registration of the oncological card (DiLO card) to receiving care	Implemented (see Box 5.3)
2015	Introduction of nurse prescribing Act on the Amendment of the Act on the Professions of Nurse and Midwife and some other acts	Extending the qualifications of nurses by permitting them to prescribe certain medicines, medical devices and foodstuffs for special use and refer patients to diagnostic tests	Implemented
2015	Amendment of the Act on the State Medical Rescue	Medical rescuers allowed to work in hospital wards (SORs and other) alongside nurses	Implemented
2015	Regulation of the Profession of Physiotherapist Act on the Profession of Physiotherapist	Creation of professional self-government for physiotherapists	Implemented

Source: Authors.

BOX 6.1 Key obstacles to achieving the objectives of the 2011 Act on Therapeutic Activity

The key two goals of the 2011 Act on Therapeutic Activity have largely failed to materialize: take up of "commercialization" has remained low (see Box 2.3) and the financial situation in the hospital sector has not improved significantly. Local politicians, under pressure from their electorates, have continued to support the SPZOZs (the majority of the SPZOZs are owed by the local self-governments), for example via subsidies, thus allowing them to function inefficiently. Further, the financial incentive to transform hospitals into companies under the Commercial Companies Code was not strong enough: according to the 2011 Law, local self-governments had to pay back debts of both the SPZOZs that were transformed into companies under the Commercial Companies Code, for which they had become the owner, and for the SPZOZs that had not been transformed, for which they were the founding bodies. This meant that, either way, debts had to be paid back but additionally, the administrative cost of "commercializing" the SPZOZs were high and had to be borne by the local self-governments.

In terms of improving the financial situation in the hospital sector, the results were modest because of the following factors:

- Failure to communicate to the public that access to publicly financed services will not change with the increased participation of companies under the Commercial Companies Code in the provision of public health care services (Kowalska-Bobko, 2017): this resulted in local populations opposing "commercialization" of hospitals and hospital closures.
- Failure to introduce further systemic changes, such as introduction of competition between insurers (planned for 2013–2014 but withdrawn): the loss of monopsonistic power by the NFZ could have strengthened the position of providers and helped them achieve a more realistic valuation of services (many services are currently undervalued) (Kowalska-Bobko, 2017).
- Certain practices undertaken by commercial hospitals, such as selection of good risks (patients less costly to treat) and more profitable treatments resulted in public hospitals having to treat higher risks and provide less profitable treatments.
- Increase in the number of hospitalizations (in order to assure revenue).
- Difficulties in recruiting medical personnel for "commercialized" hospitals staff: medical personnel working in the SPZOZs (mainly nurses) was reluctant to work in "commercialized" hospitals since employment in such hospitals was usually based on contracts (i.e. based on the Civil Code rather than on the Labour Code) and offered less job security (see section 3.7.2).

6.1.2 *Reform priorities since 2018*

Following the elections in late 2015, the new Law and Justice government published its reform proposals in a document titled Strategy for changes in the health care system (MZ, 2016a). The five priority areas and the specific objectives within these areas are summarized in Table 6.2.

TABLE 6.2 Reform priorities for the period 2015–2018

REFORM PRIORITY	GOALS	IMPLEMENTATION STATUS
Priority I: Building an efficiently-managed system of universally accessible health care		
Objective 1: Abolishment of the NFZ and ensuring universal access to statutory benefits	• Abolishment of the NFZ and a shift to a budgetary system of health care financing (Targeted State Health Fund, see below), with some of the responsibilities of the NFZ's Central Office transferred to the Ministry of Health. • Entitlement to statutory health care to be based on residence.	Postponed[a] (originally planned for January 2018)
Objective 2: Reforming the management of health services at the voivodeship level	• NFZ voivodeship branches to be liquidated and replaced by the Voivodeship Health Offices subordinated to the Ministry of Health and (to a lesser extent) to the voivodes.	Postponed[a] (originally planned for January 2018)
Objective 3: Transfer of resources for health to the State budget	• Establishment of the Targeted State Health Fund administered by the Minister of Health. • Funding to gradually increase from 2018 with plans to reach 6% of GDP by 2025 (later changed to 2024); funding to come from a portion of personal income tax revenues and a State subsidy (to reach the desired level of funding).	Introduction of the Targeted Fund postponed[a] (originally planned for January 2018); increase in funding under implementation (since January 2018)[b]
Priority II. Introduction of the hospital network		
Objective 1: Introduction of a new contracting model for hospitals	• Contracting to be largely replaced by budgeting, i.e. financing of hospitals to move away from financing of individual procedures to financing based on annual lump sums.	Under implementation (since October 2017) (see section 3.7)
Objective 2: Linking inpatient care with outpatient care	• Each hospital must set up a specialist outpatient clinic in an area in which it provides inpatient care; hospital budgets (annual lump sums) will cover both inpatient and specialist outpatient care.	Under implementation (since October 2017) (see section 3.7)
Objective 3: Establishment of three levels of hospital care	• Hospital network to be divided into three "basic" levels and four "specialist" levels (see Table 4.3); eligibility criteria will be defined by the Minister of Health.	Under implementation (since October 2017)

Priority III: Increasing spending on health		
Objective 1: Increasing public spending on health to 6% of GDP by 2024	• Health expenditure from public sources to gradually increase from 2018 to 6% of GDP by 2024 (annual growth of about 0.2% of GDP).	Under implementation (since January 2018)[b]
Priority IV: Reform of primary care		
Objective 1: Introducing primary care teams	• Introduction of primary care teams composed of the following health professionals: doctor, nurse, school nurse, and midwife (optionally also a physical therapist), with all health professionals in the team covering the same group of patients (same patient list). • The team will provide primary care services, including health promotion and prophylaxis, in cooperation with hospitals, ambulatory specialist care, schools and kindergartens.	Pilots (since July 2017)
Objective 2: Primary care teams to coordinate care	• Primary care teams to coordinate care pathways, including post-hospital treatment and rehabilitation.	Pilots (since July 2017)
Objective 3: Introduction of new financing model for primary care teams, with budgets for diagnostics and specialized ambulatory care	• Primary care budgets are to consist of: a capitation fee (including a supplement for prophylaxis and health promotion, for care over chronically ill patients (and their health outcomes)) and budgets for diagnostic care and specialist ambulatory care.	Pilots (since July 2017) (see section 3.7)
Priority V: Establishment of the Public Health Office		
Objective 1: Integration of the public health system	• Several public health institutions to be merged into a single Public Health Office supervised by the Secretary/ Undersecretary of State in the Ministry of Health; NIZP-PZH to continue to operate.	Originally planned for 2018; not implemented
Objective 2: Increasing effectiveness of pro-health activities and health promotion	• Establishment of the Public Health Office is intended to ensure a more efficient provision of health promotion and prevention activities thanks to, among others, cooperation with primary care, local self-governments, NGOs, and schools.	Originally planned for 2018; not implemented

Sources: Based on MZ (2016a), Polityka Zdrowotna (2016).

Notes: [a]Postponed until after the next parliamentary elections in 2019. [b]Gradual increases in health care funding are being implemented in line with the agreements between the Ministry of Health and resident physicians, following a series of strikes of resident doctors in late 2017.

The priorities have quickly been revised as the government realized that certain proposed changes, such as the abolishment of the NFZ and transfer of contracting of services to the voivodes, were administratively difficult and could seriously destabilize the health system.

The government also had to deal with day-to-day problems such as protests of resident doctors (since late 2017; see Box 6.2), mass protests related to the tightening of the abortion law (2017, 2018) as well as mass protests related to reforms outside the health sector (including reforms to

the judiciary system). As a result, some of the plans have been postponed indefinitely. However, it should be stressed that two very important planned changes, i.e. creation of the hospital network and reform of primary care, have been/are being implemented. Other changes have also been introduced (see below).

BOX 6.2 Protests of resident doctors in 2017

For most part of October 2017 junior doctors in eight cities took part in a hunger strike. Their main demands included increasing health care spending from public sources from the current level of 4.8% to at least 6.8% of GDP by 2021; reducing bureaucracy; increasing the number of medical workers; improving working conditions, including increasing salaries. Protesters also called for shorter waiting lists for patients. Protesting doctors ended their hunger strike on 31 October 2017, moving on to other forms of strike, namely refusing to sign the so-called opt-out clause in their employment contracts that waives their rights to EU working time restrictions. In practice, this means that doctors may take up additional work shifts and thus work longer than the legal limit of 48 hours a week. By the end of 2017 about 3 500 (including 1 889 residents) of the 88 000 hospital physicians refused to sign the opt-out clause (Badora-Musiał & Kowalska-Bobko, 2018a).

In December 2017, protests were dissolved after the Minister of Health announced an increase in public health care expenditure to over 6% of GDP by 2025. The new Health Minister, who took office in January 2018, promised an increase in expenditure by 2024. The Minister also agreed to increase salaries of specialist doctors working in a single hospital; increase salaries for resident doctors in exchange for an obligation to work in Poland for 2 years after completing their specialization; reduce bureaucratic burden of hospital doctors, including through the introduction of medical secretaries.

Other key reforms introduced since late 2015 include:

- **Halting of the "commercialization" of hospitals**: In July 2016, the 2011 Act on Therapeutic Activity was amended. The amendment introduced a ban on selling the majority of stocks or shares in commercial companies owned by the state or local self-governments; banned capital companies with majority public ownership (at

least 51%) from paying dividends; and reinforced supervisory powers of the founding entities over the SPZOZs. The amendment also allowed local self-governments to finance health care services and the SPZOZs to cover their losses from their own capital fund. If the capital fund is exhausted, the founding entity is obliged to cover the loss or may liquidate the SPZOZ. In practice, the introduced changes have made "commercialization" of SPZOZs an unattractive option for their founders and further reduced the already low rate of transformation of the SPOZs into companies under the Commercial Companies Code (see Box 2.3).

- **Introduction of the IOWISZ system for appraising investments in the health sector**: In 2016, the IOWISZ system has been implemented in order to evaluate investment proposals in the health sector and thus ensure that an efficient use of resources that is cost-effective (e.g. no similar investments in the neighbouring locations) and tailored to local needs (taking into account health needs maps and local health policy priorities). Prior to the reform, there was no national system for assessing new investments in the health care sector. Under the IOWISZ system all investments that result in the creation of a new therapeutic entity or any large investment are subjected to a prior assessment. Obtaining a positive opinion within the IOWISZ system will also be a necessary condition for obtaining financing from European funds.

- **Further progress in the implementation of e-health solutions**: Further efforts are being undertaken to implement, by early 2020, the Electronic Platform for Collection, Analysis and Sharing of Digital Medical Records (Project P1). This platform will comprise a number of sub-platforms and applications (e.g. Internet Patient Account, various Medical Data Collection Systems) and is meant to enable public administration bodies and (Polish and EU) citizens to collect, analyse and access digital health care information, such as information on medical conditions and medical events, prescriptions, referrals, etc. It is hoped that this will help improve, among others, quality of care, planning of services, and crisis management.

- **Changes in the Act on the Pharmaceutical Law**: The Council of Ministers is working a major overhaul of the Pharmaceutical Law Act. The proposed key changes (to be introduced in early 2019) include: (1) Strengthening the supervision over the production and marketing of medicinal products through work towards implementing Directive 2001/83/EC on the Community code relating to medicinal products for human use. For example, wholesalers of medicinal products will not be able to be involved in the provision of medical activities, in order to limit the so-called reverse distribution chain of medicines and the related illegal export of medicinal products; (2) Reducing conflicts of interest in the pharmaceutical sector: persons responsible for the supervision of medicinal products who are employed at the State Pharmaceutical Inspection will not be allowed to have any financial connections with the pharmaceutical industry; (3) Simplification of procedures for obtaining permission for clinical trials: applications for permissions to start clinical trials will not require a prior review by bioethics commissions or submission of certain related documentation (Kawalec & Kowalska-Bobko, 2018).

- **Improving access to vaccines**: In July 2018 influenza vaccines were added to the statutory reimbursement lists. They will be available with 50% reimbursement for people aged 65+. In future, reimbursement will also be granted for other recommended vaccinations. This is a big step towards improving epidemiological prevention in Poland, especially given recent anti-vaccination movements and declining rates of immunizations (see section 5.1). Until now, vaccines have not been included in the reimbursement lists, although some vaccines for children and adults have been financed directly by the Ministry of Health. Mandatory vaccination schedule for children was extended to include vaccination against pneumococci (*Streptococcus pneumoniae*) for all children born after 1 January 2017 (until then only certain vulnerable groups of children were covered).

- **Increasing funding for health care**: In August 2018, the president signed the amendment to the Act on Health Care Services Financed from Public Sources. According to this amendment,

public spending on health care will account for 4.78% of GDP and 2018 and will be gradually increased to reach 6% of GDP in 2024. Salaries of resident doctors undergoing specialization will also be increased: by PLN 600 per month for specializations in non-priority areas and by PLN 700 for specializations in priority areas. Base salaries of doctors who have completed specialization training will also be increased if they commit to working in a therapeutic entity that receives public financing (for 2 years in the first 5 years after having completed the specialization training). The main objective of these changes is to increase access to health care services and improve their quality.

6.2 Future developments

Implementation of the hospital network and reform of primary care will likely remain on the reform agenda in the years to come. Related to that, the broader issue of care coordination (*koordynowana opieka zdrowotna*, KOZ; see Box 5.3) will likely consume much political capital in near future. The goal of ongoing changes is to create a system of comprehensive health care financed from public sources. The scope is limited to specific health problems (e.g. invasive cardiology, psychiatric care) or groups of patients (e.g. pregnant women and children) (Zapaśnik et al., 2016). The government, in collaboration with the World Bank, has elaborated alternative models of coordinated care that are currently being implemented via local pilots (WB, 2018a):

- **Model 1**: Expanded primary care services, covering the original scope of primary care services and selected services provided by ambulatory specialist care; with broader competencies of the primary care team of general practitioners, nurses, midwives, and, optionally, physical therapists.
- **Model 2**: Outpatient Managed Care (OMC) model of enhanced primary health care, which includes the existing scope of primary health care, a wide variety of services including outpatient specialist care, comprehensive preventive services, and ambulatory rehabilitation, offered by one medical facility or a group of medical facilities in cooperation with one another.

- **Model 3**: Home Care Centre (HCC) model offering improved integration between health care and social care services for older people.

Primary care teams are to play key roles in each of the coordinated care models, guiding patients through the health system. To that end they will dispose of delegated budgets that can be spent on diagnostics and specialist ambulatory care. Pilots (called PHC PLUS) have started in March 2018 and will run until the end of 2019. They will be financed from the EU funds and will cover patients with 11 chronic diseases in 45–50 PHC units selected in a competitive process across all voivodeships. Approximately 700 PHC entities (out of about 6 000) with contracts with the NFZ have expressed their willingness to participate in the pilots, although this number has fallen after details about the administrative burden related to the pilots have been made available.

In April 2018, the Minister of Health initiated a nationwide debate (a series of conferences) on the directions of changes in the Polish health care sector, "Together for Health",[22] involving 60 academic researchers and other health care system experts. This work will be concluded with the publication of new strategic guidelines, "Social Programme for Health", in mid-2019.

[22] https://www.gov.pl/zdrowie/wspolnie-dla-zdrowia

7

Assessment of the health system

Summary:

- The overall performance of the health system is not explicitly assessed; however, certain selected indicators are monitored within the governmental and nongovernmental sector and the Ministry of Health may occasionally commission external experts to assess subsections of the system.
- Both amenable and preventable mortality rates have decreased over the years, indicating a positive impact of the health system and wider policies on population health. Circulatory diseases and cancers are the main causes of death in Poland: while much progress has been achieved in the area of cardiology, cancer survival rates remain low, mainly due to late detection and long waiting times for diagnostics.
- Although population coverage is practically universal within the statutory health system, there are key gaps in the scope and depth of public cover. These gaps are particularly large in the area of out-patient medicines and are the key driver of catastrophic spending on health in households. Waiting times for services, especially for specialist care and diagnostics, may be very long but efforts have been undertaken in recent years to improve access to certain population groups such as pregnant women and cancer patients.

- Spending on curative care is relatively high compared with other countries and spending on health promotion and disease prevention remains negligible. Despite efforts to shift service provision to the community, spending on hospital care is relatively high and the levels of avoidable hospital admissions for certain conditions manageable in the outpatient settings are some of the highest in the EU.
- There are major imbalances in the provision of services, with hospital sector being characterized by excessive infrastructure and low bed occupancy rates and with deficits in the provision of outpatient specialist care, of which long waiting times are symptomatic. The numbers of doctors and nurses per 100 000 inhabitants are some of the lowest in Europe and strategic human resources planning is lacking.
- The market of generics is well developed and market shares of generics are among the highest in Europe. Price competition in the generics market has been improved in recent years.
- The health sector is perceived as one of the areas of the public sphere with the highest corruption risk in Poland. A number of anti-corruption initiatives have been introduced in recent years to reduce this risk.

7.1 Monitoring health system performance

The Polish health system is primarily supervised by the Minister of Health, with specific tasks delegated to a number of institutions within the health section (and other related sections) of the central administration. The focus of this supervision is mainly on monitoring of selected indicators rather than on explicitly assessing performance of the health system, such as allocative or technical efficiency, or its parts. There are no mandatory and standardized assessments; however, certain public institutions, such as the Supreme Audit Office (NIK) carry out periodic evaluations of the functioning of the various areas of the health system, such as provision of various types of care, implementation of health needs maps, etc. Evaluations are also carried out by the nongovernmental sector, for example foundations and associations such as the Centre for Public Opinion Research (CBOS) or the Watch Health Care Foundation, and by the academic research community, but these do

not seem to have much real impact on health policy. The Ministry of Health also commissions external experts to assess the functioning of subsections of the health system, e.g. coordination of investments in the health care sector, functioning of day care facilities, etc.[23]

7.1.1 *Information systems*

Data on the functioning of the health system and on population health status are collected by various entities and by means of various information systems. Every year, the statistical survey programme of public statistics sets the scope, form and frequency of public data collection, format in which data is published, and designates entities responsible for data collection (Table 7.1). Key entities explicitly designated for data collection are: the Central Statistical Office (*Główny Urząd Statystyczny,* GUS), which also submits relevant data to international institutions such as WHO, the European Commission (Eurostat) or the OECD; the Minister of Health; and the Minister of the Interior (prevention activities, health workforce). In this task, they are supported by a number of institutions, including CSIOZ (which runs a number of health care registers and implements various e-health projects), CMJ, NIZP-PZH and a number of other institutes such as the Institute of Psychiatry and Neurology, the Nofer Institute of Occupational Medicine (which runs the Central Register of Occupational Diseases established in 1971), the Institute of Mother and Child, etc. Since 2015, AOTMiT has been collecting and analysing data on the costs of health care provision.

Public statistics data can only be collected, published and utilized in an aggregated form since the 1995 Act on Public Statistics prohibits access to and publication of personal data in non-aggregated form. Timely submission of required data is enforced through fines for non-compliance. Accuracy of collected data may not always be assured and there is a need to train physicians in filling out statistical reporting forms. The compatibility of the Polish statistical classification of health providers (as coded in the International Classification of Health Accounts) with the new OECD methodology and requirements of EU statistical reporting has been improved through training and cooperation between the Polish and international bodies involved in the collection and analysis of statistical data (OECD, Eurostat, WHO).

[23] http://www.zdrowie.gov.pl/aktualnosci-52-ewaluacja.html

TABLE 7.1 Data collected under the 2018 programme of statistical surveys of public statistics

THEME	ENTITY RESPONSIBLE FOR DATA COLLECTION
Health status of the population (incl. births, deaths, age at death, etc.)	President of GUS
Morbidity and number of treated patients (by type of disease)	Minister of Health, Minister of the Interior
Hospitalizations (incl. reasons for hospitalization, length of stay, etc.)	Minister of Health
Disease prevention (incl. type of preventive activities, their frequency, etc.)	Minister of Health, Minister of the Interior
Immunizations (monitoring of immunizations against certain infectious diseases, monitoring of mandatory immunizations)	Minister of Health
Human resources in health (number of certain types of health care professionals)	President of GUS, Minister of Health, Minister of the Interior
Health infrastructure and its functioning (incl. number of therapeutic entities, with distinction among ambulatory, inpatient, stationary LTC, health resort treatment, medical emergency services and blood service)	Minister of Health, President of GUS, Minister of the Interior
Pharmacies (incl. type and number or pharmacies and pharmaceutical outlets, their location opening hours, employed personnel)	President of GUS
Activities of the Chief Sanitary Inspectorate (activities of the Sanitary-Epidemiological Stations covering areas such as environmental safety, work safety, etc.)	Minister of Health, Minister of the Interior
Economic aspects of health care activities (financial data of the SPZOZs)	Minister of Health
National Health Accounts (health expenditure data according to international classification for health accounts (ICHA) classification)	President of GUS

Source: Based on Regulation of the Council of Ministers of 19 December 2017 on the programme of statistical surveys of public statistics for 2018.

In spite of the progress in the area of health information, there are still gaps that need to be filled. These include measuring and monitoring of performance indicators of health care providers (and the wider health system) that would help maximize the value of health care for the population, for example, by implementing P4P payment methods that are being developed. Data collection is dispersed across several institutions and collected data may not always be coherent or easy to interpret (e.g. human resources data; see section 4.2.2).

7.1.2 *Stated objectives of the health system*

At present, the framework for the strategic development of the health system in Poland is presented in the Policy paper for health protection for 2014–2020 (see section 2.4). The main strategic goal stated in the Policy paper is to "extend the number of healthy life years in order to improve the quality of life of the population and the economic development of the country" (p. 134). This is in line with the Health in All policies[24] approach and with the overall development strategy for Poland (DSRK). Key stated goals for the health care system are summarized in Table 7.2. Implementation of these goals is supported by EU funds and funding decisions are vetted by the recently created IOWISZ system.

TABLE 7.2 Key strategic goals for the health care system for 2014–2020

KEY STRATEGIC GOALS	DETAILS
A. Development of prophylaxis, diagnostics and curative medicine with the focus on key epidemiological problems in Poland.	• Reducing morbidity and premature mortality due to cardiovascular diseases, including stroke (see Box 5.3) • Reducing morbidity and premature mortality due to cancer (see Box 5.3) • Prevention of mental disorders • Reducing premature morbidity due to chronic diseases of the musculoskeletal system and reducing the negative effects of such diseases • Reducing morbidity and premature mortality due to chronic diseases of the respiratory system • Reducing the frequency of injuries resulting from accidents and limiting their effects • Increasing effectiveness of prevention against infectious diseases and infections (see section 5.1) • Improving the functioning of the State Medical Emergency System (see section 5.5) • Improving health care infrastructure and teaching base of universities and research institutes
B. Counteracting negative demographic trends by developing care for mothers, children and older people.	• Adapting prenatal care to the changed model of motherhood (older maternal age) • Improving health care for mothers, neonates and young children (see Box 5.3) • Supporting physical and psychosocial health of children and youth and prevention of the most common health problems in these groups • Increasing prevention and treatment of tooth decay in children and youth (see section 5.12) • Creating conditions for healthy and active life for older people and people with disabilities* • Implementation of a new model of care for dependent persons; development of long-term care • Improving the availability and quality of care (incl. geriatric services) for older people * Activities implemented as part of an inter-ministerial document entitled "Assumptions of Long-term Senior Policy in Poland for 2014–2020" and the "Solidarity across generations" Programme established in 2014.

[24] Commitment to the "Health in All Policies" approach has been explicitly stated in the Policy paper for health protection for 2014–2020 as well as in other strategic documents.

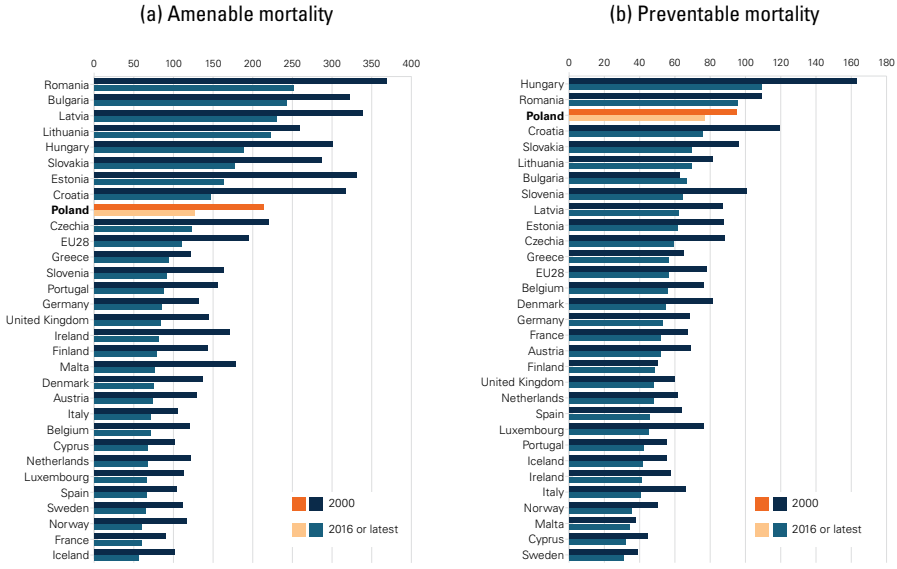
C. Improving the efficiency and organization of the health care system in the context of changing demographic and epidemiological situation as supporting scientific research, technological development and innovation in health care.	• Introduction of systemic changes, such as changes in the financing model (additional sources of funding) and increasing efficiency in the system • Increasing public expenditure on health and improving the efficiency with which public spending on health is managed; further development of private health insurance as an additional source of financing • Reducing geographical inequalities in the health status (see section 2.4) • Improving access to health care benefits (see section 7.3) • Improving management of the health care system • Creating effective management of medicinal products (see section 6.1) • Adapting regulatory and financial context to support innovation
D. Supporting education of medical personnel in order to adapt human resources for health to the changing needs of society.	• Increasing access to PHC and ambulatory specialist physicians for patients living in peripheral areas • Developing education and training of professionals taking care of older people (e.g. supporting families who care for a dependent family member in order to enable them to return to their professional activity) • Adapting education of health care professionals to projected needs and demographic changes • Training of health educators responsible for implementation of local activities in the health promotion and health education • Educating health personnel about the possibilities of using modern information technologies in health care

Source: MZ (2015).

7.2 Health system impact on population health

The health status of the Polish population in terms of mortality and morbidity is outlined in section 1.4. The impact of the health system and wider policies on population health can be quantified using amenable and preventable mortality. The former reflects quality and timeliness of medical care, whereas the latter reflects intersectoral measures affecting health, such as tobacco and alcohol consumption policies or road traffic safety. Fig. 7.1a shows how amenable mortality rates changed between 2000 and 2015. In Poland, this indicator decreased significantly over this period, from 214 to 127 per 100 000 (a fall of over 40%), but is still higher than the EU average (118 in 2015). However, it is lower compared with almost all central and eastern European EU Member States (with the exception of Slovenia). Preventable mortality rate also decreased between 2000 and 2015 (by 19%) (Fig. 7.1b) but it is worse than in most EU Member States – it was only lower than Croatia, Romania and Hungary – and exceeds the EU average by over 30%. There is no research that allows these changes to be linked to any particular policies.

FIG. 7.1 Amenable and preventable mortality in Poland and selected countries, 2000 and 2016 (or the latest available year)



Sources: Calculated by the European Observatory for Health Systems and Policies using data from WHO (2019b) and amenable causes as per list by Nolte and McKee (2004).

Notes: Age-standardized death rates for all persons; 2000–2016 unless stated otherwise; 2000–2015 for Belgium, Germany, Denmark, Greece, Finland, France, Ireland, Italy, Luxembourg, Latvia, Malta, Poland, Slovenia, EU-28; 2000–2014 for Bulgaria, Slovakia; 2001–2015 for United Kingdom; 2004–2016 for Cyprus.

Circulatory diseases and malignant neoplasms are the major causes of death in Poland (see section 1.4). Standardized death rates from circulatory diseases decreased by 18% between 2005 and 2015 and it is likely that a portion of this positive trend can be ascribed to investments in cardiac care. NFZ's spending on cardiac services increased from PLN 1 billion in 2004 to over PLN 3 billion in 2014. The number of haemodynamic laboratories increased to 167 in 2014 (NIK, 2016b), the number of centres for invasive cardiology to 154 (Ochała et al., 2014), and the percentage of fatal cases after an angioplasty decreased to 2.3% in 2014 (NIK, 2016b). Compared with other countries, 30-day mortality rate after admission to hospital for acute myocardial infarction (AMI) is low in Poland: in 2015, the age-sex standardized rate per 100 admissions of adults was 4.4 in Poland compared with an average of 7.5 for 34 OECD countries (OECD 2017; unlinked data).

Despite the increase in 5-year cancer survival rates, these indicators are still much lower in Poland compared with the OECD countries. For example, survival rate for rectal cancer was almost 13 percentage points lower in

Poland compared with the OECD average and almost 23 percentage points lower compared with Australia, which had the highest survival rate for this type of cancer among the OECD countries (Table 7.3). For cervical cancer, the differences were 11 and 25 percentage points, respectively.

TABLE 7.3 Five-year age-standardized survival rates (%) for cancer patients 15 years and older, 2000–2004 and 2009–2014

	POLAND		OECD AVERAGE (31)[a]		HIGHEST VALUE	
	2000–2004	2009–2014	2000–2004	2009–2014	2000–2004	2009–2014
Breast cancer	71.3	76.5	82.0	85.0	88.9 (US)	90.2 (US)
Cervical cancer	51.6	55.1	64.5	65.9	81.8 (Iceland)	80.1 (Iceland)
Colon cancer	45.2	52.8	57.0	62.5	66.6 (Israel)	71.7 (Israel)
Rectal cancer	42.5	48.4	55.4	61.0	70.7 (Iceland)	71.0 (Australia)

Source: OECD (2017).

Note: [a]Average for 31 OECD countries (except for Greece, Hungary, Mexico and Luxembourg).

The relatively low cancer survival rates in Poland are ascribed to late detection of cancers in patients due to long waiting times for diagnostic tests, such as MRI scans and colonoscopy (although access to the latter has been improving; see below) and low effectiveness of the screening programmes. For example, 40% of newly diagnosed cases of cervical cancer are too advanced for successful treatment (KRN, 2018). Cancer screening on a national scale was introduced in 2006 under the National Programme Against Cancer Diseases for 2006–2015 (Wojtyniak & Goryński, 2018). The Programme was successful in increasing the rates of mammography examinations in women (from 23.4% in 2006 to 48.1% in 2014) and cervical cytology (from 12.7% to 44.4%). Access to colonoscopy has also improved: the number of locations where this examination is performed increased from 10 in 2006 to 106 in 2014 (RM, 2015). However, the participation in preventive examinations in Poland is still too low to be effective (NIK, 2018; see also Box 5.2). The Programme was renewed for the 2016–2024 period with the goal of narrowing the gap in 5-year survival rates between Poland and the EU for cancers with the largest shares in the structure of cancer deaths in Poland (e.g. breast, lung, and prostate cancers). A variety of measures are foreseen to achieve this goal, including health promotion, primary and

secondary prevention, development of diagnostics and early detection, and cancer treatment (RM, 2015). In terms of cancer treatment, the introduction of the "Oncology pathway" in January 2015 (see Box 5.3) was a key milestone in improving coordination of care and lowering waiting times for cancer patients. This was to a large extent achieved thanks to the abolition of financing limits for cancer treatment.

7.2.1 *Health promotion and primary prevention*

Provision of health care is focused on curative care and expenditure on health promotion and primary prevention is low (see Table 3.3). The key focus of preventive activities is on immunizations. Vaccinations rates are high (Table 7.4) and key vaccines for children and adolescents are compulsory and available free of charge. However, an increasing number of people have been refusing to vaccinate their children in recent years (see Fig. 5.1). Since 1 July 2018 the influenza vaccine has been included on the reimbursement list. Half of the cost of the vaccine will be reimbursed for people aged 65+ in order to increase vaccinations rates in this age group and decrease hospitalization and mortality rates from influenza complications.

TABLE 7.4 Vaccination coverage in children in Poland and the EU, 2017

	POLAND (%)	EU AVERAGE (%)
Diphtheria tetanus toxoid and pertussis (DTP3) immunization coverage among 1-year-olds	98	95
Measles-containing-vaccine first-dose (MCV1) immunization coverage among 1-year-olds	96	94
Hepatitis B (HepB3) immunization coverage among 1-year-olds	95	93

Source: WHO (2019a).

7.2.2 *Equity of outcomes*

Inequalities in health status are observed along several dimensions (see Box 1.1). Although the majority of publicly-financed health policy programmes are not specifically targeted at vulnerable population groups

(Kwaśniewska, Słońska & Drygas, 2015), several initiatives have been undertaken in recent years to address health inequalities. These initiatives included a project titled "Reducing Social Inequalities in Health" for 2014–2017 that was co-financed by the Norwegian Financial Mechanism 2009–2014.[25] So far, only a few publicly-financed health policy programmes have focused on health inequalities. One example is the "Polish Project 400 Cities" programme (*Polski Program 400 Miast*) that was implemented in 2003–2008 and aimed at reducing differences in education in the areas of health promotion and disease prevention and creating infrastructure for health promotion in smaller cities.

There is no information on variation in health service outcomes across different population groups.

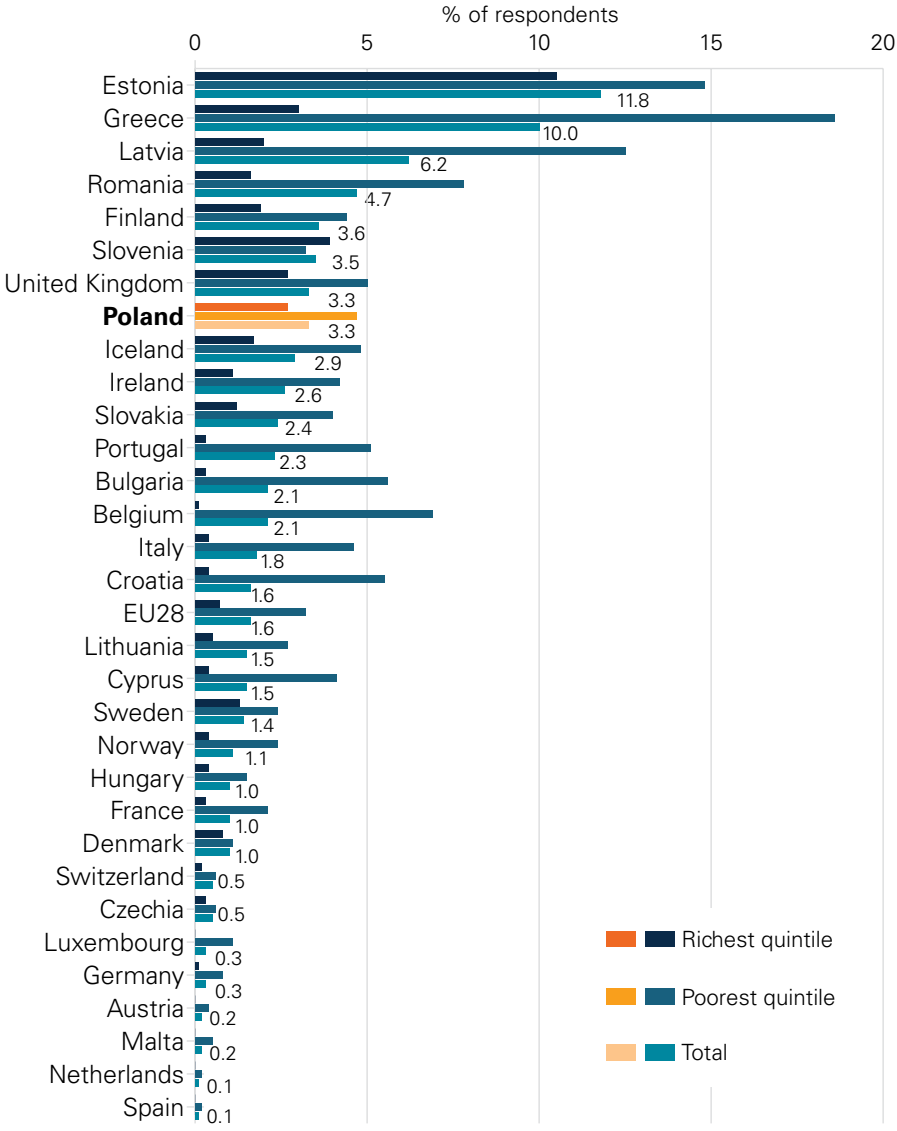
7.3 Access

Access to statutory benefits is close to universal and scope of services is broad, with a wide range of services financed from public funds, and with no cost-sharing for primary and inpatient care (see section 3.3.1). Certain vulnerable population groups have access to additional benefits – e.g. orthodontic care for young children. Persons without statutory insurance cover have access to outpatient emergency medical care. Since 2017, all insured persons, even if they are not able to prove their insurance status, have the right to access primary care free of charge.

Key gaps in coverage are outpatient medicines and dental care – these are either not covered or subject to cost-sharing. This may lead to patients forgoing care due to financial reasons. According to EU-SILC data, the share of the Polish population reporting unmet needs for medical examination in 2017 (because care was too expensive, it was too far to travel or there was a waiting list) was 3.3%, compared with the EU average of 1.6% (Fig. 7.2), down from 6.6% in the year before. This share was higher for people in the lowest income quintile (4.7%) compared with people in the highest quintile (2.7%). For dental care, 2.1% of the population reported unmet needs (compared with 2.9% of the EU countries on average) (EC, 2019a) and approximately 9% of households were not able (sometimes or often) to purchase prescribed or recommend medicines (GUS, 2018e).

[25] For more information on the project see Norway Grants website: https://eeagrants.org/project-portal/project/PL13-0001.

FIG. 7.2 Unmet needs for a medical examination (for financial or other reasons) in the EU, by income quintile, 2017



Source: European Union Statistics on Income and Living Conditions (EU-SILC) in EC (2019a).

Benefits are the same across the country, with no differences across the voivodeships. However, there are inequalities in access to health services, both among geographical regions and socioeconomic groups. These differences are more significant in the case of specialist outpatient services compared

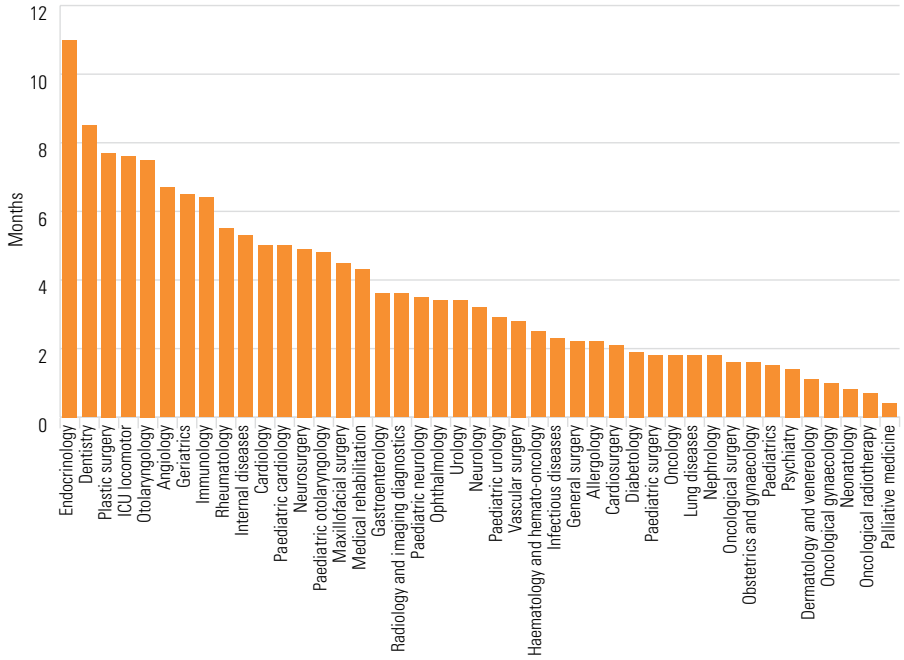
with primary and hospital care (Sowa-Kofta, Rabczenko & Wojtyniak, 2017). For example, looking at cardiology, which is relatively well developed in Poland, differences in per capita spending by the NFZ branches range from PLN 48.8 to PLN 94.3 and the number of cardiologists per million inhabitants ranges from 53 to 122 (NFZ, 2017).

Patients can choose among any provider that has a contract with the NFZ. Access to GPs is direct (no referral is required). Night and holiday health care is available outside of GP working hours, on weekends and during public holidays. Access to specialist health care services and inpatient care usually requires a prior referral and choice may be constrained within coordinated care programmes (see Box 5.3 and section 5.3). However, no referral is required for certain specialists and for some patient groups. If specialist/inpatient care cannot be provided on the same day, patient will be entered onto a waiting list. This does not apply to certain population groups, such as distinguished honorary blood donors, meritorious transplant donors, war and military invalids and war veterans, who are granted immediate access. In recent years, other population groups have also been granted immediate access to specialist/inpatient care, including pregnant women and children under 18 with a severe and irreversible impairment or an incurable life-threatening disease that was acquired in the prenatal period or during delivery (since 1 January 2017).

In April and May 2018, the average waiting time across all guaranteed health services was 3.4 months and it has been stable in recent years. The longest waiting times are for services in endocrinology (11 months on average), followed by dental services (8.5 months) (Fig. 7.3). Patients also have to wait long for consultations with specialist physicians. The shortest waiting times are for palliative medicine (less than 2 weeks) (MAHTA, 2018).

From 1 January 2015, patients with the Oncology Diagnostic and Treatment Card (DiLO) have been entitled to diagnosis and treatment under the so-called fast path (see section 5.3). The oncology package introduced organizational changes (special patient pathway, separate waiting list) that allowed shortening waiting times for cancer patients. According to a recent audit by the Supreme Audit Office, more than half of patients started treatment within 7 weeks of receiving their DiLO card. At the same time, waiting times for services other than those covered by the oncology package has increased, compared with the previous year, and doubled in the case of CT and MRI scans (NIK, 2017b; 2018).

FIG. 7.3 Waiting time (in months) for specialists by type of specialist, April and May 2018



Source: MAHTA (2018).

7.4 Financial protection

Universal health coverage means that all people are able to use needed health services (that are of sufficient quality to be effective) without experiencing financial hardship. Although statutory health cover is de facto universal, inequalities in service use, long waiting times for certain services and a high share of population facing unmet health needs and catastrophic levels of health spending mean that the "universality" of statutory health coverage is not assured. Assessment of coverage of the statutory health system is provided in Box 3.1.

Financial protection refers to the absence of financial hardship due to OOP payments when using health services. In 2000, OOP payments accounted for almost 30% of total current spending on health. This share has decreased over the years, but OOP still account for over a fifth of total current spending on health (see section 3.4). In 2016, OOP medical spending

accounted for 2.6% of final household consumption, compared with 2.2% in the EU on average (EC, 2019a). Most of this spending is for outpatient medicines (see Table 7.5). Per capita spending on outpatient medicines is particularly high among retirees and pensioners, disabled persons, households in rural areas, higher income households, and small households (1 or 2 persons) (GUS, 2018e).

TABLE 7.5 Shares of out-of-pocket medical spending by services and goods, 2016

	CURATIVE CARE[a]	DENTAL CARE	PHARMACEUTICALS	THERAPEUTIC APPLIANCES[b]	OTHER
Poland	18.6	15.5	59.5	6.0	0.3
EU	36.7	11.2	33.0	17.7	1.5

Source: EC (2019a).

Notes: [a]Including rehabilitative and ancillary services; [b]Including eye care products, hearing aids, wheelchairs, etc.

A study on financial protection by the WHO Barcelona Office for Health Systems Strengthening indicates that financial protection in the Polish health system is weak when compared with many other countries in Europe (Tambor & Pavlova, forthcoming). In 2014, nearly 9% of Polish households experienced catastrophic levels of OOP spending on health, defined as spending in excess of 40% of the household's capacity to pay (which is defined as a household's consumption minus a standard amount to cover basic needs such as food, housing and utilities). The share of the population affected by catastrophic spending rises up to 30% among the lowest income quintile. Outpatient medicines are the largest single driver of catastrophic spending across all income quintiles, except for the richest quintile for which medical devices are the key driver of catastrophic spending.

Cost-sharing for reimbursed medicines is extensive and mechanisms to protect the most vulnerable population groups, e.g. low-income households, are weak (see section 3.4.1). Also, high consumption of OTC medicines might impose some financial hardship on households. Consumption of OTC medicines is very high in Poland (see section 3.2) and little is being done in order to reduce it. More recent policies such as the Medicines 75+ programme implemented in 2016, which gives older people free access to certain medicines (see section 5.6), is expected to contribute to improving financial protection in the area of medicines although there is no formal evidence corroborating this.

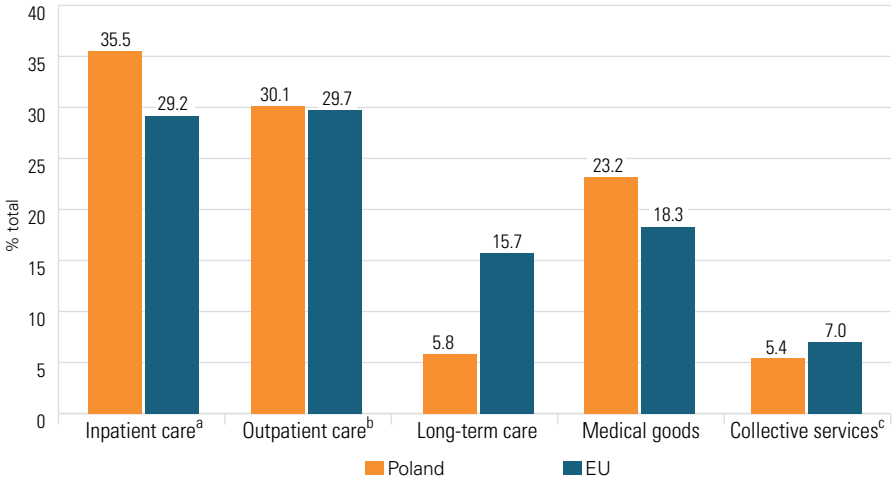
7.5 Health system efficiency

7.5.1 *Allocative efficiency*

Allocative efficiency indicates the extent to which limited funds are directed towards purchasing an appropriate mix of health services or interventions that maximize health improvements.

In 2016, 65.6% of current spending on health was directed to curative inpatient and outpatient care. This is high when compared with other EU countries, where curative care accounts for just under 60% of spending (Fig. 7.4). The share spent on inpatient curative care (35.5%) has remained high despite the efforts to shift service provision to outpatient care (for example, for small surgical procedures) through modifications of payment mechanisms for specialist outpatient care (see section 3.7.1). On the other hand, expenditure on prevention and public health account for only 2.7% of total current health expenditure.

FIG. 7.4 Current health expenditure by function of health care, 2016



Source: EC (2019a).

Notes: [a]Refers to curative-rehabilitative care in inpatient and day care settings; [b]Includes home care; **c**Collective services include prevention and administration.

Decisions on the reimbursement of medicines are informed by non-binding recommendations by the HTA agency (AOTMiT), and it is preceded by clinical effectiveness, cost–effectiveness and budget impact analyses. AOTMiT also conducts appraisals of health services and publicly-financed health policy programmes and, overall, the role of HTA is very important in Poland compared with other central and eastern European countries but also compared with many countries in western Europe. Negative opinions of AOTMiT effectively block territorial self-government units from implementation of their planned health policy programmes and conditionally positive opinions require appropriate adjustments of these programmes before they are implemented (see section 2.4.3).

Health policy priorities are established based on the maps of health needs (see section 2.4). Centrally pooled resources are divided among the voivodeship branches of the NFZ according to a formula that takes into account the demographic characteristics of the voivodeships (number, gender and age structure of the insured persons) and the amount granted in the previous year. Although this formula has been changed over the years in an attempt to reduce disparities among the voivodeships, it does not eliminate the variation in per capita spending across the branches and allocation of resources remains skewed in favour of the richer regions (see section 3.3.3).

7.5.2 *Technical efficiency*

Curative care

Despite certain positive trends, efficient utilization of available resources still faces numerous obstacles. The average length of stay (ALOS) for acute care for all causes is comparable to the EU average: 6.6 days in 2014 in Poland and 6.4 days in the EU-28 and its value has decreased in the last decade (from 7.9 days in 2005). The value of the same indicator for all hospitals (not only acute) was 6.9 days for Poland and 8.2 for the EU (the value of this indicator in Poland decreased from 8.2 in 2005) (WHO, 2018a). There are variations in ALOS value for different types of care. For example, in 2015, ALOS for acute myocardial infraction was shorter in Poland compared with the OECD average but it was longer for single spontaneous delivery (OECD, 2018b).

In terms of the average beds occupancy ratio, its value is relatively low in Poland and has been decreasing. According to the Ministry of Health data the average occupancy beds ratio for general hospitals dropped from 68.1% in 2010 to 65.8% in 2017 (CSIOZ, 2011, 2018b), although it varies for different types of wards (Table 7.6). In comparison, the average occupancy ratio for beds in acute hospitals in the EU was stable at 77% between 2010 and 2014 (WHO, 2018a). This relatively low bed occupancy ratio in Poland can be explained by excess hospital infrastructure. Fragmentation of hospital

TABLE 7.6 Bed occupancy in general hospitals by type of department, 2017

DEPARTMENT	NUMBER OF BEDS	BED OCCUPANCY (IN DAYS)	BED OCCUPANCY (%)
Internal diseases	23 520	267.6	73.2
Cardiology	8 696	264.2	72.4
Rheumatology	2 301	235.0	64.4
Gastrology	1 674	274.7	75.3
Oncology	5 204	257.0	70.4
Nephrology	1 935	270.1	74.0
Haematology	1 412	305.3	83.6
General surgery	19 572	225.0	61.6
Paediatric surgery	2 032	194.2	53.2
Urology	3 442	223.5	61.2
Ophthalmology	3 199	170.8	46.8
Otorhinolaryngology	3 751	185.3	50.8
Psychiatric	5 680	333.8	91.5
Gynaecology-obstetrics	18 050	216.2	59.2
Paediatric	9 766	183.2	50.2
Rehabilitation	17 826	273.4	74.9
Geriatrics	1 029	245.3	67.2
Neonatal	9 179	199.9	54.8
Total	**181 548**	**240.1**	**65.8**

Source: CSIOZ (2018b).

ownership and lack of strong stewardship at the central level have resulted in poor planning of infrastructure and equipment investments; for example, with similar equipment being bought by neighbouring hospitals (NIK, 2013b; MZ, 2015). The introduction of a system for assessing investments in health care in 2016 (IOWISZ) is hoped to improve the allocation of resources in the system (see section 4.1).

Day care is not well developed in Poland, compared with the United Kingdom, the Nordic countries and countries in the west of Europe (Table 7.7). On the other hand, the C-section rate[26] is very high and growing fast (Fig. 7.5).

TABLE 7.7 Share of ambulatory cases (%) for cataract surgery and tonsillectomy in Poland and the EU, 2016

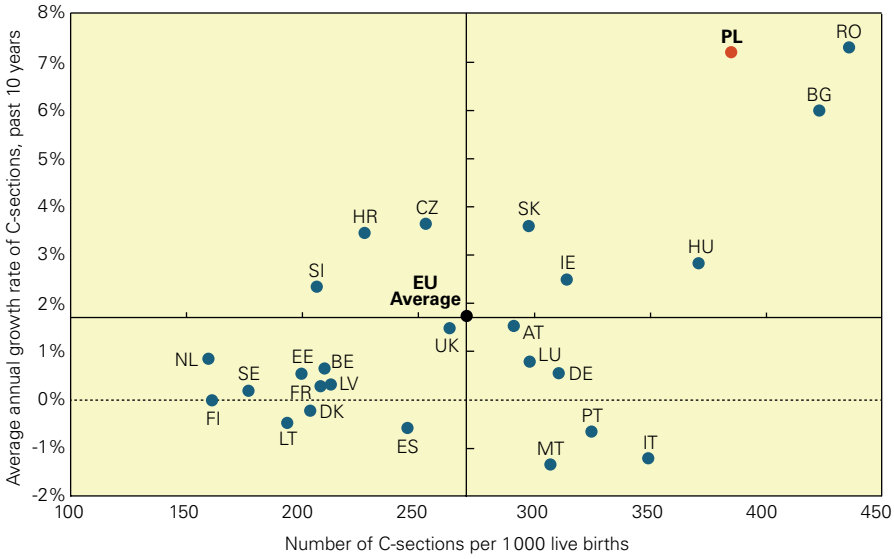
	POLAND (%)	EU (%)
Cataract surgery	35	84 (26 countries)
Tonsillectomy	6	29 (24 countries)

Source: Joint Questionnaire on Non-Monetary Health Care Statistics (EC, 2019a).

Excess capacity in the hospital sector is accompanied by deficits in the provision of outpatient care. Waiting times for specialist consultations are very long and Poland has comparatively high hospitalization rates for chronic conditions (e.g. asthma and chronic obstructive pulmonary disease) that can be managed in the outpatient sector (see section 7.6). Cooperation between primary, secondary and tertiary care levels is low; partly due to the low level of IT use and incompatibility of the IT systems (see section 4.1). However, efforts have been made to improve coordination of care (see Box 5.2).

[26] C-section rates above 15% are not associated with reductions in maternal, neonatal or infant mortality (OECD, 2018a).

FIG. 7.5 C-section rates in 2016 and their annual growth rate between 2006 and 2016 in the European OECD countries



Source: OECD (2018a).

Human resources

The numbers of doctors and nurses per 100 000 in Poland are some of the lowest in the EU (see section 4.2.) and despite some ad hoc actions taken by the government to alleviate the problem, such as shortening the duration of residency training for doctors, they remain low. In 2017, the Ministry of Health proposed to allow doctors to work across different wards in the same hospital (MZ, 2017b) and in 2018, the Ministry proposed to introduce a new profession of "medical secretary" to alleviate the administrative burden of physicians (MZ, KL/Rynek Zdrowia, 2018). However, strategic human resources planning is lacking and deficits in the numbers of doctors and nurses are likely to persist.

Medicines

In 2017, per capita spending on outpatient pharmaceuticals in Poland amounted to US$ 369 compared with US$ 378 in Estonia, US$ 433 in Czechia, US$ 452 in Latvia, US$ 541 in Lithuania, and US$ 566 in Slovakia and Hungary (fifth lowest among 35 OECD countries for which there was data; OECD, 2018c). In terms of the share of GDP spent on pharmaceuticals, Poland was placed 18th among the 35 OECD for which there was data. While per capita spending on medicines is relatively low in Poland, both in terms of absolute values and as a share of GDP, Poland ranked ninth highest among OECD countries in terms of the share of current health expenditure spent on pharmaceuticals (20.7%) (OECD, 2018c). High expenditure on medicines presents a significant financial burden to households and the share of OOP spending on health that goes on purchasing medicines (approximately 60%) is the second highest (after Mexico) among 31 OECD countries for which such data was available (OECD, 2017).

The market of generic medicines is well developed. Market shares of generic medicines are among the highest in Europe – close to 70% by volume and over 40% by value, according to 2014 data (Albrecht et al., 2015). However, before 2012, price competition in the market of generics was considered to be insufficient and this resulted in the passing of the Act on the Reimbursement of Pharmaceuticals, Foodstuffs for Special Nutritional Use and Medical Devices in 2012. According to this Act, the Marketing Authorization Holder (MAH) who is the first to apply for the reimbursement of a generic drug must set its price at 25% below the price of the price of the original drug on the reimbursement list. For all subsequent applications, prices of generics cannot exceed the current reimbursement limit (see section 2.4). These new rules have promoted price competition and lowered price differentials between generics and among equivalent branded medicines. However, since they only apply to medicines that have entered the market since 2012, some high price differences that existed before 2012 persist.

Medicines are still prescribed with their trade names and prescribing by International Nonproprietary Names (INN) is not obligatory (see Box 5.8). Nevertheless, pharmacists are legally obliged (by the 2012 Act, see above) to inform patients about the possibility of purchasing a cheaper generic equivalent and to hold such products in stock.

Substandard and counterfeit medicines do not seem to represent a major problem in Poland. However, Poland has been assessed as being only partially compliant with the Falsified Medicines Directive of the European Union (Directive 2011/62/EU) which is to be implemented by February 2019 (Merks et al., 2018).

7.6 Health care quality and safety

Health quality and patient safety are not routinely assessed in Poland. The focus of policy initiatives in this area is on hospital care, with few (if any) evaluations targeting primary care.

The level of avoidable hospitalizations for conditions manageable in the outpatient settings is one of the highest across the EU countries (in 2015 it was approximately 900 per 100 000 inhabitants compared with 630 per 100 000 for 21 EU countries for which data was available) (EC, 2017e) (Table 7.8). The high (albeit falling) amenable mortality rate and the low cancer survival rates (section 7.2) are further indicators of deficiencies in the quality of curative care.

TABLE 7.8 Avoidable hospital admission for selected conditions per 100 000 population in Poland, 2015, and the EU, 2015 (or latest available year)

	POLAND	EU
Asthma	81.86	48.27
Chronic obstructive pulmonary disease (COPD)	151.74	188.85
Congestive heart failure	463.80	285.22
Diabetes	197.35	135.91

Source: OECD Health Care Quality Indicators (OECD, 2018b).
Note: Age-sex standardized rate, 15 years old and over.

Although hospital accreditation is encouraged by financial incentives (within the contracts with the NFZ), at present, only 190 hospitals and 42 primary care clinics have received accreditation (data as of late November; CMJ, 2018b). Medical errors are only recorded in accredited hospitals. There

is no obligatory recording of medical errors in other health care providers (see section 2.5.1). However, studies and polls conducted between 2013 and 2015 by the CMJ within the project "Safe Hospital – Safe Patient" suggest that adverse events do happen in Poland (Table 7.9). In 2017, 828 applications were submitted to the voivodeship committees for adjudication of medical events (see Table 2.6) and 314 were confirmed as medical events (RPP, 2018).

TABLE 7.9 Results of analyses of patient safety conducted within the "Safe Hospital – Safe Patient" project (2013–2015)

YEAR	STUDY/POLL	RESULTS
2014	Analysis of 183 civil court cases against hospitals claiming compensation for damages resulting from adverse events during hospital stay	Occurrence of adverse medical event was ruled in almost 40% of cases; the most common reasons were nosocomial infections and infringements of patients' rights.
2015	Opinion poll among 3 140 head medical officers and departmental nurses in surgical and non-surgical hospital departments	86.5% of respondents reported participating in an adverse event; (20.2% participated in an adverse event associated with pharmacotherapy; 16.2% – diagnostics and diagnosis; 15.7% – infection; 14.2% – medical equipment failure; 14.1% – surgery).
2015	Public opinion poll on adverse events and perceptions of health care safety; 2 942 random respondents	12% of respondents reported experiencing an undesirable medical event; the latter occurred most frequently in the following areas: diagnostics and diagnosis (34%), infection (29%) and surgery (28%).
2015	Study on the occurrence of adverse events during hospitalization based on a review of 2 100 medical records of patients hospitalized in 2013 in 6 hospitals	7.2% of patients suffered an adverse event.

Source: Based on CMJ (2018a).

In 2017, a draft Act on Quality in Health Care and Patient Safety was submitted to public consultations. The draft foresees the establishment of the Agency for the Quality of Health Care and Patient Safety in Health Care (*Agencja do Spraw Jakości Opieki Zdrowotnej i Bezpieczeństwa Pacjenta w Ochronie Zdrowia*) (MMM, 2017). The Agency will be tasked with monitoring clinical quality indicators and adverse events; granting authorizations for entities performing medical activities and promoting the accreditation system in health care.

7.7 Transparency and accountability

7.7.1 *Transparency*

In 2017, Poland was ranked 36th (out of 180 countries) in the Corruption Perception Index (Transparency International, 2018) which constitutes a slight decrease compared with recent years. Corruption is a punishable offence in the Polish Penal Code and a draft law on the Transparency of public life (currently in preparation) obligates all public institutions to introduce internal anti-corruption procedures.

Health sector is perceived as one of the areas of the public sphere with the highest corruption risk in Poland (EC, 2017d). Informal payments used to be common but their occurrence appears to be decreasing (see section 3.4.3). According to a Eurobarometer poll, in 2017, 7% of respondents who visited a public health provider made under-the-table payment or gave a gift (EC, 2017d). According to the same source, the main corruption risks in the Polish health care system are:

- different understandings of corruption in different situations (not recognizing certain unethical behaviours as corruption);
- low public spending on health;
- long waiting lists for specialist public health care services (with some lists not frequently updated); and
- lack of technical knowledge about specialist medical equipment in small hospitals (leading to situations in which tender specifications are prepared by the producers of medical equipment).

Since 2017, an ethical adviser to the Minister of Health is responsible for educating Ministry of Health staff and promoting anti-corruption initiatives. Anti-corruption coordinators (introduced in 2014) and the Committee for Combatting Fraud and Corruption (introduced in 2006) in the health sector are other bodies advising the Minister of Health on issues related to corruption and conflict of interests. Initiatives aimed at preventing corruption at the Ministry include educating staff about corruption, obligating staff to submit financial declarations, implementation of procedures for receiving gifts and for dealing with cases of corruption, keeping logs of external visitors in each department. Experts advising the Ministry have to sign a statement

declaring their interests in private companies. Special procedures are applied to lobbying in the legislative process – they apply to all ministries, including the Ministry of Health.

In 2017, Poland was placed on the 50th place in the Global Health System Transparency Index (KPMG International, 2017). Highest marks were received for public availability of information about health care financing (information on financial performance, prices patients are charged, prices health insurers/payers are charged, and disclosure of payments and gifts to health care staff). The score was lower for transparency of health care governance (information on decision-making, rights and obligations of actors, patient and public involvement), patient experience (information on patient satisfaction in health care units, outcome measures, patient approval and patient complaints), personal health care data (information on electronic patient records system, shared clinical documentation, patient data privacy and safeguarding policy, information on use of patient data) and communication of health care data (information on the accessible data portal, the extent to which data is up-to-date, ease of comparing providers and services, use of open data file formats). The lowest score was granted for transparency in quality of health care (publicly available information on mortality/survival rates, re-admissions, waiting time in emergency care and hospital-acquired infection rates).

7.7.2 *Population participation and involvement*

Under existing regulations, patients have the right to indirectly participate in the decision-making process to define the basic benefits package. Under Article 31e of the Law on Health care Services Financed from Public Sources (as amended in 2009), foundations and associations, the statutory objective of which is to protect patient rights, may submit, through a national consultant, a request to the Ministry of Health to add (or remove) a particular benefit to the list of guaranteed health care benefits or change the level or method of financing or the conditions in which it is provided. Patients and organizations representing them may influence the legislative process by submitting opinions on draft acts when these are open to public discussion. However, this is limited in practice as the time during which opinions may be submitted is not very long.

Patients are actively involved in public life and there are many NGOs supporting their participation. These NGOs undertake various activities to influence policy-makers, often seeking support from the media, politicians, and formal research. Research on the satisfaction of citizens with health care is regularly carried out by the CBOS. No data on their impact is available.

Assessment on how well the Polish health system responds to people's needs is mixed. Responsiveness of primary care is well perceived along dimensions such as patient's dignity and communication but scores for patient's autonomy and receiving prompt attention are lower (Murante et al., 2017). Responsiveness to the needs of hospital patients is assessed as one of the worst among the OECD countries (Gromulska et al., 2014).

8

Conclusions

8.1 Key findings and remaining challenges

The PiS party is the first political party in the postcommunist era to win an outright majority in parliamentary elections. Since coming to power in late 2015, the government has used this unprecedented opportunity to introduce a number of reforms. Out of the PiS' ambitious reform programme for the health sector, the following important changes stand out:

- Introduction of elements of care coordination, both between primary and specialist (ambulatory and inpatient) care and within primary care, with some financial instruments to incentivize it;
- Introduction of the hospital network, which (among others) incentivizes provision of ambulatory outpatient care within hospitals and thus incentivizes reduction of acute beds (of which there is an overcapacity in the Polish health sector) and increased coordination between ambulatory and inpatient care;
- Efforts to further develop health needs maps in order to better align provision of services to patients' needs; and
- Efforts to reduce waste in the system through the introduction of the IOWISZ system for appraising investments in health care

to complement continued works of the Polish HTA state agency (AOTMiT) to appraise services and local policy programmes.

Key areas that require attention include:

- The unresolved problem of the poor financial results of public hospitals operating as SPZOZs and the resulting indebtedness of the hospital sector: the process of commercialization of SPZOZs has not proved successful and has been halted without any alternative solution for improving finances in the hospital sector.

- The longstanding overcapacity of acute hospital beds: recent efforts to incentivize hospitals to provide more ambulatory care for outpatients are welcome but more has to be done to further reduce the number of acute hospital beds and increase provision of day care. Shortage of long-term care beds is severe and needs to be addressed and coordination between the health and social care sectors should be improved.

- The longstanding shortage of human resources in health, particularly physicians (including PHC physicians) and nurses: despite these longstanding shortages, a human resources strategy for the health sector is still lacking and not enough has been done to improve the working conditions for health professionals.

- The negligent role of disease prevention and health promotion compared with curative care: the existing care model remains heavily centred on curative care. The adoption of the Act of Public Health in 2015 has elevated the status of public health in Poland, changed the focus of the National Health Programme to fighting risk factors and, for the first time, allocated separate funding for its implementation. These changes are welcome but the role of public health must be further strengthened, given the high rates of overweight and obesity, rising burden of mental disorders, population ageing and other challenges that can be alleviated by promotion and prevention activities.

- Measuring and monitoring of performance: there is a need to undertake work to develop a set of indicators to measure performance of health care providers (and the wider health system). This will help reduce waste in the system and maximize the value of health care for the population, for example, by enabling the implementation of P4P payment methods that are slowly emerging.

- Paying attention to inequalities in health outcomes and access: given the existence of large socioeconomic disparities in health outcomes and access, any current and future reforms should ensure that these inequalities are reduced or, at the very least, not exacerbated any further.

8.2 Lessons learnt from the health system changes

There are a multitude of ongoing reforms that go in the right direction, such as the ongoing reform of primary care; however, there is also a number of key unresolved problems that are not being tackled, such as the longstanding indebtedness of the hospital sector or the shortages of human resources. This presents the risk that important changes may be halted by these unresolved problems. For example, enhanced coordination of care within primary care may be difficult to achieve if the working conditions of the workforce are not improved. Achieving desired changes requires a holistic approach to the health system and a carefully crafted strategy with a well thought-out sequence of changes for the short, medium and long term.

The government's recent commitment to increase public health financing to 6% of GDP by 2024 presents a great opportunity for improving the Polish health system. However, the actual increase in spending will depend on the GDP growth and the level of private spending on health: a major economic crisis may slow down the increase in public spending on health and increases in public spending may result in lower private health expenditure and thus a lower health spending overall. The pledge should therefore be supplemented by a commitment to assure a stable level of financing of the health system, therefore protecting it from any future economic downturns.

9

Appendices

9.1 References

Albrecht M et al. (2015). *Value of Generic Medicines. Health Economics Study*. Berlin: IGES Institut GmbH (https://www.medicinesforeurope.com/wp-content/uploads/2016/03/IGES_Study_Report_final_05-10-2015.pdf, accessed 16 June 2018).

AOTMiT (2016). *Health Technology Assessment Guidelines. Version 3.0*. Warsaw: Agencja Oceny Technologii Medycznych i Taryfikacji [Agency for Health Technology Assessment and Tariff System] (http://www.aotm.gov.pl/www/hta/wytyczne-hta/, accessed 05 February 2018).

AOTMiT (2017). *Świadczenia gwarantowane obejmujące świadczenia pielęgnacyjne i opiekuńcze w ramach opieki długoterminowej [Guaranteed nursing and care services in long-term care]*. Warsaw: Agencja Oceny Technologii Medycznych i Taryfikacji [Agency for Health Technology Assessment and Tariff System] (http://www.aotm.gov.pl/www/wp-content/uploads/taryfikacja/2017/projekty_taryf/raporty/016/WT.541.49.2016_ZOL_raport.pdf, accessed 10 September 2018) [in Polish].

AOTMiT (2018a). *Opinia Prezesa Agencji Oceny Technologii Medycznych i Taryfikacji nr 52/2018 z dnia 22 marca 2018 r. o projekcie programu polityki zdrowotnej pn. "Program Polityki Zdrowotnej Gminy Lublin na lata 2018–2020 w przedmiocie opieki paliatywnej i hospicyjnej dla dzieci i młodzieży oraz dla osób dorosłych w stanach terminalnych choroby" [Opinion of the President of the Agency for Health Technology Assessment and Tariff System No. 52/2018 of 22 March 2018 on the draft health policy program entitled "The Health Policy Program of the Lublin Commune for the years 2018–2020 in the field of palliative and hospice care for children and adolescents and adults in terminal disease states"]*. Warsaw: Agencja Oceny Technologii Medycznych i Taryfikacji [Agency for Health Technology Assessment and Tariff System] (http://bipold.aotm.gov.pl/assets/files/oopz/2018/OP-0052-2018.pdf, accessed 15 November 2018) [in Polish].)

AOTMiT (2018b). *Opinie o projektach programów zdrowotnych realizowanych przez jednostki samorządu terytorialnego [Opinions on projects of health programs implemented by local government units]*. Warsaw: Agencja Oceny Technologii Medycznych i Taryfikacji [Agency for Health Technology Assessment and Tariff System] (http://bipold.aotm.gov.pl/index.php/opinie-o-projektach-programow-zdrowotnych-realizowanych-przez-jst/884-opz-2017, accessed 16 November 2018) [in Polish].

AOTMiT (2019). *Biuletyn Informacji Publicznej Agencji Oceny Technologii Medycznych i Taryfikacji [Bulletin of the Agency for Health Technology Assessment and Tariff System]*. Warsaw: Agencja Oceny Technologii Medycznych i Taryfikacji [Agency for Health Technology Assessment

and Tariff System] (http://bipold.aotm.gov.pl/index.php/strona-glowna, accessed 24 January 2019) [in Polish].

Azzopardi-Muscat N et al. (2018). The role of the 2011 patients' rights in cross-border health care directive in shaping seven national health systems: Looking beyond patient mobility. *Health Policy*.122(3):279–283.

Badora-Musiał K, Kowalska-Bobko I (2017). Adoption of draft law on primary healthcare, Chapter 3 – Section 5.3 in Online HiT. *The Health Systems and Policy Monitor*, 15 September 2017. (http://www.hspm.org/countries/poland27012013/livinghit.aspx?Section=5.3%20Primary%20/%20ambulatory%20care&Type=Section, accessed 28 August 2018).

Badora-Musiał K, Kowalska-Bobko I (2018a). Agreement reached between the Minister of Health and protesting resident doctors, Chapter 3 – Section 3.7 in Online HiT. *The Health Systems and Policy Monitor*, 04 June 2018. (http://www.hspm.org/countries/poland27012013/countrypage.aspx, accessed 28 August 2018).

Badora-Musiał K, Kowalska-Bobko I (2018b). Dentobuses to help improve oral health in children, Chapter 5 – Section 5.1 in Online HiT. *The Health Systems and Policy Monitor,* 25 January 2018. (https://www.hspm.org/countries/poland27012013/countrypage.aspx, accessed 28 August 2018).

Bagińska E (2015). Development in personal injury law in Poland: Shaping the compensatory function of tort law. *Journal of Civil Law Studies*.8(1):310–353 (https://digitalcommons.law.lsu.edu/cgi/viewcontent.cgi?article=1149&context=jcls).

Bochenek T et al. (2016). The transparency of published health technology assessment-based recommendations on pharmaceutical reimbursement in Poland. *Expert Review of Pharmacoeconomics & Outcomes Research*.17(4):385–400.

CBOS (2016). *Opinie o funkcjonowaniu opieki zdrowotnej [Opinions on health system functioning]*. Warsaw: Centrum Badania Opinii Społecznej [Public Opinion Research Center] (http://www.cbos.pl/SPISKOM.POL/2016/K_113_16.PDF, accessed 20 December 2017) [in Polish].

CBOS (2018). *Opinie na temat funkcjonowaniu opieki zdrowotnej [Opinions on health system functioning]*. Warsaw: Centrum Badania Opinii Społecznej [Public Opinion Research Center]. (https://www.cbos.pl/SPISKOM.POL/2018/K_089_18.PDF, accessed 10 September 2018) [in Polish].

Centeno C et al. (2016). Coverage and development of specialist palliative care services across the World Health Organization European Region (2005–2012): Results from a European Association for Palliative Care Task Force survey of 53 Countries. *Palliative Medicine*.30(4):351–362.

CHAFEA (2016). *Mapping of the use of European Structural and Investment Funds (ESIF) in health for the period 2014–2020*. Consumers, Health and Food Executive Agency (http://esifforhealth.eu/pdf/Mapping_Report_Final.pdf, accessed 23 October 2017).

Cierniak-Piotrowska M, Marciniak G, Stańczak J (2015). Statystyka zgonów i umieralności z powodu chorób układu krążenia [The statistics of deaths and mortality due to cardiovascular diseases]. In Strzelecki Z, Szymborski J eds. *Zachorowalność i umieralność na choroby ukáadu krążenia a sytuacja demograficzna Polski [Morbidity and mortality from cardiovascular diseases and demographic situation of Poland]*. Warsaw: Rządowa Rada Ludnościowa [Government Population Council]. (http://bip.stat.gov.pl/organizacja-statystyki-publicznej/rzadowa-rada-ludnosciowa/publikacje-rzadowej-rady-ludnosciowej/sytuacja-demograficzna-polski/) [in Polish].

CKPPiP (2018). *Dane dotyczące liczby pielęgniarek i położnych, które uzyskały tytuł specjalisty w dziedzinach kształcenia1 realizowanych na podstawie programów ramowych, obowiązujących do dnia 23 sierpnia 2015r. [Data on the number of nurses and midwives who obtained the title of specialist in the field of education, implemented on the basis of framework programs, valid until 23 August 2015]*. Warsaw: Centrum Kształcenia Podyplomowego Pielęgniarek i Położnych [Center for Postgraduate Education of Nurses and Midwives]. (http://www.ckppip.edu.pl/uploads/docs/Dane_statystyczne%20_kształcenia/2018/2018.09.07%20dane%20specjalizacje%202002-2018.pdf, accessed 15 November 2018) [in Polish].

CMJ (2018a). *Bezpieczny szpital, bezpieczny pacjent [Safe hospital, safe patient]*. Kraków: Centrum Monitorowania Jakości [Center for Quality Monitoring in Health Care] (http://bezpiecznypacjent.cmj.org.pl/, accessed 15 July 2018) [in Polish].

CMJ (2018b). *Zestawienie szpitali z akredytacją [Number of accredited hospitals]*. Kraków: Centrum Monitorowania Jakości [Center for Quality Monitoring in Health Care] (http://www.cmj.org.pl/akredytacja/certyfikaty.php, accessed 16 November 2018) [in Polish].

CSIOZ (2011). *Biuletyn Statystyczny Ministerstwa Zdrowia 2011 [Statistical Bulletin of the Ministry of Health in 2011]*. Warsaw: Centrum Systemów Informacyjnych w Ochronie Zdrowia [Centre for Health Information Systems] (https://www.csioz.gov.pl/fileadmin/user_upload/biuletyn_statystyczny_2011_565ef6ff67ca6.pdf., accessed 1 November 2017) [in Polish].

CSIOZ (2018a). *Badanie stopnia informatyzacji podmiotów wykonujących działalność leczniczą, III edycja [Assessing the level of informatization of health providers 3rd edition]*. Warsaw: Centrum Systemów Informacyjnych w Ochronie Zdrowia [Centre for Health Information Systems] (https://www.csioz.gov.pl/fileadmin/user_upload/badanie_ankietowe_nt_poziomu_informatyzacji_2018_5bbccd3259008.pdf, accessed 12 November 2018) [in Polish].

CSIOZ (2018b). *Biuletyn Statystyczny Ministerstwa Zdrowia 2018 [Statistical Bulletin of the Ministry of Health in 2018]*. Warsaw: Centrum Systemów Informacyjnych w Ochronie Zdrowia [Centre for Health Information Systems]. (https://www.csioz.gov.pl/fileadmin/user_upload/Biuletyny_informacyjny/biuletyn_2018_5bd9a285274e7.pdf, accessed 10 November 2018) [in Polish].

Czabanowska K, Domagała A, Kalaitzi S, Krogulec A, Burazeri G, Babich S (2017). Exploring the added value of women health care managers in Poland. *Materia Sociomedica*.29(4):280–285.

Czapiński J, Panek T (2015). *Diagnoza społeczna 2015. Warunki i jakość życia Polaków [Social diagnosis 2015. Objective and subjective quality of life in Poland]*. Warsaw: Rada Monitoringu Społecznego [Council for Social Monitoring] (https://www.torun.pl/sites/default/files/pictures/diagnoza_raport_2015.pdf, accessed 15 November 2018) [in Polish].

Domagała A (2017). Personal communication between Alicja Domagała of the Jagiellonian University Medical College with the Department of Science and Higher Education at the Ministry of Health: e-mail communication on 13 March 2017.

Domagała A, Klich J (2018). Planning of Polish physician workforce – systemic inconsistencies, challenges and possible ways forward. *Health Policy*.122(2):102–108.

Dubas-Jakóbczyk K (2014). Rola funduszy strukturalnych Unii Europejskiej w finansowaniu inwestycji w obszarze ochrony zdrowia w Polsce [European Union structural funds' role in financing investment in Polish health care sector]. *Zeszyty Naukowe Ochrony Zdrowia – Zdrowie Publiczne i Zarządzanie [Scientific Issues of Health Protection Public Health and Governance]*.13(3):228–238 [in Polish].

Dubas-Jakóbczyk K (2017). Personal communication between Katarzyna Dubas-Jakóbczyk of the Jagiellonian university Medical College with the Centre for Health Information Systems in Warsaw: e-mail communication, 16–21 November 2017.

Dubas-Jakóbczyk K, Kamińska K (2017). *Szpitale prywatne w Polsce – znaczenie w systemie lecznictwa oraz potencjał rozwoju [Private hospitals in Poland – the role in the system and development potential]. Zeszyty Naukowe Ochrony Zdrowia – Zdrowie Publiczne i Zarządzanie [Scientific Issues of Health Protection Public Health and Governance]*.15(3):185–196 [in Polish].

Dubas-Jakóbczyk K et al. (2018). Building hospital capacity planning mechanisms in Poland: The impact of 2016/2017 regulatory changes. *International Journal of Health Planning and Management*.33(2):e403–e415. doi: 10.1002/hpm.2493.

EC (2017a). *Eurostat: European health and social integration survey 2012 (EHSIS)* [online database]. Luxembourg: European Commission. (http://ec.europa.eu/eurostat/web/health/disability/data/database, accessed 20 March 2018).

EC (2017b). *Eurostat: EU statistics on income and living conditions EU-SILC 2015* [online database]. Luxembourg: European Commission. (http://ec.europa.eu/eurostat/data/database, accessed 20 March 2018).

EC (2017c). *Self-reported use of non-prescribed medicines by sex, age and educational attainment level*. Luxembourg: European Commission. (http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_md2e&lang=en, accessed 10 November 2018).

EC (2017d). *Special Eurobarometer 470 report corruption*. Brussels: European Commission. (http://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/Survey/getSurveyDetail/yearFrom/1974/yearTo/2017/surveyKy/2176, accessed 11 September 2018).

EC (2017e). *State of Health in EU. Poland Country Profile – 2017*. Luxembourg: European Commission. (https://ec.europa.eu/health/sites/health/files/state/docs/chp_pl_english.pdf, accessed 27 August 2018).

EC (2018a). *Eurostat: European Health Interview Survey* [online database]. Luxembourg: European Commission. (http://ec.europa.eu/eurostat/web/microdata/european-health-interview-survey, accessed 15 June 2018).

EC (2018b). *Eurostat: Mortality and life expectancy statistics database* [online database]. Luxembourg: European Commission. (http://ec.europa.eu/eurostat/statistics-explained/index.php/Mortality_and_life_expectancy_statistics, accessed 11 January 2019).

EC (2018c). *Eurostat: Surgical operations and procedures performed in hospitals by ICD-9-CM* [online database]. Luxembourg: European Commission. (https://ec.europa.eu/eurostat/web/health/health-care/data/database, accessed 25 August 2018).

EC (2018d). *The 2018 Aging Report*. Luxembourg: European Commission. (https://ec.europa.eu/info/sites/info/files/economy-finance/ip065_en.pdf, accessed 10 July 2018).

EC (2019a). *Eurostat* [online database]. Luxembourg: European Commission. (http://ec.europa.eu/eurostat/data/database, accessed 20 February 2019).

EC (2019b). *Eurostat: Statistics – Digital economy and society*. Luxembourg: European Commission. (http://ec.europa.eu/eurostat/web/digital-economy-and-society/data/database, accessed 28 January 2019).

GIF (2018a). *Główny Inspektorat Farmaceutyczny – homepage [Chief Pharmaceutical Inspectorate homepage]* (https://www.gif.gov.pl/, accessed 20 March 2018) [in Polish].

GIF (2018b). *Sfałszowane produkty lecznicze [Falsified medicines]*. Warsaw: Główny Inspektor Farmaceutyczny [Chief Pharmaceutical Inspectorate] (https://www.gif.gov.pl/pl/nadzor/sfalszowane-produkty-le/informacje-ogolne/sfalszowane-produkty-le/479,Fakty.html, accessed 25 August 2018) [in Polish].

GIF/rynekaptek.pl (2018). *GIF: dane wskazują na aktywność instytucji w zakresie wykrywania sfałszowanych leków [GIF: data indicates the institution's activity in the detection of falsified medicines]*. Rynekaptek.pl (http://www.rynekaptek.pl/komunikaty-urzedowe/gif-dane-wskazuja-na-aktywnosc-instytucji-w-zakresie-wykrywania-sfalszowanych-lekow,26556_1.html, accessed 25 August 2018) [in Polish].

Golinowska S, Sowada C, Woźniak M (2007). Sources of inefficiency and financial deficits in Poland's health care system. Report for WHO Regional Office for Europe. Copenhagen: WHO Regional Office for Europe.

Golinowska S (2010). *Opłaty nieformalne w ochronie zdrowia. Perspektywa i doświadczenia polskie [Informal payments in health care. Perspective and Polish experiences]. Zeszyty Naukowe Ochrony Zdrowia. Zdrowie Publiczne i Zarządzanie [Scientific Issues of Health Protection Public Health and Governance]*.7(1):12–18 [in Polish].

Golinowska S, Sowa A (2017). *Quality and cost-effectiveness in long-term care and dependency prevention: the Polish policy landscape*. Warsaw: CASE (Center for Social and Economic Research) (http://www.case-research.eu/files/?id_plik=5303, accessed 10 November 2018).

Golinowska S, Sowada C, Tambor M (2012). *Równowaga finansowa oraz efektywność w polskim systemie ochrony zdrowia [Financial equilibrium and efficiency in the Polish health care system]*. Kraków: Uniwersyteckie Wydawnictwo Medyczne Vesalius [in Polish].

Goryński P, Cianciara D (2016). *Sytuacja demograficzna i zdrowotna ludności Polski – wybrane element [Demographic situation and health status of the Polish population – selected aspects]. Czytelnia Medyczna Borgis – Postępy Nauk Medycznych*.5:298–307 (http://www.czytelniamedyczna.pl/5556,sytuacja-demograficzna-i-zdrowotna-ludnosci-polski-wybrane-elementy.html, accessed 2 March 2018) [in Polish].

Goscinska D (2014). *Transposition of the Patients' Rights Directive 2011/24/EU. A discourse analysis in Germany, Poland and Austria*. Working Papers in Health Policy and Management, 8, Department of Health Care Management, Technische Universität Berlin. (https://www.mig.tu-berlin.de/ fileadmin/a38331600/2014.publications/Working Paper vol.8.pdf, accessed 15 January 2018).

Gromulska L et al. (2014). Responsiveness to the hospital patient needs in Poland. *Roczniki Państwowego Zakładu Higieny*.65(2):155–164.

GUS (2001). *Podstawowe dane z zakresu ochrony zdrowia 2000 [Basic data on health care 2000]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office].

GUS (2006a). *Narodowy Rachunek Zdrowia [National Health Accounts]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office] [in Polish].

GUS (2006b). *Podstawowe dane z zakresu ochrony zdrowia 2005 [Basic data on health care 2005]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office].

GUS (2007). *Podstawowe dane z zakresu ochrony zdrowia 2006 [Basic data on health care 2006]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office].

GUS (2008). *Społeczeństwo informacyjne w Polsce. Wyniki badań systematycznych z lat 2004–2007 [Information society in Poland. Results of statistical surveys in the years 2004–2007]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office]. (https://stat.gov.pl/cps/rde/xbcr/gus/NTS_spoleczenstwo_informacyjne_w_Polsce_2004_2008.pdf, accessed 15 February 2018) [in Polish].

GUS (2011). *Podstawowe dane z zakresu ochrony zdrowia 2010 [Basic data on health care 2010]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office].

GUS (2013). *Ludność. Stan i struktura demograficzno-społeczna [Population. The socio-demographic status and structure]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office] (https://stat.gov.pl/cps/rde/xbcr/gus/LUD_ludnosc_stan_str_dem_spo_NSP2011.pdf, accessed 21 March 2018) [in Polish].

GUS (2014a). *Podstawowe dane demograficzne o dzieciach w Polsce – Notka informacyjna [Basic demographic data on children in Poland – Information note]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office]. (http://stat.gov.pl/obszary-tematyczne/ludnosc/ludnosc/podstawowe-dane-demograficzne-o-dzieciach-w-polsce,14,1.html, accessed 10 November 2018) [in Polish].

GUS (2014b). *Prognoza ludności na lata 2014–2050 [Population Projection 2014–2050]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office]. (https://stat.gov.pl/files/gfx/portalinformacyjny/pl/defaultaktualnosci/5469/1/5/1/prognoza_ludnosci_na_lata____2014_-_2050.pdf, accessed 15 March 2018) [in Polish].

GUS (2016). *Wyznania religijne w Polsce 2012–2014 [Religious confessions in Poland 2012–2014]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office]. (https://stat.gov.pl/obszary-tematyczne/inne-opracowania/wyznania-religijne/wyznania-religijne-w-polsce-20122014,5,1.html) [in Polish].

GUS (2017a). *Zamachy samobójcze w 2016 r. [Suicides in 2016]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office]. (https://stat.gov.pl/obszary-tematyczne/ludnosc/statystyka-przyczyn-zgonow/zamachy-samobojcze-w-2016-r-,5,1.html, accessed 15 November 2018) [in Polish].

GUS (2017b), *Zdrowie i ochrona zdrowia w 2015 r. [Health and health care in 2015]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office]. (http://stat.gov.pl/obszary-tematyczne/zdrowie/zdrowie/zdrowie-i-ochrona-zdrowia-w-2015-roku,1,6.html, accessed 21 March 2018).

GUS (2018a). *Ambulatoryjna opieka zdrowotna w 2017 r. [Outpatient healthcare in 2017]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office]. (https://stat.gov.pl/files/gfx/portalinformacyjny/pl/defaultaktualnosci/5513/13/2/1/ambulatoryjna_opieka_zdrowotna_w_2017_roku.pdf, accessed 2 September 2018) [in Polish].

GUS (2018b). *Apteki i punkty apteczne w 2017 r. Notatka informacyjna [Pharmacies and pharmacy outlets in 2017. Information note]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office]. (https://stat.gov.pl/files/gfx/portalinformacyjny/pl/defaultaktualnosci/5513/15/2/1/apteki_i_punkty_apteczne_w_2017.pdf, accessed 28 December 2018) [in Polish].

GUS (2018c). *Informacja o rozmiarach i kierunkach czasowej emigracji z Polski w latach 2004–2017 [Information about the size and directions of the time of emigration from Poland in 2004–2017]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office]. (https://stat.gov.pl/obszary-tematyczne/ludnosc/migracje-zagraniczne-ludnosci/informacja-o-rozmiarach-i-kierunkach-czasowej-emigracji-z-polski-w-latach-2004-2017,2,11.html, accessed 28 January 2019) [in Polish].

GUS (2018d). *Ludność. Stan i struktura oraz ruch naturalny w przekroju terytorialnym w 2017 r. [Population. Size and structure and vital statistics in Poland by territorial division in 2017]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office]. (https://stat.gov.pl/obszary-tematyczne/ludnosc/ludnosc/ludnosc-stan-i-struktura-oraz-ruch-naturalny-w-przekroju-terytorialnym-w-2017-r-stan-w-dniu-31-xii,6,23.html, accessed 2 September 2018) [in Polish].

GUS (2018e). *Ochrona Zdrowia w gospodarstwach domowych w 2016r. [Health care in households in 2016]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office] [in Polish].

GUS (2018f). *Rezydenci (ludność rezydująca) [Residents – usual residence population]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office] (http://stat.gov.pl/obszary-tematyczne/ludnosc/ludnosc/rezydenci-ludnosc-rezydujaca,19,1.html, accessed 24 September 2018) [in Polish].

GUS (2018g). *Rocznik demograficzny 2017 [Demographic Yearbook of Poland 2017]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office].

GUS (2018h). *Rocznik Statystyczny Rzeczpospolitej Polskiej 2017 [Statistical Yearbook of the Republic of Poland 2017]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office] (https://stat.gov.pl/files/gfx/portalinformacyjny/pl/defaultaktualnosci/5515/2/17/1/rocznik_statystyczny_rzeczypospolitej_polskiej_2017.pdf, accessed 15 November 2018).

GUS (2018i). *Sektor non profit w 2016 r. [The non-profit sector in 2016]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office] (https://stat.gov.pl/obszary-tematyczne/gospodarka-spoleczna-wolontariat/gospodarka-spoleczna-trzeci-sektor/sektor-non-profit-w-2016-r-,1,6.html, accessed 21 December 2018) [in Polish].

GUS (2018j). *Społeczeństwo informacyjne w Polsce w 2018 r. [Information society in Poland in 2018]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office] (https://stat.gov.pl/obszary-tematyczne/nauka-i-technika-spoleczenstwo-informacyjne/spoleczenstwo-informacyjne/spoleczenstwo-informacyjne-w-polsce-w-2018-roku,2,8.html, accessed 10 November 2018) [in Polish].

GUS (2018k). *Trwanie życia w 2017 r. [Life Expectancy Tables of Poland 2017]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office]. (http://stat.gov.pl/obszary-tematyczne/ludnosc/trwanie-zycia/trwanie-zycia-w-2017-r-,2,12.html, accessed 19 September 2018) [in Polish].

GUS (2018l). *Zakłady stacjonarne pomocy społecznej w 2017 r. Informacje sygnalne [Stationary social assistance facilities in 2017. Signal information]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office]. (https://stat.gov.pl/obszary-tematyczne/warunki-zycia/ubostwo-pomoc-spoleczna/zaklady-stacjonarne-pomocy-spolecznej-w-2017-roku,18,2.html, accessed 18 August 2018) [in Polish].

GUS (2018m). *Zgony niemowląt [Deaths of infants]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office] (https://stat.gov.pl/obszary-tematyczne/ludnosc/ludnosc/zgony-niemowlat,35,1.html, accessed 18 December 2018) [in Polish].

GUS (2019). *Zdrowie i ochrona zdrowia w 2017 r. [Health and health care in 2017]*. Warsaw: Główny Urząd Statystyczny [Central Statistical Office]. (http://stat.gov.pl/obszary-tematyczne/zdrowie/zdrowie/zdrowie-i-ochrona-zdrowia-w-2017-r-,1,8.html, accessed 31 January 2019).

Herbst I et al. (2014). *Partnerstwo publiczno-prywatne w szpitalach [Public-private partnership in hospital]*. Warsaw: ABC Wolters Kluwer [in Polish].

Inchley J et al. (2016). *Growing up unequal: gender and socioeconomic differences in young people's health and well-being. Health behavior in school-aged children: HBSC Study: International Report from the 2013/2014 Survey*. Copenhagen: WHO Regional Office for Europe. (http://www.euro.who.int/__data/assets/pdf_file/0003/303438/HSBC-No.7-Growing-up-unequal-Full-Report.pdf, accessed 28 June 2018).

IPPP (2017). *Analiza rynku PPP za okres 2009 – 30 czerwiec 2017 [Analysis of the PPP market for the period 2009 – June 30 2017]*. Warsaw: Instytut Partnerstwa Publiczno-Prywatnego [Public-Private Partnership Institute] (https://www.ppp.gov.pl/Aktualnosci/Documents/Analiza_rynku_PPP_30_06_2017.pdf, accessed 15 March 2018) [in Polish].

IQVIA (2018). *Rynek farmaceutyczny w 2017 roku [Pharmaceutical Market 2017]*. Warszawa: IQVIA (http://www.nia.org.pl/wp-content/uploads/2018/01/IQVIA_Rynek_farmaceutyczny_2017_RAPORT.pdf, accessed: 23 September 2018) [in Polish].

Kaczmarek K et al. (2013). The process of privatization of health care provision in Poland, *Value in Health Regional Issues*.2(2):306–311.

Kautsch M, Lichoń M, Matuszak N (2016). Development of publicly funded ehealth in Poland: Barriers and Opportunities. *Journal of Scientific Papers Economics & Sociology*.9(3):28–40.

Kawalec P, Kowalska-Bobko I (2018). Significant changes to the Pharmaceutical Law under way. Chapter 2 – Section 2.8 in Online HiT. *The Health Systems and Policy Monitor*, 19 April 2018 (https://www.hspm.org/countries/poland27012013/livinghit.aspx?Section=2.8%20Regulation&Type=Section, accessed 10 September 2018).

Kawalec P, Kowalska-Bobko I, Mokrzycka A (2015). Measures being taken to improve the availability of refunded drugs. Online HiT. *The Health Systems and Policy Monitor*, 30 June 2015 (https://hspm.org/_layouts/LivingHiT/Archive.aspx?type=Updates&siteid=0a73366d-6c9b-44c6-98bd-3810e37be854, accessed 10 September 2018).

Kęska K, Sławatyniec Ł, Deloitte Legal (2015). *Ochrona patentowa leków na odmiennych zasadach [Patent protection of medicines on different terms]*. Warsaw: Narodowe Centrum Badań i Rozwoju [National Centre for Research and Development] Bridge Info. Serwis informacyjno-doradczy [Information and advice service] (http://bridge.gov.pl/aktualnosc/pokaz/ochrona-patentowa-lekow-na-odmiennych-zasadach/?L=0%2F, accessed 20 March 2018) [in Polish].

KNF (2018). *Biuletyn Kwartalny. Rynek ubezpieczeń 4/2017. Część A – Informacje o zakładach ubezpieczeń [Quarterly Bulletin. Insurance market 4/2017. Part A – Information on insurance companies]*. Warsaw: Komisja Nadzoru Finansowego [Polish Financial Supervision Authority] (https://www.knf.gov.pl/?articleId=61185&p_id=18, accessed 24 June 2018) [in Polish].

Kowalska-Bobko I (2005). Odpowiedzialność publiczna oraz dostępne mechanizmy realizowania polityki zdrowotnej przez jednostki samorządu terytorialnego w Polsce [Public liability and available mechanisms for implementation of health policy by territorial self-government units in Poland]. *Zeszyty Naukowe Ochrony Zdrowia. Zdrowie Publiczne i Zarządzanie [Scientific Issues of Health Protection Public Health and Governance]*.3(1):5–16 [in Polish].

Kowalska-Bobko I (2006). Decentralizacja zarządzania funkcjami zdrowotnymi państwa [Decentralization of management of state health functions]. *Zeszyty Naukowe Ochrony Zdrowia. Zdrowie Publiczne i Zarządzanie [Scientific Issues of Health Protection Public Health and Governance]*.4(1):70–82 [in Polish].

Kowalska-Bobko I (2009). Odpowiedzialność samorządu lokalnego za zdrowie – podstawowa opieka zdrowotna. Oczekiwania a rzeczywistość [Local self-government responsibility for health, Primary Health Care. Expectations and reality]. *Polityka Społeczna [Social Policy]*.11–12:44–48 [in Polish].

Kowalska-Bobko I (2017). *Decentralizacja a systemy zdrowotne. W poszukiwaniu rozwiązań sprzyjających zdrowiu [Decentralization in health systems. In search of health-friendly solutions]*. Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego [in Polish].

Kowalska-Bobko I, Mokrzycka A (2012). Analiza wybranych kryteriów wartościujących dla oceny procesów decentralizacji i centralizacji w ochronie zdrowia [The analysis of the driving forces initiating the decentralization/centralization processes]. *Zeszyty Naukowe Ochrony Zdrowia. Zdrowie Publiczne i Zarządzanie [Scientific Issues of Health Protection Public Health and Governance]*.10(3):169–176 [in Polish].

Kowalska-Bobko I, Mokrzycka A (2016). Reversal of the commercialization of hospitals; Chapter 2 – Section 2.8 in Online HiT. *The Health Systems and Policy Monitor*, 04 August 2016 (http://hspm.org/_layouts/LivingHiT/Archive.aspx?type=Updates&siteid=0a73366d-6c9b-44c6-98bd-3810e37be854, accessed 15 August 2018).

Kowalska-Bobko I et al. (2016). Implementation of the cross-border healthcare directive in Poland: how not to encourage patients to seek care abroad? *Health Policy*.120(11):1233–1239.

KPMG International (2017). *Though the looking glass. The practical path to improving healthcare through transparency*. KPMG International (https://assets.kpmg.com/content/dam/kpmg/bm/pdf/2017/04/Through-the-looking-glass.pdf, assessed 14 September 2018).

KRN (2018). [Online] *Krajowy Rejestr Nowotworów [National Cancer Register]*. (http://onkologia.org.pl, accessed 16 April 2018) [in Polish].

Kurczewska U, Jasińska M, Orszulak-Michalak D (2010). Opieka paliatywna w Polsce – wybrane zagadnienia. Część I. Założenia, organizacja i funkcjonowanie opieki paliatywnej [Palliative care in Poland – selected issues. Part I. The objectives, organization and functioning of palliative care]. *Farmacja Polska*.66(2):93–100 [in Polish].

Kwaśniewska M, Słońska Z, Drygas W (2015). *Przegląd wybranych polskich programów promocji zdrowia i prewencji chorób przewlekłych zrealizowanych w XXI wieku ze szczególnym uwzględnieniem programów ukierunkowanych na redukowanie społecznych nierówności w zdrowiu [Review of selected Polish programs for health promotion and prevention of chronic diseases implemented in the 21st century, with particular emphasis on programs aimed at reducing social inequalities in health]*. Elaboration created as a part of the PL13 Program co-financed by the Norwegian Financial Mechanism 2009–2014. Warszawa: Konsorcjum Nauka i Zdrowie [Consortium Science and Health] [in Polish].

Lubecki M (2011). Rola ośrodków rehabilitacyjno-ortopedycznych w polskim modelu rehabilitacji medycznej w drugiej połowie XX wieku [The role of orthopedic-rehabilitation centres in the Polish model of rehabilitation in the second half of the twentieth century]. *Hygeia Public Health*.46(2):249–255 [in Polish].

MAHTA (2018). *BAROMETR WHC: Raport na temat zmian w dostępności do gwarantowanych świadczeń zdrowotnych w Polsce nr 18/ 27.06.2018. Stan na kwiecień/maj2018 r. [BAROMETER WHC: Report on changes in the accessibility to guaranteed health services in Poland No. 18/ 27.06.2018. Status for April / May 2018]*. Warsaw: Fundacja Watch Health Care (Foundation Watch Health Care). (http://www.korektorzdrowia.pl/wp-content/uploads/barometrwhc_raport_062018.pdf, accessed 24 July 2018) [in Polish].

MC (2016). *Program zintegrowanej informatyzacji państwa [Program of integrated state informatization]*. Warsaw: Ministerstwo Cyfryzacji [Ministry of Digital Affairs] (https://www.gov.pl/cyfryzacja/program-zintegrowanej-informatyzacji-panstwa, accessed 2 April 2018) [in Polish].

Merks P et al. (2018). The European Falsified Medicines Directive in Poland: background, implementation and potential recommendations for pharmacists. *European Journal of Hospital Pharmacy*.25:10–15. (https://ejhp.bmj.com/content/25/1/10).

MMM (2017). *Monitor zmian w systemie ochrony zdrowia. Stan na dzień 9 kwietnia 2017 r. [Monitor changes in the health care system]*. Warsaw: Młodzi Menadżerowie Medycyny, Polska Federacja Szpitali [Young Medicine Managers, Polish Federation of Hospitals] (http://zmianywzdrowiu.pl/wp-content/uploads/2014/11/Monitor-9.04-1.pdf, accessed 10 September 2018) [in Polish].

Mokrzycka A et al. (2016). The 2014 primary health care reform in Poland: Short-term fixes instead of a long-term strategy. *Health Policy*.120(11):1226–1232.

MR (2017). Informacja o projektach z zakresu ochrony zdrowia zrealizowanych ze wsparciem środków Unii Europejskiej w ramach perspektywy finansowej 2007–2013 [Information on health sector related projects co-financed by the European Union funds under the financial perspective 2007 – 2013]. Warszawa: Ministerstwo Rozwoju [Ministry of Development] Unpublished materials.

MRPiPS (2016). *Informacja o realizacji świadczeń rodzinnych w 2015 r. [Information on the implementation of family benefits in 2015]*. Warsaw: Ministerstwo Rodziny, Pracy i Spraw Socjalnych [Ministry of Family, Labour and Social Policy] (https://www.gov.pl/documents/1048151/1060973/Informacja_o_realizacji_%C5%9Bwiadcze%C5%84_rodzinnych_w_2015_r.pdf/e7aa60b7-bf0a-ea92-b013-f855c2fdff75, accessed 28 December 2018) [in Polish].

MRPiPS (2017). *Informacja o realizacji świadczeń rodzinnych w 2016 r. [Information on the implementation of family benefits in 2016]*. Warsaw: Ministerstwo Rodziny, Pracy i Spraw Socjalnych [Ministry of Family, Labour and Social Policy] (https://www.gov.pl/web/rodzina/informacje-statystyczne-swiadczenia-rodzinne, accessed 10 November 2018) [in Polish].

MRPiPS (2018). Informacja o sytuacji osób starszych w Polsce za rok 2017 [Information on the situation of older people in Poland for 2017]. Warsaw: Ministerstwo Rodziny, Pracy i Spraw Socjalnych [Ministry of Family, Labour and Social Policy]. (https://www.gov.pl/documents/1048151/1060973/Informacja_o_sytuacji_os%C3%B3b_starszych_za_2017.pdf/1d23a7b9-4f2f-1a92-41d1-5bf51598d261, accessed 16 November 2018) [in Polish].

MRR (2011). *Mechanizm Finansowy EIG i Norweski Mechanizm Finansowy. Raport podsumowujący I edycję w Polsce [The EEA Grants and Norway Grants. Report summarizing the 1st edition in Poland]*. Warszawa: Ministerstwo Rozwoju Regionalnego [Ministry of Regional Development] (https://www.eog.gov.pl/media/3468/Raport_I_edycja.pdf, accessed 25 October 2017) [in Polish].

Murante AM et al. (2017). Patient perceived responsiveness of primary care systems across Europe and the relationship with the health expenditures and remuneration systems of primary care doctors. *Social Science and Medicine*.186:139–147.

Murtin F et al. (2017). Inequalities in longevity by education in OECD countries: Insights from new OECD estimates. *OECD Statistics Working Papers*, 2017/02. Paris: OECD Publishing (http://dx.doi.org/10.1787/6b64d9cf-en).

MZ (2015). *Krajowe Ramy Strategiczne – Policy paper dla ochrony zdrowia na lata 2014 – 2020 [National Strategic Framework – Policy paper for health care 2014–2020]*. Ministerstwo Zdrowia [Ministry of Health] (http://www.mz.gov.pl/rozwoj-i-inwestycje/fundusze-europejskie-dla-sektora-ochrony-zdrowia/krajowe-ramy-strategiczne-policy-paper/, accessed 20 August 2018) [in Polish].

MZ (2016a): *Narodowa Służba Zdrowia. Strategia zmian w systemie ochrony zdrowia w Polsce [National Health Service. Strategy of changes in the health care system in Poland]*. Warszawa: Ministerstwo Zdrowia [Ministry of Health] (http://www.mz.gov.pl/wp-content/uploads/2016/07/narodowa-strategia-zdrowia8.pdf, accessed 25 August 2018) [in Polish].

MZ (2016b). *Narodowy program ochrony antybiotyków na lata 2016–2020 [The National Programme to Protect Antibiotics 2016–2020]*. Warszawa: Ministerstwo Zdrowia [Ministry of Health] (https://www.gov.pl/zdrowie/narodowy-program-ochrony-antybiotykow-na-lata-2016-2020, accessed 1 September 2018) [in Polish].

MZ (2016c). *Odpowiedź Ministerstwa Zdrowia na interpelację nr 1845 w sprawie sytuacji zawodowej i demograficznej polskich pielęgniarek i położnych [Response of the Ministry of Health to question no 1845 on the professional and demographic situation of Polish nurses and midwives]*. Warszawa: Ministerstwo Zdrowia [Ministry of Health] (http://www.sejm.gov.pl/sejm8.nsf/InterpelacjaTresc.xsp?key=14AE627B, accessed 20 January 2018) [in Polish].

MZ (2017a). *Dodatkowe nakłady na ochronę zdrowia w 2017 r. [Additional funds for health care in 2017]*. Warszawa: Ministerstwo Zdrowia [Ministry of Health] (http://www.mz.gov.pl/aktualnosci/dodatkowe-naklady-na-ochrone-zdrowia-w-2017-r/, accessed 20 June 2018) [in Polish].

MZ (2017b). *Projekt zmiany rozporządzenia w sprawie świadczeń gwarantowanych z zakresu leczenia szpitalnego, przekazany do konsultacji społecznych w dniu 19 December 2017 r. [Draft of the amendment to the Regulation on guaranteed services in the field of hospital treatment, submitted for public consultation on 19 December 2017]*. Warszawa: Ministerstwo Zdrowia [Ministry of Health] (https://legislacja.rcl.gov.pl/docs//516/12306406/12479547/12479548/dokument322571.pdf, accessed 11 September 2018) [In Polish].

MZ (2017c). *Rządowy projekt ustawy o szczególnych rozwiązaniach zapewniających poprawę jakości i dostępności do świadczeń opieki zdrowotnej [Government's project of law on mechanisms aimed at improving the quality and access to health care]*. Warszawa: Ministerstwo Zdrowia [Ministry of Health] (http://www.sejm.gov.pl/sejm8.nsf/agent.xsp?symbol=RPL&Id=RM-10-111-17, accessed 20 November 2017) [in Polish].

MZ (2017d). *Strategia na rzecz rozwoju pielęgniarstwa i położnictwa w Polsce [Strategy for the development of nursing and midwifery in Poland]*. Warszawa: Ministerstwo Zdrowia [Ministry of Health]. (http://www.mz.gov.pl/wp-content/uploads/2018/01/dokument_strategia-rozwoju-pielegniarstwa-i-poloznictwa-w-polsce_do-wyslania.pdf, accessed 28 January 2018) [in Polish].

MZ (2018a). *Fundusze Norweskie PL07 i PL13 [Norway Grants PL 07 and PL13]*. Warszawa: Ministerstwo Zdrowia [Ministry of Health] (http://zdrowie.gov.pl/pl07, accessed 20 September 2018) [in Polish].

MZ (2018b). *Monitorowanie stanu zdrowia jamy ustnej populacji polskiej [Monitoring the oral health of the Polish population]*. Warszawa: Ministerstwo Zdrowia [Ministry of Health]. (https://www.gov.pl/zdrowie/monitorowanie-stanu-zdrowia-jamy-ustnej-populacji-polskiej-w-latach-2016-2020, accessed 17 September 2018) [in Polish].

MZ (2018c). *Polityka Lekowa Państwa 2018–2022 [Drug Policy of the State 2018–2022]*. Warszawa: Ministerstwo Zdrowia [Ministry of Health]. (http://www.rynekzdrowia.pl/Plik/150829.html) [in Polish].

MZ (2018d). *Program szwajcarski – homepage [Swiss Contribution – home page]*. Warszawa: Ministerstwo Zdrowia [Ministry of Health] (http://zdrowie.gov.pl/sppw, accessed 20 October 2018) [in Polish].

MZ (2018e). *Sfałszowane produkty lecznicze [Counterfeit medicinal products]*. Warsaw: Ministerstwo Zdrowia [Ministry of Health] (http://www.mz.gov.pl/leki/produkty-lecznicze/sfalszowane-produkty-lecznicze, accessed 20 March 2018) [in Polish].

MZ (2018f). *Sieć szpitali – oficjalna strona rządowego projektu sieci szpitali [Hospitals network – official website of the governmental project Hospital Network]*. Warszawa: Ministerstwo Zdrowia [Ministry of Health] (http://siecszpitali.mz.gov.pl/, accessed 20 March 2018) [in Polish].

MZ (2018g). *System Państwowe Ratownictwo Medyczne [State Medical Rescue System]*. Warszawa: Ministerstwo Zdrowia [Ministry of Health] (https://www.gov.pl/zdrowie/system-panstwowe-ratownictwo-medyczne, accessed 25 August 2018) [in Polish].

MZ (2018h). *Szybka Terapia Onkologiczna [Oncology therapy]*. Warszawa: Ministerstwo Zdrowia [Ministry of Health] (http://pakietonkologiczny.gov.pl, accessed 15 March 2018) [in Polish].

MZ (2019). *Informacja o zadłużeniu SPZOZ [Information on SPZOZ debts]*. Warszawa: Ministerstwo Zdrowia [Ministry of Health] (https://www.gov.pl/zdrowie/zadluzenie-spzoz accessed 26 Januar 2019) [in Polish].

MZ, KL/Rynek Zdrowia (2018). *Trwają prace nad określeniem kompetencji zawodowych sekretarki medycznej [Work is ongoing to determine the professional competence of the medical secretary]*. Rynek Zdrowia 12 February 2018 (http://www.rynekzdrowia.pl/Finanse-i-zarzadzanie/MZ-trwaja-prace-nad-okresleniem-kompetencji-zawodowych-sekretarki-medycznej,181212,1.html, accessed 25 August 2015) [in Polish].

NFZ (2006). *Sprawozdanie z działalności Narodowego Funduszu Zdrowia za 2005 rok [Report on Activity of the National Health Fund in 2005]*. Warsaw: Narodowy Fundusz Zdrowia [National Health Fund] [in Polish].

NFZ (2016a). *Prognoza korzystania ze świadczeń szpitalnych finansowanych przez Narodowy Fundusz Zdrowia w kontekście zmian demograficznych w Polsce [Prognosis of the health services financed by National Health Fund utilization, in the context of demographic changes]*. Warsaw: Narodowy Fundusz Zdrowia [National Health Fund] (http://www.nfz.gov.pl/gfx/nfz/userfiles/_public/o_nfz/publikacje/prognoza_korzystania_ze_swiadczen_szpitalnych_finansowanych_przez_nfz_w_kontekscie_zmian_demograficznych_w_polsce.pdf, accessed 20 February 2018) [in Polish].

NFZ (2016b). *Sprawozdanie z działalności Narodowego Funduszu Zdrowia za 2015 rok [Report on Activity of the National Health Fund in 2015]*. Warsaw: Narodowy Fundusz Zdrowia [National Health Fund] [in Polish].

NFZ (2017). *Analiza na potrzeby uzasadnienia podjęcia kontroli, której celem będzie ocena prawidłowości realizacji umów o udzielanie świadczeń opieki zdrowotnej w rodzaju leczenie szpitalne, w zakresie świadczeń: kardiologia – hospitalizacja E10, E11, E12, E13, E14, oraz kardiologia – hospitalizacja i kardiologia – hospitalizacja planowa, w której zostały rozliczone wybrane grupy z sekcji E, takie jak: E20, E23, E24, E25, E26, E27 [Analysis for the purpose of justifying of control, the purpose*

of which will be to assess the correctness of the implementation of contracts for the provision of health care services, such as hospital treatment, in the scope of services: cardiology – hospitalization E10, E11, E12, E13, E14, and cardiology – hospitalization and cardiology – planned hospitalization, in which selected groups from section E were settled, such as: E20, E23, E24, E25, E26, E27]. Warsaw: Narodowy Fundusz Zdrowia [National Health Fund] [in Polish]

NFZ (2018a). *Informacja o liczbie skarg i wniosków rozpatrzonych w Narodowym Funduszu Zdrowia w 2017 r. [National Health Fund information on complaints in 2017]*. Warsaw: Narodowy Fundusz Zdrowia [National Health Fund]. (http://www.nfz.gov.pl/o-nfz/skargi-i-wnioski/, accessed 10 August 2018) [in Polish].

NFZ (2018b). *Plan finansowy NFZ na rok 2018 [NHF's financial plan for the year 2018]*. Warsaw: Narodowy Fundusz Zdrowia [National Health Fund] (http://www.nfz.gov.pl/bip/finanse-nfz, accessed 19 September 2018) [in Polish].

NFZ (2018c). *Sprawozdania Finansowe NFZ – lata 2008–2017 [Financial reports of the National Health Fund – 2008–2017]*. Warsaw: Narodowy Fundusz Zdrowia [National Health Fund] (http://www.nfz.gov.pl/bip/finanse-nfz/, accessed 20 October 2018) [in Polish].

NFZ (2018d). *Sprawozdanie z działalności Narodowego Funduszu Zdrowia za IV kwartał 2017. [Report on the activities of the National Health Fund for the fourth quarter of 2017]*. Warsaw: Narodowy Fundusz Zdrowia [National Health Fund] (http://www.nfz.gov.pl/zarzadzenia-prezesa/uchwaly-rady-nfz/uchwala-nr-22018iii,6438.html, accessed 2 September 2018) [in Polish].

NIK (2013a). *Informatyzacja szpitali [Information on hospitals]*. Warsaw: Najwyższa Izba Kontroli [Supreme Audit Office] (https://www.nik.gov.pl/plik/id,4849,vp,6462.pdf, accessed 15 March 2018) [in Polish].

NIK (2013b). *Zakup i wykorzystanie aparatury medycznej współfinansowanej ze środków regionalnych programów operacyjnych [Procurement and exploitation of medical equipment co-financed by regional operational programs]*. Warsaw: Najwyższa Izba Kontroli [Supreme Audit Office] (https://www.nik.gov.pl/plik/id,5019,vp,6515.pdf, accessed 20 November 2017) [in Polish].

NIK (2015). *Działalność szpitali samorządowych przekształconych w spółki kapitałowe [Functioning of corporatized hospitals]*. Warsaw: Najwyższa Izba Kontroli [Supreme Audit Office] (https://www.nik.gov.pl/plik/id,8411,vp,10488.pdf, accessed 20 November 2017) [in Polish].

NIK (2016a). *Kształcenie i przygotowanie zawodowe kadr medycznych [Training and professional development of medical staff]*. Warsaw: Najwyższa Izba Kontroli [Supreme Audit Office] (https://www.nik.gov.pl/plik/id,10242,vp,12565.pdf, accessed 20 March 2018) [in Polish].

NIK (2016b). *Realizacja świadczeń zdrowotnych z zakresu kardiologii przez publiczne i niepubliczne podmioty lecznicze [Implementation of health services in the field of cardiology by public and non-public entities]*. Warsaw: Najwyższa Izba Kontroli [Supreme Audit Office] (https://www.nik.gov.pl/kontrole/P/14/078/, accessed 3 September 2018) [in Polish].

NIK (2017a). *Dostępność i finansowanie diagnostyki laboratoryjnej [Availability and financing of laboratory diagnostics. Information about the results of the inspection]*. Warsaw: Najwyższa Izba Kontroli [Supreme Audit Office]. (https://www.nik.gov.pl/plik/id,14416,vp,16875.pdf, accessed 10 July 2018) [in Polish].

NIK (2017b). *Pakiet onkologiczny [Oncological Package]*. Warsaw: Najwyższa Izba Kontroli [Supreme Audit Office] (https://www.nik.gov.pl/aktualnosci/pakiet-onkologiczny.html, accessed 24 July 2018) [in Polish].

NIK (2017c). *Profilaktyka zdrowotna w systemie ochrony zdrowia [Health prophylaxis in the health care system]*. Warsaw: Najwyższa Izba Kontroli [Supreme Audit Office] (https://www.nik.gov.pl/plik/id,13788,vp,16224.pdf, accessed 10 September 2018) [in Polish].

NIK (2017d). *Respektowanie praw pacjentów w transgranicznej opiece zdrowotnej [Respecting patients' rights in cross-border healthcare]*. Warsaw: Najwyższa Izba Kontroli [Supreme Audit Office]. (https://www.nik.gov.pl/kontrole/P/16/084/, accessed 24 July 2018) [in Polish].

NIK (2018). *Dostępność i efekty leczenia leczenia nowotworów [Access to and effects of cancer treatment]*. Warsaw: Najwyższa Izba Kontroli [Supreme Audit Office] (https://www.nik.gov.pl/plik/id,16371,vp,18897.pdf, accessed 20 September 2018) [in Polish].

NIL (2015). *Lekarze specjaliści i lekarze dentyści specjaliści 2015 [Specialised doctors and specialised dental practitioners in 2015]*. Warsaw: Naczelna Izba Lekarska [National Chamber of Physician] (http://www.nil.org.pl/aktualnosci/lekarze-specjalisci-i-lekarze-dentysci-specjalisci-sytuacja-demograficzna, accessed 19 March 2018) [in Polish].

NIL (2016). *Lekarze Stomatolodzy 2016 – raport z badania [Dentist 2016 – Survey report]*. Warsaw: Naczelna Izba Lekarska [National Chamber of Physician]. (https://www.nil.org.pl/__data/assets/pdf_file/0012/110514/Lekarze-Stomatolodzy-2016-raport-z-badania.pdf, accessed 20 August 2018) [in Polish].

NIL (2018a). *Lekarze i lekarze dentyści w Polsce – charaterystyka demograficzna in 2017 [Doctors and dentists in Poland – demographic characteristics in 2017]*. Warsaw: Naczelna Izba Lekarska [National Chamber of Physician]. (https://nil.org.pl/__data/assets/pdf_file/0014/132521/Demografia-2017.pdf, accessed 15 November 2018) [in Polish].

NIL (2018b). *Zestawienie liczbowe lekarzy i lekarzy dentystów wg wieku, płci i tytułu zawodowego z uwzględnieniem podziału na lekarzy wykonujących i nie wykonujących zawodu [Counting numbers of doctors and dentists by age, sex and professional title, including the division into practicing and not practicing doctors]*. Warsaw: Naczelna Izba Lekarska [National Chamber of Physician] (https://www.nil.org.pl/__data/assets/pdf_file/0009/128529/Zestawienie-nr-03.pdf, accessed 14 July 2018) [in Polish].

NIPiP (2017). *Raport NIPiP nt. Zabezpieczenie Społeczeństwa Polskiego w świadczenia pielęgniarek i położnych [Report on securing the Polish Society in providing nurses and midwives services]*. Warsaw: Naczelna Izba Pielęgniarek i Położnych [National Chamber of Nurses and Midwives] (http://nipip.pl/wp-content/uploads/2017/03/Raport_druk_2017.pdf, accessed 30 June 2018) [in Polish].

NIPiP (2018). *Zabezpieczenie społeczeństwa polskiego w opiekę pielęgniarską i położniczą w związku z migracjami personelu i zmianą systemu emerytalnego [Securing the Polish Society in providing nurses and midwives services in connection with the staff migration and the change of the pension system]*. Warsaw: Naczelna Izba Pielęgniarek i Położnych [National Chamber of Nurses and Midwives] (http://ozzpip.malopolska.pl/wp-content/uploads/2018/01/Zabezpieczenie-spo%C5%82ecze%C5%84stwa-polskiego-migracja.pdf, accessed 20 February 2018) [in Polish].

NIZP-PZH (2013a). *Choroby zakaźne i zatrucia w Polsce w 2012 roku [Infectious diseases and poisonings in Poland in 2012]*. Warsaw: Narodowy Instytut Zdrowia Publicznego – Państwowy Zakład Higieny [National Institute of Public Health – National Institute of Hygiene] (http://wwwold.pzh.gov.pl/oldpage/epimeld/2012/Ch_2012.pdf, accessed 15 March 2018) [in Polish].

NIZP-PZH (2013b). *Szczepienia ochronne w Polsce w 2012 roku [Vaccinations in Poland in 2012]*. Warsaw: Narodowy Instytut Zdrowia Publicznego – Państwowy Zakład Higieny [National Institute of Public Health – National Institute of Hygiene] (http://wwwold.pzh.gov.pl/oldpage/epimeld/2012/Sz_2012.pdf, accessed 10 September 2018) [in Polish].

NIZP-PZH (2014a). *Choroby zakaźne i zatrucia w Polsce w 2013 roku [Infectious diseases and poisonings in Poland in 2013]*. Warsaw: Narodowy Instytut Zdrowia Publicznego – Państwowy Zakład Higieny [National Institute of Public Health – National Institute of Hygiene] (http://wwwold.pzh.gov.pl/oldpage/epimeld/2013/Ch_2013.pdf, accessed 15 March 2018) [in Polish].

NIZP-PZH (2014b). *Szczepienia ochronne w Polsce w 2013 roku [Vaccinations in Poland in 2013]*. Warsaw: Narodowy Instytut Zdrowia Publicznego – Państwowy Zakład Higieny [National Institute of Public Health – National Institute of Hygiene] (http://wwwold.pzh.gov.pl/oldpage/epimeld/2013/Sz_2013.pdf, accessed 10 September 2018) [in Polish].

NIZP-PZH (2015a). *Choroby zakaźne i zatrucia w Polsce w 2014 roku [Infectious diseases and poisonings in Poland in 2014]*. Warsaw: Narodowy Instytut Zdrowia Publicznego – Państwowy Zakład Higieny [National Institute of Public Health – National Institute of Hygiene] (http://wwwold.pzh.gov.pl/oldpage/epimeld/2014/Ch_2014.pdf, accessed 15 March 2018) [in Polish].

NIZP-PZH (2015b). *Szczepienia ochronne w Polsce w 2014 roku [Vaccinations in Poland in 2014]*. Warsaw: Narodowy Instytut Zdrowia Publicznego – Państwowy Zakład Higieny [National Institute of Public Health – National Institute of Hygiene] (http://wwwold.pzh.gov.pl/oldpage/epimeld/2014/Sz_2014.pdf, accessed 10 September 2018) [in Polish].

NIZP-PZH (2016a). *Choroby zakaźne i zatrucia w Polsce w 2015 roku [Infectious diseases and poisonings in Poland in 2015]*. Warsaw: Narodowy Instytut Zdrowia Publicznego – Państwowy Zakład Higieny [National Institute of Public Health – National Institute of Hygiene] (http://wwwold.pzh.gov.pl/oldpage/epimeld/2015/Ch_2015.pdf, accessed 15 March 2018) [in Polish].

NIZP-PZH (2016b). *Szczepienia ochronne w Polsce w 2015 roku [Vaccinations in Poland in 2015]*. Warsaw: Narodowy Instytut Zdrowia Publicznego – Państwowy Zakład Higieny [National Institute of Public Health – National Institute of Hygiene] (http://wwwold.pzh.gov.pl/oldpage/epimeld/2015/Sz_2015.pdf, accessed 10 September 2018) [in Polish].

NIZP-PZH (2017a). *Choroby zakaźne i zatrucia w Polsce w 2016 roku [Infectious diseases and poisonings in Poland in 2016]*. Warsaw: Narodowy Instytut Zdrowia Publicznego – Państwowy Zakład Higieny [National Institute of Public Health – National Institute of Hygiene] (http://wwwold.pzh.gov.pl/oldpage/epimeld/2016/Ch_2016.pdf, accessed 15 March 2018) [in Polish].

NIZP-PZH (2017b). *Mandatory vaccinations in Poland – history and rationale*. Warsaw: Narodowy Instytut Zdrowia Publicznego – Państwowy Zakład Higieny [National Institute of Public Health – National Institute of Hygiene] (http://szczepienia.pzh.gov.pl/en/stories/mandatory-vaccinations-in-poland/, accessed 24 July 2018).

NIZP-PZH (2017c). *Szczepienia ochronne w Polsce w 2016 roku [Vaccinations in Poland in 2016]*. Warsaw: Narodowy Instytut Zdrowia Publicznego – Państwowy Zakład Higieny [National Institute of Public Health – National Institute of Hygiene] (http://wwwold.pzh.gov.pl/oldpage/epimeld/2016/Sz_2016.pdf, accessed 10 September 2018) [in Polish].

NIZP-PZH (2018a). *Choroby zakaźne i zatrucia w Polsce w 2017 roku [Infectious diseases and poisonings in Poland in 2017]*. Warsaw: Narodowy Instytut Zdrowia Publicznego – Państwowy Zakład Higieny [National Institute of Public Health – National Institute of Hygiene] (http://wwwold.pzh.gov.pl/oldpage/epimeld/2016/Ch_2016.pdf, accessed 15 November 2018) [in Polish].

NIZP-PZH (2018b). *Szczepienia ochronne w Polsce w 2017 roku [Vaccinations in Poland in 2017]*. Warsaw: Narodowy Instytut Zdrowia Publicznego – Państwowy Zakład Higieny [National Institute of Public Health – National Institute of Hygiene] (http://wwwold.pzh.gov.pl/oldpage/epimeld/2016/Sz_2016.pdf, accessed 10 September 2018) [in Polish].

Nolte E, McKee M (2004). *Does health care save lives? Avoidable mortality revisited*. London: Nuffield Trust, pp. 1–93.

Ochała A et al. (2014). Statistics regarding interventional cardiology in Poland in 2013. Summary report of the Association of Cardiovascular Interventions of the Polish Cardiac Society (AISN PTK), *Kardiologia Polska*.72(12):1402–1407.

OECD (2017). *Health at a Glance 2017: OECD Indicators*. Paris: OECD Publishing (doi:10.1787/health_glance-2017-en, accessed 28 October 2018).

OECD (2018a). *Health at a Glance: Europe 2018: State of Health in the EU Cycle*. Paris: OECD Publishing (doi:10.1787/health_glance_eur-2018-en, accessed 15 February 2019).

OECD (2018b). *OECD health statistics* [online database]. Paris: OECD Publishing (https://stats.oecd.org/, accessed 28 December 2018).

OECD (2018c). *Pharmaceutical spending*. Paris: OECD Publishing (https://data.oecd.org/healthres/pharmaceutical-spending.htm, accessed 20 July 2018).

Osak M (2016). *Private health insurance and medical subscriptions – two faces of private pre-paid funding of health care in Poland*. European Financial Systems 2016, Proceedings of the 13th Scientific Conference, Brno: Masaryk University, 2016, pp: 517–525. (https://www.researchgate.net/publication/315423556_Private_health_insurance_and_medical_subscriptions_-_two_faces_of_the_private_pre-paid_funding_of_health_care_in_Poland, accessed 15 March 2018).

PFRON (2017). *Wykorzystanie środków PFRON przez jednostki samorządu terytorialnego [Utilization of PFRON funds by local governments units]*. Warsaw: Państwowy Fundusz Rehabilitacji Osób Niepełnosprawnych [State Fund for Rehabilitation of Persons with Disabilities] (https://bip.pfron.org.pl/pfron/wykorzystanie-srodkow, accessed 16 March 2018) [in Polish].

PGEU (2018). *Annual report 2017. Measuring health outcomes in community pharmacy*. Brussels: Pharmaceutical Group of the European Union PGEU (https://www.pgeu.eu/en/library/587:annual-report-2017.html, accessed 24 August 2018).

PIU (2017). *Raport – jak ubezpieczenia zmieniają Polskę i Polaków [Report – How insurance changes Poland and Poles]*. Warsaw: Polska Izba Ubezpieczeń [Polish Insurance Association] (https://piu.org.pl/wp-content/uploads/2017/12/171205_raport_wplywu_dlugi.pdf, accessed 9 December 2017) [in Polish].

PIU (2018a). *Coraz więcej Polaków z prywatnym ubezpieczeniem zdrowotnym [More and more Poles with private health insurance]*. Warsaw: Polska Izba Ubezpieczeń [Polish Insurance Association] (https://piu.org.pl/coraz-wiecej-polakow-prywatnym-ubezpieczeniem-zdrowotnym/, accessed 26 June 2018) [in Polish].

PIU (2018b). *Niemal 2,3 mln Polaków z ubezpieczeniem zdrowotnym [Almost 2.3 million Poles with health insurance]*. Warsaw: Polska Izba Ubezpieczeń [Polish Insurance Association] (https://piu.org.pl/niemal-23-mln-polakow-dodatkowym-ubezpieczeniem-zdrowotnym/, accessed 26 June 2018) [in Polish].

PK (2017). *Prokuratura lepiej broni pacjentów i ściga lekarzy [The prosecutor's office better protects patients and chases doctors]*. Warsaw: Prokuratura Krajowa [National Prosecutor's Office] (https://pk.gov.pl/aktualnosci/aktualnosci-z-kraju/prokuratura-lepiej-broni-pacjentow-i-sciga-lekarzy/, accessed 24 July 2018) [in Polish].

PK (2018). *Prokuratura prowadzi coraz więcej spraw dotyczących błędów medycznych [The prosecutor's office is carrying more and more cases regarding medical errors]*. Warsaw: Prokuratura Krajowa [National Prosecutor's Office] (https://pk.gov.pl/aktualnosci/aktualnosci-prokuratury-krajowej/prokuratura-prowadzi-coraz-wiecej-spraw-dotyczacych-bledow-medycznych/, accessed 18 August 2018) [in Polish].

Polityka Zdrowotna (2016). *Narodowa Służba Zdrowia zamiast NFZ. Jest plan reform [National Health Service instead of NFZ. There is a reform plan]*. Polityka Zdrowotna. (http://www.politykazdrowotna.com/11192,narodowa-sluzba-zdrowia-zamiast-nfz-jest-plan-reformy, accessed 15 August 2018) [in Polish].

Poznańska A, Wojtyniak B, Seroka W (2011). *Najważniejsze przyczyny zgonów Polaków w 2030 roku [Main causes of death among Polish population in 2030]. Przegląd Epidemiologiczny*.65(3):483–489 [in Polish].

Prawo.pl (2018). *Turyści medyczni źródłem zarobku dla szpitali [Medical tourists are a source of income for hospitals]* Prawo.pl. (https://www.prawo.pl/zdrowie/turystyka-medyczna-przyciaga-pacjentow,295043.html, accessed 19 November 2018) [in Polish].

RM (2015). *Załącznik do uchwały nr 208 Rady Ministrów z dnia 3 listopada 2015 r. w sprawie ustanowienia programu wieloletniego na lata 2016–2024 pod nazwą „Narodowy Program Zwalczania Chorób Nowotworowych" [Annex to Resolution No.208 of the Council of Ministers of November 3. 2015 regarding the establishment of a long-term program for 2016–2024 under the name "National Program Against Cancer Diseases"]*. Warszawa: Rada Ministrów [Council of Ministers]. (http://prawo.sejm.gov.pl/isap.nsf/DocDetails.xsp?id =WMP20150001165, accessed 16 April 2018) [in Polish].

RPP (2018). *Sprawozdanie dotyczące przestrzegania praw pacjenta na terytorium Rzeczypospolitej Polskiej (za okres od dnia 1 stycznia 2017 r. do dnia 31 grudnia 2017 r.) [Report on the observance of patients' rights in the Republic of Poland (for the period January 1, 2017 to December 31, 2017]*. Warsaw: Biuro Rzecznika Prawa Pacjenta [Office of Patient Rights Ombudsman]. (https://www.bpp.gov.pl/gfx/bpp/userfiles/_public/bip/sprawozdania_roczne/sprawozdanie_rpp_za_2017r.pdf, accessed 14 November 2018) [in Polish].

Rutkowska K (2018). Personal communication between Katarzyna Rutkowska on behalf of the Department of Nurses and Midwives at the Ministry of Health and the authors of this volume, 15 October 2018.

Sagan A et al. (2011). Poland: Health system review. *Health Systems in Transition*.13(8):1–193.

Sagan A, Sobczak A (2014). Implementation of the 2011 Therapeutic Activity Act: Will commercialization improve the financial performance of Polish hospitals? *Health Policy* 118(2): 153–158. (https://www.sciencedirect.com/science/article/pii/S0168851014002632?via%3Dihub)

Sejm RP (2017). *USTAWA z dnia o sposobie ustalania najniższego wynagrodzenia zasadniczego pracowników wykonujących zawody medyczne zatrudnionych w podmiotach leczniczych. Projekt.*

Druk nr 1583 [Law on the method of determining the lowest basic salary of employees performing medical professions employed in medical entities. Project. Print No. 1583]. Warsaw: Sejm Rzeczpospolitej Polskiej VIII Kadencja [Parliament of the Republic of Poland] (http://orka.sejm.gov.pl/Druki8ka.nsf/0/6CD7CC0A43B2BD6CC125813000443C99/%24File/1583.pdf, accessed 10 September 2018) [in Polish].

Sejm/rynekaptek.pl (2016). *5 spółek farmaceutyczno-medycznych w portfelu MSP [5 pharmaceutical and medical companies in the portfolio of SMEs]*. Rynekaptek.pl, 01 August 2016. (http://www.rynekaptek.pl/marketing-i-zarzadzanie/5-spolek-farmaceutyczno-medycznych-w-portfelu-msp,15231.html, accessed 25 August 2018) [in Polish].

Sobczak A (2016). Poland. In Sagan A, Thomson S eds. *Voluntary health insurance in Europe – Country experiences*. Copenhagen: WHO Regional Office for Europe, European Observatory on Health Systems and Policies. (http://www.euro.who.int/__data/assets/pdf_file/0011/310799/Voluntary-health-insurance-Europe-country-experience.pdf, accessed 26 June 2018).

Sobiesiak-Penszko P (2015). *Niewidzialna siła robocza. Migranci w usługach opiekuńczych nad osobami starszymi [Invisible workforce. Migrants in care services for older people]*. Warsaw: Instytut Spraw Publicznych [in Polish].

Sowa-Kofta A, Rabczenko D, Wojtyniak B (2017). *Nierówności w stanie zdrowia i w korzystaniu z usług medycznych dorosłych mieszkańców Polski w zależności od sytuacji społeczno-ekonomicznej osób oraz ich gospodarstw domowych, Projekt Predefiniowany: „Ograniczanie społecznych nierówności w zdrowiu" [Inequalities in health and in health services utilization of adults in Poland depending on socio-economic status of people and their households, Pre-defined Project "Reduction in social inequalities of health"]*. Elaboration created as a part of the PL13 Program co-financed by the Norwegian Financial Mechanism 2009–2014. Warszawa: Konsorcjum Nauka i Zdrowie [Consortium Science and Health] [in Polish].

Sowada C (1995). The Stabilization Program – "Balcerowicz-Plan". In: Belka M, Petersen H-G eds. *Economic Transformation in Poland – Reforms of Institutional Settings and Macroeconomic Performance*. Frankfurt, New York: Campus, pp. 25–46.

Sowada C (2014). Zadłużenie publicznych szpitali w Polsce w latach 2005–2014. Nierozwiązany problem zobowiązań wymagalnych [Debts of Polish public hospitals in 2005–2014. The unsolved problem of overdue liabilities]. *Zeszyty Naukowe Ochrony Zdrowia. Zdrowie Publiczne i Zarządzanie Scientific Issues of Health Protection Public Health and Governance]*.XII (3): 258–270 [in Polish].

Tambor M et al. (2013). The inability to pay for health services in Central and Eastern Europe: evidence from six countries. *The European Journal of Public Health*.24(3):378–385.

Tambor M et al. (2015). Towards a stakeholders' consensus on patient payment policy: the views of health-care consumers, providers, insurers and policy makers in six Central and Eastern European countries. *Health Expectations*.18(4):475–488.

Tambor M, Pavlova M (forthcoming). Can people afford to pay for healthcare. New evidence on financial protection in Poland. Copenhagen: WHO Regional Office for Europe.

Tomkiewicz J (2016). Tax System In Poland – Progressive or Regressive? *Journal of Management and Business Administration. Central Europe*.24(2):107–122. (https://content.sciendo.com/view/journals/jmbace/24/2/article-p107.xml).

Transparency International (2018). *Corruption Perceptions Index*. Berlin: Transparency International (https://www.transparency.org/news/feature/corruption_perceptions_index_2017, accessed 10 August 2018).

UNDP (2011). *Human Development Report 2011*. New York: United Nations Development Programme. (http://hdr.undp.org/sites/default/files/reports/271/hdr_2011_en_complete.pdf, accessed 10 March 2018).

UNDP (2018). *Human Development Indices and Indicators 2018 Statistical Update*. New York: United Nations Development Programme. (http://www.hdr.undp.org/sites/default/files/2018_human_development_statistical_update.pdf, accessed 10 November 2018).

United Nations (2016). *Map of Poland*, No. 3784 Rev. 5. New York: United Nations Cartographic Section (http://www.un.org/Depts/Cartographic/map/profile/poland.pdf, accessed 4 June 2018).

URPLWMiPB (2018). *Office for Registration of Medicinal Products, Medical Devices and Biocidal Products – homepage*. Warsaw: Urząd Rejestracji Produktów Leczniczych, Wyrobów Medycznych i Produktów Biobójczych [Office for Registration of Medicinal Products, Medical Devices and Biocidal Products] (http://urpl.gov.pl/pl, accessed 10 March 2018).

WB (2014). *Poland – Improving the financial sustainability of the hospital sector in Poland: towards a systemic approach*. Washington, DC: The World Bank. (http://documents.worldbank.org/curated/en/200981468092357399/Poland-Improving-the-financial-sustainability-of-the-hospital-sector-in-Poland-towards-a-systemic-approach-policy-note, accessed 4 June 2018).

WB (2018a). *Integrated health care in Poland*. Washington, DC: The World Bank (http://www.worldbank.org/en/country/poland/publication/integrated-health-care-in-poland, accessed 1 May 2018) [in Polish].

WB (2018b). *World Development Indicators Database* [online database]. Washington, DC: The World Bank (https://data.worldbank.org/data-catalog/world-development-indicators, accessed 29 December 2018).

WHO (2018a). *European Health For All Database* [online database]. Copenhagen: WHO Regional Office for Europe. (http://data.euro.who.int/hfadb, accessed 10 March 2018).

WHO (2018b). *European Health Information Gateway* [online database]. Copenhagen: WHO Regional Office for Europe. (https://gateway.euro.who.int/en/indicators/hlthres_229-psychiatrists-per-100-000/visualizations/#id=28481&tab=table, accessed 1 September 2018).

WHO (2018c). *Global health expenditure database* [online database]. Copenhagen: WHO Regional Office for Europe. (http://apps.who.int/nha/database, accessed 28 December 2018).

WHO (2018d). *Health statistics and information systems. Disease burden and mortality estimates*. [online database]. Copenhagen: WHO Regional Office for Europe. (http://www.who.int/healthinfo/global_burden_disease/estimates/en/index2.html, accessed 1 September 2018).

WHO (2019a). *WHO Global Health Observatory (GHO) data* [online database]. (https://www.who.int/gho/en/, accessed 15 January 2019).

WHO (2019b). *WHO Global Mortality Database* [online database]. (https://www.who.int/healthinfo/mortality_data/en/, accessed 15 January 2019).

Wiedziuk S (2018). *Abonament kontra polisa [Subscription versus policy]. Puls Biznesu [Puls of the Business]*, 08 January 2018. (https://www.pb.pl/abonament-kontra-polisa-902615, accessed 10 March 2018) [in Polish].

Więckowska B (2017). Healthcare needs maps – evidence informed healthcare policy. *Journal of Health Policy and Outcomes Research*.1:15–20.

Wojtyniak B (2017). *Nierówności w zdrowiu w Polsce – istotny problem zdrowia publicznego [Inequalities in health in Poland – a significant public health problem]*. Warsaw: Posiedzenie Plenarne Rady Naukowej przy Ministrze Zdrowia Warszawa 21 września 2017 http://www.mz.gov.pl/wp-content/uploads/2017/11/bogdan-wojtyniak_nierownosci-w-zdrowiu_rada-naukowa_mz_do-wyslania.pdf, accessed 26 October 2018) [in Polish].

Wojtyniak B, Goryński P eds. (2018). Sytuacja zdrowotna ludności Polski i jej uwarunkowania [The health situation of the Polish population and its determinants]. Warsaw: Narodowy Instytut Zdrowia Publicznego – Państwowy Zakład Higieny (http://www.pzh.gov.pl/stan-zdrowia-ludnosci/sytuacja-zdrowotna-ludnosci-w-polsce/, accessed 12 February 2019) [in Polish].

WOŚP (2018). *Historia finałów [History of the finals]*. Warsaw: Wielka Orkiestra Świątecznej Pomocy [Great Orchestra of Christmas Charity] (https://www.wosp.org.pl/final/historia-finalow, accessed 10 July 2018) [in Polish].

Zabdyr-Jamróz M, Badora K, Kwoka A (2012). *Public administration system in Poland since 1999*. Kraków: UJCM, Academia.edu (https://jagiellonian.academia.edu/MichałZabdyrJamróz/Diagrams, accessed 15 January 2018).

Zapaśnik A et al. (2016). *Koncepcja koordynowanej Ambulatoryjnej Opieki Zdrowotnej [The concept of coordinated outpatient health care]*. Gdańsk: Polskie Towarzystwo Programów Zdrowotnych [Polish Society of Health Programmes] (http://www.ptpz.pl/images/publikacjePTPZ/koncepcja.pdf, accessed 12 April 2018) [in Polish].

Zespół ds. przygotowania raportu „Finansowanie ochrony zdrowia w Polsce – Zielona Księga" (2004). *Finansowanie ochrony zdrowia w Polsce – Zielona Księga [Financing of the health care in Poland – Green Book]*. Warszawa: Ministerstwo Zdrowia [Ministry of Health] [in Polish].

Zespół do opracowania strategii rozwiązań systemowych w zakresie POZ (2016). *Analiza funkcjonowania podstawowej opieki zdrowotnej w Polsce oraz propozycje rozwiązań systemowych [Analysis of the functioning of primary health care in Poland and proposals of system solutions]*. Warsaw (http://oipip.elblag.pl/wp-content/uploads/2015/06/Krytyczna-analiza-POZ-8-czer-2016-1.pdf, accessed 25 August 2018) [in Polish].

Zgliczyński WS (2017). Nadwaga i otyłość w Polsce [Obesity and overweight in Poland]. *Infos, Zagadnienia społeczno-gospodarcze 4(227)/2017*. Warsaw: Biuro Analiz Sejmowych [Sejm Analysis Office] (http://orka.sejm.gov.pl/WydBAS.nsf/0/E1076D55B37A9603C12580E2002F7655/$file/Infos_227.pdf, accessed 10 July 2018) [in Polish].

ZUS (2017). *Ubezpieczeni poddani rehabilitacji leczniczej w ramach prewencji rentowej ZUS [Persons who have undergone a medical rehabilitation programme within the framework of ZUS disability prevention]*. Warsaw: Zakład Ubezpieczeń Społecznych [Social Insurance Institution] (http://www.zus.pl/baza-wiedzy/statystyka/opracowania-tematyczne/ubezpieczeni-poddani-rehabilitacji-leczniczej-w-ramach-prewencji-rentowej-zus, accessed 29 January 2018) [in Polish].

9.2 List of legal acts

Polish legal acts:

(Date order)	**Date enacted (Position in the Journal of Laws)**
Act on the Civil Code ("Civil Code") *Ustawa z dnia 23 kwietnia 1964 r. – Kodeks cywilny*	23 April 1964 No. 16, item 93
Act on the Labour Code ("Labour Code") *Ustawa z dnia 26 czerwca 1974 r. Kodeks pracy*	26 June 1974 No. 24, item 141
Act on the Pharmaceutical Chambers *Ustawa z dnia 19 kwietnia 1991 r. o izbach aptekarskich*	19 April 1991 No. 41, item 179
Act on Health Care Units *Ustawa z dnia 30 sierpnia 1991 r. o zakładach opieki zdrowotnej*	30 August 1991 No. 91, item 408
Act on Mental Health Protection *Ustawa z dnia 19 sierpnia 1994 r. o ochronie zdrowia psychicznego*	19 August 1994 No, 111, item 535
Act on Public Statistics *Ustawa z dnia 29 czerwca 1995 r. o statystyce publicznej*	29 June 1995 No. 88, item 439
Act on the Professions of Physician and Dentist *Ustawa z dnia 5 grudnia 1996 r. o zawodach lekarza i lekarza dentysty*	5 December 1996 No. 28, item 152
Act on Occupational Health Service *Ustawa z dnia 27 czerwca 1997 r. o służbie medycyny pracy*	27 June 1997 No. 96, item 593
Act on Social Insurance System *Ustawa z dnia 13 października 1998 r. o systemie ubezpieczeń społecznych*	13 October 1998 No. 137, item 887

Act on Cash Benefits from Social Insurance in Case of Sickness and Maternity *Ustawa z dnia 25 czerwca 1999 r. o świadczeniach pieniężnych z ubezpieczenia społecznego w razie choroby i macierzyństwa*	25 June 1999 No. 60, item 636
Act on the Commercial Companies Code ("Commercial Companies Code") *Ustawa z dnia 15 września 2000 r. Kodeks spółek handlowych*	15 June 2000 No. 94, item 1 037
Act on Prices *Ustawa z dnia 5 lipca 2001 r. o cenach*	5 July 2001 No. 97, item 1 050
Act on the Pharmaceutical Law *Ustawa z dnia 6 września 2001 r. Prawo farmaceutyczne*	6 September 2001 No. 126, item 1 381
Act on Universal Health Insurance in the National Health Fund *Ustawa z dnia 23 stycznia 2003 r. o powszechnym ubezpieczeniu w Narodowym Funduszu Zdrowia*	23 January 2003 No. 210, item 2 135
Act on Insurance Activity *Ustawa z dnia 22 maja 2003 r. o działalności ubezpieczeniowej*	22 May 2003 No. 124, item 1 151
Act on Public Procurement *Ustawa z dnia 29 stycznia 2004 r. Prawo zamówień publicznych*	29 January 2004 No. 19, item 177
Act on Health Care Services Financed from Public Sources *Ustawa z dnia 27 sierpnia 2004 r. o świadczeniach opieki zdrowotnej finansowanych ze środków publicznych*	27 August 2004 No. 201, item 2 135
Act on Spa Treatment, Spas, Spa Protection Areas and Spa Municipalities *Ustawa z dnia 28 lipca 2005 r. o lecznictwie uzdrowiskowym, uzdrowiskach i obs zarach ochrony uzdrowiskowej oraz gminach uzdrowiskowych*	28 July 2005 No. 167, 1 399
Act on Counteracting Drug Addiction *Ustawa z dnia 29 lipca 2005 r. o przeciwdziałaniu narkomanii*	29 July 2005 No. 179, item 485
Act on the State Medical Rescue *Ustawa z dnia 8 września 2006 r. o Państwowym Ratownictwie Medycznym*	8 September 2006 No. 191, item 1 410
The Act on the Amendment to the Act Mental Health Protection *Ustawa z dnia 23 lipca 2008 r. o zmianie ustawy o ochronie zdrowia psychicznego*	23 July 2008 No. 180, item 1 108
Act on Patient's Rights and Patient Rights Ombudsman *2008 Ustawa z dnia 6 listopada 2008 r. o prawach pacjenta i Rzeczniku Praw Pacjenta*	6 November 2008 No. 52, 417
Act on Accreditation in Health Care *Ustawa z dnia 6 listopada 2008 r. o akredytacji w ochronie zdrowia*	6 November 2008 No. 52, item 418
Act on Public–Private Partnership *Ustawa z dnia 19 grudnia 2008 r. o partnerstwie publiczno–prywatnym*	19 December 2008 No. 19, item 100
Act on the Amendment of the Act on Health Care Services Financed from Public Sources and the Act on Prices ("Act on Health Benefits Package") *Ustawa z dnia 25 czerwca 2009 r. o zmianie ustawy o świadczeniach opieki zdrowotnej finansowanych ze środków publicznych oraz ustawy o cenach*	25 June 2009 No. 118, item 989

Act on the Chambers of Physicians *Ustawa z dnia 2 grudnia 2009 r. o izbach lekarskich*	2 December 2009 No 219, item 1 708
Act on the Office for Registration of Medicinal Products, Medical Devices and Biocidal Products *Ustawa z dnia 18 marca 2011 r. o Urzędzie Rejestracji Produktów Leczniczych, Wyrobów Medycznych i Produktów Biobójczych*	18 March 2011 No. 82, item 451
Act on Therapeutic Activity *Ustawa z dnia 15 kwietnia 2011 r. o działalności leczniczej*	15 April 2011 No. 112, item 654
Act on Information Systems in Health Care *Ustawa z dnia 28 kwietnia 2011 r. o systemie informacji w ochronie zdrowia*	28 April 2011 No. 113, item 657
Act on the Reimbursement of Pharmaceuticals, Foodstuffs for Special Nutritional Use and Medical Devices ("Act on Reimbursement") *Ustawa z dnia 12 maja 2011 r. o refundacji leków, środków spożywczych specjalnego przeznaczenia żywieniowego oraz wyrobów medycznych*	12 May 2011 No. 122, item 696
Act on the Self-Government of Nurses and Midwives *Ustawa z dnia 1 lipca 2011 r. o samorządzie pielęgniarek i położnych*	1 July 2011 No. 174, item 1 038
Act on the Professions of Nurse and Midwife *Ustawa z dnia 5 lipca 1996 r. o zawodach pielęgniarki i położnej*	15 July 2011 No. 174, item 1 039
Act on the Amendment of the Act on the Professions of Nurse and Midwife and Some Other Acts *Ustawa z dnia 22 lipca 2014 r. o zmianie ustawy o zawodach pielęgniarki i położnej oraz niektórych innych ustaw*	22 July 2014 Item 1 136
Act on the Amendment of the Act on Health Care Services Financed from Public Sources and Certain Other Acts ("Waiting Lists Package" and "Oncology Package") *Ustawa z dnia 22 lipca 2014 r. o zmianie ustawy o świadczeniach opieki zdrowotnej finansowanych ze środków publicznych oraz niektórych innych ustaw*	22 July 2014 Item 1 138
Act on the Amendment of the Act on Health Care Services Financed from Public Sources and Certain Other Acts ("Act on Cross-Border Care") *Ustawa z dnia 10 października 2014 r. o zmianie ustawy o świadczeniach opieki zdrowotnej finansowanych ze środków publicznych oraz niektórych innych ustaw*	10 October 2014 Item 1 491
Act on Insurance and Reinsurance Activity *Ustawa z dnia 11 września 2015 r. o działalności ubezpieczeniowej i reasekuracyjnej*	11 September 2015 Item 1844
Act on Public Health *Ustawa z dnia 11 września 2015 r. o zdrowiu publicznym*	11 September 2015 Item 1916
Act on the Amendment of the Act on the State Medical Rescue, Act on Therapeutic Activity and the Amendment of the Act on Therapeutic Activity and certain other acts *Ustawa z dnia 25 września 2015 r. o zmianie ustawy o Państwowym Ratownictwie Medycznym, ustawy o działalności leczniczej oraz ustawy o zmianie ustawy o działalności leczniczej oraz niektórych innych ustaw*	25 September 2015 No. 1887

Act on the Profession of Physiotherapist *Ustawa z dnia 25 września 2015 r. o zawodzie fizjoterapeuty*	25 September 2015 Item 1994
Act on the Amendment of the Act on the Pharmaceutical Law *Ustawa z dnia 7 kwietnia 2017 r. o zmianie ustawy – Prawo farmaceutyczne*	7 April 2017 Item 1 015
Act on the Method for Determining the Lowest Basic Salary for Employees Performing Medical Professions Employed in Health Care Entities *Ustawa z dnia 8 czerwca 2017 r. o sposobie ustalania najniższego wynagrodzenia zasadniczego pracowników wykonujących zawody medyczne zatrudnionych w podmiotach leczniczych*	8 June 2017 Item 1 473
Act on Special Solutions Ensuring the Improvement of the Quality and Accessibility of Health care Services *Ustawa z dnia 15 września 2017 r. o szczególnych rozwiązaniach zapewniających poprawę jakości i dostępności świadczeń opieki zdrowotnej*	5 September 2017 Item 1 774
Act on Primary Health Care *Ustawa z dnia 27 października 2017 r. o podstawowej opiece zdrowotnej*	27 October 2017 Item 2 217

Note: Only key amendments explicitly mentioned in the text have been included in this table.

Polish executive regulations:

	Date enacted (Position in the Journal of Laws)
MINISTER OF HEALTH	
Executive regulation of the Minister of Health amending the regulation on guaranteed services in the field of spa treatment *Rozporządzenie Ministra Zdrowia z dnia 25 kwietnia 2017 r. zmieniające rozporządzenie w sprawie świadczeń gwarantowanych z zakresu lecznictwa uzdrowiskowego*	25 April 2017 Item 923
Executive regulation of the Minister of Health on the hospital emergency ward *Rozporządzenie Ministra Zdrowia z dnia 3 listopada 2011 r. w sprawie szpitalnego oddziału ratunkowego*	3 November 2011 No. 237, item 1 420
Executive regulation of the Minister of Health on the scope of tasks of primary care physician, nurse and midwife *Rozporządzenie Ministra Zdrowia z dnia 20 października 2005 r. w sprawie zakresu zadań lekarza, pielęgniarki i położnej podstawowej opieki zdrowotnej*	20 October 2005 No. 214, item 1816
Executive regulations of the Minister of Health on guaranteed benefits ("Guaranteed benefits package"):	
Primary health care *Rozporządzenie Ministra Zdrowia z dnia 24 września 2013 roku w sprawie świadczeń gwarantowanych z zakresu podstawowej opieki zdrowotnej*	24 September 2013 Item 1 248

Outpatient specialist care *Rozporządzenie Ministra Zdrowia z dnia 6 listopada 2013 r. w sprawie świadczeń gwarantowanych z zakresu ambulatoryjnej opieki specjalistycznej*	6 November 2013 No. 0, item 1 413
Hospital care *Rozporządzenie Ministra Zdrowia z dnia 22 listopada 2013 r. w sprawie świadczeń gwarantowanych z zakresu leczenia szpitalnego*	22 November 2013 No. 0, item 1 520
Therapeutic rehabilitation *Rozporządzenie Ministra Zdrowia z dnia 6 listopada 2013 r. w sprawie świadczeń gwarantowanych z zakresu rehabilitacji leczniczej*	6 November 2013 No. 0, item 1 522
Psychiatric care and addiction treatment *Rozporządzenie Ministra Zdrowia z dnia 6 listopada 2013 r. w sprawie świadczeń gwarantowanych z zakresu opieki psychiatrycznej i leczenia uzależnień*	6 November 2013 No. 0, item 1 386
Nursing and care services within long-term care *Rozporządzenie Ministra Zdrowia z dnia 22 listopada 2013 r. w sprawie świadczeń gwarantowanych z zakresu świadczeń pielęgnacyjnych i opiekuńczych w ramach opieki długoterminowej*	22 November 2013 Item 1 480
Dental care *Rozporządzenie Ministra Zdrowia z dnia 6 listopada 2013 r. w sprawie świadczeń gwarantowanych z zakresu leczenia stomatologicznego*	6 November 2013 No. 0, item 1 462
Health resort treatment	
Terms of service *Rozporządzenie Ministra Zdrowia z dnia 23 lipca 2013 r. w sprawie świadczeń gwarantowanych z zakresu lecznictwa uzdrowiskowego (Warunki realizacji)*	23 July 2013 Item 931
Indications and contraindications *Rozporządzenie Ministra Zdrowia z dnia 5 stycznia 2012 r. w sprawie sposobu kierowania i kwalifikowania pacjentów do zakładów lecznictwa uzdrowiskowego (wskazania i przeciwwskazania)*	5 January 2012 No. 0, item 14
Referral form *Rozporządzenie Ministra Zdrowia z dnia 7 lipca 2011 r. w sprawie kierowania na leczenie uzdrowiskowe albo rehabilitację uzdrowiskową (Wzór skierowania)*	7 July 2011 No. 142, item 835
Medical devices *Rozporządzenie Ministra Zdrowia z dnia 29 maja 2017 r. w sprawie wykazu wyrobów medycznych wydawanych na zlecenie*	29 May 2017 Item 1 061
Emergency medical care *Rozporządzenie Ministra Zdrowia z dnia 24 września 2013 r. w sprawie świadczeń gwarantowanych z zakresu ratownictwa medycznego*	24 September 2013 No. 0, item 1 176
Palliative and hospice care *Rozporządzenie Ministra Zdrowia z dnia 29 października 2013 r. w sprawie świadczeń gwarantowanych z zakresu opieki paliatywnej i hospicyjnej*	29 October 2013 No. 0, item 1 347

Highly specialized care *Rozporządzenie Ministra Zdrowia z dnia 12 listopada 2015 r. w sprawie świadczeń gwarantowanych z zakresu świadczeń wysokospecjalistycznych oraz warunków ich realizacji*	12 November 2015 Item 1958
Therapeutic programmes *Rozporządzenie Ministra Zdrowia z dnia 6 listopada 2013 r. w sprawie świadczeń gwarantowanych z zakresu programów zdrowotnych*	6 November 2013 No. 0, item 1 505
Reimbursed medicines, foodstuffs for special nutritional use and medical devices *Obwieszczenie Ministra Zdrowia z dnia 26 października 2018 r. w sprawie wykazu refundowanych leków, środków spożywczych specjalnego przeznaczenia żywieniowego oraz wyrobów medycznych*	Official Journal of the Minister of Health 2018, item 105
COUNCIL OF MINISTERS	
Regulation of the Council of Ministers of 19 December 2017 on the programme of statistical surveys of public statistics for 2018 *Rozporządzenie Rady Ministrów z dnia 19 grudnia 2017 r. w sprawie programu badań statystycznych statystyki publicznej na rok 2018*	19 December 2017 Item 2 471
PRESIDENT OF NATIONAL HEALTH FUND	
Executive regulation No. 22/2018/DSOZ of the President of National Health Fund on the terms of concluding and implementing contracts for provision of health care services: outpatient specialist care *Zarządzenie Prezesa Narodowego Funduszu Zdrowia z dnia 14 marca 2018 r. w sprawie określenia warunków zawierania i realizacji umów o udzielanie świadczeń opieki zdrowotnej w rodzaju: ambulatoryjna opieka specjalistyczna*	(not published in the Polish Journal of Laws)

European legislation:

EU and EEC directives	Full name
Directive 2005/36/EC	Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications
Directive 89/105/EEC **("Transparency Directive")**	Council Directive 89/105/EEC of 21 December 1988 relating to the transparency of measures regulating the prices of medicinal products for human use and their inclusion in the scope of national health insurance systems
Directive 2011/24/EU **("Directive on Cross-Border Health Care")**	Directive 2011/24/EU of the European Parliament and of the Council of 9 March 2011 on the application of patients' rights in cross-border health care
Directive 2001/83/EC	Directive 2001/83/EC of the European Parliament and of the Council of 6 November 2001 on the Community code relating to medicinal products for human use

Regulation EC 883/2004	Regulation (EC) No 883/2004 of the European Parliament and of the Council of of 29 April 2004 on the coordination of social security systems
Regulation EC 987/2009	Regulation (EC) No 987/2009 of the European Parliament and of the Council of 16 September 2009 laying down the procedure for implementing Regulation (EC) No 883/2004 on the coordination of social security systems

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. This HiT has used a revised version of the template that is being piloted during 2016–2017 and will be available on the Observatory website once it has been finalized. The previous (2010) version of the template is available online at: http://www.euro.who.int/en/home/projects/observatory/publications/health-system-profiles-hits/hit-template-2010.

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 1 200 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 learnt 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 each other 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

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Print ISSN 1817-6119 Web ISSN 1817-6127