

# Denmark

## Health system review

Hans Okkels Birk  
Karsten Vrangbæk  
Andreas Rudkjøbing  
Allan Krasnik  
Astrid Eriksen  
Erica Richardson  
Signe Smith Jervelund



UNIVERSITY OF COPENHAGEN

European

**Observatory**



on Health Systems and Policies

a partnership hosted by WHO

Astrid Eriksen and Erica Richardson (Editors) and Anna Maresso (Series Editor) were responsible for this HiT

## Editorial Board

---

### Series editors

Reinhard Busse, Berlin University of Technology, Germany  
Josep Figueras, European Observatory on Health Systems and Policies  
Martin McKee, London School of Hygiene & Tropical Medicine, United Kingdom  
Elias Mossialos, London School of Economics and Political Science, United Kingdom  
Ewout van Ginneken, European Observatory on Health Systems and Policies

### Series coordinator

Anna Maresso, European Observatory on Health Systems and Policies

### Editorial team

Jonathan Cylus, European Observatory on Health Systems and Policies  
Astrid Eriksen, Berlin University of Technology, Germany  
Cristina Hernández-Quevedo, European Observatory on Health Systems and Policies  
Katherine Polin, Berlin University of Technology, Germany  
Marina Karanikolos, European Observatory on Health Systems and Policies  
Yulia Litvinova, Berlin University of Technology, Germany  
Sherry Merkur, European Observatory on Health Systems and Policies  
Dimitra Panteli, European Observatory on Health Systems and Policies  
Wilm Quentin, Berlin University of Technology, Germany  
Bernd Rechel, European Observatory on Health Systems and Policies  
Erica Richardson, European Observatory on Health Systems and Policies  
Anna Sagan, European Observatory on Health Systems and Policies  
Giada Scarpetti, Berlin University of Technology, Germany  
Nathan Shuftan, Berlin University of Technology, Germany  
Erin Webb, Berlin University of Technology, Germany  
Juliane Winkelmann, European Observatory on Health Systems and Policies

### International advisory board

Tit Albreht, Institute of Public Health, Slovenia  
Carlos Alvarez-Dardet Díaz, University of Alicante, Spain  
Rifat Atun, Harvard University, United States  
Armin Fidler, Management Center Innsbruck  
Colleen Flood, University of Toronto, Canada  
Péter Gaál, Semmelweis University, Hungary  
Unto Häkkinen, National Institute for Health and Welfare, Finland  
William Hsiao, Harvard University, United States  
Allan Krasnik, University of Copenhagen, Denmark  
Joseph Kutzin, World Health Organization  
Soonman Kwon, Seoul National University, Republic of Korea  
John Lavis, McMaster University, Canada  
Vivien Lin, La Trobe University, Australia  
Greg Marchildon, University of Regina, Canada  
Nata Menabde, World Health Organization  
Charles Normand, University of Dublin, Ireland  
Robin Osborn, The Commonwealth Fund, United States  
Dominique Polton, National Health Insurance Fund for Salaried Staff (CNAMTS), France  
Sophia Schlette, Federal Statutory Health Insurance Physicians Association, Germany  
Igor Sheiman, Higher School of Economics, Russian Federation

# Health Systems in Transition

## Denmark

### Health System Review 2024

**Hans Okkels Birk**

University of Copenhagen

**Karsten Vrangbæk**

University of Copenhagen

**Andreas Rudkjøbing**

University of Copenhagen

**Allan Krasnik**

University of Copenhagen

**Astrid Eriksen**

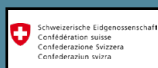
European Observatory on  
Health Systems and Policies

**Erica Richardson**

European Observatory on  
Health Systems and Policies

**Signe Smith Jervelund**

University of Copenhagen



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.

The Observatory is a partnership, hosted by WHO Regional Office for Europe, which includes other international organizations (the European Commission); national and regional governments (Austria, Belgium, Finland, Ireland, Netherlands (Kingdom of the), Norway, Slovenia, Spain, Sweden, Switzerland, the United Kingdom and the Veneto Region of Italy (with Agenas)); other health system organizations (the French National Union of Health Insurance Funds (UNCAM), the Health Foundation); and academia (the London School of Economics and Political Science (LSE) and the London School of Hygiene & Tropical Medicine (LSHTM)). The Observatory has a secretariat in Brussels and it has hubs in London (at LSE and LSHTM) and at the Berlin University of Technology.

**KEYWORDS:**

DELIVERY OF HEALTHCARE

EVALUATION STUDIES

FINANCING, HEALTH

HEALTHCARE REFORM

HEALTH SYSTEM PLANS – organization and administration

DENMARK

© **World Health Organization 2024 (acting as the host organization for, and secretariat of, the European Observatory on Health Systems and Policies).**

All rights reserved. The European Observatory on Health Systems and Policies welcomes requests for permission to reproduce or translate its publications, in part or in full.

Please address requests about the publication to:

**Publications,  
WHO Regional Office for Europe,  
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 web site (<http://www.euro.who.int/en/what-we-publish/publication-request-forms>).

The views expressed by authors or editors do not necessarily represent the decisions or the stated policies of the European Observatory on Health Systems and Policies or any of its partners.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the European Observatory on Health Systems and Policies or any of its partners concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Where the designation “country or area” appears in the headings of tables, it covers countries, territories, cities, or areas. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers’ products does not imply that they are endorsed or recommended by the European Observatory on Health Systems and Policies in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

The European Observatory on Health Systems and Policies does not warrant that the information contained in this publication is complete and correct and shall not be liable for any damages incurred as a result of its use.

Printed and bound in the United Kingdom.

Suggested citation:

Birk HO, Vrangbæk K, Rudkjøbing A, Krasnik A, Eriksen A, Richardson E, Smith Jervelund S. Denmark: Health system review. *Health Systems in Transition*, 2024; 26(1): i–152.

**Print ISSN 1817-6119 Vol. 26 No. 1**

**Web ISSN 1817-6127 Vol. 26 No. 1**

**ISBN 978 92 890 5956 5**

**ISBN 978 92 890 5955 8**

# CONTENTS

Preface	v
Acknowledgements	vii
List of abbreviations	ix
List of tables, figures and boxes	xi
Abstract	xv
Executive summary	xvii
<b>1 Introduction</b>	<b>1</b>
1.1 <i>Geography and sociodemography</i>	2
1.2 <i>Economic context</i>	2
1.3 <i>Political context</i>	5
1.4 <i>Health status</i>	6
<b>2 Organization and governance</b>	<b>10</b>
2.1 <i>Historical background</i>	11
2.2 <i>Organization</i>	12
2.3 <i>Decentralization and centralization</i>	17
2.4 <i>Planning</i>	17
2.5 <i>Intersectorality</i>	19
2.6 <i>Health information systems</i>	19
2.7 <i>Regulation</i>	21
2.8 <i>Person-centred care</i>	27
<b>3 Financing</b>	<b>33</b>
3.1 <i>Health expenditure</i>	34
3.2 <i>Sources of revenue and financial flows</i>	37
3.3 <i>Overview of the statutory financing system</i>	42
3.4 <i>Out-of-pocket payments</i>	50
3.5 <i>Voluntary health insurance</i>	53
3.6 <i>Other financing</i>	55
3.7 <i>Payment mechanisms</i>	56

<b>4</b>	<b>Physical and human resources</b>	<b>62</b>
4.1	<i>Physical resources</i>	63
4.2	<i>Human resources</i>	68
<b>5</b>	<b>Provision of services</b>	<b>76</b>
5.1	<i>Public health</i>	77
5.2	<i>Patient pathways</i>	82
5.3	<i>Primary care</i>	85
5.4	<i>Specialized care</i>	87
5.5	<i>Urgent and emergency care</i>	91
5.6	<i>Pharmaceutical care</i>	92
5.7	<i>Rehabilitation/intermediate care</i>	95
5.8	<i>Long-term care</i>	96
5.9	<i>Services for informal carers</i>	98
5.10	<i>Palliative care</i>	98
5.11	<i>Mental health care</i>	99
5.12	<i>Dental care</i>	101
<b>6</b>	<b>Principal health reforms</b>	<b>103</b>
6.1	<i>Analysis of recent reforms</i>	104
6.2	<i>Future developments</i>	108
<b>7</b>	<b>Assessment of the health system</b>	<b>111</b>
7.1	<i>Health system governance</i>	112
7.2	<i>Accessibility</i>	113
7.3	<i>Financial protection</i>	118
7.4	<i>Health care quality</i>	119
7.5	<i>Health system outcomes</i>	123
7.6	<i>Health system efficiency</i>	128
<b>8</b>	<b>Conclusions</b>	<b>131</b>
<b>9</b>	<b>Appendices</b>	<b>133</b>
9.1	<i>References</i>	133
9.2	<i>Useful websites</i>	147
9.3	<i>HiT methodology and production process</i>	148
9.4	<i>About the authors</i>	150

# PREFACE

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

They are building blocks that can be used to:

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

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

Monetary Fund (IMF), the World Bank's World Development Indicators and any other relevant sources considered useful by the authors. Data collection methods and definitions sometimes vary, but typically are consistent within each separate review.

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

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

HiTs and HiT summaries are available on the Observatory's website ([www.healthobservatory.eu](http://www.healthobservatory.eu)).



# ACKNOWLEDGEMENTS

The Health Systems in Transition (HiT) profile on Denmark was produced by the European Observatory on Health Systems and Policies in collaboration with the University of Copenhagen.

The 2023 edition was written by Hans Okkels Birk (University of Copenhagen), Karsten Vrangbæk (University of Copenhagen), Andreas Rudkjøbing (University of Copenhagen), Allan Krasnik (University of Copenhagen) and Signe Smith Jervelund (University of Copenhagen). It was edited by Astrid Eriksen and Erica Richardson, working with the support of Ewout van Ginneken and Anna Maresso of the European Observatory of Health Systems and Policies. The basis for this edition was the previous HiT on Denmark, which was published in 2012 and written by Maria Olejaz, Annegrete Juul Nielsen, Andreas Rudkjøbing, Hans Okkels Birk, Allan Krasnik and Cristina Hernández-Quevedo.

The authors would like to thank Merete Nordentoft (Danish Psychiatric Association), Nana Folmann Hempler (Steno Diabetes Centre Copenhagen, the Capital Region), Kirsten Vinther-Jensen (Department of Public Health, Aarhus University), Helle Terkildsen Maindal (Department of Public Health, Aarhus University), John Sahl Andersen (Department of Public Health, University of Copenhagen), Thorkil Thorsen (Department of Public Health, University of Copenhagen), Johan Ludwig Reventlow (general practitioner), Thomas Maribo (Department of Public Health, Aarhus University), the Danish Association of the Pharmaceutical Industry, the Danish Organization of General Practitioners and the Danish Regions.

The Observatory, the University of Copenhagen and the authors are grateful to Mickael Bech (Professor, Faculty of Business and Social Sciences, Department of Political Science and Public Management, and Public Administration at the University of Southern Denmark) and Camilla Palmhøj Nielsen (PhD, Associate Professor, Department of Public Health at Aarhus University, and Research Director, DEFACTUM) for reviewing the report.

Thanks are also extended to the World Health Organization (WHO) Regional Office for Europe for their European Health for All database from which data on health services were extracted; to the OECD for the data on health services in western Europe; to the World Bank for the data on health expenditure in central and eastern European countries and to the European Commission for the Eurostat database. The HiT uses data available at end-October 2023, unless otherwise indicated. The HiT reflects the organization of the health system and the data availability, unless otherwise indicated, as it was at end-October 2023.

The Observatory is a partnership that includes the governments of Austria, Belgium, Finland, Ireland, Netherlands (Kingdom of the), Norway, Slovenia, Sweden, Switzerland and the United Kingdom; the Veneto Region of Italy (with Agenas); the French National Union of Health Insurance Funds (UNCAM); WHO; the European Commission; the Health Foundation; the London School of Economics and Political Science (LSE); and the London School of Hygiene & Tropical Medicine (LSHTM). The partnership is hosted by the WHO Regional Office for Europe. The Observatory is composed of a Steering Committee, core management team, research policy group and staff. Its secretariat is based in Brussels and has offices in London at LSE and LSHTM and at the Technical University of Berlin. 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 Lucie Jackson, Andrea Kay (copy-editing) and Prepress Projects (design and layout).

# LIST OF ABBREVIATIONS

<b>BMI</b>	body mass index
<b>COPD</b>	chronic obstructive pulmonary disease
<b>COVID-19</b>	coronavirus disease 2019
<b>CT</b>	computed tomography
<b>DAGS</b>	Dansk Ambulant Grupperingssystem
<b>DANMAP</b>	Danish Programme for Surveillance of Antimicrobial Consumption and Resistance
<b>DDD</b>	defined daily dose
<b>DDKM</b>	Danish Quality Model (Den Danske Kvalitetsmodel)
<b>DRG</b>	diagnosis-related group
<b>EEA</b>	European Economic Area
<b>EU</b>	European Union
<b>EUnetHTA</b>	European Network for Health Technology Assessment
<b>FFS</b>	fee-for-service
<b>GDP</b>	gross domestic product
<b>GP</b>	general practitioner
<b>HTA</b>	Health Technology Assessment
<b>IT</b>	information technology
<b>LUP</b>	National Danish Survey of Patient Experiences (Landsdækkende Undersøgelse af Patientoplevelser)
<b>NATO</b>	North Atlantic Treaty Organization
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>OOP</b>	out-of-pocket
<b>PLO</b>	Organization of General Practitioners (Praktiserende Lægers Organisation)
<b>PPP</b>	purchasing power parity
<b>PREM</b>	patient-reported experience measure
<b>PRO</b>	patient-reported outcome

<b>RLTN</b>	Regions' Board for Wages and Tariffs (Regionernes Lønnings- og Takstsnævn)
<b>SDR</b>	standardized death rate
<b>SSI</b>	National Serum Institute (Statens Serum Institut)
<b>STPS</b>	Danish Patient Safety Authority (Styrelsen for Patientsikkerhed)
<b>UK</b>	United Kingdom
<b>US</b>	United States
<b>VAT</b>	value added tax
<b>VHI</b>	voluntary health insurance
<b>WHO</b>	World Health Organization

# LIST OF TABLES, FIGURES AND BOXES

## ■ Tables

<b>TABLE 1.1</b>	Trends in population/demographic indicators, selected years	3
<b>TABLE 1.2</b>	Macroeconomic indicators, selected years	4
<b>TABLE 1.3</b>	Mortality and health indicators, selected years	6
<b>TABLE 2.1</b>	Overview of the regulation of providers	23
<b>TABLE 2.2</b>	Patient information	28
<b>TABLE 2.3</b>	Patient choice	30
<b>TABLE 2.4</b>	Patient rights	32
<b>TABLE 3.1</b>	Trends in health expenditure in Denmark, 2000–2021, selected years	34
<b>TABLE 3.2</b>	Expenditure on health (as % of current health expenditure) according to function and type of financing, 2021	40
<b>TABLE 3.3</b>	Sociodemographic criteria for allocation of the block grant	48
<b>TABLE 3.4</b>	User charges for health services	51
<b>TABLE 3.5</b>	Cost sharing for medicines prescribed by a GP or a practicing specialist – the patients' share of costs, 2023	52
<b>TABLE 3.6</b>	Coverage schemes within Health Insurance "danmark"	54
<b>TABLE 3.7</b>	Provider payment mechanisms	57
<b>TABLE 6.1</b>	Main reforms and policy initiatives within the Danish health care system since 2007	105

## ■ Figures

<b>FIG. 1.1</b>	Map of Denmark	<u>3</u>
<b>FIG. 1.2</b>	Risk factors affecting health status, 2019	<u>8</u>
<b>FIG. 2.1</b>	Overview of the health system	<u>14</u>
<b>FIG. 3.1</b>	Current health expenditure as a share (%) of GDP in the WHO European Region, 2021	<u>36</u>
<b>FIG. 3.2</b>	Trends in current health expenditure as a share (%) of GDP in Denmark and selected countries, 2000–2021	<u>37</u>
<b>FIG. 3.3</b>	Current health expenditure in US\$ PPP per capita in the WHO European Region, 2021	<u>38</u>
<b>FIG. 3.4</b>	Public expenditure on health as a share (%) of current health expenditure in the WHO European Region, 2021	<u>39</u>
<b>FIG. 3.5</b>	Financial flows in the Danish health system	<u>41</u>
<b>FIG. 4.1</b>	Acute somatic care beds in hospitals per 100 000 population in Denmark and selected countries, 2000–2021	<u>64</u>
<b>FIG. 4.2</b>	Practicing nurses and physicians per 100 000 population, 2020	<u>70</u>
<b>FIG. 4.3</b>	Number of physicians per 100 000 population in Denmark and selected countries, 2000–2020	<u>72</u>
<b>FIG. 4.4</b>	Number of nurses per 100 000 population in Denmark and selected countries, 2000–2020	<u>72</u>
<b>FIG. 5.1</b>	Patient pathways in Denmark	<u>83</u>
<b>FIG. 5.2</b>	Inpatient average length of stay, 2011–2020	<u>89</u>
<b>FIG. 7.1</b>	Experienced waiting times for selected surgeries, 2009–2018	<u>116</u>
<b>FIG. 7.2</b>	Unmet needs for a medical examination (due to cost, waiting time or travel distance), by income quintile, EU/EEA countries, 2022 (or latest available year)	<u>118</u>
<b>FIG. 7.3</b>	Avoidable hospital admission rates for asthma, COPD, congestive heart failure, hypertension and diabetes-related complications, Denmark and selected countries, 2019	<u>120</u>
<b>FIG. 7.4</b>	In-hospital mortality rates (deaths within 30 days of admission) for admissions following acute myocardial infarction, in Denmark and selected countries, 2009 and 2019	<u>122</u>
<b>FIG. 7.5</b>	Cancer survival rates for colon cancer and breast cancer (among women)	<u>123</u>

<b>FIG. 7.6</b>	Preventable and treatable mortality in Denmark and selected countries, 2011–2020	<u>124</u>
<b>FIG. 7.7</b>	Main causes of treatable and preventable mortality in Denmark, 2011 and 2020 (or latest available year)	<u>126</u>
<b>FIG. 7.8</b>	Treatable mortality per 100 000 population versus health expenditure per capita, in Denmark and selected countries, 2011–2020 (or latest available year)	<u>129</u>

## ■ Boxes

<b>BOX 2.1</b>	Is there sufficient capacity for policy development and implementation?	<u>19</u>
<b>BOX 3.1</b>	What are the key gaps in coverage?	<u>44</u>
<b>BOX 3.2</b>	Is health financing fair?	<u>45</u>
<b>BOX 3.3</b>	Are resources put where they are most effective?	<u>49</u>
<b>BOX 4.1</b>	Assessing the geographical distribution of health resources	<u>64</u>
<b>BOX 4.2</b>	Are health workers appropriately distributed?	<u>71</u>
<b>BOX 5.1</b>	Are public health interventions making a difference?	<u>79</u>
<b>BOX 5.2</b>	Key strengths and weaknesses of primary care in Denmark	<u>86</u>
<b>BOX 5.3</b>	Are efforts to improve integration of care working?	<u>90</u>
<b>BOX 5.4</b>	What do patients think of the care they receive?	<u>90</u>
<b>BOX 5.5</b>	Is there waste in pharmaceutical spending?	<u>94</u>





## ABSTRACT

This analysis of the Danish health system reviews recent developments in organization and governance, health financing, health care provision, health reforms and health system performance. Population health in Denmark is good and improving, with life expectancy above the European Union (EU) average but is, however, lagging behind the other Nordic countries. Denmark has a universal and tax-financed health system, providing coverage for a comprehensive package of health services. Notable exclusions to the benefits package include outpatient prescription drugs and adult dental care, which require co-payment and are the main causes of out-of-pocket spending. The hospital sector has been transformed during the past 15 years through a process of consolidating hospitals and the centralization of medical specialties. However, in recent years, there has been a move towards decentralization to increase the volume and quality of care provided outside hospitals in primary and local care settings. The Danish health care system is, to a very high degree, based on digital solutions that health care providers, citizens and institutions all use. Ensuring the availability of health care in all parts of Denmark is increasingly seen as a priority issue.

Ensuring sufficient health workers, especially nurses, poses a significant challenge to the Danish health system's sustainability and resilience. While a comprehensive package of policies has been put in place to increase the number of nurses being trained and retain those already working in the system, such measures need time to work. Addressing staffing shortages requires long-term action. Profound changes in working practices and working environments will be required to ensure the sustainability of the health workforce and, by extension, the health system into the future.



# EXECUTIVE SUMMARY

- **Health status in Denmark is generally characterized as good, but population health status has improved at a slower rate than in other European countries**

In 2022, the average life expectancy at birth in Denmark reached 81.3 years (83.2 years for women and 79.5 years for men), which is one year higher than the European Union (EU) average but lower than in other Nordic countries. The proportion of daily smokers has decreased in the last two decades, partly due to tobacco control policies. However, tobacco use remains higher than in other Nordic countries, and historically high smoking rates mean tobacco continues to impact population health negatively. There is a strong negative association between educational level and daily smoking. The share of daily smokers among people with 10 or less years of education (22%) is significantly higher than among those with higher education (8%). Despite being a high-income country with a relatively even income distribution across the population and a universal health care system, social inequality in health has increased since the 1980s and constitutes a challenge to equity in the health system.

- **The Danish health system is organized into three administrative levels: state, region and municipal**

The system is relatively decentralized, with planning and regulation taking place at three levels: state, region and municipal. The state holds the overall regulatory, supervisory and fiscal functions. The five regions are, among other things, responsible for hospitals as well as for planning and paying for primary care services delivered by self-employed health care professionals.

The association called Danish Regions (Danske Regioner) represents the five regions in negotiations with the state and private providers and plays a critical role in coordinating policy development across the regions. The 98 municipalities are responsible for rehabilitation, home and institutional long-term care, and public health. In negotiations, they are represented by the association called Local Government Denmark (Kommunernes Landsforening). The relationship between the state, region and municipal levels is not hierarchical but collaborative, although the state level has much larger financial and legislative resources than the two decentralized levels. All three levels are governed by citizen-elected democratic assemblies.

### ■ There is a much greater focus on curative care than on health promotion and disease prevention

The responsibility for public health services is also dispersed between different actors. Public health services are partly organized as separate activities run by the municipalities and specific institutions and partially integrated with curative services under the regions. There has been a larger focus on and resource allocation to curative care rather than health promotion and disease prevention. Since 2009, no new overarching national public health programmes have been issued, although many decentralized activities have been launched. Since July 2022, new health clusters facilitate collaboration across hospitals and primary and local care and coordinate disease prevention and health promotion activities. The clusters are embedded in a broader framework for health agreements and collaboration between the regions and municipalities.

### ■ The Danish health system is predominantly tax-funded

Since 2011, health expenditure as a proportion of GDP in Denmark has remained relatively stable. In 2021, Denmark spent 10.8% of its GDP on health, which is more than the average for the EU/EEA/UK (9.6%) and the WHO European Region (8.7%). Publicly sourced health expenditure (85.2% in 2021) makes up the largest share of current health expenditure, higher than in Germany (79.0%), the United Kingdom (83.7%), the average

for the EU/EEA/UK (75.1%), and the average for the WHO European Region (67.7%), but lower than in Norway (85.6%) and Sweden (85.9%).

## ■ Danish residents enjoy universal access to a comprehensive package of health services, and unmet needs for medical care are generally low

The benefits basket is considered generous, but there are some important gaps in coverage: outpatient prescription medicines and adult dental care and glasses are only partially covered through subsidies. In 2021, private out-of-pocket (OOP) spending accounted for 12.4% of current health expenditure. Thus, OOP spending is relatively high, particularly among lower-income groups. OOP expenditure is concentrated on outpatient prescription medicine and dental care, and together these contributed to 44% of total OOP spending in Denmark in 2021. Informal payments are not a feature of the system.

Differences in unmet medical needs between persons in the lowest and highest income quintiles are smaller than the EU average. A total of 7.5% of the population reported unmet needs for dental care in 2022, mainly due to cost. Social inequalities in health by income were larger than in the EU overall.

## ■ Revenues for the health system are mainly collected at the state level and distributed at the regional and municipal levels

Although responsibility for the health system is shared between different levels of government, revenues for the system are predominantly collected at the central state level through general taxation. Health budgets for the regions and municipalities are negotiated and adjusted according to formulae that take demographic and socioeconomic differences into account. A minor part of the regional funding is allocated according to a set of indicators related to national quality goals (a pay-for-performance system known as proximity funding). Regional financing of hospitals is predominantly through global budgets combined with elements of value-based health care using quality indicators. Primary care services are provided by general practitioners (GPs),

who are private providers reimbursed through a mixture of weighted capitation and fee-for-service payments. Specialists working outside hospitals and dentists are reimbursed fee-for-service, and, as with GPs, they contract with the regions to agree on a national schedule of fees for their remuneration. Doctors working in hospitals are salaried and directly employed by the hospitals where they work.

## ■ General practice is central to the Danish health care system functioning cost-effectively

GPs play a key role as the first point of contact for patients, and gatekeeping to more specialized services is important. Primary care in Denmark has good geographical coverage and accessibility, very high patient satisfaction and good continuity of care. Weaknesses seem to be: maintaining coverage in remote rural and disadvantaged urban areas, increasing demands and pressure on primary care without increased capacity, limitations in integration and coordination, and quality assurance.

All primary care doctors use electronic medical records because, since 2004, primary care doctors have been mandated to use computers and a system for electronic medical records and communication. Virtually all clinical communication between primary and secondary care is exchanged electronically through a messaging system. Since March 2020 and the start of the COVID-19 pandemic, the use of video consultations improved access to general practice, and from 1 January 2022, video consultation has been a permanent consultation option.

## ■ Each region employs local groups of pharmacists and GPs to monitor prescription patterns and advise GPs on rational prescribing

Generic products make up a significant proportion of the Danish usage of prescribed pharmaceuticals. Price competition for generics manufacturers encourages them to seek to be cheapest at a tender every 14 days. As pharmacies must offer customers the cheapest variant of a drug, the cheapest supplier secures almost the entire market for 14 days. This system creates

fierce competition and some of Europe's lowest prices for generics, which make up two thirds of medicines dispensed.

The regions, which own the hospital pharmacies, have established AMGROS, a wholesaler that invites tenders for pharmaceutical contracts. Most hospital pharmacies buy medicines through AMGROS to benefit from lower prices based on large, joint contracts. The regions have also established the Medicines Council for the assessment of new pharmaceutical products and input to price negotiations.

- **A key focus for the regions has been to find the optimal balance between centralization and decentralization in the provision of services**

Following the major structural reform in 2007, which changed the administrative landscape of the public sector, an ongoing centralization and modernization of the hospital structure has occurred through a major hospital reform. Several smaller hospitals were closed or converted into other types of health care facilities, and the number of acute hospitals has been reduced from 40 in 2006 to 21 in 2022. Alongside this process, a long-term major investment programme in new hospitals and improvements to existing ones continuously transform the sector. Hospital building projects in all regions, including six new “super-hospitals” have received funding through a quality fund of DKK 25 billion (€3.4 billion). The first five new regional “super-hospitals” were opened in 2021, and as of the time of writing, the last building project is due to open in 2025.

- **Hospital reforms have made it necessary to increase local and primary care capacity to prevent unnecessary admissions and take care of patients discharged earlier**

The municipalities have developed more structured approaches to rehabilitation and home care, and local and primary care services have tried to adhere to new guidelines. Municipalities have also introduced different facilities to provide care before potential admissions and after discharge. Some of these municipal acute beds are co-located with nursing homes. Others are placed

in community health houses or health centres focusing on patients with chronic care needs and older patients. Many community health care facilities provide co-location with GPs, private practicing specialists and other private health professionals such as physiotherapists, podiatrists, etc. In the spring of 2022, the then government and selected opposition parties agreed on a new health reform package. One part of the package was establishing health clusters around the 21 acute hospitals with representatives from the regions, municipalities and general practice. The clusters facilitate collaboration across hospitals and primary and local care. The clusters supplement the broader framework for collaborative governance and health agreements between regions and municipalities, which has been in place since 2007.

■ **Hospital capacity and average length of stay have decreased since the 1990s through changes in treatment protocols and an increase in outpatient treatments**

The number of hospital beds per 100 000 inhabitants in Denmark has declined dramatically since the 1990s. The same trend is true for the number of beds in acute care hospitals, reflecting a trend in almost all western European countries. In 2021, there were 190 acute somatic care beds in hospitals per 100 000 population, which was lower than in Germany (495 in 2020) and Norway (202 in 2020) but higher than in Sweden (150 in 2020). The relative reduction in the number of beds is most significant in psychiatry, largely because of the policy of de-institutionalization, whereby beds in long-stay psychiatric hospitals are gradually being replaced by community mental health services where patients are not living in institutions. The average length of stay in hospitals has decreased substantially since the 1990s and is currently 5.4 days (2020). This steady decline has occurred as treatments have become more effective and more nursing care has shifted to the municipalities. A waiting time guarantee for diagnosis (30 days) and treatment (additional 30 days) combined with extended free choice of private providers if the guarantee cannot be met has also put pressure on the regions to optimize patient flows during admission.



- **Denmark has a general shortage of health professionals, particularly among nurses and nurse assistants (social and health care assistants)**

The number of doctors per 100 000 population has followed an upward trend. It is lower than in other Nordic countries but higher than the EU average. By contrast, while the number of nurses per 100 000 population has also been above the EU average, it has not increased at the same rate. There are doctor shortages within some medical specialties, such as psychiatry, radiology and general practice, especially outside the larger cities. It is estimated that 1.8 million Danes live in so-called underserved areas in terms of GPs. The current staffing challenges for nurses are found mainly in anaesthesia departments, intensive care units, internal medicine units and operating rooms, where all regions have vacant positions. However, depending on the situation, department and region, the challenges look different and have different degrees of severity. The government seeks to address this through a combination of short-term investments to reduce waiting times and mid to long-term solutions to staff shortages.

- **A health reform package aims to strengthen local capacity to provide chronic care and address shortages in nursing staff and GPs in certain areas**

As part of the reform package from the spring of 2022, it was also agreed to allocate DKK 4 billion (€536.4 million) to establish up to 25 “local hospitals” throughout the country, aiming to further strengthen local capacity to provide chronic care. A significant proportion of the money must be invested in digital health solutions. Additional investments of DKK 1.4 billion (€187.7 million) in 2023, followed by DKK 384 million (€51.5 million) annually, have been earmarked for the development of municipal health care over the coming years. This is followed by an agreement to develop quality targets and indicators at the municipal level. Another focus point in the reform package is to address the shortages in nursing staff and GPs in some areas. The volume of GP training positions was increased, and a Resilience Commission was established to address other staffing shortages. However, establishing the 25 “local hospitals” could also exacerbate shortages of health care staff at

existing hospitals. The whole reform package can be seen as the latest in a long line of initiatives aimed at solving the difficult issues of integration across care levels and preparing for the higher volume of older and chronic care patients. While the intentions of the package are clear, it is unclear whether they will be sufficient. The implementation of the plan has also been delayed in anticipation of a new major reform proposal announced by the current government when it came into office in December 2022.

## ■ A 10-year plan for mental health is highly anticipated

Mental health care has suffered from lack of prioritization in the past few decades. In early 2022, the Danish Health Authority published a technical report in collaboration with the National Board of Social Services. The report outlines the main challenges in delivering care to people with mental health problems and gives 37 recommendations for improving mental health care over the next 10 years. In December 2022, investments in psychiatry over the next 10 years were prioritized so that the plan is now funded with DKK 4 billion (€536.4 million) annually.

## ■ There are major reforms on the policy agenda which could radically reorganize the health care system

The coalition government that took office in December 2022 believes there is a need to further improve the interaction between specialized health care in hospitals and local health care in the municipalities and general practices. Therefore, in their coalition agreement from December 2022, the parties decided to set up a new structural commission. The Commission's task is to draw up a basis for decision-making that sets out and illustrates models for the future organization of the health care system. In their work, the Commission is to look at geography, organization, financial management, quality standards, patients' rights and patient choice in designing new models. The Commission's work started in April 2023, and the handover of the first report is expected in the spring of 2024. At the same time, the government is planning on initiating a broad public debate involving employees, patients, relatives, experts and other stakeholders in the health care system.

## ■ It is unclear whether increased waiting times for elective surgery is a passing issue or the beginning of a chronic problem

Average waiting times for elective surgeries in Denmark decreased between 2005 and 2019 but have since been increasing. During the COVID-19 pandemic, and accelerated by the nurses' strike in the summer of 2021, the number of patients waiting for treatment has increased. This is partly due to the backlog of elective care patients not treated when hospitals had to cope with acute COVID-19 cases. However, internal medicine wards have faced challenges when increasing capacity for several years to meet the ever-increasing demand for services as new treatments have been developed and the population has aged. Furthermore, the regions have struggled to recruit sufficient health care staff, particularly nurses. In 2022, around 4700 nursing positions were unfilled, and staff shortages resulted in cancelled surgeries and further prolonged waiting times. If capacity cannot be increased, patient rights regarding waiting time guarantees etc. may need to be revised.

## ■ Reducing preventable hospitalizations and readmissions is a national policy goal

The collection of administrative and clinical data to inform policy-making is extensive, and performance indicators are continuously monitored at all levels of the system. Local and regional variations are viewed as an indication of problematic quality, service delivery or effectiveness. Quality indicators are measured and published yearly as part of the National Quality Programme. The regions receive special payments (proximity financing) if they reduce the number of hospitalizations per citizen and the proportion of hospitalizations that lead to acute readmission. The effectiveness of specialist care in Denmark is high and has among the best outcomes in Europe in terms of mortality from acute myocardial infarction within 30 days of hospitalization. The marked improvement in this indicator over the past decade is the result of investments in acute care in general and direct policy efforts to reduce mortality rates from heart disease. Hospital admission rates remain high for some chronic conditions, particularly asthma and chronic obstructive pulmonary disease, indicating possible inefficiencies and weaknesses in primary care.

- **Cancer survival rates in Denmark have improved markedly since the 2000s after they became the focus of policy efforts to improve cancer care**

Alongside introducing new treatment options, cancer plans strengthened the national screening programmes for colorectal and breast cancer and streamlined access to diagnosis and treatment through fast-track cancer patient pathways. However, this improvement in cancer outcomes is from a relatively low baseline, and in the Danish national cancer plan IV from 2016, one ambitious goal is to ensure cancer survival rates are on a par with the best performing Nordic countries by 2025. By the end of 2024, the Danish Health Authority will present their work on the content for a national cancer plan V. Cancer plan V will focus on early detection and diagnostics, the time after cancer treatment in the form of late effects, rehabilitation and pain relief, as well as on inequalities.

- **Although the health system is effective at providing good quality care, the emphasis is on treatment rather than prevention**

The focus on treatment rather than prevention reduces the overall allocative efficiency of the system because it is more efficient to prevent disease through public health than it is to treat diseases once they have developed. Treatable mortality rates in Denmark are among the best in Europe, while preventable mortality rates are closer to average. There are countries, such as Finland, that spend considerably less money on health but are more successful at preventing early deaths among their population, compared with Denmark.

- **The Danish health system demonstrated its resilience in coping with the COVID-19 pandemic, but this shock also highlighted pre-existing weaknesses in the system**

The future sustainability of the health system relies on the health workforce supply problems being solved. Primary care services are the foundation of the health system. They are prioritized as gatekeepers to more specialized services, but this relies on easy access to a GP, and this is a problem in underserved

areas. Similarly, longer waiting times could become endemic in the system if capacity cannot be expanded to meet increasing health needs. A stronger focus on prevention through concerted public health efforts to address the commercial determinants of health could also be part of the solution.



# Introduction

## ■ Summary

- Denmark is a comparatively small, urbanized, high-income country with a high population density and a demographic profile similar to other western European countries. The age dependency ratio in Denmark has been increasing due to an increasing share of older people in the population.
- Denmark is a stable parliamentary democracy divided into three administrative levels: the state, the regions and the municipalities. The regions and the municipalities have separate areas of responsibility, and their relationship is not hierarchical.
- In 2022, the average life expectancy at birth in Denmark reached 81.3 years (83.2 years for women and 79.5 years for men). Since 1995, average life expectancy has increased significantly and at a pace similar to many western European countries. However, life expectancy in Denmark lags behind other Nordic countries.
- Mortality reductions from some of the most frequent causes have driven the steady increase in life expectancy since 2000. In 2020, the leading causes of death in Denmark were cancer (29%), heart disease (14%) and respiratory diseases (10%).
- The key public health challenges are similar to those across northern Europe. Over recent years, the proportion of people who are

overweight or obese has increased, and alcohol consumption and overall consumption patterns remain an issue. In addition, socioeconomic inequalities in health have increased and constitute another challenge.

- The proportion of daily smokers has decreased in the past two decades, partly due to tobacco control policies. Still, tobacco use remains higher than in other Nordic countries, and historically high smoking rates mean that tobacco continues to impact population health negatively.

## ■ 1.1 Geography and sociodemography

Denmark is a comparatively small and flat Nordic country in northern Europe with a vast coastline. It borders Germany to the south and connects to Sweden to the east by bridge and tunnel. Denmark consists of a mainland peninsula and 407 islands (of which 72 are inhabited) of different sizes, some of them connected by bridges, ferries and/or air (Fig. 1.1). Denmark also encompasses two autonomous constituent countries in the Atlantic, Greenland and the Faroe Islands, granted home rule in 1979 and 1948, respectively. This report does not cover these offshore territories, which have their own and, in some respects, quite different health systems and challenges.

The climate in Denmark is temperate/maritime with mild, damp winters, relatively cool, unsettled summers and precipitation throughout the year. Sixty-six per cent of the country's area is agricultural land, while forests cover 12% of the country.

Denmark has a small population but a high population density compared with its neighbours. Most people in Denmark live in urban areas. Demographic trends are similar to other western European countries (Table 1.1), with an increasing proportion of older people, a shrinking working-age population, a low birth rate and population growth driven by migration.

## ■ 1.2 Economic context

Denmark is a high-income economy with a relatively even income distribution across the population, although socioeconomic inequality has grown



**FIG. 1.1** Map of Denmark

*Notes:* The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

*Source:* WHO GIS Centre for Health, Division of Data Analytics and Delivery for Impact.

**TABLE 1.1** Trends in population/demographic indicators, selected years

	1995	2000	2005	2010	2015	2020	2022
<b>Population, total</b>	5.2	5.3	5.4	5.5	5.7	5.8	5.9
<b>Population ages 0–14, total</b>	0.9	1.0	1.0	1.0	1.0	0.9	0.9
<b>Population ages 65 and above (% of total population)</b>	15.2	14.8	15.1	16.6	18.7	20.0	20.5
<b>Population density (people per sq. km of land area)</b>	130.8	133.5	135.5	138.7	142.1	145.8	–
<b>Population growth (annual %)</b>	0.5	0.3	0.3	0.4	0.7	0.3	0.8
<b>Fertility rate, total (births per woman)</b>	1.8	1.8	1.8	1.9	1.7	1.7	–
<b>Urban population (% of total population)</b>	85.0	85.1	85.9	86.8	87.5	88.1	88.4

*Source:* World Bank, 2023.

over the past two decades (see Table 1.2). Until the 1950s, agriculture provided the biggest share of exports and national income. Since then, industry and services have come to dominate, with the latter growing more rapidly.

Unemployment decreased from the mid-1990s but rose temporarily after the global financial crisis in 2008. The government introduced major stabilization packages during the COVID-19 pandemic, and the pandemic did not trigger major reductions in employment. Although the economy shrank and gross domestic product (GDP) growth was  $-2.0\%$  in 2020, the economy rebounded in 2022. The unemployment rate varies considerably across different geographical areas, with some areas experiencing an unemployment rate significantly higher than average. Furthermore, in areas with a relatively large share of industry, such as Western Jutland, the unemployment rate is much more sensitive to economic shocks than in areas with an economy based on services, for example, in the Capital Area.

**TABLE 1.2** Macroeconomic indicators, selected years

	1995	2000	2005	2010	2015	2019	2020	2022
<b>GDP per capita (current US\$)</b>	35 352	30 743	48 800	58 041	53 255	59 593	60 915	66 983
<b>GDP per capita, PPP (current international \$)</b>	22 697	28 664	34 150	43 001	49 045	59 911	60 832	74 005
<b>GDP growth (annual %)</b>	3.0	3.7	2.3	1.9	2.3	1.5	-2.0	3.8
<b>General government final consumption expenditure (% of GDP)</b>	24.1	23.9	24.5	27.4	25.5	24.1	24.8	22.0
<b>Unemployment, total (% of total labour force) (national estimate)</b>	7.0	4.5	4.8	7.8	6.3	5.0	5.6	4.4
<b>Multidimensional poverty headcount ratio (% of total population)</b>	—	—	—	18.3	17.7	16.5	15.9	—
<b>Gini index</b>	23.0	23.8	25.2	27.2	28.2	27.7	27.5	—

GDP: gross domestic product; PPP: purchasing power parity.

Source: World Bank, 2023.

## ■ 1.3 Political context

Denmark is a constitutional monarchy and a parliamentary democracy. The parliament has 179 members, of whom 175 are elected in Denmark, two are elected in the Faroe Islands, and two are elected in Greenland. General elections are held at least every 4 years. The seats in the parliament are distributed by proportional representation. To be elected, parties must exceed the 2% share of the vote threshold. At the time of writing, 16 political parties are represented in parliament.

There is a long tradition in Denmark for centre-right or centre-left minority governments. However, the current government at the time of writing in 2023, which has been in power since December 2022, is an attempt to bridge the left–right divide. Therefore, Denmark has a cross-party government for the first time since 1978, and a majority government for the first time since 1994, consisting of the Social Democrats, the Liberals and the Moderates.

The state is the central administrative level, and the Ministry of the Interior and Health is responsible for the health system. The Danish Ministry of Health (*Sundhedsministeriet*) was established in 1987. The name has changed several times as the ministry was merged with or separated from other ministries. Therefore, the generic name Ministry of Health is used in this review, although corresponding references use period-specific names.

Five geographical and administrative regions were established with a structural reform in 2007, these are responsible for providing health care, which is allocated approximately 95% of the regions' budget. The 98 municipalities are responsible for social services, care for older people, environment and technology, schools and some aspects of primary and long-term health care. The regions and the municipalities have separate areas of responsibility, and their relationship is not hierarchical. The regions do not have any governing or regulatory role concerning the municipalities.

Denmark has been a member of the European Union (EU) since 1973. It is also a member of the United Nations, the World Health Organization (WHO) and other United Nations organizations, the World Trade Organization, the Organisation for Economic Co-operation and Development (OECD), the North Atlantic Treaty Organization (NATO), the Council of Europe and the Nordic Council.

# 1.4 Health status

From an international perspective, health status in Denmark can generally be characterized as good in terms of morbidity and mortality indicators. However, population health status has improved at a slower rate than in other European countries. In 2022, average life expectancy at birth in Denmark reached 81.3 years (83.2 years for women and 79.5 years for men), which is one year higher than the EU average (83.4 years) but lower than in other Nordic countries (Eurostat, 2023a).

Since 1995, average life expectancy in Denmark increased significantly and at a pace similar to many other western European countries; the steady increase in life expectancy in Denmark since 2000 has been driven by mortality reductions from some of the most frequent causes of death (Table 1.3).

**TABLE 1.3** Mortality and health indicators, selected years

	1995	2000	2005	2010	2015	2018	2022
<b>Life expectancy (years)</b>							
<b>Life expectancy at birth, total</b>	75.3	76.9	78.3	79.3	80.8	81.0	81.3
<b>Life expectancy at birth, male</b>	72.7	74.5	76.0	77.3	78.8	79.1	79.5
<b>Life expectancy at birth, female</b>	77.9	79.2	80.5	81.4	82.7	82.9	83.2
<b>Life expectancy at 65 years, male</b>	14.1	15.2	16.1	17.0	18.0	18.0	18.2
<b>Life expectancy at 65 years, female</b>	17.6	18.3	19.1	19.7	20.7	20.7	20.7
<b>Mortality</b>							
<b>MORTALITY, SDR PER 100 000 POPULATION</b>							
<b>Circulatory diseases</b>	316	248	203	155	124	113	–
<b>Malignant neoplasms</b>	234	222	207	191	172	159	–
<b>Communicable diseases</b>	9.9	5.1	8.9	10.3	9.2	10.1	–
<b>External causes of death</b>	56	49	38	30	26	26	–
<b>All causes</b>	863	752	684	629	551	542	–

SDR: standardized death rate.

Source: Eurostat, 2023a (life expectancy); WHO Regional Office for Europe, 2022 (mortality).

The three most common causes of death in 2020 were cancer (29%), heart disease (14%) and respiratory diseases (10%). Mortality differs by gender: more men than women die from cancer and heart disease, while more women than men die from respiratory diseases, other circulatory diseases and dementia. The higher female mortality from dementia may reflect women's longer average lifespan (Sundhedsdatastyrelsen, 2022a).

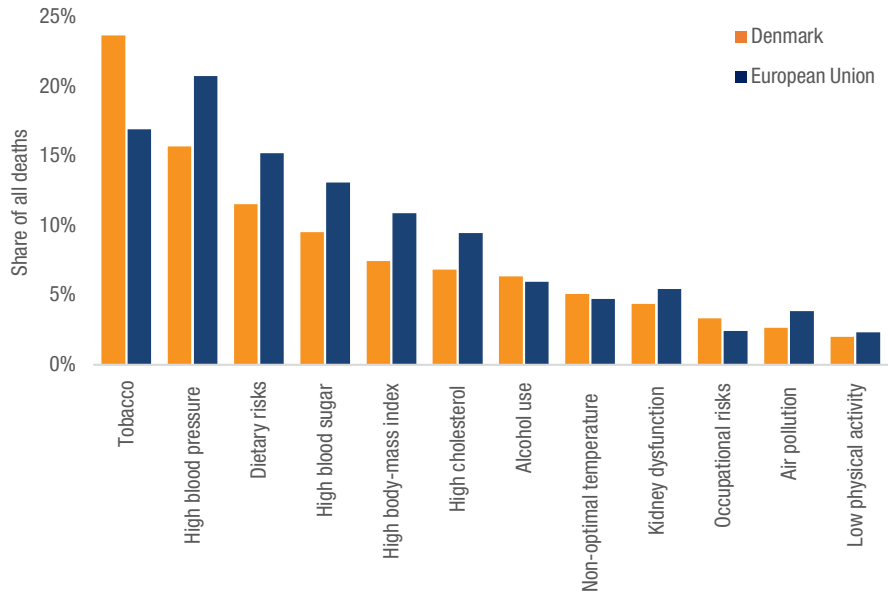
In 2019, lung cancer was the most common cause of cancer death for men (54.4 deaths per 100 000 population) and women (47.4 deaths per 100 000 population). For women, breast cancer (29.1 deaths per 100 000 population) and colon cancer (16.9 deaths per 100 000 population) accounted for the second and third most common cancer deaths. Prostate cancer (44.2 deaths per 100 000 population) and colon cancer (21.3 deaths per 100 000 population) accounted for the second and third most common cancer deaths for men. In addition, in 2019, more than half of deaths due to respiratory disease were attributed to chronic obstructive pulmonary disease (COPD) (56.1 deaths per 100 000 men and 46.6 deaths per 100 000 women).

Despite relatively low economic inequality and a universal health care system, social inequality in health has increased since the 1980s. In 2016, the average length of life for men in the highest income group was 83.3 years, while it was 73.8 years for men in the lowest income group – a difference of 9.5 years; for women, the difference was 5.5 years (Sundhedsstyrelsen, 2019a).

A comparative study of refugees in Denmark, Norway and Sweden found that refugee men in Denmark have higher risks for mortality, disability pension, psychiatric care and substance abuse than most native-born Danish men. In addition, these differences are higher than comparable estimates observed between refugee men and native-born men in Norway and Sweden. However, except for increased risk for psychotic disorders, outcomes among refugee women were similar to or better than those of native-born women in all countries (Dunlavy et al., 2023).

Most risk factors affecting population health status in Denmark are similar to the EU average. However, the impact of tobacco use on cause of death stands out as much higher (Fig. 1.2). In Denmark, every year there are 13 600 more deaths among smokers and former smokers than among never-smokers. In addition, every year, 58 000 years of life are lost in men and 38 000 in women due to smoking. Smoking reduces average life expectancy by 3 years and 6 months in men, and by 3 years and 1 month in women (Eriksen et al., 2016).

**FIG. 1.2** Risk factors affecting health status, 2019



Source: IHME, 2021.

The impact of tobacco use is, however, a legacy effect. The proportion of Danish adults who smoke tobacco daily has fallen considerably in recent decades – from around 30% in 2000 to 13% in 2022. The share is higher among men (15%) than women (11%) (Sundhedsstyrelsen, 2023a). As a result, Denmark is now among the EU countries with the lowest smoking rates. The share of daily smokers was the highest in the age group 30–59 years (15%). Furthermore, there is a strong negative association between educational level and daily smoking. The share of daily smokers among people with 10 years of education or less (22%) is significantly higher than among those with a higher education level (8%) (Sundhedsstyrelsen, 2023a). However, daily smoking rates decreased by 7 percentage points between 2010 and 2021, with rates reducing especially among the youngest age group. Smoking rates among adolescents are also now lower in Denmark than in most other EU countries while remaining high compared with other Nordic nations. The reduction in smoking rates is partly due to increased tobacco prices and a ban on smoking in public spaces, including in primary and high schools as well as vocational schools. However, the use of nicotine products is on the rise, especially among young people, and 11.4% of 15–29-year-olds use these products (Sundhedsstyrelsen, 2023b).

Alcohol consumption in Denmark is higher than the EU average. A large proportion of the Danish population drinks alcohol regularly, and weekly alcohol consumption is higher in men than women. Data on sales indicate that average alcohol consumption increased rapidly through the 1960s. However, from the middle of the 1970s, the increase slowed and since then, average alcohol consumption has stabilized.

In 2021, 15.7% of the adult population consumed more than the recommended limit of 10 units of alcohol in an ordinary week. Across age groups, the share is markedly higher among men (23.0%) than women (8.8%), with the highest share (32.5%) in men aged 65–74 years. However, trends in alcohol consumption are going down and from 2010 to 2021, the share of adults who drink more than 10 units of alcohol in an ordinary week decreased by 8.9 percentage points. In addition, consumption decreased in both men and women and across age groups, but the decrease was highest in men in the youngest age groups: 16–24 years (23.5 percentage points) and 25–34 years (15.9 percentage points).

Overall, 9.1% of people report drinking five or more units of alcohol in a short space of time (binge drinking) at least once a week. The share was markedly higher in men (13.4%) than in women (5.0%), with the highest share in the youngest age group for both men and women. Although binge drinking rates have fallen between 2013 and 2021 (by 3.3% across age groups and sexes), it remains a huge public health issue (Jensen et al., 2022).

While the impact of low physical activity on population health in Denmark is below the EU average, most of the Danish population (58.1%) does not meet the WHO minimum recommendations for physical activity. Overall, 19.0% of the population describe their spare time activities as mainly passive, and the share increased by 3.1 percentage points between 2010 and 2021.

In 2021, the National Health Profile study found that 52.6% of the adult population was overweight (body mass index (BMI) >25) and 18.5% were obese (BMI >30). As elsewhere in Europe, over the past decade, rates of obesity and overweight have been consistently increasing, particularly for men. Obesity rates also vary by socioeconomic status: for example, among people with 10 years of education or less, 27.2% were categorized as obese, compared with 9.8% among people with higher education, while 33.7% of people who retired early were obese (Jensen et al., 2022).

# 2

## Organization and governance

### ■ Summary

- The Danish health system is organized into three administrative levels: the state, the regions and the municipalities. The system is relatively decentralized and planning and regulation take place at all three levels.
- The state holds the overall regulatory, supervisory and fiscal functions. It is also in charge of many strategic, coordinative and soft regulatory functions such as quality monitoring, planning of medical education and planning the distribution of medical specialties at the hospital level.
- The five regions are, among other things, responsible for hospitals as well as for planning and paying for primary care services delivered by self-employed health care professionals.
- The municipalities are responsible for rehabilitation, home and institutional long-term care, dental care for children, adolescents and especially vulnerable groups, and public health.
- Health care regulation takes place through national and regional guidelines, licensing systems for health professionals, state–regional–local agreements and national quality monitoring



systems. Access to a wide range of health services is largely free of charge for all residents.

- Patient choice of public provider upon referral is a key feature of the system. This choice is extended to private hospitals if the public hospital cannot provide diagnosis and treatment within waiting time guarantees. Patient choice is facilitated by online platforms that provide information and guidance on hospital choice and the waiting times for different providers.

## ■ 2.1 Historical background

Denmark has a long tradition of public welfare (Vallgård, 1989; 1999a; 1999b) and decentralized management of welfare tasks. The first hospitals were built by individual counties and towns. Initially, hospitals were intended for and used by the poor, but this gradually changed at the end of the 19th century. From the 1930s onwards, the state started subsidizing hospitals, but county councils were responsible for them.

Although health insurance developed during the second half of the 19th century as mutual assistance funds for artisans and through philanthropy, from 1973 onwards, health care has been predominantly financed from general taxation. A 1970 reform of the political and administrative structure reduced the number of counties and municipalities in Denmark (see Section 2.3). It also placed the responsibility for the largest part of the health care sector on the counties. Previously, this responsibility was divided between the municipalities, counties, the central state and the health insurance schemes. In 2007, a structural reform (*Strukturreformen*) was implemented, further reducing the number of municipalities to 98 and establishing five regions, replacing the counties, responsible for providing hospital and outpatient care as well as contracting with general practitioners (GPs) and practicing specialists. The municipalities received more responsibility for rehabilitation, disease prevention, health promotion and the care and treatment of disabled people and people who misuse drugs or alcohol.

Controlling public spending on health care has been an important political aim since the 1980s. Many economic steering mechanisms have been applied to this end. However, the main instrument continues to be a tight control of budget adherence and a combination of global budgeting

and some performance-based funding (see Chapter 3). In 1993, free choice of hospital was introduced, and in 1998, it was decided that hospitals should be reimbursed according to diagnosis-related groups (DRGs) for patients living in other counties. Waiting times have been a major political issue since the mid-1990s. Overall, a change in the role of hospitals towards providing more diagnosis and treatment and less care is reflected in trends such as a decrease in the number of hospitals, hospital beds and the length of stay; an increase in the number of doctors and nurses; a slight increase in admissions; and a steep increase in outpatient visits, both to hospital outpatient departments and GPs. For more information on the evolution of the Danish health system, see Olejaz et al. (2012).

## ■ 2.2 Organization

The defining feature of the Danish health system is its decentralized responsibility for primary and secondary health care. However, important negotiation and coordination channels exist between the state, regions and municipalities. The political focus on controlling health care costs has encouraged a trend towards more formal cooperation and a stronger influence of the central authorities.

### ■ 2.2.1 *State level*

The Danish Health Act (from 2005) lays down requirements for health care to ensure respect for the individual, individual integrity and self-determination, and to meet the need for:

- easy and equitable access to health care;
- high-quality care;
- coherence of services;
- freedom of choice;
- easy access to information;
- transparency of health care; and
- short waiting times for treatment (Retsinformation, 2023).

These principles guide the governance of the sector. Responsibility for preparing legislation and providing overall guidelines for the health sector lies with the Ministry of Health. Each year, the Ministry of Health, the Ministry of Finance and the regional and municipal councils – represented by Danish Regions (*Danske Regioner*) and Local Government Denmark (*Kommunernes Landsforening*) – take part in a national budget negotiation to set targets for health care expenditure. The targets are subsequently confirmed in the national budget law. The regions and municipalities are subject to automatic collective and individual sanctions if they exceed their budgets.

### **DANISH HEALTH AUTHORITY**

The Danish Health Authority (*Sundhedsstyrelsen*), a central body established in 1909 and now connected to the Ministry of Health, is responsible for advising different ministries, regions and municipalities on health issues and prevention (Fig. 2.1). Furthermore, the Danish Health Authority is responsible for defining and planning specialized hospital services (see Section 5.4.3), for the overall health emergency response in Denmark as well as for establishing rules for the training of specialist doctors and other health personnel.

### **DANISH MEDICINES AGENCY**

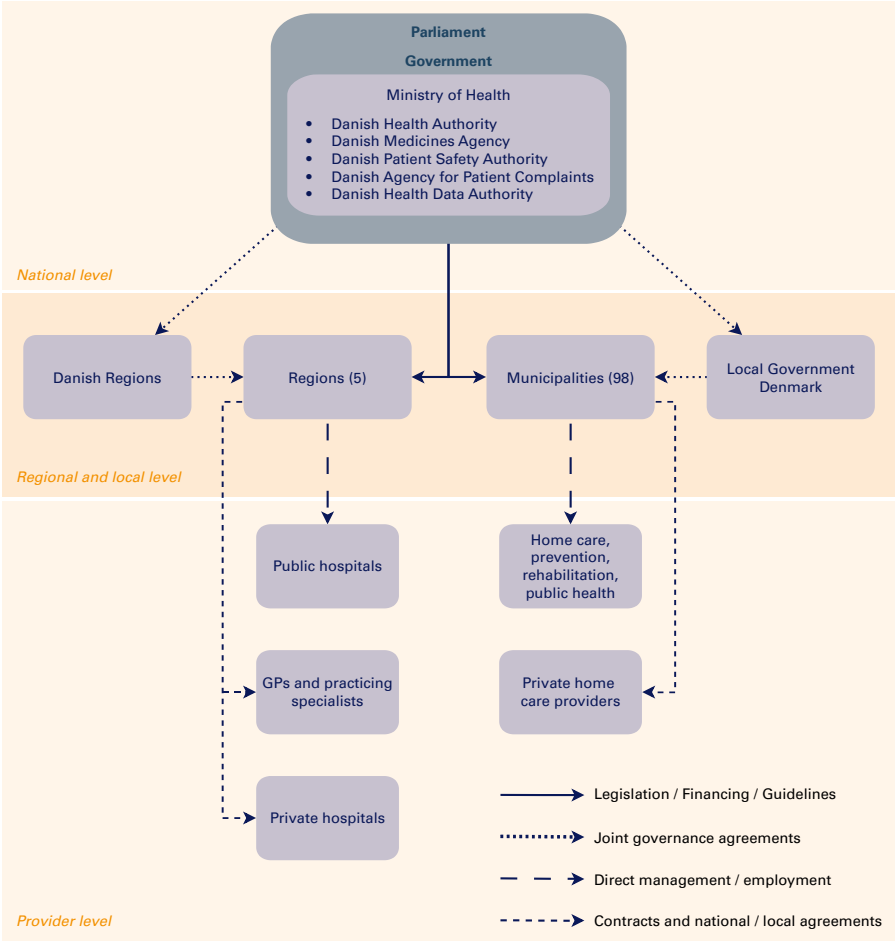
Under the Ministry of Health, the Danish Medicines Agency (*Lægemiddelstyrelsen*) approves new medicines and provides information about existing medicines, subsidies, legal imports and medicine prices. Furthermore, it warns consumers about dangerous drugs and monitors clinical trials, sales and the distribution of medicines in Denmark (see Section 2.7.4).

### **DANISH PATIENT SAFETY AUTHORITY**

The Danish Patient Safety Authority (*Styrelsen for Patientsikkerhed*) is responsible for the supervision of health professionals and organizations. It conducts periodic inspection visits in health care organizations, emphasizing patient

experiences and coordination. The Danish Patient Safety Authority may revoke practice licenses for individual health care professionals and issue injunctions or restrictions to health care institutions.

FIG. 2.1 Overview of the health system



Source: Authors.

DANISH PATIENT COMPLAINTS AGENCY

The Danish Patient Complaints Agency (*Styrelsen for Patientklager*) is responsible for handling complaints from patients about the health care they have received or possible violations of patient rights (see Table 2.4).

## DANISH HEALTH DATA AUTHORITY

The Danish Health Data Authority (*Sundhedsdatastyrelsen*) is responsible for running several databases and registers (see Section 2.6). The Authority is responsible for providing coherent health data and digital solutions that benefit patients and practitioners as well as research and administrative support in the health care sector.

### ■ 2.2.2 Regional level

The five regions own and run hospitals, including psychiatric health care services. Furthermore, they finance GPs, specialists, physiotherapists, dentists and pharmaceuticals. Danish Regions is the interest organization for the five regions in Denmark.

### ■ 2.2.3 Municipal level

The 98 municipalities are responsible for providing services such as nursing homes (residential long-term care), home nurses, health visitors, community psychiatric services (except for some community psychiatric institutions, which are still managed by the regions but financed by the municipalities (see Section 5.11)), school health care, dental care for children and adolescents and especially vulnerable groups, prevention and health promotion, institutions for people with disabilities, and treatment of drug and alcohol-related problems. Local Government Denmark is the interest organization of the municipalities in Denmark.

## PRIVATE SECTOR

The oldest established part of the health system in the private sector includes pharmacies and the GPs. Other health professionals who are self-employed private contractors include some specialist doctors, physiotherapists, psychologists, chiropractors and others (see Chapter 4). Most private hospitals

are for-profit. The private hospitals enter agreements with the regions to serve as buffer capacity for the waiting time guarantee. They also treat patients paying out-of-pocket (OOP) or covered by voluntary health insurance (VHI). Activity at private hospitals was about 1.25% of total public hospital activity in 2017 (Holstein, 2019). Usually, the private hospitals handled 5% of all elective surgeries. However, in 2022, this increased to 10% (Indenrigs- og Sundhedsministeriet, 2023), mainly as a result of the COVID-19 pandemic and the nurses' strike.

## PROFESSIONAL ASSOCIATIONS

The Danish Medical Association (*Lægeforeningen*) was founded in 1857 and is the professional association for doctors in Denmark, and nearly all Danish doctors are members. It is an important contributor to policy committees and public policy hearings. The Danish Nurses Organization (*Dansk Sygeplejeråd*) was founded in 1899, and nurses have often also been represented in policy committees. Nurses and other professionals allied to medicine have organized themselves effectively since the mid-1990s to influence the political agenda.

## PATIENT ASSOCIATIONS

Denmark has between 200 and 300 active patient associations depending on how they are defined. Most groups are specific to diseases or health problems such as heart disease, cancer, arthritis, diabetes or multiple sclerosis. Some groups are active in trying to influence public debate and act as the patients' voices in the media. The largest, best-known and most well-funded groups also have a strong track record of involvement in health policy. These groups are backed by large membership numbers and operating budgets, which enable them to maintain professional staff. Patient organizations are generally invited to participate in parliamentary hearings relevant to their causes and concerns. Danish Patients (*Danske Patienter*) is an umbrella organization for 15 patient associations in Denmark, of which some are also umbrella organizations, so a total of 77 patient organizations representing 830 000 members are included.

## ■ 2.3 Decentralization and centralization

There is a long tradition of decentralized administration in the health sector (see Section 2.1). The 1970 reform of the public administrative structure, which reduced the number of counties from 24 to 14 and the number of municipalities from over 1300 to 275, led to both centralization of administrative entities and decentralization of responsibilities. While the reform transferred many state tasks to the counties, responsibility for the hospitals moved from local hospital boards to county councils. The 2007 structural reform further concentrated the municipalities (now 98) and combined the counties into five regions. The primary responsibility of the regions in the health sector is specialized health care. They cannot levy taxes and are funded by state grants and municipal co-payments for hospitalization (see Section 3.3.3).

## ■ 2.4 Planning

Planning is an integral part of the Danish health system. It reflects the decentralized nature of the health system: the regions and municipalities are the planners and providers of health care services, and the state is the provider of the overall framework. However, some specific planning activities, such as planning the distribution of medical specialties, are regulated at the state level (see Box 2.1).

Economic management and planning of the health sector take place within a framework of negotiation between the different political and administrative levels. The annual financial agreement between the government and the regions/municipalities determines the overall budgets and the overall level of municipal taxes. The agreements are confirmed in the national budget agreements, which specifies the level of state subsidies to the regions and municipalities. A Budget Law from 2014 imposes sanctions if municipalities and regions set their budgets above the target level or exceed their budgets at year-end (see Section 3.3.2). The annual economic negotiations are also used to promote specific policy priority areas.

The umbrella organization Danish Regions is thus in a central position to influence economic conditions and planning in the health system. The

organization negotiates the annual financial framework of the regions with the state. It also negotiates the pay and working conditions for regional employees, including hospital staff. In this way, the regions, as a collective body, can to some extent regulate the number of people employed in hospitals and the number of private practitioners entitled to reimbursement from the regions. An even geographical distribution of GPs has been pursued through regional practice planning since 1976. Furthermore, the regions' collective negotiations with professional organizations establish economic incentives for services provided by private practitioners.

Each region can determine the size, content and cost of hospital activities through detailed budgets. These budgets enable them to specify which treatments should be offered and which technical equipment should be bought. The regions' opportunities to plan their own capacity is, however, affected by: (1) patient choice, which allows hospital patients access to treatment in other regions; (2) waiting time guarantees, which force them to prioritize specific interventions/treatments; and (3) various initiatives, which have been introduced by centrally conceived legislation or agreements (Vrangbæk, 1999; Christiansen & Vrangbæk, 2018).

Coordination of treatment has been a key focus area in the past decades. Since 2007, the regions and municipalities have been obliged to enter health care agreements in every 4-year election period, setting a framework for coordination of activities, sharing of resources, referral criteria, etc. The agreements are subject to approval by the Danish Health Authority but are not legally binding documents. The health care agreements are anchored in regional consultative committees consisting of representatives from the region, the municipalities within the region and private practitioners. Overall, the health care agreements provide a framework for developing more specific coordination activities and for monitoring progress (Strandberg-Larsen, Nielsen & Krasnik, 2007).

By 1 July 2022, 21 health clusters were established; one around each emergency hospital, with representatives from hospitals/regions, the municipalities and general practice in the catchment area. The health clusters also include psychiatry. The new health clusters are supposed to take joint responsibility for the population in the catchment area with a focus on strengthening coherence and care paths across regions, municipalities and general practice. Formal authority remains with regions and municipalities, but the health clusters include new collaborative administrative and political



committees with representation from those two parties (Regeringen, Danske Regioner & KL, 2021).

**BOX 2.1** Is there sufficient capacity for policy development and implementation?

Overall, the Danish health system has responded well to the challenges it has faced in the past three decades. Effective policies to control expenditures and increase activity levels have been implemented, and overall results are positive. Denmark handled the COVID-19 pandemic well, with limited excess mortality and rapid and flexible adjustment of testing and treatment capacity. Overall, this testifies to a system with good capacity to develop and implement suitable policies.

## ■ 2.5 Intersectorality

No direct mechanisms or rules ensure that ministries other than the Ministry of Health take health into account. However, some responsibilities of the Ministry of Social Affairs, Housing, and Senior Citizens fall under what may be considered health affairs, including nursing homes and home nursing care. An example of health being an explicit concern for other ministries is taxing unhealthy goods, such as tobacco and alcohol. In addition, educational policies include health-related topics, such as mandatory inclusion of health-related topics in curricula and encouraging physical exercise. Transportation policy, urban planning, environmental policies and cultural policies also include health concerns in various ways.

## ■ 2.6 Health information systems

Many public registers within the health system cover the utilization of services, disease incidence and prevalence, causes of death and so on (Thygesen & Ersbøll, 2011). The registers are mainly compiled for administrative purposes, but the information is also used for research purposes. More specifically, the data can be used for managing health expenses or planning activities within the health system. In addition, the registers and their data are vital for epidemiological studies and health services research in Denmark.

Individuals in Denmark have a unique personal identification number allowing different types of information in the registers to be linked for research and administrative purposes while adhering to general data protection regulations (Vallgård & Krasnik, 2008; Knudsen & Hansen, 2008). The Danish health data are rather unique as they cover all areas of the health sector, comprise data on the entire Danish population from birth to death, go far back in time, allow for data linkage and are of high quality. The main registers include the following:

- Registers based on activity in the hospital system: the National Patient Register (*Landspatientregistret*), the Psychiatric Central Register, the Medical Birth Register and the Danish Health Authority Register for Legal Abortions. The National Patient Register is a unique register containing all hospital admissions, outpatient treatments, and emergency department visits, including diagnoses, tests and treatments, across all public and private hospitals in the country.
- Registers of specific diseases, conditions and treatments: e.g. the Cancer Register, the Birth Defect Register and the IVF Register (assisted reproduction).
- Registers of population mortality and morbidity: Causes of Death Register and the Work Accident Register.
- Administrative registers relevant to the health sector: the Central National Register (the Danish Civil Registration System), the Health Reimbursement Register, the Register of Pharmaceutical Sales and the Sickness Benefit Register. The Health Reimbursement Register contains information about health services provided by GPs, practicing specialists, dentists, physiotherapists, psychologists and so on (Vallgård & Krasnik, 2008). The Register of Pharmaceutical Sales contains information about all sales and all supplies of medicines, both what is sold at the pharmacy and in stores and what is provided in hospitals.
- Other registers of importance for public health science: the Demographic Database, the Prevention Register, the Hospital Use Statistics Register and the Fertility Database. For a list of the national health registers, see Sundhedsdatastyrelsen (2023).

The Joint Medicine Card registers drug and vaccination information in one database to allow health care professionals to access details of a patient's current medication and vaccination status. It has been implemented across sectors, including pharmacies.

The Danish Act on Dental Care also obliged municipalities to take on the responsibility of reporting oral health data to a national recording system (the SCOR system). The system was developed and implemented by the Danish Health Authority to evaluate the evolution of oral health status nationally, regionally and locally.

## ■ 2.7 Regulation

The state sets the overall direction for health and monitors performance. The state regulates the establishment of highly specialized departments and functions (such as heart transplants) in hospitals and determines targets for service quality, including waiting times. The 2007 structural reform provided the central authorities with stronger means to govern activities at the regional and municipal levels (see Section 2.3).

The central state negotiates the level of expenditures with the regions and municipalities and the level of taxation with the municipalities, thus setting the financial framework for activities. It also participates in negotiations between professional organizations and unions about salaries, working conditions, fees and the number of private practitioners with regional contracts.

### ■ 2.7.1 *Regulation and governance of third-party payers*

The main financing for the health care sector comes from state and municipal taxation. The state subsidizes the regions and municipalities but does not act as the purchaser or directly finance the providers. Sociodemographic criteria determines the scope of funding to regions and municipalities. In addition, based on sociodemographic criteria, a mechanism redistributes funds from wealthier to poorer municipalities (equalization mechanism).

## ■ 2.7.2 Regulation and governance of provision

### ORGANIZATION

The state is responsible for the general legal and economic framework and the overall regulation of health care organizations and professionals. In addition to formal legislation, the state provides guidelines and standards and develops general and specific policy initiatives. The five regions are responsible for providing hospital, somatic and psychiatric care and financing private practitioners (such as GPs, some specialists, dentists, physiotherapists, chiropractors and so on) for their public sector work. Private practitioners are self-employed but reimbursed for their services by the regions according to a nationally negotiated agreement. The regions regulate the number of private practitioners allowed to get reimbursement from the public system based on a negotiated number of doctors per 1000 inhabitants. The regions also pay a few tendered clinics run by private companies and small hospitals for treating patients according to contracts or waiting time guarantees. Furthermore, municipalities employ health care providers who mainly care for children and older people (see Section 5.8). Table 2.1 gives an overview of the regulatory activities of the state, regions, municipalities and private sector.

There is a licensing system for health care professionals but not for health care facilities. The Danish Patient Safety Authority supervises care facilities. Medical doctors (physicians and surgeons) have been licensed since the 17th century, midwives since the early 18th century, and nurses since 1933. The Danish Patient Safety Authority grants and revalidates licenses and, in case of malpractice or other undesirable behaviour, has the authority to withdraw them. There is no relicensing system. By regulating the capacity available for medical education, it is possible, to a certain degree, to control the number of authorized personnel within the different professional categories and specialties.

### QUALITY

A national model for quality assessment and improvement, the Danish Quality Model (*Den Danske Kvalitetsmodel*, DDKM), was established in 2002. Its main objective was to monitor all publicly financed health care

**TABLE 2.1** Overview of the regulation of providers

	LEGISLATION	PLANNING	LICENSING	PRICING/TARIFF SETTING	QUALITY ASSURANCE	PURCHASING/FINANCING
<b>Public health services</b>	State	Municipalities/state	N/a	N/a	Municipalities/state	Municipalities
<b>Ambulatory care outside hospitals</b>	State	Regions	State	National agreement	Regions/private/state	Regions
<b>Inpatient care</b>	State	Regions/state	State	Global budgets/DRGs	Regions/state	Regions
<b>Dental care</b>	State	Private market/municipalities (patients aged under 22 years) (see Section 3.2)	State	Private	Regions/state	Private/municipalities (patients aged under 22 years)
<b>Pharmaceuticals</b>	State	State/regions	State	Private	State	Regions/private
<b>Long-term care</b>	State	Municipalities	N/a	Municipalities/state	Municipalities/state	Municipalities
<b>University education of personnel</b>	State	State	State	N/a	State	State

N/a: not applicable.

Source: Authors.

activities using accreditation. Accreditation was, however, abandoned for hospitals in 2016 and primary care in 2021 after criticisms from regional authorities and health care professionals. A set of national goals and regional and locally adapted indicators, the National Quality Programme, have replaced the DDKM, and a data-driven quality approach based on GP clusters was initiated in 2022.

The national goals include 40 standards and indicators in eight areas (increased continuity in care; better care for chronic and older patients; lower mortality and increased patient safety; treatment of high quality; fast diagnosis and treatment; greater patient involvement; more healthy life years; a more efficient health care system), agreed upon by the Ministry of Health, Danish Regions and Local Government Denmark (Ministry of Health, Danish Regions & KL, 2018). The ministry regularly publishes data on each region's performance on each standard (green, yellow or red). The national indicators provide an opportunity to compare performance

across regions and municipalities over time. Selected indicators are used as part of the proximity financing scheme. Additionally, there are a number of regional and nationwide clinical quality databases for specific diseases (e.g. heart failure, diabetes and dementia) and/or patient groups that have received specific treatments that aim to measure the quality of health care and help improve health care efforts and results.

All regions have a programme to train health professionals and leaders in improvement methods aimed at improving patient safety and health care quality. Some of the programmes are based on cooperation with the Institute for Health Care Improvement or, in the case of the Region of Southern Denmark, the hospital system from Seattle (USA), Virginia Mason.

In 2004, an Act on Patient Safety came into effect, aiming to promote patient safety through a reporting system of adverse events. The goal is to foster learning and prevent future adverse events (National Board of Health, 2007). These reports do not allow the sanctioning of health care personnel or institutions. Under the state Law of Authorization of Health Professionals and Health Care Activities, authorization to practice can be revoked, or activity can be reduced if a qualified health care worker takes an unnecessary risk regarding a patient's health or has shown serious or repeated unsafe professional activity. The final licence withdrawal occurs in court. Patient safety remains a major issue in policy discussions and the public debate regarding Danish health services, which is also reflected in the prioritization of patient safety in the national health goals (see Section 7.1).

### ■ 2.7.3 *Regulation of services and goods*

#### **BASIC BENEFITS PACKAGE**

There is no explicitly defined statutory benefits package in Denmark (see Section 3.3.1). The regions decide which treatments to provide, and there are few limitations if the treatment is evidence based and clinically proven. The regions rely on national-level guidelines developed by the Danish Health Authority and input from the Danish Medicines Council for the assessment of pharmaceuticals and the Danish Health Technology Council for other technologies. Health technology assessments are done at the regional level (see Section 3.3.1).

## HEALTH TECHNOLOGY ASSESSMENT (HTA)

Denmark is an active partner in the European Network for Health Technology Assessment (EUnetHTA) and has been using HTA as an input to decision-making at national and regional levels since the 1990s. In 2017, the Danish Regions established the Danish Medicines Council to evaluate and provide input to prioritize medicines for use in the Danish hospital sector (see Section 6.1). A new Danish Health Technology Council supplemented the Danish Medicines Council in the beginning of 2021, which assesses other technologies and devices (see sections 2.7.4 and 2.7.5).

### ■ 2.7.4 *Regulation and governance of pharmaceuticals*

The Danish Medicines Agency is the key regulatory body for pharmaceutical products. The Danish Medicines Agency is a parallel board to the Danish Health Authority under the Ministry of Health (see Fig. 2.1) and performs most tasks in close cooperation with regulatory authorities and organizations in other EU countries as well as the European Medicines Agency. It is responsible for legislation concerning pharmaceuticals and medical devices, approving new products, clinical trials, deciding which drugs should be reimbursed, and licensing companies that produce and distribute pharmaceuticals. Marketing authorization is granted based on chemical, pharmaceutical, clinical and safety criteria and without a need or cost-effectiveness assessment. Consequently, there is no essential drug list in the Danish pharmaceutical sector. Instead, consumption is regulated partly through the reimbursement system and rational prescribing policies (see Box 5.5). The Danish Medicines Agency is aligned with the European Medicines Agency.

The Danish Medicines Agency coordinates several activities to improve the prevention and monitoring of adverse reactions. It proposes recommendations and supports information and communication tasks regarding adverse reactions for consumers, patients and health care professionals. The most important source of information on adverse drug reactions is spontaneous reports. The Agency recommends that all patients who experience adverse drug reactions not mentioned on the package leaflet should contact their GP, who is then required to report all presumably serious or unexpected adverse reactions to the Danish Medicines Agency. Moreover, GPs must report any

known and non-serious adverse drug reactions within the first 2 years that a medicinal product is on the market. It is also possible for the patient or the patient's relatives to report adverse drug reactions directly to the Agency.

There is strict regulation of direct-to-consumer advertisement of prescription drugs. Furthermore, an Ethical Committee of the Pharmaceutical Sector (*Etisk Nævn for Lægemiddelindustrien*) was established in 2011 to develop and impose ethical standards for pharmaceutical companies (Etisk Nævn for Lægemiddelindustrien, 2011; Lægemiddelstyrelsen, 2023a).

Drugs dispensed in pharmacies are subject to ongoing price competition: companies report their prices and pharmacies are obliged to substitute the medicine prescribed by the physician with the cheapest or second cheapest generic medicine. Exceptions are if the prescriber has indicated otherwise, or if the patient refuses substitution. Generic substitution slows increasing drug costs in two ways. Firstly, by changing to a less expensive generic drug and stimulating price competition among interchangeable medicines. Secondly, since the beginning of the 1990s, through parallel imports of pharmaceuticals (see Section 5.6).

The joint regional purchasing agency, AMGROS, purchases hospital drugs based on price negotiations and bidding with input from the Danish Medicines Council.

Pharmaceuticals administered in hospitals are free for patients. Outpatient prescription medicines are reimbursed based on their main indication. However, other secondary indications also warrant reimbursement. For example, some pharmaceutical products are only reimbursed for certain diseases. The Danish Medicines Agency decides on the reimbursement status of each pharmaceutical product. The Reimbursement Committee advises the Danish Medicines Agency before deciding on whether to reimburse a particular drug. Drugs with a definite and valuable therapeutic effect are reimbursed when used for a well-defined indication.

Usually, only prescription pharmaceuticals are eligible for reimbursement. Drugs available without a prescription may be included in the list of reimbursable pharmaceuticals. However, reimbursement is only granted to pensioners and patients suffering from a chronic illness requiring continuous treatment with the drug. A prescription would also have to be issued for the pharmaceutical in question. Even if a drug meets the criteria for reimbursement, certain pharmaceutical characteristics, its specific use or how it is prescribed may lead to a non-reimbursement decision.



Reimbursement of prescription medicines is based on the patient's annual pharmaceutical expenses. As of 2021, patients were reimbursed at 0%, 50%, 75% and 85%, depending on the amount spent within the year (see Section 3.4).

### ■ **2.7.5** *Regulation of medical devices and aids*

Procurement of medical devices and aids is done by the five regions. The Danish Regions established the Danish Health Technology Council in the beginning of 2021 to do assessments of devices and health technology (see Section 2.7.3). Medical devices are regulated by two EU regulations respectively: the EU regulation on medical devices and the EU regulation on medical devices for in vitro diagnostics with the overall purpose of ensuring patient safety. The regulations state, inter alia, that the manufacturer must have documentation that the equipment works as intended and that the benefits of use outweigh any risks. Manufacturers must also monitor the safety and performance of the equipment after the equipment is placed on the market. Medical devices must be CE-marked before they come to market. The Danish Medicines Agency does not approve medical devices, but supervises Danish manufacturers and other actors within the medical devices field and receives reports of errors, failures and deficiencies with medical devices. The use of medical devices and aids is less standardized than the use of medicines.

## ■ **2.8** **Person-centred care**

### ■ **2.8.1** *Patient information*

The Danish Health Act (2005) covers the patient's right to continuous information, adapted according to age and the diagnosis, given throughout examinations and treatment. Furthermore, the rules also determine doctors' rights to share information with third parties, give patients the right to access documents, hold case records and that their confidentiality is maintained.

Patients can obtain information and guidance on hospital choice and waiting times through their GP and through patient offices, which exist in

every region (see Table 2.2). The Danish Health Authority, Danish Regions and the Ministry of Health have established several websites and digital portals to provide information to patients, such as the E-journal, health records (*Sundhedsjournal*) and Medicine card (*Medicinkort*). The digital portal eSundhed.dk gives access to individual patient data for patients and health care professionals and provides information about public and private hospitals, specialists and clinics. The portal also provides information about waiting times and quality indicators (see Section 4.1.3).

In case of hospital referral, the hospital must send a notice letter to the patient, informing the patient of their specific examination and treatment. The hospital also provides information on its capacity to examine and treat the patient within 1 month (see Section 2.8.2).

Since July 2018, refugees and migrants who have resided in Denmark for more than 3 years must pay a fee for interpreter services themselves.

TABLE 2.2 Patient information

TYPE OF INFORMATION	IS IT AVAILABLE?	COMMENTS
Information about statutory benefits	No statutory benefit package in Denmark	But few limitations if evidence based
Information on hospital clinical outcomes	Partly	Selected clinical and process indicators at the regional level are published regularly according to the national quality indicator programme
Information on hospital waiting times	Yes	
Comparative information about the quality of other providers (for example, GPs)	Yes, partly	Waiting times and patient satisfaction data for hospitals
Patient access to own medical record	Yes	There are several websites and digital portals where patients can access their data (see Section 4.1.3)
Interactive web or 24/7 telephone information	Yes	
Information on patient satisfaction collected (systematically or occasionally)	Yes	
Information on medical errors	No	

Source: Authors.

## ■ 2.8.2 *Patient choice*

Since 1973, residents over the age of 15 have been able to choose between two coverage options in the statutory health system, known as Group 1 and Group 2. The default is Group 1, and almost all citizens belong to this group (see Table 2.3). In Group 1, members are registered with a GP of their choice, practicing within 15 km of their home (5 km in the Copenhagen area) or further if the patient moves after registration, provided they waive their right to home visits by the GP. Group 1 members have free access to emergency services and general preventive, diagnostic and curative services. Without a prior referral, patients may consult dentists, chiropractors, ear, nose and throat specialists or ophthalmologists. Their GP must refer them for access to all other medical specialties, physiotherapy and hospital treatments. Consultation with a GP or specialist is free, while dental care, podiatry, psychology consultations, chiropractic and physiotherapy are subsidized in most cases. Patients seeking care from specialists other than ear, nose and throat or ophthalmologists without a GP referral are liable to pay the full fee. In Group 2, individuals can consult any GP and specialist without a referral. The region will subsidize expenses up to the cost of the corresponding treatment for a patient in Group 1. The same rules apply to treatment by podiatrists, psychologists, dentists, chiropractors and physiotherapists. There is no charge for treatment in hospital. Only a minority of the population (1%) chooses this group, probably because of general satisfaction with the referral system (see Section 5.2).

Most hospitals in Denmark are general hospitals. There are very few specialized hospitals other than psychiatric hospitals. Legislative reform in 1993 gave patients the freedom to choose to be treated at any hospital in the country if treatment takes place at the same level of specialization. Since 2003, direct referral to highly specialized services can be made by a medical doctor, wherever they work. According to a national study of choice behaviour, patients prefer treatment close to their place of residence (Birk & Henriksen, 2003).

A waiting time guarantee for diagnosis (30 days) and treatment (additional 30 days) has been in place for several years. If the regions cannot offer treatments at their hospitals within these time limits, they must inform patients of the right to seek treatment in other public or private hospitals at

TABLE 2.3 Patient choice

TYPE OF CHOICE	IS IT AVAILABLE	DO PEOPLE EXERCISE CHOICE? ARE THERE ANY CONSTRAINTS (E.G. CHOICE IN THE REGION BUT NOT COUNTRYWIDE)? OTHER COMMENTS?
Choices around coverage		
Choice of being covered or not	No	All citizens are covered by the public health system. However, patients have the right to refuse treatment. Citizens can choose between two different public coverage options. Group 1 provides free access to privately practicing specialists upon referral. Group 2 provides direct access to privately practicing specialists for a co-payment
Choice of public or private coverage	No	But many have voluntary health insurance
Choice of purchasing organization	No	
Choices of provider		
Choice of primary care practitioner	Yes	GP can be changed for a small fee after informing municipal authorities
Choice of specialist practitioner	Yes	Upon GP referral
Direct access to specialist practitioner	Yes	Out-of-pocket payments without a referral
Choice of hospital	Yes	All public hospitals at the same level of specialization upon referral. Extended choice of private hospitals if the public hospital cannot provide diagnosis and treatment within waiting time guarantees
Choice to have treatment abroad	Yes	See Section 2.8.4
Choices of treatment		
Participation in treatment decisions	Yes	
Right to informed consent	Yes	
Right to request a second opinion	No	Critically ill patients may request a second opinion about possibilities for experimental treatment in Denmark or abroad
Right to information about alternative treatment options	Yes	

Source: Authors.

the expense of the home region. There are stricter waiting time guarantees for specific cancer procedures and procedures for certain other diseases (including coronary heart disease). If the hospital cannot treat the patient locally within the guarantee, it must look nationally or internationally for alternative hospitals. If this is not possible, the Danish Health Authority is involved to find an alternative solution.

### ■ **2.8.3** *Patient rights*

The Danish Health Act specifies the basic and general principles of the individual patient's right to self-determination and safety regarding the health system and medical examination, treatment and care (Table 2.4).

### ■ **2.8.4** *Patients and cross-border care*

Patients' rights to treatment abroad are defined in the Danish Hospital Law (specified in the current executive order of 28 June 2019 on the right to hospital treatment) in accordance with the EU Cross Border Healthcare Directive. The regional councils can offer a patient highly specialized, research-based treatment abroad. However, the Danish Health Authority must approve the referral to highly specialized treatment abroad. The preconditions for obtaining approval are, among other things, that the treatment in question is not provided at a Danish hospital and that the treatment is not experimental or alternative. A regional council can also refer a patient for research-based treatment abroad if this treatment fulfils several requirements listed in the Act. For example, the general requirements for research-based treatment are carried out in collaboration with a Danish hospital and approved in advance by the Danish Health Authority.

**TABLE 2.4** Patient rights

PROTECTION OF PATIENT RIGHTS	Y/N	COMMENTS
Does a formal definition of patient rights exist at national level?	Yes	
Are patient rights included in legislation?	Yes	
Does the legislation conform with WHO's patient rights framework?	Yes	
<b>Patient complaints avenues</b>		
Are hospitals required to have a designated desk responsible for collecting and resolving patient complaints?	Yes	Regional patient offices and digital information.
Is a health-specific Ombudsman responsible for investigating and resolving patient complaints about health services?	Yes	Danish Patient Complaints Agency (see Section 2.2.1).
Are there other complaint avenues?	Yes	Court system and International Court of Human Rights.
<b>Liability/compensation</b>		
Is liability insurance required for physicians and/or other medical professionals?	Yes	An obligatory insurance scheme provides compensation financed by the hospital owners. The Danish Patient Compensation was set up in 1992, providing compensation to patients or patients' relatives. Since 2005, the insurance has covered treatment at all public and private hospitals, specialists, and selected hospitals abroad (under the 2005 Health Act). Other compensation schemes include the Danish Dentist Society Insurance Schemes and the Danish Chiropractor Society Insurance Schemes.
Can legal redress be sought through the courts in the case of medical error?	Yes	After exhausting other options.
Is there a basis for no-fault compensation?	Yes	A patient's right to compensation is not dependent on a doctor or other health professionals accepting personal responsibility for the damage. The level of compensation is regulated through the law of access to complaint and compensation within the health services.
If a tort system exists, can patients obtain damage awards for economic and non-economic losses?	Yes	According to the general Liability Act ( <i>Erstatningsansvarsløv</i> ).
Can class action suits be taken against health care providers, pharmaceutical companies, etc.?	Yes	But criteria are quite strict.

Source: Authors.

# Financing

## ■ Summary

- The regions and municipalities are the administrative levels responsible for financing health care in Denmark.
- The municipalities derive their revenue from a proportional income tax, proportional land tax and block grants from the state.
- The regions derive their revenue from a block grant from the state (around 83% of their income) combined with performance-based financing reflecting continuity of care (around 1%) from the state, and municipal co-payment for services provided to the residents in the municipality (around 16%).
- All registered Danish residents are entitled to publicly financed care, which is largely free at the point of use. Undocumented migrants are entitled to acute care but not to elective care. Asylum seekers have access to so-called necessary health care.
- The statutory benefits basket is considered generous and covers primary and preventive care, specialist care, hospital care (including prescription drugs for inpatients), mental health care, long-term care and dental care for children/young people under 20 in 2023 – increasing to 21 years of age in 2025.
- However, outpatient prescription drugs, adult dental care, physiotherapy and optometry services are only partially covered through

subsidies, with the largest amount spent OOP on user fees for medicines, dental care and glasses.

- Voluntary complementary insurance is purchased by around 42% of the population to cover user fees. Supplementary private insurance is purchased by around 32% of the population to enable expanded access to private providers.

■ 3.1 Health expenditure

According to WHO data, total current health expenditure as a share of GDP increased significantly from 8.1% in 2000 to 10.6% in 2010 (Table 3.1). Since

**TABLE 3.1** Trends in health expenditure in Denmark, 2000–2021, selected years

EXPENDITURE	2000	2005	2010	2015	2019	2020	2021
Current health expenditure per capita in International US\$ (PPP)	2 327	3 109	4 572	5 095	5 950	6 351	7 140
Current health expenditure as % of GDP	8.1	9.1	10.6	10.3	10.1	10.5	10.8
Public expenditure on health as % of total expenditure on health	83.1	83.7	84.3	84.3	83.7	84.9	85.4
Public expenditure on health per capita in International US\$ (PPP)	1 934	2 604	3 853	4 292	4 981	5 389	6 098
Private expenditure on health as % of total expenditure on health	16.9	16.3	15.7	15.7	16.3	15.1	14.6
Public expenditure on health as % of general government expenditure	12.8	14.9	15.8	16.0	17.1	16.7	18.2
Government health spending as % of GDP	6.7	7.6	8.9	8.7	8.5	8.9	9.3
OOP payments as % of total expenditure on health	15.4	14.7	13.7	13.5	13.8	12.8	12.4
Voluntary health care payment schemes as % of total expenditure on health	1.5	1.5	2.0	2.3	2.5	2.3	2.2
Capital health expenditure as % of total expenditure on health	—	—	0.7	0.9	—	—	—

GDP: gross domestic product; OOP: out-of-pocket; PPP: purchasing power parity.

Source: WHO, 2023.



then, health expenditure has remained relatively stable, hovering around 10.0%. Health expenditure per capita increased from US\$ 2327 in 2000 to US\$ 7140 in 2021 (current prices) – a more than twofold increase.

In 2021, Denmark's total current health spending (10.8% of GDP) was below that of neighbouring countries such as Germany (12.9%), Sweden (11.2%) and the United Kingdom (UK) (12.4%). However, Denmark still spends more on health as a share of GDP than the average for the EU/EEA/UK (9.6%) and the WHO European Region (8.7%) (Fig. 3.1).

Denmark's highest growth in health expenditure as a share of GDP was between 2000 (8.1%) and 2009 (10.7%). Like the rest of the world, Denmark was affected by the global financial crisis from 2007. This limited the available resources while health needs increased (see Section 1.2 and Table 1.2). Between 2000–2009, health expenditure as a proportion of GDP steadily increased with a large spike between 2009–2010 (the result of a fall in GDP after the global financial crisis and relatively stable health care costs rather than an increase in health care costs). Since 2011, it has remained relatively stable, reaching 10.8% in 2021 (Fig. 3.2). In 2021, all the comparator countries (except for Finland and Norway) had higher spending than Denmark (Fig. 3.2). However, health spending in Denmark has remained above the EU/EEA/UK average since 2000.

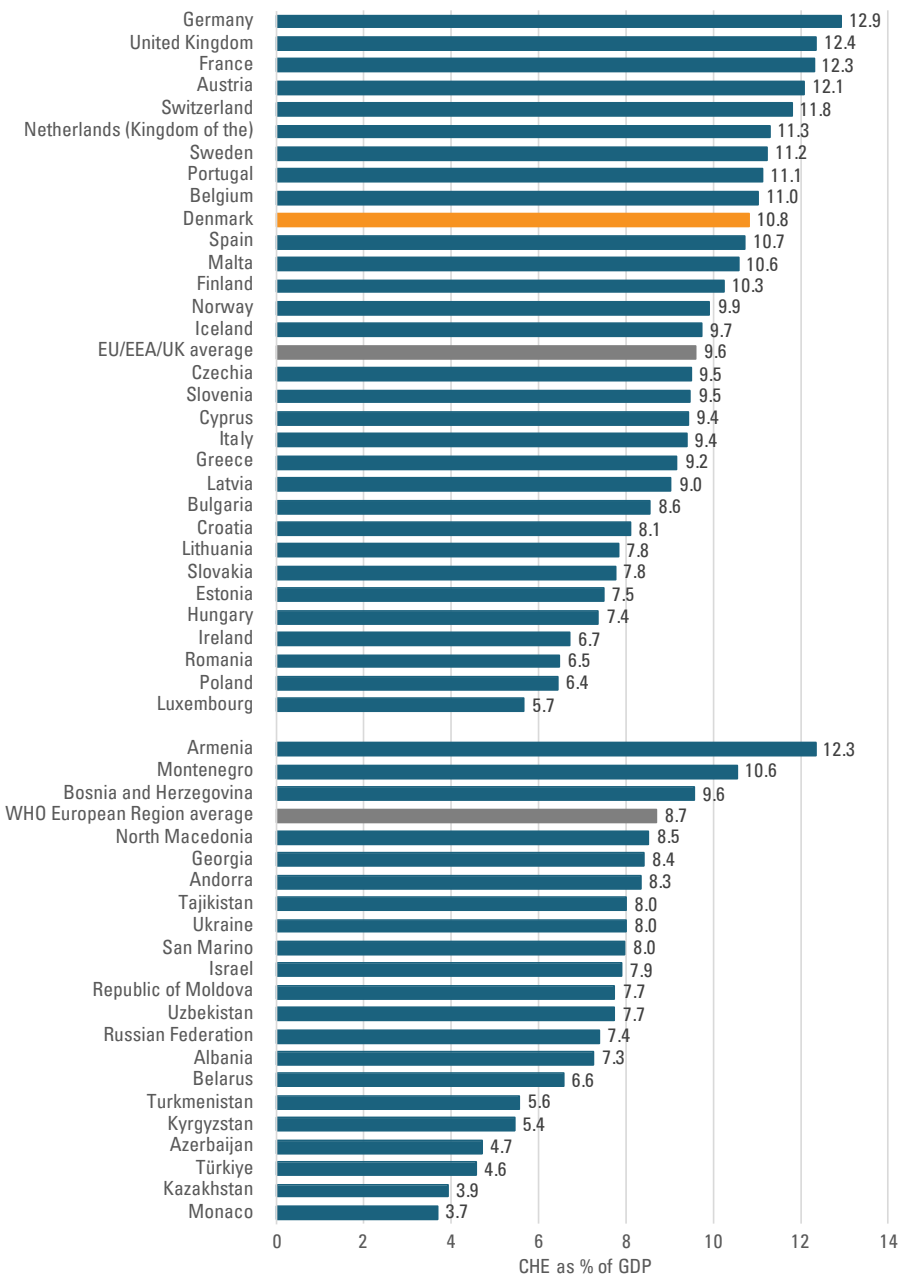
Denmark spends more per capita (measured in US\$ PPP) on health than neighbouring countries such as Finland (US\$ 5613), Sweden (US\$ 6784) and the United Kingdom (US\$ 6160), but less than Germany (US\$ 7607) and Norway (US\$ 8146) (Fig. 3.3). It should be noted that Denmark traditionally has included more long-term care expenditures in this measure than other countries. This means that the reported total health expenditure may be overestimated when compared with other countries.

Public health expenditure makes up the largest share of current health expenditure (Fig. 3.4). In 2021, public expenditure accounted for 85.2%, which is only slightly lower than neighbouring country Norway (85.6%).

Growth in health expenditure is contained by a combination of levers, including annual global budgets for regions and municipalities (see Section 2.4), collective purchasing and generic substitution for pharmaceuticals (see Section 2.7.4), and incentives to shift care from inpatient to outpatient settings (see Section 5.4.3).

The public sector provides by far the most funding for the health care sector, and hospital care (inpatient and outpatient care provided at hospitals)

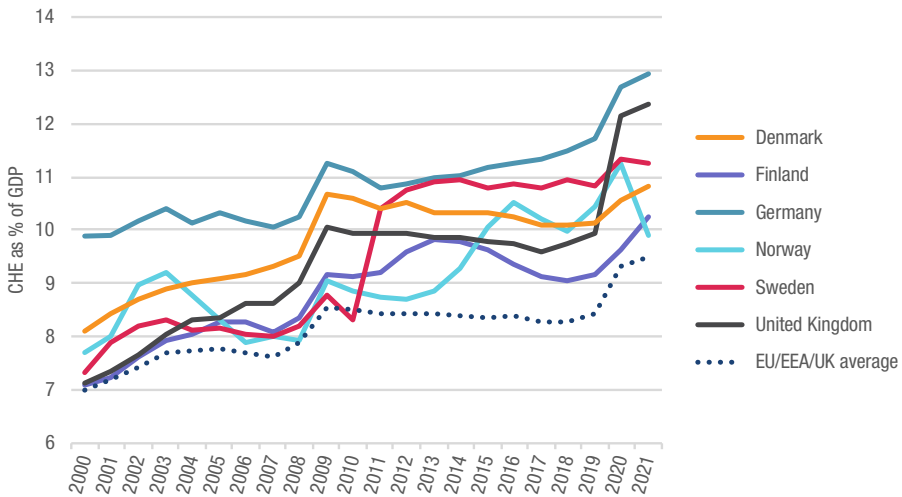
**FIG. 3.1** Current health expenditure as a share (%) of GDP in the WHO European Region, 2021



CHE: current health expenditure; EEA: European Economic Area; EU: European Union;  
GDP: gross domestic product; UK: United Kingdom.

Source: WHO, 2023.

**FIG. 3.2** Trends in current health expenditure as a share (%) of GDP in Denmark and selected countries, 2000–2021



CHE: current health expenditure; EEA: European Economic Area; EU: European Union; GDP: gross domestic product; UK: United Kingdom; WHO EURO: World Health Organization European Region.

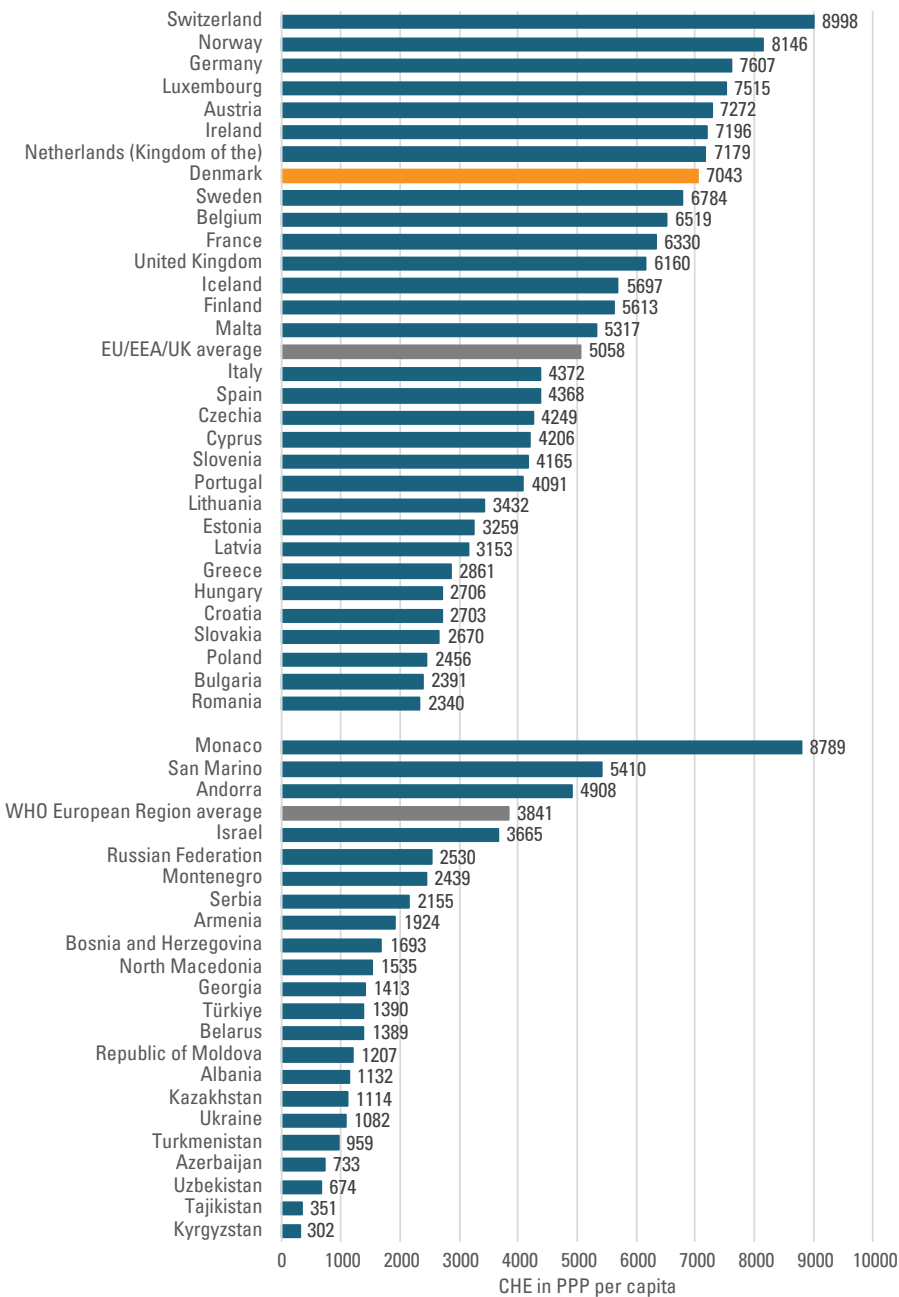
Source: WHO, 2023.

is responsible for the largest share of total health expenditure as well as publicly funded health care costs (Table 3.2). OOP spending and private insurance fund a minor share of hospital care, but the role varies between specialties – being much bigger in predominantly elective surgical specialties and much smaller in internal medicine. Public health (prevention and health promotion) costs are a small proportion of total health costs, and public health is mainly funded by the public sector, depending on how public health is defined.

## ■ 3.2 Sources of revenue and financial flows

The state derives most of its revenue from a progressive personal income tax payable on wages and almost all other forms of income, including profits from personally owned businesses, a few other taxes on all personal income and VAT. Earmarked taxes play no role in financing Danish health care. The municipalities derive their revenue from a proportional income tax, proportional land tax and block grants from the state. Formally, each municipality sets its own tax rate. In reality, they are set within limits negotiated with the

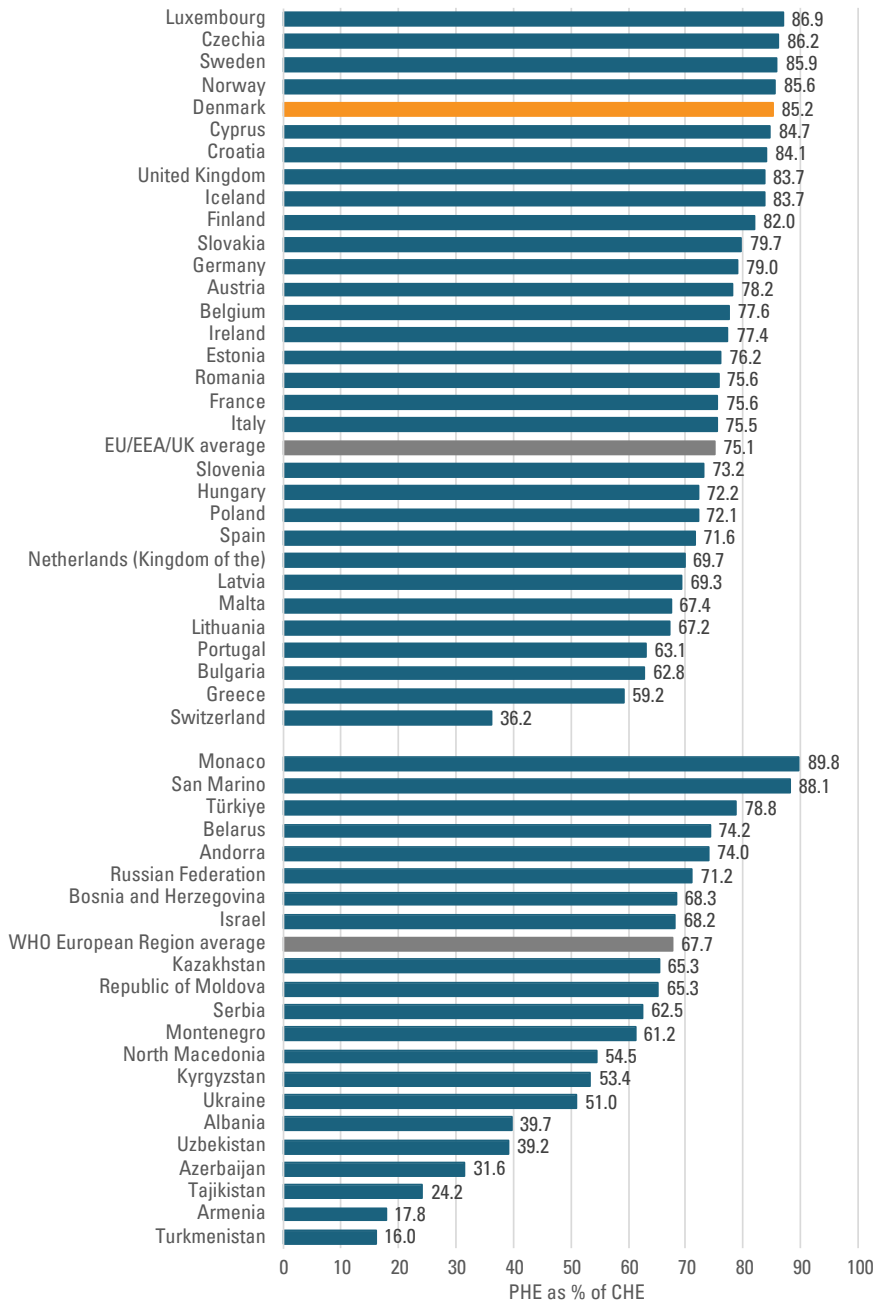
**FIG. 3.3** Current health expenditure in US\$ PPP per capita in the WHO European Region, 2021



CHE: current health expenditure; EEA: European Economic Area; EU: European Union; PPP: purchasing power parity; UK: United Kingdom.

Source: WHO, 2023.

**FIG. 3.4** Public expenditure on health as a share (%) of current health expenditure in the WHO European Region, 2021



CHE: current health expenditure; EEA: European Economic Area; EU: European Union; PHE: public health expenditure; UK: United Kingdom.

Source: WHO, 2023.

**TABLE 3.2** Expenditure on health (as % of current health expenditure) according to function and type of financing, 2021

	INPATIENT CARE	OUTPATIENT CARE	LONG-TERM CARE	PHARMACEUTICALS	PUBLIC HEALTH	ADMINISTRATION	TOTAL
<b>General government</b>	22.8	27.2	18.0	4.2	8.8	4.5	85.4
<b>Private out-of-pocket</b>	1.6	4.0	1.7	5.0	0.0	0.0	12.4
<b>Private insurance</b>	0.4	1.1	0.0	0.5	0.1	0.1	2.2
<b>Other (for example, non-profit institutions serving households)</b>	–	–	–	–	–	–	–
<b>Total expenditure</b>	24.7	32.4	19.7	9.7	8.8	4.6	100

*Notes:* Inpatient care includes curative and rehabilitative inpatient care. Outpatient care includes curative care (including dental outpatient curative care) and rehabilitative outpatient care. Long-term care includes inpatient and home-based long-term care. Pharmaceuticals include pharmaceuticals and other medical non-durable goods and therapeutic appliances and other medical durable goods. Public health includes the following programmes: information, education and counselling; immunization; early disease detection, health condition monitoring; epidemiological surveillance and risk and diseases control; and preparing for disaster and emergency response programmes.

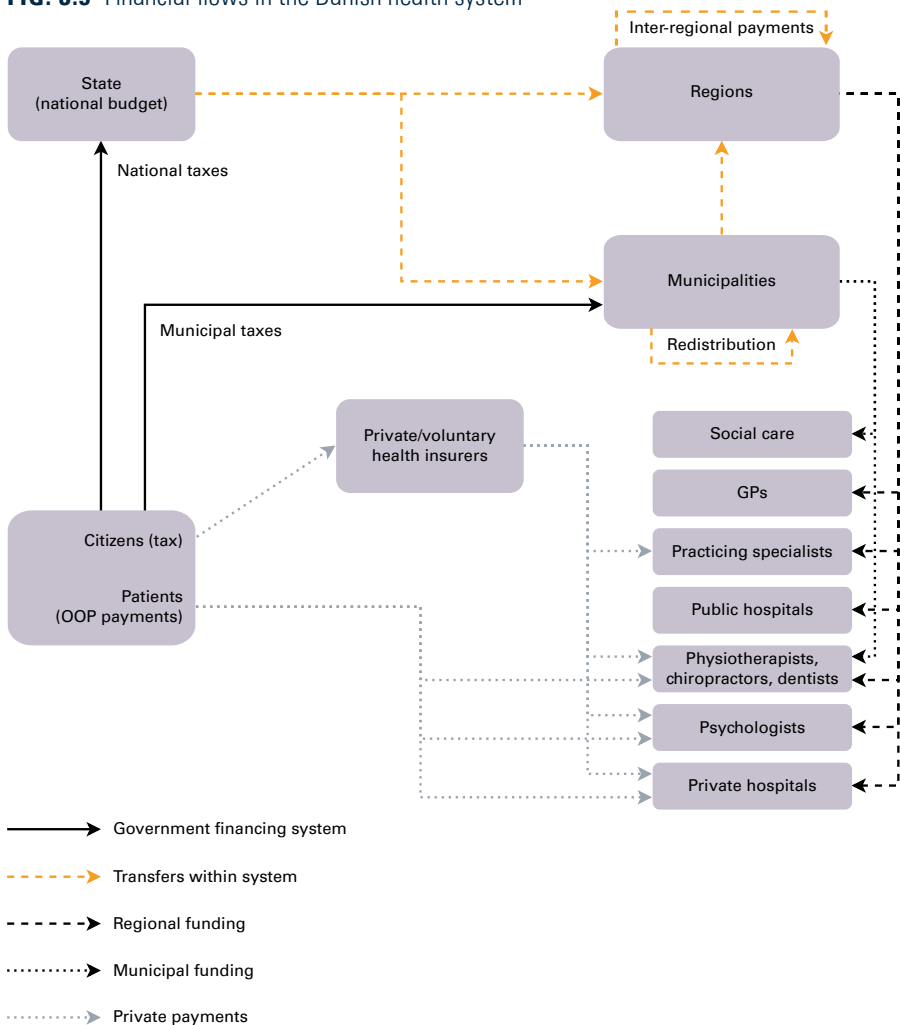
*Source:* OECD, 2021a.

state. The state and the municipalities fund the regions through a combination of block grants (83% of the revenue in 2021) and performance-based financing (17% in 2021), which is made up of municipal co-payment (16%) and performance-based financing reflecting continuity of care (around 1%) (Danmarks Statistik, 2022a). Approximately 12% of total health care costs are financed through OOP payments, particularly for outpatient medicines, dental services and eye glasses (Table 3.2). Citizens may buy VHI to share risk and even out OOP payments over time, and employers may buy VHI on behalf of their employees or pay for preventive care. However, employees may have to pay tax on the value of these employment benefits.

Financing for the health system is largely devolved to the regions and municipalities which are responsible for funding different services. The regions finance secondary care, prenatal care and community psychiatric units and they contract with GPs, specialists, physiotherapists and dentists who can provide services without a referral (see Section 5.2). The regions decide on the number of providers of GPs and specialists in their region to whom they grant a provider number which the providers need to receive

reimbursement. This control of the number of providers assists the regions in their cost-control of the specialists. The regions are also responsible for the reimbursement of outpatient medicines. Medicines administered in hospital are purchased through the joint regional purchaser AMGROS (see Section 2.7.4). The municipalities finance long-term care, home nurses, health visitors, dental care for some groups (such as adults who for physical or mental reasons cannot use the regular dental schemes), prevention and

**FIG. 3.5** Financial flows in the Danish health system



GP: general practitioner; OOP: out-of-pocket.

Source: Authors.

health promotion, drug and alcohol services, and school health services. Financial flows through the system are represented in Fig. 3.5.

## ■ 3.3 Overview of the statutory financing system

The statutory health system is universal and tax financed.

### ■ 3.3.1 *Coverage*

#### **BREADTH OF COVERAGE**

According to the 2007 Health Act, all legal residents of Denmark (i.e. people registered with the national registry service) are entitled to health care services. Non-residents are entitled to acute care but not to elective treatment. Coverage is universal, independent of contributions and not tied to membership of any insurance scheme. Residents cannot opt out of contributing to the statutory system.

#### **SCOPE OF COVERAGE**

There is no explicitly defined benefits basket in Denmark, but the scope of services is broadly described in the 2007 Health Act. The statutory health system covers primary and preventive care, specialist care, hospital care (including prescription drugs for inpatients), mental health care, long-term care and dental care for children/youth aged under 22 years. Outpatient prescription drugs, adult dental care, physiotherapy and optometry services are partially covered through subsidies (Box 3.1) (Vrangbæk, 2020). The benefits package does not cover cosmetic surgery unless the doctor considers the condition so severe that treatment is required. Whether a new intervention should be included in the implicit benefits package is opaque. In general, clinicians are free to introduce new techniques if they can stay within their budget and if the national specialty planning does not cover the intervention.

The level of service offered to patients is regulated by law and sets maximum waiting times for diagnosis (30 days) and treatment (another 30 days)



before the region must offer access to an alternative provider. However, the scope of health care services that must be provided is not specified. Three potential reasons for the absence of an explicit benefit package are:

- the regions could use a positive list as a bargaining tool in negotiations with the state, asking for more resources to cover any new intervention listed;
- the hospitals and their departments could use a positive list as a bargaining tool in negotiations with the region on next year's budget, asking for more resources to cover any new intervention listed; and
- fear that a positive list might slow the introduction of new interventions and the abolition of antiquated practices.

In theory, the regions could provide different service levels, but since the 1990s, local and regional variation has become an indication of inferior quality, service or effectiveness in some areas. Moreover, if a region does not provide a service provided by another region, the patient can choose treatment in the other region, which then bills the home region. Therefore, even if there is no explicit benefits package, there is a strong pressure on the regions to standardize their care, quality and service level, and provide services with documented effect. Politicians at the national level and the media are highly critical of regional differences in opportunities for health care (so-called postcode priority-setting – whether it is documented or based on media reports or opinion pieces in the media), and the regions have coordinated the introduction of and use of new medicines to prevent such differences.

## DEPTH OF COVERAGE

There is no cost sharing for hospital care, primary care, dental care for children/youth aged under 22 years, vaccinations for children, cancer screenings, maternity care, hospice care or permanent home care. There is a 35–60% co-payment for adult dental care (see Section 3.4.1). Outpatient prescriptions, temporary home care, long-term care in nursing homes, corrective lenses, and travel vaccinations are also subject to cost sharing (Vrangbæk, 2020).

**BOX 3.1** What are the key gaps in coverage?

Danish residents enjoy universal access to a comprehensive package of health services, and unmet needs for medical care are generally low. However, there are some gaps in coverage. Because dental care and outpatient medicines are less well covered, OOP spending can be substantial, and thus, unmet needs are higher, particularly among lower-income groups despite subsidies and caps on overall OOP spending for outpatient medicines. In 2021, 42% of pharmaceutical spending was publicly covered, compared with 59% across the EU (OECD, 2023a). OOP expenditure is concentrated for outpatient prescription medicines and dental care, and together they contributed to 44% of total OOP spending in Denmark in 2021 (OECD, 2023a). However, OOP spending in Denmark is relatively low (see Section 3.4). Experimental or costly new pharmaceuticals are not systematically covered (Palm et al., 2021). Lastly, there are restrictions on access to some assisted reproductive health services. For example, public facilities do not provide fertility treatment for women aged over 41, and most regions only cover up to three rounds of IVF treatments (Palm et al., 2021).

### ■ 3.3.2 *Collection*

#### GENERAL GOVERNMENT BUDGET

The state derives its income from:

- personal income tax, payable on wages and almost all other forms of income, including profits from personally owned businesses;
- labour market contributions on all personal income;
- property tax;
- corporate income tax;
- VAT;
- taxes on specific goods; and
- energy and excise duties, including duties on pollution and the consumption of scarce goods.

National tax rates are set by a majority in the parliament and local taxes by the municipal councils. The state collects all taxes and duties. Personal income tax and labour market social security contributions (*Arbejdsmarkedetsbidrag*) account for more than half of the state's total revenue. In 2023, the labour

market social security contribution (*Arbejdsmarkedsbidrag*) rate was 8%. State taxes are calculated according to a two-step progressive scale, with a basic rate in 2023 of 12.1% and a top rate of 15% on labour and capital income. A tax ceiling ensures that income taxes collected at state and municipal levels cannot exceed 52.07% of income in 2023. Several existing taxes on goods are partly motivated by health concerns (e.g. excise duty on spirits, tobacco products, chocolate products, ice cream and soft drinks). A tax on fatty foods was introduced in 2011 but abolished in 2013. None of these taxes are earmarked for health care.

### TAXES, CONTRIBUTIONS OR PREMIUMS POOLED BY A SEPARATE AGENCY

The municipalities derive their income from a proportional income tax (between 22.8% and 26.3% in 2022), a proportional land tax (between 1.6% to 3.4% in 2022) and block grants from the central government. Formally, the municipalities set the tax rates themselves. However, the municipal councils set rates within limits negotiated with the state. As per the Danish 2014 Budget Act, implementing the EU Fiscal Compact, the state may punish the municipalities, for example, by reducing the block grants, individually or collectively, if the municipalities collectively exceed the limit on their tax rate (see Box 3.2).

#### **BOX 3.2** Is health financing fair?

The health system is tax financed and mostly provided free at the point of delivery, so the fairness of health financing reflects the fairness of income taxation, which is progressive in Denmark, although its redistributive effect is declining (Nielsen & Christensen, 2022). Health care funding by progressive income taxation contributes positively to equity, but non-financial barriers to health care utilization may undermine its impact.

In Denmark, user charges are not currently utilized to improve efficiency by influencing patients' behaviour but may reduce patients' utilization of costly health care; for example, dentistry services. User charges are inherently regressive and therefore do not contribute positively to equity.

Independent researchers have questioned whether the key for allocation of block grants to the regions reflect the sociodemographic differences between the regions sufficiently (Pedersen, Søgaard & Kjellberg, 2022).

### ■ 3.3.3 *Pooling of funds*

#### **ALLOCATION FROM COLLECTION AGENCIES TO POOLING AGENCIES**

Every year in May to June, the state, represented by the Minister of Finance, negotiates limits to municipal taxation and expenditure, the total size of the block grants to the municipalities, and the service level for the next year with Local Government Denmark. The regional service level and size of the block grants are also negotiated with Danish Regions (see Section 2.4).

Changes in the amount of money distributed from the state through block grants to the municipalities and regions depend on inflation and whether:

- the municipalities take on new tasks;
- responsibility for one or more tasks is moved from one administrative level to another; and
- the regions and municipalities increase their service level in a specific area in agreement with the state.

Demographic changes, changes in morbidity or the introduction of new and expensive medicines do not automatically lead to increased block grants.

The block grants are distributed to the municipalities in proportion to the population. However, to consider the differences in the inhabitants' taxable income and needs, funds are afterwards redistributed between the municipalities to ensure that each municipality's tax rate ideally reflects the municipality's service level and efficiency rather than the population's demographic characteristics and income. Redistribution between municipalities is based on a series of complex formulae, which include several objective criteria, including the age distribution of the population, the number of unemployed and the unemployment rate, uptake of affordable housing, the number of disabled people, people on low incomes or with basic or no education, the average life expectancy and the proportion of older people living alone. In addition, special schemes provide extra redistribution to municipalities with a high share of immigrants from non-EU countries or geographical challenges (islands). However, to give the municipalities an incentive to improve their performance, the redistribution between them is only partial (Indenrigs- og Boligministeriet, 2022a).

During summer and autumn, the municipality councils negotiate the following year's budget, including budgets for health care. This process includes a purely technical negotiation between the municipality and the region on how much money the municipality and the region expect the municipality must pay to the region for health care.

The regions derive their income for health care from three sources (Indenrigs- og Boligministeriet, 2022b):

- a block grant from the state (83% in 2022);
- performance-based financing from the state, ideally reflecting continuity in care (1% in 2022);
- activity-based financing from each municipality in the region (16% in 2022).

In 2023, each region's share of the state's block grant depends on certain sociodemographic criteria (Table 3.3).

The size of the performance-based contribution from the state to each region basically depends on whether the region and the municipalities in the region succeed in avoiding hospitalizations, reflecting continuity of care. This mirrors a shift in funding principles in 2019 from activity-based funding to value-based proximity financing (a pay-for-performance system) that promotes the transition from hospital to primary, local and digital health care (see Section 6.1). There is an upper limit to the amount of money each region can earn through performance-based financing from the state. In 2022, the performance was measured by the following criteria (Danske Regioner, 2022):

- a reduction in the number of hospitalizations/citizens;
- a reduction in inpatient care for each patient with COPD and/or diabetes;
- a reduction in the share of hospital readmittance within 30 days of discharge;
- an increase in virtual hospital treatments' share of hospital treatments.

The size of the performance-based contribution paid by the municipality in each region depends on the number and type of health care services

**TABLE 3.3** Sociodemographic criteria for allocation of the block grant

SOCIODEMOGRAPHIC CRITERIA	WEIGHT (%)
Number of older people (65+ years) living alone	25
Number of families receiving social security	17.5
Number of children of single parents	15
Number of people living in rented housing	15
Number of years of life lost (YLL), relative to the region with the highest average life expectancy	10
Number of psychiatric patients who have been in contact with a psychiatric hospital department within the last 10 years	5
Number of patients with a diagnosis of schizophrenia who have been in contact with a psychiatric hospital department within the last 10 years	5
Population density (the average travel time for each inhabitant in the region to the 18 000 inhabitants living closest to the inhabitant, multiplied by the number of inhabitants)	5
Number of citizens living on islands without a fixed connection to the mainland	2.5

*Note:* The percentage represents each criterion’s weight, adding up to 100%.

*Source:* Indenrigs- og Boligministeriet, 2022b.

provided to citizens in the municipality, measured in DRG points with an upper limit on the contribution. If the amount exceeds this limit, the state receives the surplus, thereby maintaining the incentive for the municipality to prevent disease and keep to the upper limit to the region’s income and expenditures (see Box 3.3).

**ALLOCATING RESOURCES TO PURCHASERS**

The pooling and purchasing (payment) functions are integrated, although it is basically the patient or the GP (regarding services provided by hospitals) who chooses the provider (see Section 2.8.2).

### **BOX 3.3** Are resources put where they are most effective?

Allocation of resources depends on multiple governance tools and clinicians' decision-making working in parallel – including global budgets at several organizational levels (by politicians or administrators), subsidies for some services, political allocation of funds for specific purposes (sometimes in response to media reports on specific subjects/problems), payments by fee-for-service, patient rights, etc. There is no objective measure of the effect of various resources on population health, and no comparative analyses on the effects of different interventions at the health system level.

The political debate about Danish health care reflects a growing emphasis on questions concerning allocative efficiency. For example, it has been questioned why there is so much emphasis on cancer, heart disease and formal equity in access to health care compared with psychiatry, multimorbidity, preventive services and equity in actual utilization of health care.

The evaluation of drugs by the Danish Medicines Council represents a major step towards more consistent priority-setting in Danish health care.

### ■ **3.3.4** *Purchasing and purchaser–provider relations*

Public hospitals owned and managed by the regions work within detailed targets for waiting times and financial resources. If managers at the hospital or departmental level deviate from the budgets, they may be fired by the region. If GPs, medical specialists or other providers working independently diverge from the official targets, their representatives may enter into negotiations with the region about the divergences and the reasons behind the divergences.

If the regions cannot meet the guarantees on treatment and care, they must offer patients treatment in a private hospital or clinic. The relations between the regions and the private providers are highly dynamic. Contract negotiations between Danish Regions and private hospitals are governed at the national level, by centralized price setting should negotiations fail, and by invitations to tender by individual regions for a specified number of specific examinations or treatments. The state still plays a major role in the formalized relationship between private hospitals and clinics by stipulating the legal framework for utilizing private providers and putting pressure on the regions to utilize private providers.

## ■ 3.4 Out-of-pocket payments

### ■ 3.4.1 *Cost sharing (user charges)*

There are no user charges for primary care and inpatient stays (Table 3.4). Patients pay OOP for some outpatient services including dental care, physiotherapy, chiropractic care and psychological services outside hospitals. Outpatient physiotherapy and psychological therapy outside hospitals may be subsidized if the GP refers the patient. For dental care, the reimbursable amount depends on the procedure performed, but commonly, only a smaller part of the total cost is covered, resulting in high OOP payments. Inequity in dental status has been attributed to these high costs (Petersen, 2021).

A majority in the parliament has allocated special grants for free access to psychologists (for 15–24-year-olds with anxiety or depression) and for physiotherapy (for patients with some chronic diseases/conditions including multiple sclerosis and cerebral palsy) – until a year's grant has been spent.

Medicines prescribed in hospitals are free at the point of delivery, whereas medicines prescribed by GPs or ambulatory/outpatient specialists are subject to cost sharing (patients in outpatient hospital treatment for some diseases may receive drugs free at the point of delivery at the hospital or pharmacy). Users pay a fixed proportion of the cost of the medicine, with the regions paying the balance (co-insurance). The level of co-insurance depends on the individual patient's drug costs in a year (Table 3.5). Pharmacies must offer to substitute brand-name medicines prescribed by the GP with the cheapest generic to reduce drug costs for both the public sector and the individual patient. OOP payments are not tax deductible. Co-payments for outpatient medicines are capped but are not limited in other areas (e.g. dentistry and some other outpatient services). Consequently, user charges in some areas have much greater impact for individual patients and on equity than others (see sections 3.7, 7.2 and 7.3).

The state decides on user charges and there are no uniform principles for this. User charges have previously been introduced to reduce demand for health services, promote more efficient utilization of resources, and increase revenues. Co-payments have developed through historical choices and there is no logical pattern determining whether a specific health care service is paid for by the patient or the region or municipality. The size of many user charges and subsidies is independent of the patient's income. There is no



**TABLE 3.4** User charges for health services

	TYPE OF USER CHARGE IN PLACE	EXEMPTIONS AND/OR REDUCED RATES	CAP ON OOP SPENDING	OTHER PROTECTION MECHANISMS
<b>Primary care</b>	None for health care			
<b>Outpatient specialist visit</b>	None if referred by a GP			
<b>Outpatient prescription drugs</b>	Fixed percentage co-payment (co-insurance)	Subsidies which increase with increasing costs (see Table 3.5)	Yes	VHI
<b>Inpatient stay</b>	None			
<b>Outpatient visit</b>	None			
<b>Dental care</b>	Yes, dependent on service/treatment	Free access for citizens aged 0–19 years (2023), 0–20 years (2024), 0–21 years (from 2025) Subsidies for certain preventive interventions and treatments for older age groups		VHI
<b>Medical devices</b>	Yes – full cost without prescription	Municipalities pay for or subsidize some medical devices prescribed by a GP or the municipality		
<b>Other (please specify)</b>	Yes – full cost	Outpatient physiotherapy or psychological therapy, etc., may be subsidized (free for patients with disabilities) if the GP refers the patient. Chiropractors are subsidized without GP referral		VHI

GP: general practitioner; OOP: out-of-pocket; VHI: voluntary health insurance.

Source: Authors.

clear relation between when an intervention was introduced and whether it is paid for by the patient or by the region or municipality.

There have been no political movements towards introducing user fees for medical care, but in a break away from the traditional provision of hospital

**TABLE 3.5** Cost sharing for medicines prescribed by a GP or a practicing specialist – the patients’ share of costs, 2023

INDIVIDUAL SPENDING ON MEDICINES IN A YEAR	CO-INSURANCE FOR PATIENTS UNDER 18 YEARS	CO-INSURANCE FOR PATIENTS 18 YEARS OR OLDER
DKK 0–1 045 (€0–140)	60%	0%
DKK 1 045–1 750 (€140–235)	60%	50%
DKK 1 750–3 795 (€235–509)	75%	75%
DKK 3 795–20 636 (€509–2 767)	85%	85%
DKK 20 636–25 286 (€2 767–3 391)	85%	100%
> DKK 25 286 (> €3 391)	100%	100%

Source: Lægemiddelstyrelsen, 2023b.

services free at the point of delivery, user charges were introduced for three kinds of hospital care on 1 January 2011: fertility treatment, sterilization (DKK 8457 (€1 134) for men and DKK 12 984 (€1 741) for women) and sterilization reversal, but these user charges were abolished again by 1 January 2012. Similarly, in 2018, the former Liberal government implemented a new fee for using interpreters for migrants who had been living in Denmark for more than 3 years.

Employers and individual citizens may take out VHI to spread the cost of paying user charges. However, VHI is not tax deductible for employers. The data on VHI coverage of the Danish population are insufficient in terms of comprehensiveness and coherence (see sections 3.3.1 and 3.5).

■ **3.4.2** *Direct payments*

Patients pay directly for glasses, over-the-counter medicines and cosmetic surgery. Prices are set competitively.

■ **3.4.3** *Informal payments*

In Denmark, informal payments are not a feature of the health system.

## ■ 3.5 Voluntary health insurance

Voluntary complementary health insurance is purchased by around 42% of the population to cover user charges for outpatient medicines, dental care and other services. Supplementary insurance is purchased (by around 32% of the population) to get expanded access to private providers. The proportion of the population covered by VHI has largely been driven by: (1) increasing user charges for certain services; and (2) changes in the tax rules for commercial health insurance in 2002 (Kjellberg, Andreassen & Søgård, 2010).

Between 2002 and 2012, VHI paid by the employer was not taxable if the VHI covered all employees. The declared intention was not to substitute tax-financed health care but to supplement public care and promote free choice (Pedersen, Christiansen & Bech, 2005). However, as the changed tax rules only applied to insurance policies purchased by employers, it could be seen as an indirect tax subsidy that favoured the employed population and challenged the basic values of equity and solidarity.

### ■ 3.5.1 *Complementary insurance*

Complementary VHI provides full or partial coverage for services excluded from or only partially covered by the statutory health system. It primarily covers co-payments, and, in some cases, it pays for non-publicly reimbursed health care. All citizens may take up complementary insurance. Children are usually covered by their parents' VHI.

The dominant insurer is the non-profit mutual health insurance association “danmark”, which covers around 50% of dental care and 14% of OOP spending on outpatient prescription medicines. Premiums are not tax deductible. The insurer offers four different coverage schemes (Table 3.6). Group 5, the largest group, is mainly aimed at young people, who generally have less need for coverage, and the premiums are lower compared with groups 1 and 2. The fourth group, the basic scheme, is designed for people with no current need for medical care. However, members can switch to one of the other schemes when necessary, except for persons in the basic group who can change once a year, without requalifying their membership.

Complementary VHI is provided through annual or long-term contracts, and benefits are paid in cash. Applications for coverage may be rejected if

applicants do not fulfil the requirements, which include being younger than 60 years of age and, otherwise, mainly concern health status, and are set out by Health Insurance “danmark”.

Since 1973, the membership has increased from about 270 000 (Pedersen, Christiansen & Bech, 2005) to 2.7 million (46% of all inhabitants) in 2023 (Sygeforsikring “danmark”, 2021; 2023), making complementary VHI the most common type of VHI in Denmark.

■ 3.5.2 *Supplementary insurance*

The development of supplementary VHI in Denmark stems from a political initiative to strengthen supplementary coverage. From 2002 to 2012, the tax rules for commercial health insurance meant that the premium was tax-free for the employees if all employees in an organization were included (Pedersen, Christiansen & Bech, 2005). Apart from the more favourable tax issue, demand may also have been fuelled by public debate on the public health system. Quality and waiting times are perceived to be problems in Denmark, and insurers have been able to capitalize on these concerns.

All citizens may take up supplementary insurance, but nine out of 10 citizens covered by supplementary insurance are covered by their employer (Seiersen, Hansen & Borchsenius, 2011). The level has been stable even after the tax exemption was abolished, and in 2020, 7% paid individually (Forsikring og Pension, 2023). Few workplaces in the public sector offer VHI; most citizens covered by supplementary VHI work in the private sector.

**TABLE 3.6** Coverage schemes within Health Insurance “danmark”

GROUP	5	1	2	BASIC
Coverage	Medication, vaccination, dental care, glasses and contact lenses, psychology and physiotherapy services	Same as Group 5 + subsidy for extended dental treatment + greater subsidy for medicine + subsidy for operations after 1 year + others (e.g. funeral aid, visits to sanatoria)	Same as Group 1 + more freedom of choice of GPs and specialists + full coverage of subsidized medication	None

Source: Sygeforsikring “danmark”, 2023.

Insurance premiums are set competitively, and insurers can reject applications from potential customers for insurance. In Denmark, insurers and providers are not integrated. Insurers buy services from private providers in Denmark or abroad, both specialists and hospitals. Published data on the administrative costs of insurance companies are not readily available.

According to the Danish Financial Business Act, which implements several Council Directives, Danish insurance companies are regulated by the Danish Financial Services Authority (*Finanstilsynet*). A major part of the Danish regulation of insurance companies is derived from EU regulations.

## ■ 3.6 Other financing

Other financing methods are only of marginal importance.

### ■ 3.6.1 *Parallel health systems*

The role of parallel health systems is marginal and limited to a few individual providers operating independently. Danish ministries such as those for the interior, defence and justice do not run their own health systems.

### ■ 3.6.2 *External sources of funds*

Danish health care is not funded by external sources.

### ■ 3.6.3 *Other sources of financing*

Except for contributions to VHI, as described above, private and public employers do not provide access to parallel health care. At the same time, only a minor share of the costly equipment in Danish hospitals has been financed by private foundations or sponsors.

## ■ 3.7 Payment mechanisms

Table 3.7 shows the different payment mechanisms for providers in the health system. The rest of this section provides more detailed information on payment methods and processes in different subsectors.

### ■ 3.7.1 *Paying for health services*

#### **PUBLIC HEALTH SERVICES**

Fundamentally, public health services are financed by global budgets set politically by the regions and the municipalities based on the yearly agreements with the state. When services are provided by the regions or the municipalities themselves, the providers usually receive a global budget, while private providers usually receive fee-for-services payments.

#### **PRIMARY CARE**

The Regions' Board for Wages and Tariffs (*Regionernes Lønnings- og Takstsnævn*, RLTN) and the Organization of General Practitioners (*Praktiserende Lægers Organisation*, PLO) negotiate the fees for GPs. Individual regions may enter into one or more supplementary agreements with representatives of the GPs working in the region on the provision and payment of services not included in the national agreement. GPs derive almost all (more than 95%) of their income from the region in which their practice is situated. Their income is derived from a mixture of capitation, which makes up, on average, a third of their income, and fees for services rendered (per consultation, examination, out-of-hours consultation, telephone consultation, email consultation, home visits etc.), which make up the remaining two thirds. Fees paid directly by citizens for services not covered by the region (e.g. fitness certificates for the renewal of driver's licenses, some other health certificates, and some vaccinations) constitute only a small part of a GP's income. This combined fee system has evolved over the last 100 years.

The objective of the RLTN when negotiating fees is to create incentives for the GPs to treat patients at the primary care level rather than refer

**TABLE 3.7** Provider payment mechanisms

	REGIONS	MUNICIPALITIES
<b>GPs</b>	FFS and C	
<b>Ambulatory specialists</b>	FFS	
<b>Other ambulatory provision</b>	FFS	
<b>Acute hospitals</b>	Global budgets	
<b>Other hospitals</b>	Global budgets	
<b>Hospital outpatient</b>	Global budgets	
<b>Dentists</b>	FFS	
<b>Pharmacies</b>	(see Section 3.7.1)	
<b>Public health services</b>	Global budgets and FFS	Global budgets and FFS
<b>Social care</b>	Global budgets and FFS	Global budgets and FFS

C: capitation; FFS: fee-for-service; GP: general practitioner.

Source: Authors.

patients who could be treated in general practice to a hospital while, at the same time, providing budget safety for the regions. While fees for service should increase GPs' productivity and provide incentives for them to treat patients themselves rather than referring them to hospitals, capitation aims to compensate GPs for services not covered by fees, thereby reducing the temptation for GPs to provide unnecessary treatment (supplier-induced demand) to secure a sufficient income. If a GP's turnover exceeds the average turnover for GPs in the region by a certain percentage, the GP's representatives in the region and representatives of the regional council may discuss the situation, but the region cannot order the GP to reduce their turnover or activity or to pay back a proportion of the turnover.

## PHARMACEUTICAL CARE

Pharmacies derive their income from the sale of prescribed medicines, over-the-counter medicines and other goods. Prices on prescribed medicines and over-the-counter medicines which are only available from pharmacies, are regulated at the national level, while prices on other goods are set competitively.

The pharmacies' profits are regulated by the state, which sets a limit on the pharmacies' gross profits. To ensure citizens' access to pharmacies throughout the country, pharmacies with a high turnover must share profits with low-turnover pharmacies located at least five kilometres from the next closest pharmacy.

## INPATIENT CARE AND SPECIALIZED AMBULATORY CARE

Financial resource allocation between the integrated purchasers and providers in the hospital sector of the Danish health system was subject to several major reforms through the 1980s and 1990s (see Olejaz et al., 2012). Prospective global budgets for hospitals were introduced in 1982 in response to massive budgetary deficits experienced in the 1970s. Several different national and regional-level initiatives have been introduced to counter the obstructive incentives associated with global budgeting – but the main purpose of global budgeting has been to contain total costs.

Activity-based financing was introduced at the department and hospital levels in the 1990s, and by 2010, two of the five regions distributed 70% of their hospital budgets through activity-based financing (DRGs).

The national health authorities developed the Danish DRG system from a Nordic system NordDRG. DRG rates are calculated annually by the Ministry of Health based on the hospitals' accounts and activity (Sundhedsdatastyrelsen, 2022b). Until 2018, rates for inpatients (DRG rates) and outpatients (DAGS rates from the Danish outpatient grouping system – Dansk Ambulant Grupperingssystem) were calculated, but the two rate systems were merged. In 2023, the Danish DRG system includes 951 DRG groups (Sundhedsdatastyrelsen, 2022b). The medical societies validate the logic in the grouping of services.

Activity-based funding was associated with some perverse incentives; for example, an incentive to avoid telemedicine and treat patients at hospitals to produce DRG- and/or DAGS-points, as telemedicine did not register as an output in the activity-based funding system (Burau et al., 2018; Danske Regioner, 2015). Furthermore, activity-based funding strengthened the focus on increasing activity per se rather than on activity providing value for the patients.

Against this background, the regions wanted to substitute so-called value-based funding for activity-based funding, utilizing patient-reported



outcomes (PROs) and patient-reported experience measures (PREMs). In 2015 the Danish Regions and the state agreed to initiate the development of PROs. Each region got the responsibility for studies of value-based care for one or two of seven diagnoses: hip and knee replacement (Region Nordjylland), stroke (Region Midtjylland), prostate cancer (Region Syddanmark), epilepsy (Region Sjælland) and anxiety and depression (Region Hovedstaden) (Danske Regioner, 2016). From 1 January 2017, all five regions largely abolished activity-based funding and started introducing value-based health care at the departmental, hospital or regional levels. For example, Region Hovedstaden tested value-based health care at the hospital level on the island of Bornholm and the highly specialized Heart Centre at Rigshospitalet in Copenhagen. Region Midtjylland tested a new governance model where hospital departments choose their own performance focus during a 3-year test period (Bollerup et al., 2018). Region Sjælland abolished activity-based funding in all somatic and psychiatric hospitals in the region in a single step. The regions use a number of indicators including adherence to the waiting time guarantees for diagnosis and treatment and the cancer pathways and eight national targets act as proxy measures for value for the patients as PROs are not available yet. The eight goals include 40 sets of standards and indicators in the eight areas: increased continuity in care; better care for chronic and older patients; lower mortality and increased patient safety; treatment of high quality; fast diagnosis and treatment; greater patient involvement; more healthy life years; and a more efficient health care system (Regeringen, Danske Regioner & KL, 2016) (see Section 2.7.2).

In effect, the regions still utilize governance by targets and measurement, but the activity-based funding model has been replaced with a funding model that emphasizes broader performance measures than before.

Current DRG rates are still calculated every year for calculating interregional payments for patients treated outside their home region and for calculating the municipalities' payments to the regions as well as benchmarking.

### ■ 3.7.2 *Paying health workers*

In hospitals, the RLTN and the employees' trade unions negotiate salaries for all health workers. The RLTN consists of a representative from each of the five regions (each of which must be a member of a regional council), two representatives appointed by Local Government Denmark (each of which

must be a member of a municipal council), a representative of the Ministry of Finance and a representative of the Ministry of Health. Wages are calculated based on the number of hours worked, with supplements for extra hours. The wages of each health professional are thus independent of the clinical output, quality and service level in the department and hospital. For providers of health services outside the hospitals, payments are negotiated between the RLTN and professional organizations.

Practicing specialists, all of which practice outside hospitals, derive their income from fees paid by the regions for specific services described in the agreement between the RLTN and the Danish Association of Medical Specialists. They do not receive capitation payments. For each specialty, the agreement specifies the fee associated with each service. If the specialist reaches a certain turnover (specific for each medical specialty), the fees for further services provided are reduced by 40%. Until 2008, the payment was reduced in two steps, by 25% at the first limit and 40% at the second limit, to reduce the risk that actual costs exceed the region's budget. However, to reduce waiting times at hospitals, the first limit was eliminated on the assumption that this would strengthen the specialists' financial incentives to examine and treat patients, thereby reducing the pressure on hospital departments and the need for re-referral of patients to private hospitals. Little evidence is available on whether this had the desired impact, but controlling spending on GP and outpatient specialist services is a persistent challenge for the regions.

The agreements reached by the RLTN with other providers, such as physiotherapists, psychologists, chiropractors and dentists, also specify fees and conditions for providing services. The agreements do not include capitation payments.

It has proved difficult for the regions to control costs to providers outside hospitals for several reasons:

- The regions and the providers' representatives are negotiation partners on an equal footing (at least formally). The regions cannot change the providers' financial conditions unilaterally but must enter into a negotiation to reach an agreement, while they may unilaterally reduce hospital departments' financial budgets or increase their activity budgets.

- A large share of the turnover of GPs and, particularly, medical specialists are derived from contracted fee-for-service payments, so even small changes in providers' activity levels impact on the region's budget.
- GPs treat 90% of the patients showing up in their practice without referring them to the hospital. If the regions reduce the GPs' financial incentive to treat patients, the GPs may refer more patients to the hospital. Even if the GPs refer only a small percentage more of their patients to hospitals, the number of patients received by hospitals – and the hospitals' costs – will increase by a much higher percentage.
- GPs and other providers working independently employ secretaries and other supporting personnel, such as nurses or laboratory technicians, who are paid fixed salaries in accordance with agreements between employers' associations and the relevant trade unions. It is the stated objective of the state and the regions to encourage GPs to employ more supporting personnel to enable GPs to concentrate on tasks that only medical doctors are authorized to perform.
- A pharmacy's turnover determines the income of a proprietor pharmacist, the pharmacy's costs and regulation by the state, which redistributes income from pharmacies with a relatively high turnover to pharmacies with a relatively low turnover. The association between the pharmacy's and the proprietor pharmacist's financial success gives proprietor pharmacists an incentive to improve the pharmacy's efficiency. Salaries for pharmacy staff, pharmacists and pharmaconomists (pharmacy assistants) are set through negotiations between employers' associations and the relevant trade unions.

# 4

## Physical and human resources

### ■ Summary

- The number of hospital beds has declined since the late 1980s in the acute, long-term and psychiatric care sectors. The average length of stay has also decreased through changes in treatment protocols, with an increase in outpatient treatments, and a policy of deinstitutionalization in the psychiatric care sector.
- The hospital sector has been transformed during the past 15 years through a process of consolidating hospitals and the centralization of medical specialties, including a reorganization of the acute care system.
- Alongside this process, a long-term major investment programme in new hospitals and improvements to existing ones continuously transform the sector. The aim is for all projects to be completed in 2025.
- The Danish health care system is, to a very high degree, based on digital solutions that health care providers, citizens and institutions use. All primary care doctors and hospitals have used electronic medical records for decades. Information technology (IT)

literacy is high, and official apps for accessing health information and managing health care access are proving increasingly popular.

- Despite having a relatively high number of practicing doctors and nurses per capita, Denmark has a general shortage of health professionals, particularly among nurses and nurse assistants (social and health care assistants).

## ■ 4.1 Physical resources

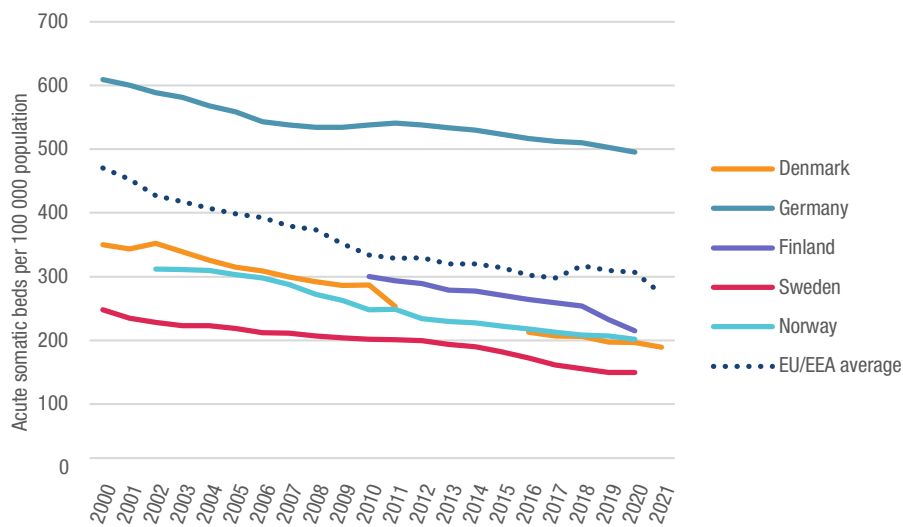
### ■ 4.1.1 *Infrastructure, capital stock and investments*

#### INFRASTRUCTURE

In 2021 counting all beds, there were 252 hospital beds per 100 000 inhabitants, a number that has declined dramatically from 420 beds per 100 000 inhabitants in 2002 (Eurostat, 2023b). In total, there were around 14 000 beds in the hospital sector in 2020 (eSundhed.dk, 2022). The number of acute somatic care hospital beds in Denmark has also declined substantially since 2000 (Fig. 4.1), reflecting a trend in almost all western European countries. In 2021, there were 190 acute somatic care hospital beds per 100 000 population (Fig. 4.1). The relative reduction in the number of beds is most significant in psychiatry, largely because of the policy of deinstitutionalization, whereby beds in long-stay psychiatric hospitals are gradually being replaced by community mental health services where patients are not living in institutions. Between 1980 and 1990, the total number of psychiatric beds was dramatically reduced from 8182 to 4906. In 2018, the number of psychiatric beds was 2677 (Danske Regioner, 2018; Sundheds- og Ældreministeriet, 2019a).

The inpatient average length of stay was 5.4 days in 2020 (Eurostat, 2023c) and has decreased substantially since the 1990s. This steady decline has occurred as treatments have become more effective and some nursing care has been transferred to the municipal services. A similar decline has occurred throughout the last 100 years because of changes in disease patterns and the availability of more effective treatments, among other reasons (Vallgård & Krasnik, 2010). A focus on shortening the length of stay through policies extending free choice combined with the treatment guarantee has put pressure on the regions to optimize patient flow during admission (see Chapter 6).

**FIG. 4.1** Acute somatic care beds in hospitals per 100 000 population in Denmark and selected countries, 2000–2021



EEA: European Economic Area; EU: European Union.

*Note:* Data only refer to curative care beds in hospitals for somatic care, as data for Denmark are not available for psychiatric care through the Eurostat Database.

*Source:* Eurostat, 2023b.

**BOX 4.1** Assessing the geographical distribution of health resources

The distribution of hospitals in Denmark reflects geographical differences in population density. Thus, the Region Hovedstaden has the largest hospital network, and the largest distances are between hospitals in the less populated Region Midtjylland and Region Nordjylland. Still, Denmark being a relatively small country, means that most citizens have a hospital nearby, and every citizen is no more than one hour away from a hospital. There are, however, differences in the distribution of specialized health care services that tend to be centralized in the larger cities across Denmark, but transport infrastructure is good, so these differences do not constitute a major barrier to accessing care.

**CURRENT CAPITAL STOCK**

The number of Danish hospitals can be based on organizational units or sites. A hospital organizational unit can have several different physical locations or addresses across a city or greater area. Odense University Hospital, for

example, has the main facility in Odense but also a site at a former independent hospital in Svendborg, which is 45 km away.

In 2020, there were 29 organizational units across the Danish health care system, and five were psychiatric hospitals (one in each of the five regions) (see Box 4.1). The hospitals are situated across the country following population density, with the greatest number of hospitals around the capital, Copenhagen. Hospital size varies from the smallest, with around 90 beds (Bornholms Hospital), to the largest, with 1319 beds (Rigshospitalet) (eSundhed.dk, 2022).

More than 95% of hospital beds are in public hospitals owned and operated by the five administrative regions. Each region has one or more university (teaching) hospitals with tertiary care capacity as well as district general hospitals, of which 21 are acute care hospitals.

Hospital management is organized differently in each region, with executives having from three to six members. In addition, some of the larger hospitals are organized with centres that comprise several individual departments.

After the structural reform of 2007, the government started a process of investing in building new hospitals and improving existing ones (popularly known as the hospital reform). The construction of the new hospitals aims to improve the provision of more consistent patient care and increase patient safety, efficiency and quality. Many current hospitals were built in the 1970s, and their condition reflects decades of intensive use. For example, a condition report from 2018 from Region Hovedstaden showed that several buildings and technical facilities in the region are in an alarmingly critical condition (Region Hovedstaden, 2018).

A panel of experts was appointed in 2007 to review hospital construction plans from the regions and recommend to the government which construction projects should receive funding. The recommendations were based on the wish to centralize medical specialties at fewer hospitals and on the need to support a new structure for acute care hospitals, thus reflecting stated policies on how the health system should be organized in the future. Currently, more than €6.5 billion have been invested in 16 different building and renovation projects, including the so-called “super-hospitals”. Several new hospitals have already been completed, while others are underway. There has been some criticism that the construction of the new hospitals is taking place in all regions simultaneously rather than progressively over time: this could

have reduced the demand for scarce construction resources, limited price increases and allowed a learning process. Over half of the building projects have taken longer than anticipated (Kristensen, 2020), pushing back the projected opening times. The aim is for all projects to be completed in 2025.

In 2022, a further DKK 4 billion (€536.4 million) was allocated for the development of 25 “local hospitals” to serve more remote areas and meet the chronic care needs of the population (see Section 5.4.1).

## REGULATION OF CAPITAL INVESTMENT AND INVESTMENT FUNDING

Regional capital investments and ongoing maintenance costs are funded through general revenue and occasionally by specific grants. Recent capital investments support a planning strategy that combines a new acute care organization and a continuing trend of centralization of the hospital sector (see Section 2.4). The financing of large-scale buildings is accomplished through a combination of state grants, regional self-financing and loans. However, the state limits the economic activities of the regions regarding the level of expenditure and borrowing. These limitations vary over time and are generally based on political considerations. Despite political interest, there are no current public–private partnerships for capital investments.

Large differences exist between capital investments in the different sectors of the health system because of differences in ownership and funding. As public hospitals are owned by regions and financed through taxes, capital investments in these hospitals are governed differently to, for example, the primary care sector, where the estates are privately owned.

### ■ 4.1.2 *Medical equipment*

Financing of new medical equipment and ongoing maintenance costs are funded through general revenue and occasionally by specific grants in the same way as capital investments (see Section 4.1.1). There is very limited national information available from hospitals and primary care facilities on existing medical equipment and its use. It is difficult to assess whether the quality and quantity of basic equipment are sufficient. There are waiting times of varying lengths for diagnostic imaging. Different actors, for example,



patient organizations and hospital managers, are likely to disagree on whether this means the capacity is too low. Primary care doctors can refer to diagnostic imaging facilities at hospitals and in private clinics in bigger cities. There are special facilities for primary care diagnostics, including diagnostic imaging. Until May 2011, primary care doctors could not refer patients directly for computed tomography (CT) scans and magnetic resonance imaging (MRI); before then, such referrals could only be made by doctors in secondary care. In 2021, there were 4.4 CT scanners per 100 000 population (both in hospitals and in the ambulatory sector) in Denmark (Eurostat, 2023d).

### ■ 4.1.3 *Information technology and eHealth*

The Danish health care system is, to a very high degree, based on digital solutions used by health care providers, citizens and institutions. All primary care doctors have and use electronic medical records. Since 2004, primary care doctors have been mandated to use computers and a system for electronic medical records and communication. The Danish Health Care Data Network (MedCom) developed the system. It allows for the management of medication lists, clinical progress notes, viewing diagnostic images and laboratory test results, and sending reminders to patients. Primary care doctors are connected to specialists, pharmacies, laboratories and hospitals via clinical messaging systems. This allows for medical prescriptions and referrals to hospitals and specialists to be sent and received electronically. Virtually all clinical communication between primary and secondary care is exchanged electronically through this messaging system.

Whereas in-person GP consultations decreased slightly from 20.1 million consultations in 2011 to 17.4 million in 2020, the amount and share of GP email consultations increased from 2.8 million to 9.2 million in the same period at an average annual increase of 12%. At the same time, telephone consultations decreased from 13.4 million to 8.6 million (PLO, 2021). Since March 2020 and the outbreak of the COVID-19 pandemic, the use of video solutions in general practice has improved access to general practice. With the General Practice agreement, which entered into force on 1 January 2022, it was decided to introduce video consultation as a permanent consultation option. The video function is technically available in all medical practice systems today, and many general practices use this application. Approximately

1570 of 2000 practices offer video consultations (PLO, 2022a). The General Practice agreement states that all medical practices must offer video consultations for their patients at the latest by the end of the agreement period, on 1 January 2025.

Internet use for health matters is increasing in all adult age groups. Six out of 10 Internet users between the ages of 75 and 89 have used the Internet to see, for example, test results, doctor's appointments or other information in their E-journal, Health record (*Sundhedsjournal*) or Medicine card (*Medicinkort*). Those aged 35–54 years are the most intensive users of online health data services, with nine out of 10 having seen health-related information online in 2021 (Danmarks Statistik, 2022a).

The Danish E-Health Portal, Sundhed.dk, and the corresponding MinSundhed app, is a joint public service established in 2003 and maintained by the Ministry of Health, Danish Regions and Local Government Denmark. The portal allows patients to access data about their health (i.e. medical records, test results, medications, appointments, etc.) and information about health care providers and waiting times. Through sundhed.dk, patients can also access video consultations. The MinSundhed app was downloaded more than 5 million times as of July 2022. Patients login via unique personal signatures, and health professionals via their professional digital login. All views are logged, and unjustified use is a privacy violation and can be punished. On the Minlæge app, which had more than 1.5 million active users as of July 2022, users can correspond with their GP, request repeat prescriptions, book appointments, have video consultations and access information about vaccinations, referrals, diagnoses and disease management plans.

## ■ 4.2 Human resources

### ■ 4.2.1 Planning and registration of human resources

The Danish Patient Safety Authority (STPS) is responsible for registering the 17 medical professional categories in Denmark wherever they completed their professional training. Moreover, STPS licenses independent practices to medical doctors, dentists or chiropractors and issues specialist registrations in the 39 medical specialties and the two dental specialties. The STPS is also

tasked with supervising authorized health professionals and handles cases of individual and organizational malpractice.

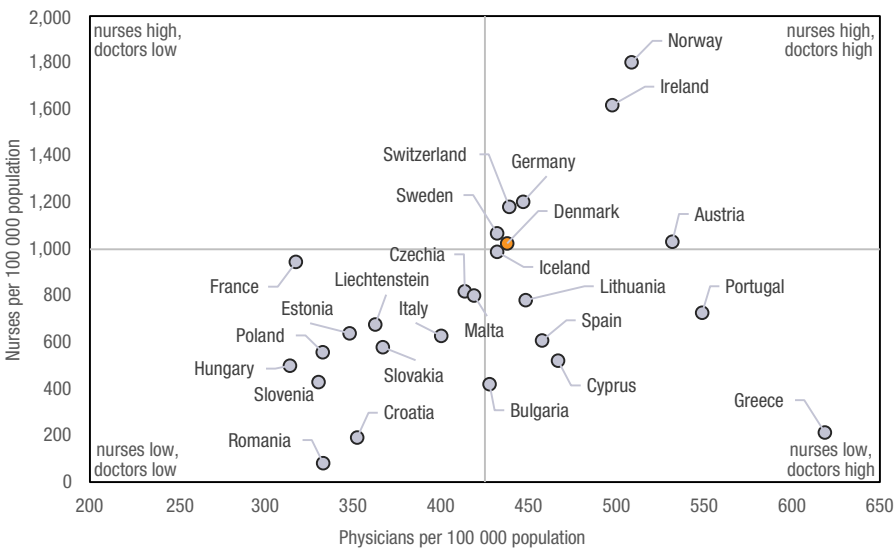
The Ministry of Health defines the postgraduate training programmes for medical specialties based on advice from the Danish Health Authority and the National Council for Postgraduate Education of Physicians. Through the three Secretariates for Medical Training (*Sekretariat for Lægelig Videreuddannelse*), the National Council is responsible for regional planning and coordination of physicians' clinical training. The National Council advises on the number and type of specialties, the number of students admitted to postgraduate training programmes, the proportion of physicians training in each specialty, and the duration and content of postgraduate training. The Danish Health Authority is responsible for the administration and the quality of training for specialist doctors and dentists and specialist training for nurses.

#### ■ 4.2.2 Trends in the health workforce

Despite having a relatively high number of practicing doctors and nurses per capita in Europe (Fig. 4.2), Denmark has a general shortage of health professionals, particularly among nurses and nurse assistants (health and social care assistants). There are also shortages within some medical specialties, among others, in psychiatry, radiology and among GPs and especially outside the larger cities. Furthermore, it is estimated that 1.8 million Danes live in so-called medically underserved areas with too few GPs (*lægedækningsstruede områder*) (PLO, 2019a).

The current staffing challenges are found mainly in anaesthesia departments, intensive care units, internal medicine units and operating rooms, for which all regions have vacant positions. However, depending on the situation, department and region, the challenges look different and have different degrees of complexity. The coalition government from 2022 launched an emergency package for the health care system in February 2023 to address the immediate challenges with increasing waiting times and staff shortages. The package includes a grant of DKK 2 billion (€268.2 million) to strengthen the incentives for extra work at the hospitals in the next 2 years. The government will also collaborate with the regions to enable the use of other types of staff, including medical students, retired health care staff and administrative staff

**FIG. 4.2** Practicing nurses and physicians per 100 000 population, 2020



*Notes:* For physicians, data for Greece, Ireland and Portugal refer to those who are licensed to practise, and for Slovakia data refer to those who are professionally active. For nurses, data for Ireland refer to those who are licensed to practise, and data for France, Portugal and Slovakia refer to those who are professionally active.

*Source:* Eurostat, 2023e.

to ease the pressure on doctors and nurses (so-called task shifting). Another initiative is to streamline and thus shorten the authorization process for foreign health care personnel.

Tackling the longer-term challenges is the primary purpose of the Resilience Commission, which is to make continuous recommendations, starting in early 2023 and reporting their overall recommendations by the end of 2023. In a similar vein, due to the demographic changes in the population together with the shortage of staff issues, the newly appointed Health Structure Commission from March 2023 has been tasked to set up and elucidate the various models for the future organization of health care services by spring 2024. The models must support a preventive and coherent health care system with more equity, proximity and sustainability.

The shortage of GPs has been gradually developing over decades and has left more than 100 000 patients without a GP (see Box 4.2). Those patients, however, have had access to either regionally run or private clinics. The shortage of GPs led to the formation of a ministerial working group

(*Lægedækningsudvalget*) with broad involvement from employers and physicians' organizations. The working group launched several initiatives to increase the number of GPs. The initiatives became part of a political plan with broad parliamentary support for better coverage of GPs (Sundhedsministeriet, 2017). The initiatives included, for example, training more GPs, changes in distribution for residency programmes, strengthened recruitment and retention policies, increasingly flexible ways for GPs to run their practices, and financial incentives.

As seen across Europe, the number of doctors per 100 000 population has followed an upward trend. While it has been lower in Denmark than in other Nordic countries, it has been consistently above the EU average (Fig. 4.3). By contrast, while the number of nurses per 100 000 population has also been above the EU average, it has not increased at the same rate (Fig. 4.4). Over the last decade, it has remained relatively stable.

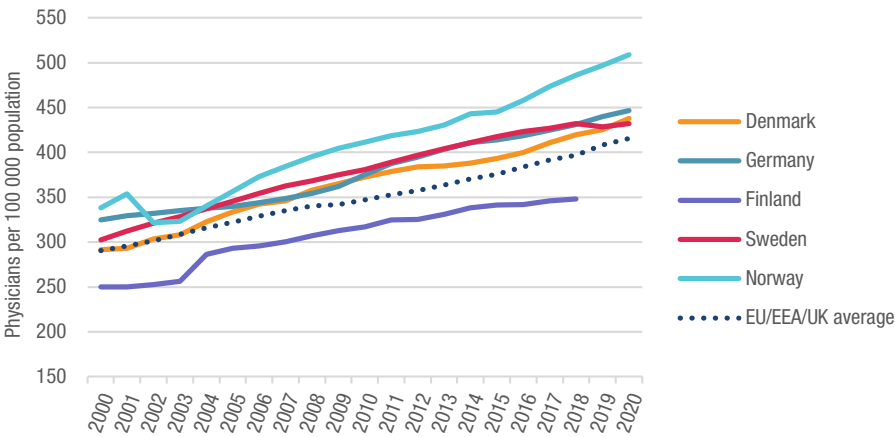
#### **BOX 4.2** Are health workers appropriately distributed?

The number of physicians is slightly increasing but recruitment problems persist, particularly in rural areas. GPs are fairly well distributed throughout the country; however, shortages are seen in both rural and disadvantaged urban areas. Practicing specialists are concentrated in the capital and other urban areas. Nurses constitute the largest group of health workers and the number of nurses increased to 2000, but during the last decade, the number has remained relatively stable. Since the early 2000s, there has been active recruitment of health workers from outside Denmark.

### ■ 4.2.3 Professional mobility of health workers

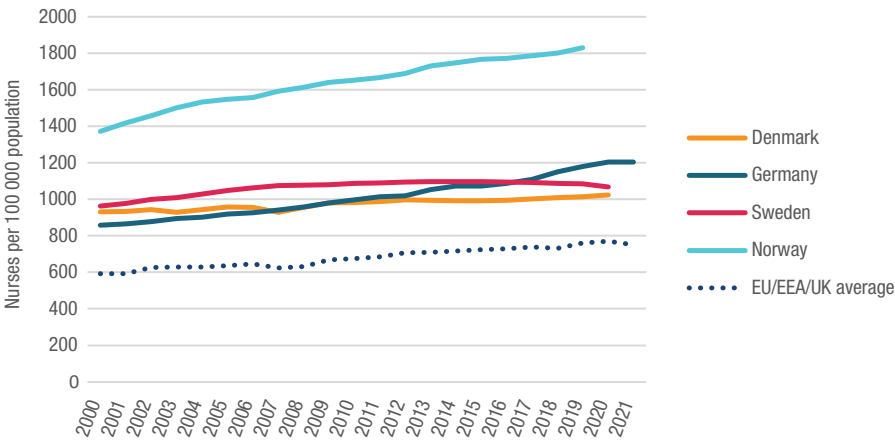
Because of the free movement of labour in the EU, many health professionals come to Denmark to work, and similarly Danish trained health professionals go abroad. Because of language barriers in the wider EU, most mobility of health professionals is within the Nordic countries where some languages are relatively similar. In 2019, there were approximately 2100 foreign trained doctors working in the Danish health system (Lægeforeningen, 2019).

**FIG. 4.3** Number of physicians per 100 000 population in Denmark and selected countries, 2000–2020



EEA: European Economic Area; EU: European Union; UK: United Kingdom.  
Source: Eurostat, 2023e.

**FIG. 4.4** Number of nurses per 100 000 population in Denmark and selected countries, 2000–2020



EEA: European Economic Area; EU: European Union; UK: United Kingdom.  
Source: Eurostat, 2023e.

#### ■ 4.2.4 *Training of health professionals*

Admissions to medical school have almost doubled over the last 20 years, bringing the total number at the four medical schools to 1395 places per year (Sundhedsstyrelsen, 2022a). In 2019, the production of medical graduates in Denmark was relatively high at 18.9 per 100 000 inhabitants against an overall OECD average of 13.2. The number was also higher in Denmark than in Norway (11.3) and similar to that in Sweden (13.5).

#### ■ 4.2.5 *Physicians' career paths*

Physicians' career paths are based on a system of postgraduate medical education. Postgraduate medical education comprises pre-registration training, specialist and subspecialist training. The postgraduate medical education structure begins with pre-registration training called clinical basic education (*klinisk basisuddannelse*). The newly graduated medical doctors are placed in temporary positions for a year, made up of two 6-month placements in a combination of internal medicine, surgery, psychiatry or general practice. The objective of clinical basic education is to give graduates a broad introduction to the health care sector. To distribute newly qualified doctors between specialties and geographical areas according to need and capacity, placements are distributed throughout the country by lottery.

Clinical basic education is followed by specialist training. Specialist training begins with a 12-month introduction as a prerequisite to applying for specialist training. The introduction to the specialty serves as a way of ensuring that the specialty is suitable for the candidate and that the candidate is right for the specialty. "Introduction" positions are opened according to agreements between the Danish Health Authority and the relevant specialty. The candidates are selected by an appointments committee comprising the department director/postgraduate clinical director and a representative of the Medical Association. Applicants are scored in seven categories, reflecting so-called doctors' roles: medical expert, communicator, cooperator, health promoter, leader/administrator, academic and professional (Dehn et al., 2009).

This introduction is followed by specialization in 1 of 38 different medical specialties. Specialist training positions are a combination of placements in different departments for 48 to 60 months. Finally, specialization

is completed at various locations, usually representing the specialty's basic and highly specialized departments. This way, doctors in training are moved to different hospitals as part of their specialization.

#### ■ 4.2.6 *Other health workers' career paths*

##### **NURSES**

Postgraduate nurse training is 30 to 78 weeks of on-the-job training. Completed postgraduate training confers the title of specialist nurse. Admission requirements for postgraduate training typically include at least 2 years of clinical practice as a nurse. Some specialties have additional specific requirements. The training has both theoretical and systematic clinical supervised units. At the time of writing, there are seven nurse specializations: mental health care for adults/children and adolescents, anaesthesiology, intensive care, infection hygiene, cancer care, health visiting and community health care. The Ministry of Health and the Danish Health Authority regulate postgraduate training.

The labour market for nurses is broad. There are good opportunities to work without on-call obligations, with greater flexibility and for a higher salary than a permanent position in the regional health service. Since 2019, there has been a large net departure of nurses from the regional hospitals to the municipal health sector as well as specialist practice and general practice. At the same time, there has been a smaller net departure to private hospitals and the industry of substitute workers.

##### **MIDWIVES**

Midwives in Denmark are mainly employed by obstetric departments in hospitals, including units in the hospital run by midwives (a midwifery unit/birth centre). Some midwives work in decentralized outpatient clinics or in GP practices.



## PHARMACISTS

Most pharmacists work in private industry, typically in drug production, testing, registration or marketing. Others are employed in the food industry, environmental health or chemical production. A further proportion is publicly employed by universities in research and teaching or working with clinical pharmacy or production at one of the hospital pharmacies in the country. The rest typically work in retail pharmacies either as advisers for patients and doctors or as owners of the pharmacies.

## DENTISTS

Dentists work in private practice or public dentistry. Public dentistry includes, among others, municipal dentistry, specialized hospital-based clinics, prison dentistry and clinics connected to universities. Other dentists work in teaching and research at universities and in the pharmaceutical industry.

# 5

## Provision of services

### ■ Summary

- Public health services are extensive and dispersed between different sectors with clear divisions of responsibility internally but sometimes without clear lines of intersectoral responsibility or coordination. Public health services are partly organized as fragmented activities run by the municipalities or special institutions, including nongovernmental organizations and the private sector, and partially integrated with curative services. The Danish Health Authority advises on public health matters; public health is promoted mainly through softer policy instruments such as information provision and, to some degree, economic incentives, while regulation is less often used.
- Primary care includes health care services provided by private practitioners (such as GPs, psychologists, physiotherapists, dentists, chiropractors, podiatrists, dietitians and pharmacists, who are self-employed but have negotiated collective agreements on remuneration with the regions) and municipal health services, such as nursing homes, social and home nurses, health visitors and municipal dentists.

- GPs treat 90% of all patient contacts at the primary care level and act as gatekeepers, referring patients to hospitals, specialists, physiotherapists, psychologists and selected municipal services.
- Secondary and tertiary care takes place in public hospitals owned and operated by the regions, where doctors and other health professionals are salaried employees. Private clinics and hospitals play a limited role, paid OOP, through private insurance or by the regions to meet treatment waiting times guarantees. Secondary care is also provided by private practicing specialists, who are self-employed but have negotiated collective agreements on remuneration with the regions.
- Community pharmacies are private but subject to comprehensive state regulation on price and location to ensure that everyone has reasonable access to medicines, even in rural areas.
- Oral health care for children and adolescents and the most vulnerable citizens, for example, people experiencing homelessness, is provided by municipal dental services free of charge. In contrast, oral health care for adults is offered by private dental practitioners and subsidized by the regions.

## ■ 5.1 Public health

### ■ 5.1.1 *Organizational set-up and main institutions*

The responsibility for public health services is dispersed between different actors. Public health services are partly organized as separate activities run by the municipalities and specific institutions and partially integrated with curative services under the regions (see Section 2.1).

The *municipalities* must: promote health and prevent diseases for all citizens, which includes special activities such as health visiting nurses for infants, school nurses and preventive home visits for older people; offer general and free health prevention information; organize health preparedness in emergencies (e.g. war, terrorism, dangerous infectious disease outbreak); report information to central health authorities and cooperate with the regions, including general practice. Municipality health promoting and

preventive efforts are guided by the prevention packages on selected public health issues, for example, alcohol, physical activity and hygiene, issued by the Danish Health Authority. These knowledge-based tools with professional recommendations can contribute to prioritizing and developing high-quality municipal prevention work. Individual municipal councils prioritize their efforts and set the level of services, but they must meet the requirements and frameworks in the Health Act. Municipal tasks aim to emphasize public health interventions versus curative care with a decentralized approach.

According to the Health Act the *regions* also have a responsibility for prevention and an advisory role for the municipalities which is partly based on their responsibility for completing the National Health Profile. In recent years, the regions have focused more on preventive efforts; for example, by launching funds for prevention research and initiating an appeal for a public health law. From July 2022, new health clusters have been established and one task of the clusters is to coordinate disease prevention and health promotion activities (see Section 5.2).

Under the auspices of the Ministry of Health, the Danish Health Authority carries out different public health functions, including advice on health promotion, disease prevention and the child vaccination programme. It also assesses the national screening programme and contributes to managing emergencies, outbreaks and other infectious diseases. The Danish Health Authority's advisory role covers noncommunicable diseases, sexual health, tobacco control, physical activity, mental health and alcohol- and drug-use directly to the public, the central government, the regions (including health professionals) and municipalities. Health promotion and prevention advice is communicated mainly via booklets, websites and campaigns and through reports on active management programmes for noncommunicable diseases. The three prevention packages on tobacco, alcohol and mental health have been prioritized by the municipalities (Jakobsen, Sølvhøj & Holmberg, 2020). Protective factors and structural efforts receive less attention in the prevention packages (Box 5.1).

The Danish Health Authority also assesses the content of existing national screening programmes and adjusts them regularly via professional recommendations and advice. Furthermore, the Danish Health Authority coordinates several population surveys in close collaboration with the National Institute of Public Health and the regions to monitor the health and health behaviour of the population. The Danish Health Authority also contributes to

**BOX 5.1** Are public health interventions making a difference?

The relative effectiveness of public health interventions differs significantly. In 2004, the age limit for selling alcohol in the retail trade was raised from 15 to 16 years. Since 2002, a steep decline in the proportion of 13- and 15-year-olds who drink alcohol at least weekly has been observed, although there has been a rising trend among 15-year-olds since 2014 (Rasmussen et al., 2019a). In tackling obesity, the Danish Health Authority has focused exclusively on behavioural interventions aimed at obese people concerning nutrition and physical activity rather than preventing people from becoming obese, which is in line with the focus on individual behaviours and disease prevention dominating Danish public health policies (Vallgård, 2021). The interventions are supposed to rely on evidence-based activities, even though evidence of their effectiveness is lacking or is of poor quality (Sundhedsstyrelsen, 2018), which could be seen as a way to legitimize ideas already held by the policy-makers rather than informing them (Vallgård, 2021). In 2020, a new National Centre for Obesity initiative with a broader approach to tackling obesity was established, and in 2023, through a public–private partnership, a Centre for Healthy Life and Well-being was established focusing on the prevention of child overweight.

managing infectious disease outbreaks, such as preparing national strategies and guidelines for the authorities. Similarly, the Danish Health Authority is part of the national emergency preparedness in Denmark. It cooperates with other authorities on emergency planning and has a permanent place in the national staff that meets if there is an emergency incident.

The primary responsibility for surveillance and control of communicable diseases rests with the National Serum Institute (*Statens Serum Institut*), which also assists in identifying sources of infection in foodborne disease outbreaks. GPs and hospital doctors are obliged to report cases of certain communicable diseases to the Danish Patient Safety Authority (under the Ministry of Health), which oversees individual and community interventions to prevent the spread of communicable disease(s). Furthermore, the Danish Patient Safety Authority advises on communicable diseases, water pollution and chemical spills as part of the societal preparedness plan. While their function is mainly advisory, they have the power to implement measures to prevent the spread of infection. This work is carried out in collaboration with the National Serum Institute and the Danish Health Authority.

Under the Ministry of Employment, the Danish Working Environment Authority monitors and maintains occupational health and safety standards. Inspecting workplaces, regulation and information aims to promote safe and healthy work environments. The provision of these tasks, together with their power to issue administrative fines or to order work to be suspended if the workplace does not comply with health and safety rules, makes the Danish Working Environment Authority an influential actor in the public health arena.

### ■ 5.1.2 *National public health programmes*

Since 2009, no new national public health programmes have been issued despite Denmark's slow increase in average life expectancy since 2000 and the observed growth in health inequalities (Sundhedsstyrelsen, 2020a; 2022b; Møller, 2023). There is a much larger focus on curative care than on health promotion and disease prevention, which is also reflected in the 2022 health reform and the allocation of funds and research grants. However, political strategy papers have an underlying perception that more preventive efforts are needed to reduce the increasing pressure on the health care system.

Previous national public health programmes have focused more on health-related behaviour and less on social and structural factors that influence health (Vallgård, 2010; 2011; 2021). One exception is tobacco control: smoking is not allowed indoors in workplaces, restaurants and large pubs (2007); young people under the age of 18 years are banned from buying tobacco (2008); the price of a pack of cigarettes has risen from DKK 40 (€5.4) to DKK 55 (€7.4) (2020) and to 60 DKK (€8) in 2022; and smoking at schools and leisure facilities is prohibited (2021). The latter law is part of the former Social Democratic government's national action plan against children and young people smoking with the ambition that no children and young people should smoke by 2030 (Sundheds- og Ældreministeriet, 2019b).

At the regional and local level, in 2017, the Danish Regions published *Health for life – prevention is a necessary investment* that included four strategy tracks as a dialogue invitation to other health actors to create more healthy

life years by increased preventive efforts (Danske Regioner, 2017). In 2018, Local Government Denmark launched the Prevention in the Future strategy with six landmarks to set a common direction for the municipalities' work to strengthen preventive efforts (Kommunernes Landsforening, 2017). In 2020, the Danish Regions pushed, together with several public and private institutions, for a public health law (Danske Regioner, 2020), but, at the time of writing, Local Government Denmark has not signed the appeal.

### ■ 5.1.3 *National screening programmes*

Currently, three national systematic disease-specific screening programmes are in place: cervical cancer, breast cancer and colorectal cancer. From 2024 as part of cancer plan V, the coalition government will launch a 3-year pilot study of screening for lung cancer, to uncover the organizational, resource and technological possibilities for a national screening programme for lung cancer. The regions are responsible for operating and monitoring all screening programmes. The national screening programme for cervical cancer has been running since 1986 and is offered to all women aged 23–64 years: every third year women aged 23–29 years and every fifth year for 60–64-year-olds. For women aged 30–59 years, a randomized controlled trial has been set up randomizing women born on an even or uneven date, respectively, to being offered screening either every third year or every fifth year. Systematic breast cancer screening (mammography) has been in effect since 2007 and is offered to women aged 50–69 years every other year. Since 2014, screening for colorectal cancer has been offered to all citizens aged between 50 and 74 years every other year.

All pregnant women are offered screening for hepatitis B, HIV and syphilis at the first pregnancy examination by their GP. The examination is optional and is part of the routine blood samples taken during pregnancy, and the participation rate is high (nearly 100% in 2019) (SSI, 2020). In addition, all pregnant women have access to antenatal services provided by GPs, midwives and with medical indication to obstetricians in hospital obstetric departments. All neonates are offered screening for several congenital diseases, including metabolic disorders, via a heel-prick blood test, and screening for hearing impairment.

### ■ 5.1.4 *National plan on infectious diseases*

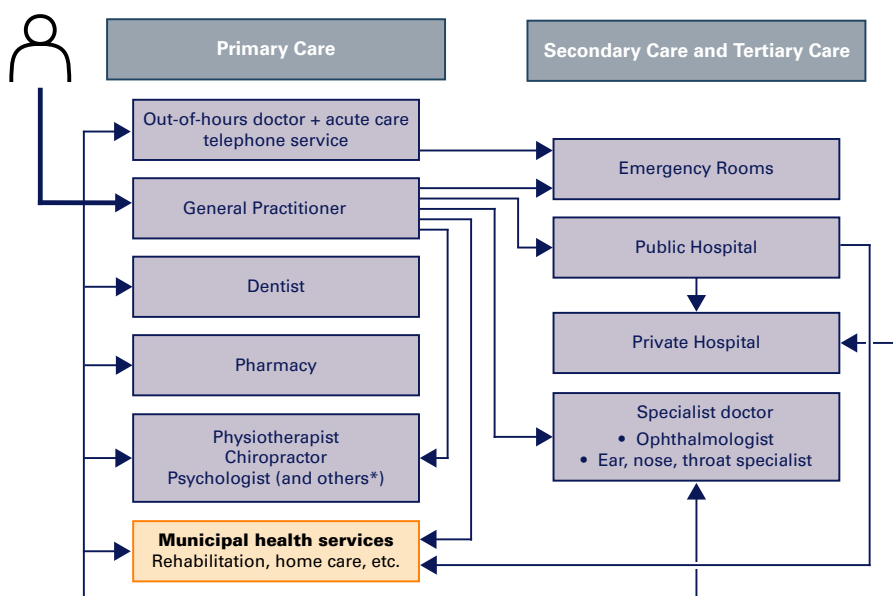
The Act on Measures against Infectious and Other Communicable Diseases (1980, last updated 2021) lays down the legal framework for the Danish authorities' prevention of serious infectious diseases. The diseases covered by the Act are divided into two lists: List A concerns diseases defined as "generally dangerous" (diseases with a high risk of infection, a usually serious course, and often high mortality), such as smallpox, Ebola and plague. List B relates to other infectious diseases, such as cholera, typhus, influenza, etc. The Act does not cover sexually transmitted infections. Doctors are obliged to report certain diseases to the Danish Patient Safety Authority and the National Serum Institute. The Danish Patient Safety Authority has day-to-day responsibility for preventing the spread of infection. The National Serum Institute monitors the incidence of disease (Sundheds- og Ældreministeriet, 2020a; 2020b).

In 2021, a new Act was adopted, which made it possible to impose measures on individuals, including assembly bans and the obligation to provide personal data to the Minister of Health if deemed necessary to prevent the spread of a dangerous infection, but not compulsory vaccination (Sundheds- og Ældreministeriet, 2021a). The new Act strengthens governmental control over the handling of epidemics. It gives far-reaching powers to the Minister of Health while at the same time has disputed elements of coercion, which challenge citizens' legal security. Yet, the Act has also laid down a new parliamentary committee to control the Minister's decisions, the establishment of a new national epidemic commission to advise the Minister of Health and other ministers on the management of socially critical diseases, as well as an automatic judicial review in cases of deprivation of liberty. Some experts claim that the Act is based too much on the experiences of the COVID-19 pandemic and lacks general preparedness for future scenarios.

## ■ 5.2 Patient pathways

The patient pathways for providing access to the health system are illustrated in Fig. 5.1. This illustration only pertains to those citizens who choose the Group 1 coverage option (99% of the population) (see Section 2.8.2). In general, patient pathways do not differ across the five regions.



**FIG. 5.1** Patient pathways in Denmark

\*Occupational therapists, podiatrists and orthotists.

Source: Authors.

Most contacts (90%) with the health system are with GPs, where the patient is examined and treated. When necessary, GPs act as gatekeepers to inpatient and specialist treatment, so most patient pathways start with a GP consultation. If a referral is required, patients can choose between all public hospitals which offer the necessary service(s). The patient can also be treated at a private hospital on an OOP, fee-for-service basis. More than 2 million people have private VHI, which may cover part or all of these fees (see Section 3.5). If the waiting time for either examination or treatment exceeds 30 days, the patient has the right to receive the necessary services at a private hospital, clinic or hospital abroad. The region will then cover the expenses if there is an agreement in place between the alternative facility and the region.

Following contact with secondary care, the GP receives a discharge summary for the patient from the hospital and is responsible for the follow-up care described in the summary, such as referral to a physiotherapist. Finally, the patient often has a follow-up hospital visit to check on the treatment outcome. Besides referring patients to a hospital or a specialist, GPs refer patients to other health professionals working within a health care service agreement when needed, for example, arranging for home nursing to be

provided. If the GP or the hospital prescribes rehabilitation outside the hospital or home care, the municipality will provide it free of charge (see Section 5.7). Hospitals and GPs can also make referrals to physiotherapy as part of treatment or rehabilitation. Patients may consult dentists, chiropractors, ear, nose and throat specialists or ophthalmologists without a referral. Patient pathways for emergency and urgent care are described in Section 5.5.

Although most patient pathways work smoothly with clear agreements on what and how to communicate, most of which take place electronically through the MedCom system, patient pathways are often criticized for not being coherent. This is especially true for multimorbid patients who may receive care across sectors without adequate coordination between GPs, municipalities and hospitals. This issue is often attributed to a highly specialized health care system with treatment across three different sectors (municipal, regional and private), which have different organizations, payment schemes, IT systems, financial incentives and tasks, which often works against cooperation between providers/sectors (Rudkjøbing, 2014). Various initiatives have been implemented to improve continuity, including a contact person arrangement, pathway coordinators and chronic disease management programmes. The contact person arrangement means that all patients admitted to the hospital for treatment or ongoing ambulatory care are assigned one or several contacts to be approached with any questions. Pathway coordinators are intended to coordinate complex patient pathways, including clinical pathways for cancer and heart disease.

From 1 July 2022, mandatory health clusters around the 21 emergency hospitals were established with representatives from hospitals/regions, municipalities and general practice in the emergency hospital's admission area. The health clusters must take joint responsibility for the population in their catchment area, focusing on ensuring that more citizens can receive treatment, rehabilitation, prevention and care services in the local community. Furthermore, the health clusters will focus on solving challenges, including strengthening coherence with better treatment and rehabilitation care paths for those citizens who have care paths across regions, municipalities and general practice and, also, be a driving force for enhanced prevention, quality and conversion towards a health care system closer to the citizens, the so-called local health care (*nære sundhedsvæsen*) (Regeringen, Danske Regioner & KL, 2021). The term "nære" has two connotations in Danish: one regarding proximity ("close to" geographically) and one regarding intimacy ("close

to” emotionally). According to the new health care orientation, developing the local health care system is one of the cornerstones to solving the future challenges of the health care system. The local health care services should support citizens’ health needs near to citizens’ homes, usually via general practice. The local health care system is thus all the functions, services and tasks carried out *outside* the hospitals.

## ■ 5.3 Primary care

GPs play a key role as the first point of contact for patients. They have numerous and varied tasks. They investigate, diagnose and treat suspected diseases; filter and refer patients to the specialized health care system; perform routine checks for well-defined chronic conditions and preventive examinations of pregnant women and children and special groups; and certify health conditions and diseases for third parties. Finally, they have a coordinating role in the health care system, focusing on cooperation within the municipalities and sector transitions. Their work assignments are laid down in an agreement between Danish Regions and the Danish Organization of General Practitioners.

Patients can freely choose their GP from the practices with availability and change their GP for a small fee. There is a slight variation in the number of inhabitants per GP across regions. For example, in 2022, there were 60 GPs per 100 000 inhabitants on a national basis (ranging from 56 in the Region Nordjylland to 65 in the Region Syddanmark). This means that all patients have a relatively short distance to their GP, and geographical access to GP services is relatively equitable (Box 5.2). However, some regions have experienced significant difficulties with recruitment, particularly in rural and socially disadvantaged urban areas. In 2018, it was estimated that around 1.8 million citizens lived in areas with low GP coverage (PLO, 2019a). To mitigate shortages of GPs in some areas, in 2017, a broad political agreement allowed the regions to operate medical clinics and allowed GPs to establish branch facilities staffed with employed physicians. In 2022, the health reform further extended the specialist medical education part in general medicine with correspondingly less time based in hospitals and gave the regions the opportunity to provide a special financial subsidy for a limited period and in certain areas with a shortage of GPs. The number of GPs is expected to

increase by 43% from 2022 to 2035. Utilization of GP services was stable from 2009–2019, with approximately 41 million contacts per year, albeit with increasing email consultations (Danmarks Statistik, 2020a). This is equivalent to seven GP contacts per capita annually.

**BOX 5.2** Key strengths and weaknesses of primary care in Denmark

General practice is central to the Danish health care system functioning cost-effectively. Strengths include good geographical coverage and accessibility, very high patient satisfaction and good continuity of care. Weaknesses seem to be maintaining coverage in remote rural and disadvantaged urban areas, increasing demands and pressure on primary care without increased capacity, fragmentation of the health system and quality assurance.

GPs run private practices, either as solo practitioners or in collaboration with other GPs in group practices. The general trend shows an increasing number of group practices, from 27% of general practices in 1977 to 59% in 2022 (PLO, 2022b). GPs derive their income from the regions according to a tariff negotiated by the Organization of General Practitioners and Danish Regions (see Section 3.7.2). The GPs are responsible for practice costs, including buildings (rented or owned) and staff.

There are targeted quality development programmes for general practice. These include Data Capture, which ensures that each practice has the capacity for quality monitoring and development through performance data within type 2 diabetes and COPD care. The Quality in General Practice programme aims to promote and support all GPs in finding professional clusters which meet and work with quality data and quality development. No other quality indicator programmes exist within general practice. General practice clinics underwent one round of accreditation from 2016 to 2019. Practices not wanting to participate in this programme must submit to an accreditation-like control procedure. A nationwide survey of over 121 000 patients in 2018 showed patients generally having very high satisfaction with their GPs. Patients were most satisfied with the doctor–patient relationship (97% rate it as exceptional, very good or good). In comparison, accessibility received the lowest scores (88% rate it as exceptional, very good or good) (PLO, 2019b).

### ■ 5.3.1 *Major changes and current challenges*

The pressure on the Danish health care system has increased considerably over recent years. Politically, there is a desire for the primary care system to take over more tasks from the secondary care system to reduce the pressure on the hospitals; also reflected in the health care reform of 2022 (see Chapter 6). At the same time, as more tasks and more complex patients are being moved back to general practice, there is a shortage of GPs (see Section 4.2.2). The Ministry of Health has sought to clarify that GPs form a crucial part of a coherent health system and clarify the terms on which they collaborate with the rest of the system. There has been a general push towards digitalization in the health system in the last decade. The uptake of telemedicine technologies and video consultation has accelerated during the COVID-19 pandemic.

## ■ 5.4 **Specialized care**

### ■ 5.4.1 *Specialized ambulatory care*

Specialized ambulatory care is mostly provided in hospitals. According to WHO data, ambulatory visits are lower in Denmark than the EU average. Ambulatory activity has increased substantially over the past 20 years due to initiatives to increase efficiency in the health system. The average length of hospital stay is now shorter than in past decades, and more diagnostics and treatment occur in outpatient clinics.

Patients also have free access to the full range of private specialists practicing outside hospitals upon referral from a GP. Specialist doctors work on a private basis and are reimbursed by the regions. They must have a provider number from the region to receive reimbursement. Privately practicing specialists can refer patients to public hospitals.

With the health care reform of 2022 (see Chapter 6), it was agreed that up to 25 “local hospitals” will be established in areas that, in a Danish context, are far from the nearest hospital. Up to DKK 4 billion (€536.4 million) was allocated to set up the 25 “local hospitals” but not for their ongoing operation. The “local hospitals” are planned to be for specialized outpatient procedures, including uncomplicated diagnostic examinations such as X-rays, blood

tests or ECG and outpatient follow-up, but they will not have beds. The implementation of the decision is awaiting a broader health system reform initiative which is expected in 2024.

#### ■ 5.4.2 *Day care (hospital ambulatory care)*

Day care takes place at hospitals and includes the medical and paramedical services delivered to patients formally admitted for diagnosis, treatment or other types of health care performed without overnight stays. The most common day-care is same-day surgery; a special category within day care is births. Women who have given birth before and deliver with no complications are often discharged on the same day. There are exceptions, and most women giving birth for the first time are discharged after the first night. In 2018, 30% went home within 12 hours of giving birth, and just over half (56%) were home within 2 days, while 17% were hospitalized more than 3 days after birth (Sundhedsstyrelsen, 2022b).

#### ■ 5.4.3 *Inpatient care*

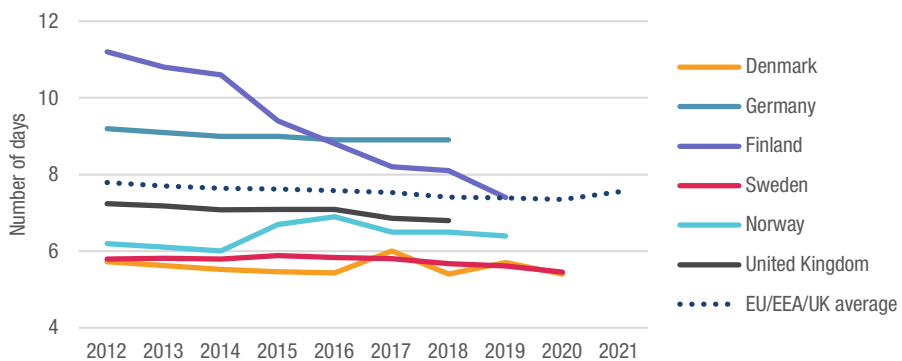
Most secondary and tertiary care takes place in public hospitals owned and operated by the regions. Doctors and other health professionals are salaried hospital employees. Hospitals have inpatient and outpatient clinics, and some also have 24-hour emergency wards. Outpatient clinics are often used for pre- or post-hospitalization diagnosis and treatments. Most public hospitals are general hospitals with different specialization levels. There is no official classification of hospitals according to the level of specialization, technological equipment or performance, but hospital functions (departments) within hospitals are classified according to level of specialization which is subject to approval by national-level authorities according to the specialty planning process. Since Denmark is a small country with good transportation infrastructure, the concentration of highly specialized services in just a few hospitals does not present a major barrier to access.

Contracting with private hospitals is limited by the regions and used mainly for specific interventions, such as bariatric surgery, or when the regions cannot uphold the waiting time guarantees (see Section 5.2). Out

of the region's total operating costs, the share spent on private providers of hospital services is relatively small, although it appears to be increasing. In 2020, approximately 120 000 patients were investigated and treated at private hospitals at public expense. The cost of this amounted to DKK 706 million (€94.7 million) (Danske Regioner, 2021b).

Since the 1940s, there has been a focus on reducing the length of stay in hospitals (Fig. 5.2). If the municipality cannot provide the necessary home nurse services or bed space in, for example, a nursing home after hospital treatment, the municipality pays a daily rate to the region and the state. Until recently (see Section 7.2.3), there was a general movement to establish larger and more specialized units of hospitals, followed by closing smaller entities to strengthen the quality of care. Similarly, the regions have built or are currently building several new, modern hospitals that are considered future-proof with the goals of ensuring better and more cohesive patient treatment, improved patient safety, greater efficiency and higher quality (see sections 6.1 and 7.4). The construction projects are funded by the state-financed Kvalitetsfonden and the regions (Danske Regioner, 2021a). Efforts are being made to improve cooperation between GPs and hospitals by appointing coordinators to work closely with hospital departments and report back to the GPs. Likewise, new health clusters aim to create better continuity of care (Box 5.3). Free choice of hospital after a referral has also encouraged hospitals to improve information to GPs about discharges and services in general. Overall, satisfaction with the health system is high (Box 5.4).

**FIG. 5.2** Inpatient average length of stay, 2011–2020



EEA: European Economic Area; EU: European Union; UK: United Kingdom.

Source: Eurostat, 2023c.

**BOX 5.3** Are efforts to improve integration of care working?

In the Danish health care system, care integration between regions, municipalities and the private sector, including GPs, remains one of the most discussed challenges. To strengthen the coordination between primary care, secondary care and municipal services for people with chronic conditions, the Danish Health Authority launched a national strategy on chronic disease management in 2012. It developed a generic model for chronic disease management programmes with the regions and municipalities. This model describes general prerequisites for integrated care, the principles for self-monitoring and treatment by the patients, patient education and how services should be coordinated for conditions such as type-2 diabetes, COPD, cardiovascular diseases, dementia and other mental health conditions. Not all disease management programmes are fully implemented in all five regions yet (Sundhedsstyrelsen, 2019b).

Several other measures have also been introduced to promote continuity of care and integration in Denmark, including mandatory health agreements, care coordinators, responsible physicians for patients with complex care needs and the new health clusters. However, these have all shown their limitations in not being implemented systematically and, in many cases, only addressing care pathways within individual sectors and for specific patient groups.

**BOX 5.4** What do patients think of the care they receive?

Since 2000, the National Danish Survey of Patient Experiences (*Landsdækkende Undersøgelser af Patientoplevelser* (LUP)) has surveyed patients and their relatives' experiences with Danish health care. The LUP is measured and reported at the national level, for each region, hospital and department and across four care areas: somatic care, acute care, maternity care and psychiatry. For the first three care areas, more than 120 000 patients participated in 2021, and the survey found that 86% of patients were very satisfied with their hospital stay overall, with minor regional differences. Patients were most satisfied with health professionals (friendly and accommodating), while patients were least satisfied with their involvement in treatment decisions (Centre for Patientinddragelse, 2022a). For acute inpatients, satisfaction was lower (67% were very satisfied), and they were least satisfied with the length of waiting time from arrival to the investigation (Centre for Patientinddragelse, 2022b). For psychiatry, the LUP results for 2021 based on the response from 8329 patients showed that 81% of the patients are "highly or very highly" satisfied with their visit or admission to the regional psychiatry service (DEFACTUM, 2022).



## ■ 5.5 Urgent and emergency care

Patients who have had an accident or an acute illness can be referred to an emergency department (in principle, within 24 hours) by their GP, specialist doctor, out-of-hours doctor or out-of-hours telephone. In the event of an acute illness, where the patient cannot wait for the on-call doctor or GP, the patient can show up at the emergency department without a prior appointment. Services are free of charge, as are ambulances. The regions are responsible for the procurement and provision of ambulance services, which are provided by both private and public suppliers. Patients must call an emergency hotline when requiring assistance for severe acute illness, accidents and life-threatening situations. Depending on the injury or illness, patients are examined, treated, medicated or admitted to the hospital. Emergency departments are open 24 hours a day, but there may be waiting times.

Due to the recent centralization of emergency care, some patients have further to travel. Still, due to the size of Denmark and the upgrading of prehospital interventions, this is not a significant barrier to access. The emergency departments in Denmark are located in 21 emergency hospitals, which have established joint emergency receptions for all emergency functions and, simultaneously, have access to a pool of specialists in the emergency department. A recent study found that the employment of specialists in the emergency department, together with waiting time guidelines of 4 hours from admission to a treatment plan, reduced the length of hospitalization without negatively affecting the quality of care; even for patients with lower socioeconomic status (Lindstroem et al., 2021; Flojstrup et al., 2023; Brabrand et al., 2022).

Most municipalities have established emergency teams whose task is to: (1) provide emergency nursing care in the patient's own homes (thereby preventing acute hospitalizations); (2) help prevent readmission; and (3) shorten unnecessarily long hospitalizations. In addition, emergency teams aim to provide more coherent care pathways focusing on patient safety. These emergency teams were developed in response to the Danish Health Authority's recommendations from 2014 to improve quality in emergency functions in municipal home nursing care and the corresponding quality standards from 2017.

In the event of an acute non-life-threatening illness or injury, patients must call their GP, out-of-hours services or telephone service to be referred

to the emergency department. At the emergency department, patients first register at the reception desk and are assessed by a triage nurse. If possible, patients are treated in the emergency department. If inpatient care is required, the patient is admitted to hospital. Patients requiring follow-up ambulatory care are provided with a follow-up appointment or referred for follow-up with their GP.

In the event of a serious acute illness, accident or life-threatening situation, patients (or relatives or bystanders) call 112. Health professionals will guide the patient or bystanders until an ambulance arrives, which is staffed with paramedics. In life-threatening situations, ambulances are accompanied by a doctor. For remote areas, a helicopter can be dispatched. First, health professionals will try to stabilize the patient, and treatment can be started on site or within the ambulance during transfer to the emergency department if necessary.

## ■ 5.6 Pharmaceutical care

Denmark has a considerable and growing biopharmaceutical industry with 135 pharmaceutical companies in 2019, with several domestic companies researching and manufacturing pharmaceutical products.

Any pharmaceutical product with marketing approval from the Danish Medicines Agency or European Medicines Agency can be distributed by community and hospital pharmacies. Denmark has three wholesalers distributing medicines to private pharmacies and other wholesalers that only distribute medicines for veterinary use. Wholesale prices are fixed through individual negotiations between the manufacturers or importers and the wholesalers; the prices are generally determined through competitive tendering.

Community pharmacies are private entities subject to comprehensive state regulation (see Section 2.7.4). A collective financial equalization system is in place, under which pharmacies with above-average turnovers contribute to pharmacies with below-average turnovers. The Health Act states that the regions pay a share of the cost for prescription medicines that the Danish Medicines Agency has approved. Co-insurance may also be given for outpatient medicines prescribed by a doctor (see Section 3.4.1).

In 2021, there were 512 pharmacies and pharmacy branches (including two online pharmacies, 24 pharmacy outlets, around 350 over-the-counter

sales points) and about 300 affiliated medicine delivery facilities (Danmarks Apotekerforening, 2021a). Since 2001, other outlets, such as supermarkets and kiosks, have been permitted to sell over-the-counter medicines. Since 2015, pharmacies have been given more opportunities to open branches, resulting in 67% more pharmacies opening (Danmarks Apotekerforening, 2021b). The pharmacies' share of over-the-counter medicines was 69% in 2020, decreasing in recent years (Danmarks Apotekerforening, 2021b). In rural areas, shops under the supervision of a pharmacy are allowed to act as over-the-counter sales or medicine delivery facilities. A common app, The Pharmacy has been developed, where patients can see and ask for renewal of their prescriptions, see the stock status, prices and subsidy level and get reminders to take their medicine. A total of 83% of pharmacies offer online medicine services, and their use increased significantly due to the COVID-19 pandemic (Danmarks Apotekerforening, 2021b).

The pharmacies sold 60 million pharmaceutical packages by prescription in 2020, equivalent to 154 000 prescriptions on average per pharmacy (or branch of a pharmacy) (Danmarks Apotekerforening, 2021b). A total of 3.6 billion daily doses of medicine were dispensed in 2020, or approximately 1.7 defined daily doses (DDDs) per day per capita (Danmarks Apotekerforening, 2021b), which has been increasing for decades. The most commonly prescribed medicines are for heart and circulatory diseases (39% of DDD), followed by diseases of the nervous system (17%) (Danmarks Apotekerforening, 2021b). The over-the-counter medicines market was worth DKK 1.6 billion in 2020 (€214.6 million), which has also been increasing for decades.

The total gross profits of community pharmacies are fixed by the Ministry of Health and the Danish Association of Pharmacists every 2 years based on current figures and forecasts. In 2021 this amounted to DKK 3 billion (€402.3 million). In 2020, turnover was DKK 12.7 billion (€1.7 billion), exclusive of VAT. The average total gross profit per pharmacy was DKK 25 million (€3.4 million). Prescription medicines made up 72% of the turnover of pharmacies in 2020 (Danmarks Apotekerforening, 2021b).

In 2018, the average pharmaceutical expenditure per capita was approximately DKK 2500 (€335) (Danmarks Apotekerforening, 2021a). Pharmacies must offer customers the cheapest option (generic substitution). In 2020, pharmacies substituted a more affordable generic for the brand name prescribed by the doctor more than 21 million times. The substitution of

medicines and the design of 14-day auctions (Box 5.5) means that competition in the Danish pharmaceuticals market is very strong, and prices in Denmark are among the lowest in Europe for the medicines where generics are available (Danmarks Apotekerforening, 2021b; Lægemedelstyrelsen, 2019; Danish Competition Council, 2016; Hauschultz & Munk-Nielsen, 2017).

**BOX 5.5** Is there waste in pharmaceutical spending?

Denmark has a high proportion of generic and parallel import products on the market. Parallel importing of pharmaceuticals has been permitted since 1990. Generic products make up a significant proportion of the Danish usage of prescribed pharmaceuticals measured as defined daily doses.

In 1999, the National Institute for Rational Pharmacotherapy (a part of the Danish Health Authority) was founded to guide doctors in rational prescribing. It also elaborates on treatment guidelines. Each region employs local groups of pharmacists and GPs to monitor prescription patterns and advise GPs on rational prescribing.

Half of the prescriptions in 2020 used brand names, but the pharmacy dispensed one of these only in 6% of cases – the others were substituted. Price competition for generics manufacturers implies that they seek to be cheapest at a tender every 14 days. As pharmacies must offer customers the cheapest variant of a drug, the cheapest supplier secures almost the entire market for 14 days. This system creates fierce competition and some of Europe's lowest prices for generics, which make up two thirds of medicines dispensed. Generic substitution reduced the potential cost of prescription medicines by DKK 3.2 billion (€429.1 million) in 2020, which is DKK 450 million (€60.3 million) more than in 2019. On average, patients save DKK 213 (€28.6) per prescribed item.

Many pharmacies offer several free health services to support better medicine use; for example, inhaler guidance for asthma and COPD patients. Since 2019, pharmacies can provide repeat prescriptions for certain types of drugs if the prescription has expired shortly before. Pharmacies also offer a free flu vaccination for older people, pregnant people and people with chronic conditions, and since 2021 they have also vaccinated against COVID-19. Following the health reform of 2022, a working group will be established to investigate potential new tasks for the pharmacies; for example, dose

dispensing and increased possibility of substitution. Increased competition for customers has resulted in longer opening hours and shorter waiting times, improving access. A survey found that 92% of people are satisfied with their pharmacy (Danmarks Apotekerforening, 2021b).

The regions own the hospital pharmacies and have established AMGROS, a wholesaler that invites tenders for pharmaceutical contracts. Most hospital pharmacies buy medicines through AMGROS to benefit from lower prices based on large, joint contracts.

In 2017, the Danish Medicines Council was established by the Danish Regions. It is an independent council that prepares recommendations and guidelines on medicines for the regions. The Council assesses whether new treatments can be recommended as the possible standard treatment and prepares joint regional treatment guidelines. The Council only issues recommendations in principle, but the regions have followed them with only a few exceptions.

## ■ 5.7 Rehabilitation/intermediate care

As part of the strategy to strengthen local and community health care services (*nære sundhedsvæsen*) (see Section 5.2), the government allocated DKK 200 million (€26.8 million) in 2018 to promote the establishment of municipal health centres. A health centre can contain many different services, but it often contains a number of GPs and medical specialists, sometimes in collaboration, who have set up their clinics in a shared building, sometimes together with other private health care providers and municipal and regional health functions. The health centre's purpose is to strengthen the interaction between various health care providers, create larger professional environments and thus strengthen professionalism and treatment quality and have the potential to gather more health care services locally, thereby consolidating entry points for citizens to the nearby health care service. Another initiative to strengthen treatment in the local and community health care services and to promote continuity of care is the extended (72 hours) responsibility from the discharging hospital department. This initiative implies that home nursing in the municipalities and the GP receive advice and guidance from the hospitals if they have questions about treatment after discharge. The doctor at the hospital, who knows about the patient's admission, is responsible 3 days

after discharge. Previously, responsibility was with the GP, who now takes over responsibility *after 72 hours*.

Medical rehabilitation is divided into basic, advanced and specialized categories. Specialized rehabilitation is provided by public hospitals, whereas municipalities provide basic and advanced rehabilitation after hospitalization. Rehabilitation is provided free of charge both at hospitals and in municipalities. Some physiotherapy and chiropractic clinics offer rehabilitation co-paid by the patient, and some diagnoses provide free access to physiotherapy in the private sector. Rehabilitation given to older people or for reasons other than hospitalization is provided by the municipalities. This includes treatment in the patient's home, in municipality rehabilitation centres, or by a private physiotherapist with the agreement of the municipality (Maribo et al., 2022). There have been problems in ensuring the coherence of patient pathways, as rehabilitation takes place in the social, occupational, educational and health sectors with various laws covering the area and is carried out by different actors (Maribo et al., 2022). Rehabilitation is included in the mandatory health care agreements between regions and municipalities to improve cooperation between hospitals and municipalities, as is expected to be the case for the new health clusters (see Section 5.2).

## ■ 5.8 Long-term care

Long-term care facilities are varied and numerous in Denmark. In addition to conventional nursing homes, there are psychiatric nursing homes, small apartments (providing basic medical care and located adjacent to nursing homes), group homes and foster homes.

The municipalities deliver social services, including social welfare allowances (sickness allowances and disability pensions), care for older people, and care for disabled people and people with chronic conditions, including those with mental health disorders. Municipalities are also responsible for providing housing for people with learning disabilities. To provide more cost-effective services, contracting with private non-profit-making agencies is becoming increasingly common. Privately contracted services include long-term inpatient care in nursing homes, care in day-care centres and social services for people with a chronic condition/disability or older people. Some additional services, such as catering and cleaning, are often contracted

out to private commercial firms. According to complex assessments of their financial situation, nursing homes and sheltered housing are co-financed by their residents. Low-income residents pay using a proportion of their old-age pension allowance.

Since the mid-1980s, the municipalities have increased the number of home nurses and decreased the number of nursing homes. Between 2010 and 2022, the number of adults aged 75 years and over living in nursing homes fell from 58 000 to 51 800. During the same period, the number of people in this age group increased by 47% (2022b). At the same time, the number of older people who receive home help has also been declining. In 2010, 148 955 persons aged 65 years and over received home help compared with 122 470 in 2018 (Danmarks Statistik, 2019). In 2015, an average of 3.7 hours of home help per week were given. By 2019, that number had dropped to 3.3 hours of help per week – a decrease of 10.8% (Danmarks Statistik, 2020b).

Municipalities have developed a wide range of services to accommodate the preference of senior citizens to remain independent for as long as possible in their own homes, as this is also the most cost-effective approach. These services include care and assistance with cleaning, shopping, washing, preparing meals and personal hygiene. Home care can also be used to assist or relieve family members with caring responsibilities. Two forms of home care are available: long-term and temporary. Long-term care is free, whereas temporary home care visits may warrant individual payment, depending on the recipient's income. All individuals with care needs can have an emergency or safety phone system installed in their home that provides direct 24-hour contact to a public health nurse.

When older people need an alternative living arrangement for health reasons, a more suitable residence is offered. An array of possibilities is available for this, based on the individual's needs and wishes. Senior citizen residences, gated communities, assisted living units and nursing homes are all designed especially for older and disabled people, offering one- or two-room apartments, elevator services, emergency and contact systems and social activities. These residences often differ in their management and administration, and some are associated with nursing homes that supply health aids. Day care centres are available for those who do not wish to move permanently but still require extra care. Transportation to and from the day care centre is arranged. There is also the option of using a nursing home for respite care.

## ■ 5.9 Services for informal carers

The municipality can employ informal carers for a close relative if they meet the following conditions: (1) the alternative to home care is round-the-clock care outside the home, or the amount of care needed corresponds to a full-time position; (2) there is an agreement between the parties concerning the care arrangement; and (3) the municipality has approved the suitability of the person in question as an informal carer. The informal carer can be employed for up to 6 months with a monthly salary of DKK 24 115 (in 2021) (€3234) (Act to Consolidate the Service Law, 2011), approximately 80% of the average monthly Danish income of DKK 29 475 (€3953) (Danmarks Statistik, 2021).

A person caring for a close relative with a terminal illness can apply to the municipality for compensation for lost earnings if: (1) a doctor assesses the close relative and confirms the terminal diagnosis; (2) the close relative has a care need; (3) there is an agreement between the parties concerning the care arrangement; and (4) the patient does not require hospital admission. This compensation is up to 1.5 times what the carer would have received in sickness benefit, provided this is not more than their regular salary. It is possible to share the care task and allowance between several relatives (Socialministeriet, 2021).

## ■ 5.10 Palliative care

The regions are obliged to offer treatment in hospitals, including palliative care. Palliative care is organized at two levels: basic and specialist. Basic palliative care is directly integrated into the mainstream health system, including GPs, municipality home care and hospital departments. Specialist palliative care includes palliative care teams, hospices and palliative care units. The executive order on operating agreements between regional councils and self-governing hospices of 2006 obliges the regions to establish contracts with hospices concerning a certain number of hospice beds across the country and to fund the total costs of running these private (self-owned, non-profit) institutions, implying that it is free for the patient.

Hospice stays are subject to the rules of free choice of hospital, but in general, there is a shortage of hospice places, so the patient may find



that there is no space when and where they need it. In 2021, there were 19 hospices, with a total of 257 beds at their disposal (44.3 hospice beds per million inhabitants), two hospices for children with room for eight children and their families, and a telemedicine hospice (Hospice Forum Danmark, 2021). Furthermore, there were 14 palliative care teams without bed capacity, 12 teams with bed capacity (93 beds in total), and one palliative care team for children and young people in each region (REHPA, 2019). The palliative care units and teams are all organizationally based at a hospital. Some include a broad range of health professionals (social workers, psychologists, physiotherapists, occupational therapists, complementary therapists, speech therapists, etc.). Volunteers work at all the hospices, and one in three palliative care teams has volunteers attached.

Patients with palliative care needs must be referred by a GP, who functions as a gatekeeper to specialist care and treatment, including palliative care. In principle, however, patients can contact some Danish hospices independently and be admitted without a referral. When asked about their referral criteria, all hospices, palliative care teams, and units respond that they use criteria such as being incurably ill and having complex symptomatology (REHPA, 2019).

Implementing the national recommendations for palliative care in both the regions and municipalities has been slow (Sundhedsstyrelsen, 2017). By 2020, nearly half of the patients who died of cancer received specialized palliative care. For non-cancer patients, it was 2%. Thus, patients with a cancer diagnosis are almost the only ones admitted to hospices.

## ■ 5.11 Mental health care

Public services for patients with mental health disorders are provided through cross-sector collaboration between the health and social care sectors. The regions are responsible for psychiatric health care services. The municipalities are responsible for community psychiatric services, except for some community psychiatric institutions, which are still managed by the regions but financed by the municipalities. Consequently, there are partial overlaps within some community psychiatric services provided by the regions and municipalities. This further complicates the effort to run an effective, coherent system linking decision competencies and financing responsibility. To

counter this, psychiatry is included in the health agreements between regions and municipalities.

As a result of the policy of deinstitutionalization of the psychiatric sector, there has been a decrease in the number of available beds in hospital psychiatric departments. Since the health care reform was implemented in 2007, however, the number has been relatively stable at around 3000 beds, while the number of beds in child and adolescent psychiatry has increased (Sundhedsstyrelsen, 2022c). At the same time, the number of outpatient contacts increased, from 732 950 in 2007 to 1 002 055 in 2020, an increase of around 27% (Sundhedsdatastyrelsen, 2021).

Outpatient psychiatric treatment is often established locally in specific centres and is provided by interdisciplinary community mental health teams. These are made up of doctors, nurses, social workers, occupational therapists, psychologists, physiotherapists and other health professionals. The regions have different outpatient psychiatric services; some strictly provide services for people with long-term and socially disabling conditions. Others also include services for people with short-term mental illness. Referrals are from a GP, the hospital, or, in some cases, the municipal caseworker. Acute care patients can also sometimes self-refer.

Community mental health care has been criticized for providing insufficient treatment, which may be linked to reductions in the number of beds without simultaneously increasing outpatient care resources. All of Denmark is served by community mental health care services and other outpatient facilities, although there are challenges in maintaining staffing levels, particularly in remote rural areas. The current focus is on quality development and revision of guidelines. Only a few specific health services are provided to deal with the mental health problems faced by refugees, asylum seekers or other vulnerable groups.

In 2014, the government and the regions agreed to reduce coercion and halve the use of restraints in psychiatry. Although it has been possible to limit the usage of restraints, the use of coercion has increased, including emergency sedatives, detentions, coercive medication, involuntary hospitalizations and coercive detentions (Sundhedsstyrelsen, 2021). The use of coercion could be seen as a symptom of a psychiatry health care system not working well. Likewise, the National Audit Office has also criticized this, stating that the management of efforts to reduce the use of coercion in psychiatry has been unsatisfactory (Rigsrevisionen, 2021).

In the recent decade, an increasing focus has been targeted on destigmatizing mental illness. The Danish Mental Health Fund, whose primary aims are to disseminate knowledge about mental illness and minimize prejudice in the field, has established a nationwide programme on depression, anxiety disorders and schizophrenia. The programmes are coordinated by the Danish Mental Health Fund and implemented in collaboration with the municipalities and networks in the regions.

A report published in 2022 by the Danish Health Authority has formed the basis for a comprehensive 10-year plan for the development of psychiatry. The report includes nine key themes. Challenges and recommendations for better mental health and a strengthened effort for people with mental health needs across sector boundaries are described with each theme. The recommendations cover both the initiatives that have a particularly high priority (early intervention for children and young people and strengthened efforts for people with the most severe mental illnesses), and that can be implemented in the short term and the efforts that can be gradually rolled out over a 10-year period (Sundhedsstyrelsen, 2022c). In December 2022, investments in psychiatry were prioritized over the next 10 years so that the plan is now funded with DKK 4 billion (€536.4 million) annually.

## ■ 5.12 Dental care

Oral health care for children and adolescents until the age of 19 (gradually increased to 21 in 2025) is free of charge and either provided by the municipal dental health service or a private practicing dentist, reimbursed by the municipalities according to an agreed schedule of fees. Dental health for children and adolescents is essentially school-based, and the participation rate is nearly 100%. The municipal children and youth dental care services can also refer children to orthodontists free of charge.

Private dental practitioners offer dental care for citizens older than 19 years (older than 21 from 2025). Citizens are responsible for a substantial part of the cost. However, the regions cover some of the costs, particularly for preventive services. If a patient has VHI, some co-payments for dental care are covered. Prices are regulated through negotiations between the Danish Dental Association and the Healthcare Reimbursement Negotiating Committee every second year.

There is no direct monitoring of the quality of dental health services in Denmark. The Danish Patient Safety Authority does act if a dentist has had a substantiated complaint. Complaints about the quality of dental care are sent to the Danish Patient Complaints Agency (Tandlægeforeningen, 2021). Patients can apply for compensation to the Danish Dental Association's Dental Injury Compensation if they believe they have been injured during dental treatment (Tandlægeforeningen, 2021).

## Principal health reforms

### ■ Summary

- The process of centralizing the hospital structure continued after the country's administrative structural reform in 2007. Several smaller hospitals have been closed or converted to other types of health care facilities, the number of acute hospitals has been reduced to 21, and the first of six new “super-hospitals” opened in 2021. The last is projected to open in 2025.
- Many initiatives have been launched to improve care coordination and to strengthen capacity to deal with chronic and older patients at the primary and local care levels.
- Economic incentives have been adjusted to support the aims of integrated care.
- A Danish Medicines Council and a Danish Health Technology Council have been established to support decisions regarding prioritizing medicines and treatments in the Danish health system.
- The state has strengthened its capacity for overall steering through economic management, national-level agreements, specialty planning, guidelines and quality indicators. Yet, the state depends on regions and municipalities for ongoing management and implementation of policy initiatives and adjusting the system to future challenges.

- A new health reform package was introduced in 2022 to address the difficult issues of integrating care across different levels and preparing for the increased volume of older and chronically ill patients.
- A 10-year plan for mental health proposed by the government is greatly anticipated. In 2022, a technical report from the Danish Health Authority and the National Board of Social Services with 37 recommendations was published.

## ■ 6.1 Analysis of recent reforms

A series of reforms have restructured the Danish health care system since the 1970s. An overview of reforms and policy initiatives until 2012 have been described in detail in previous editions of this Health System Review (Pedersen, Christiansen & Bech, 2005; Strandberg-Larsen et al., 2007; Olejaz et al., 2012). A brief overview of changes since 2007 is also provided in Table 6.1, and the details are given below.

Danish health reforms since 2007 can be seen in the light of a health policy style that tends to be pragmatic and instrumental rather than ideological. Health care professionals play a critical role in negotiated agreements and collaborative forums involving state, regional and local governments. This has facilitated reform processes incorporating different stakeholder perspectives, while the economic imperatives and awareness of future challenges have created pressure to find new solutions.

Health policy since 2007 has mostly been about optimization, innovation and incremental adjustments within the existing framework, rather than radical changes to the fundamental pillars of the universal, tax-funded health system (Vrangbæk, 2021). Under the surface of this seeming stability, there have been gradual but profound changes in the governance dynamic. The state has gradually increased its steering capacity through tighter economic management based on a budget law with automatic sanctions, specialty planning, guidelines and quality indicators. The state is also critical for developing and maintaining the digital infrastructure that is a prerequisite for many new initiatives. Meanwhile, the state continues to depend on regions and municipalities to manage service delivery and implement policy

**TABLE 6.1** Main reforms and policy initiatives within the Danish health care system since 2007

YEAR	REFORM OR POLICY INITIATIVE	EXPLANATION
2007	Structural reform	Consolidation into five new regions responsible for hospital services and 98 municipalities in charge of long-term care, public health, etc.
2007–ongoing	Centralization of hospital infrastructure	Centralization into 21 hospitals with acute functions and establishing joint acute wards staffed by specialists from relevant departments. Around DKK 53 billion (€7.1 billion) has been invested in building new hospitals in all five regions, while closing or converting smaller hospitals.
2016	Adjustment of the municipal co-funding of hospital admissions	The municipal co-funding of hospital admissions is differentiated by age to strengthen incentives for investment in municipal health services.
2017	Danish Medicines Council for evaluation of pharmaceuticals	The Danish Regions establish the Danish Medicines Council to support prioritization decisions particularly regarding expensive hospital drugs. This was supplemented by a broader Danish Health Technology Council in 2021.
2018	Funding for local community health centres	DKK 200 million (€26.8 million) was allocated to establish local community health centres with co-location of general practice, municipal health staff, etc.
2019	Adjustment of the funding scheme for the regions	Activity-based funding of the regions was replaced by proximity financing (a pay-for-performance scheme) that promotes transition from hospital to primary, local and digital health care.
2021	Health clusters	Agreement between the government, the regions and the municipalities to establish health clusters around the 21 acute hospitals. The clusters shall facilitate collaboration across hospitals, primary and local care. New collaborative governance forums are established in the five regions.
2022	Health reform package	DKK 4 billion (€536.4 million) allocated for establishing “local hospitals”. Further investment in municipal health care over the coming years, combined with an agreement to develop quality targets and indicators at the municipal level. Increasing the number of training positions for new GPs and establishing a Resilience Commission to address other staffing shortages.

Source: Authors.

initiatives. This is even more important in the ongoing efforts to shift the locus of chronic care from hospitals to primary and local care – and more generally, to address the increasing pressure on the health system due to the ageing population.

### ■ 6.1.1 *Centralization and modernization of hospital infrastructure*

Following the major structural reform in 2007, which changed the administrative landscape of the public sector, an ongoing centralization and modernization of the hospital structure has occurred through major hospital reform (see Olejaz et al., 2012). Several smaller hospitals have been closed or converted into other types of health care facilities, the number of acute hospitals (which may include several locations) has been reduced from 40 in 2006 to 21 in 2022, and several building projects, including six new “super-hospitals”, have received funding through a quality fund of DKK 25 billion (€3.4 billion) (see sections 4.1.1 and 5.4.3). The first of the six new regional “super-hospitals” were opened in 2021 (Sundhedsministeriet, 2021). The last building project is projected to open in 2025 (Sundhedsministeriet, 2021).

### ■ 6.1.2 *Economic incentives to support the transition to care outside of hospitals*

Municipal co-funding of hospital admissions was introduced in 2007 to strengthen economic incentives to increase capacity in municipalities. The initial general co-funding was criticized for being too broad, as municipalities had limited influence. It was therefore decided in 2016 to place a cap on municipal payments and differentiate co-funding by age, aiming to provide more direct incentives to the most relevant groups for municipal interventions (Sundhedsministeriet, 2016).

A keen focus on activity and waiting times has led to a continuous increase in productivity from 2002 to 2019. Patient flows in hospitals have become more streamlined, particularly for cancer and cardiovascular diseases leading to improved outcomes. Meanwhile, the average length of stay is very short compared with many other European countries, and many treatments are now available in an outpatient setting. Quality indicators and patient satisfaction have remained relatively high (Christiansen & Vrangbæk, 2018).

Increased productivity was supported by economic incentives requiring annual activity increases of 2% before additional activity-based funding on top of the block grant scheme can be accessed. This scheme was seen as highly effective in reducing waiting lists. Yet, over time, criticism grew of potential negative side-effects and limited incentives to innovate processes. This led



to an agreement between the government and the regions to abolish the requirement of the 2% increase in productivity and change the criteria for the additional funding to a so-called proximity financing (a pay-for-performance scheme). The new criteria include reductions in overall hospital activity, unnecessary readmissions, hospital activity for chronic care patients and a transition to digital care (see Section 3.3). The idea is to encourage regions to negotiate agreements to shift activity to municipal and primary care and to accelerate digital care solutions (Danske Regioner, 2022).

### **6.1.3** *The establishment of the Danish Medicines Council and the Danish Health Technology Council*

On 1 January 2017, Danish Regions established the Danish Medicines Council. The role of the Danish Medicines Council is to provide guidance about new medicines for use in the Danish hospital sector. It does this through two separate processes: assessments of new medicine, where a new compound is compared with the standard therapy used in Denmark, and guidelines, where several medicines for a specified disease are compared. The guideline process results in a recommendation with a prioritized list of medicines for patients with the specified disease (Medicinrådet, 2022; Wadmann & Kjellberg, 2019). The Danish Health Technology Council supplemented the Danish Medicines Council in the beginning of 2021, which can evaluate a broader range of technologies and treatments (Behandlingsrådet, 2022).

### **6.1.4** *Creation of community health centres*

Hospital reforms have made it necessary to increase local and primary care capacity to prevent unnecessary admissions and take care of discharged patients. Municipalities have developed more structured approaches to rehabilitation and home care, and local and primary care services have tried to adhere to new guidelines. Municipalities have also introduced different facilities to provide care before potential admissions and after discharge. Some of these municipal acute beds are co-located with nursing homes. Others are placed in community health centres that have been established since 2018, focusing on patients with chronic care needs and older patients

(see Section 5.7). Many health community centres provide co-location with GPs, practicing specialists and other private health professionals such as physiotherapists, podiatrists, etc. Successive states have supported the establishment of community health centres with earmarked donations (Sundheds- og Ældreministeriet, 2018).

## ■ 6.2 Future developments

### ■ 6.2.1 *A new reform package was introduced in 2022: health clusters*

In the spring of 2022, the former Social Democratic government and selected opposition parties agreed on a new health reform package. The overall aim was to improve care coordination and strengthen local and primary care capacity to deal with the growing number of older and chronic care patients (see Section 5.2). The package meant that the health clusters for better integrating the 21 acute care hospitals and primary and local care were formalized with a new governance structure with representatives from the regions, municipalities and general practice. In addition, DKK 4 billion (€536.4 million) were allocated for establishing up to 25 “local hospitals” throughout the country, aiming to strengthen local capacity to provide chronic care (Section 5.4.1). A significant portion of the money should be invested in digital health solutions. Additional investments of DKK 1.4 billion (€187.7 million) in 2023, followed by DKK 384 million (€51.5 million) annually, have been earmarked for the development of municipal health care over the coming years. This is followed by an agreement to develop quality targets and indicators at the municipal level.

Another focus point in the reform package is to address the shortages in nursing staff and GPs in some areas. The volume of GP training positions was increased, and a so-called Resilience Commission was established to address other staffing shortages (Sundhedsministeriet, 2022). The whole reform package can be seen as the latest in a long line of initiatives aimed at solving the difficult issues of integration across care levels and preparing for the higher volume of older and chronic care patients. While the intentions of the package are clear and relevant to the problems faced, it is unclear whether they will be sufficient.

A major concern for future policies will be developing appropriate steering mechanisms, including economic incentives, to align the interests and efforts of different care levels. Another critical issue for future health policy is to address the shortages of nurses, midwives and GPs. The government has started this work, but much more is needed to recruit and retain the necessary workforce in the future.

### ■ **6.2.2** *A 10-year plan for mental health is highly anticipated*

In 2019, the former Social Democratic government set out a vision to develop a 10-year plan for mental health. In early 2022, the Danish Health Authority published a technical report in collaboration with the National Board of Social Services. The report outlines the main challenges in delivering care to people with mental health problems, and gives 37 recommendations for improving the mental health sector over the next 10 years (Sundhedsstyrelsen, 2022c). However, it is unclear when the legislative work will begin. Since the announcement in 2019 and especially since the publication of the technical report in January 2022, the former as well as the new three-party government installed in December 2022 has been criticized for slow progress in finalizing the 10-year plan. Yet, according to the coalition agreement from December 2022, the new three-party government will prioritize investments in psychiatry over the next 10 years so that the plan is fully funded with DKK 4 billion (€536.4 million) annually (Regeringen, 2022).

### ■ **6.2.3** *Structural commission to look at the future organization of the health care system*

It is the view of the government that there is a need to improve the interaction between specialized health care in hospitals and local health care in the municipalities and general practices (Regeringen, 2022). Therefore, in their coalition agreement from December 2022 they decided to set up a new structural commission. The task of the commission is to draw up a basis for decision-making that sets out and illustrates models for the future organization of the health care system. In their work, the commission is to

look at geography, organization, financial management, quality standards, patients' rights and free choice in designing new models for the health care system (Regeringen, 2022).

The structural commission was established in March 2023 and is expected to hand over the first reporting in the spring of 2024. At the same time, the government is planning on initiating a broad public debate involving employees, patients, relatives, experts and other stakeholders in the health care system (Regeringen, 2022).

# Assessment of the health system

## ■ Summary

- The health system benefits from a high degree of transparency, and corruption in the health system and Danish society is low. Informal payments are not an issue.
- All registered residents, regardless of nationality and country of birth, are entitled to a wide range of free-of-charge health care services. The scope of health care services provided is described in the Danish Health Act in broad terms only.
- Fewer than 2% of the population reported unmet needs for medical care due to cost, distance or waiting times. However, as with other European countries, the share of the population experiencing unmet needs is higher in the low-income group compared with the high-income group.
- A total of 1.8 million Danes live in areas with a GP shortage, mostly in rural and urban disadvantaged areas. Changes in how the regions contract with GPs and a restructuring of the specialist training in general medicine have tried to mitigate the problem.
- A shortage of nurses constitutes a major problem for the availability of services, resulting in cancelled surgeries and prolonged

- waiting times. It is unclear whether this is a passing issue, which in a post-COVID-19 context will be normalized, or whether it is the beginning of a new situation where patient rights will be revised.
- Mortality attributed to treatable causes is low, indicating an effective health care system with timely and sufficient access. However, more could be done to reduce preventable deaths, such as further prioritizing public health and prevention policies, particularly tobacco and alcohol control.

## ■ 7.1 Health system governance

Denmark is among the countries with the highest ratings on multiple indicators in international comparative assessments of good governance, including Governance at a Glance from the OECD (the latest report was published in 2023), the Bertelsmann Foundation's Sustainable Governance Indicators and the Worldwide Governance Indicators Project from the World Bank. In addition, Denmark is regularly reported as being one of the least corrupt countries in the world, and informal payments are not an issue in Danish health care.

There is a high degree of transparency due to the democratic procedures at state, regional and municipal levels and the associated requirements for disclosure of political deliberations and decision-making processes. In addition, the performance of regional health care organizations is published online, and there are regular publications assessing overall system performance regarding key indicators related to eight national health system goals (Ministry of Health, Danish Regions & KL, 2018):

- Better continuity of care in clinical pathways.
- Stronger measures for chronically ill and older patients.
- Higher survival rates and patient safety.
- High-quality treatment.
- Rapid diagnosis and treatment.
- Greater patient involvement.
- Additional healthy life years.
- A more efficient health care system.

Formal governance regulation for the democratic forums supports internal accountability in Denmark. External accountability is ultimately based on the electoral process, where voters may select new representatives every 4 years. For health care professionals and organizations, there are both internal and external mechanisms for inspection and sanctioning of poor performance and misconduct via the Danish Patient Safety Authority. Health care professionals may also be evaluated and sanctioned in the complaint system and (infrequently) in civil courts (see Section 2.8.3).

Population participation and involvement are encouraged at different levels. The past two decades have seen several policy recommendations and initiatives to develop patient-centred care solutions, where the individual patient is involved in decision-making and the treatment approach is tailored to individual needs (see Section 2.8). PRO data are used to solicit patient experiences and preferences at the aggregate level. They also inform treatment plans for individual patients in several areas. Furthermore, residents may participate in democratic deliberations through open hearings and contact with elected representatives.

The Danish health system is characterized by the extensive collection of administrative and clinical data. These data are utilized to inform policy-making and enhance the capacity in all stages of the policy process, including problem assessment, deliberation of solutions, implementation and evaluation. There is ongoing monitoring of several performance indicators, from national goals to specific local targets. Collaborative forums between regions and municipalities use data to follow-up on implementation and performance, and all GPs participate in mandatory quality clusters (see Section 5.2).

## ■ 7.2 Accessibility

### ■ 7.2.1 *Population coverage*

All legal residents in Denmark (i.e. people listed on the national registry), regardless of nationality and country of birth, are entitled to health care services, most of which are free of charge. This is stated in the Danish Health Act, where one of the main goals of the health care system is to ensure “easy and equal” access to the health care system (Retsinformation, 2023). Non-residents are entitled to acute care but not to elective treatment. Coverage

is universal, independent of contributions and not tied to membership of an insurance scheme. Citizens cannot opt out of contributing to the statutory system through taxation.

Two groups are excluded from the normal health care coverage: asylum seekers and undocumented migrants. Asylum seekers are only directly entitled to certain services: (1) primary health care provided by the operator at an asylum centre and financed by the Immigration Service; (2) hospital care in case of emergency; and 3) the first three consultations with a psychologist or psychiatrist and the first five treatments at selected specialists (e.g. ophthalmologists). If an asylum seeker has a chronic disease or has other health needs, the Danish Red Cross can apply to the Danish Immigration Service for economic support. According to the Danish Immigration Service, this support can only be provided if the treatment is necessary, urgent and/or pain relieving. Special services exist for pregnant women, and health visiting nurses are available at the asylum centres for infants and children. Asylum seekers are all offered a volunteer screening examination by the Danish Red Cross. This examination is a general health check-up and an offer to perform an HIV test and chest X-rays for at-risk groups. Children are examined for their vaccination status and are offered free vaccinations. Upon arrival, all children are offered an initial physical health examination, and all children aged under 16 years are also offered mental health screening tests.

Undocumented migrants are only entitled to acute care. However, undocumented migrants are often afraid of being reported to the authorities if they seek health care. Since 2011, the Danish Medical Association, the Danish Red Cross and the Danish Refugee Council have established three private clinics for undocumented migrants, which do not require migrants to register with the authorities. The clinics provide some progress towards securing health care for undocumented migrants, but as the clinics primarily deal with acute illness, accessing treatment for chronic conditions remains a problem.

Undocumented migrants who are also commercial sex workers can also obtain anonymous help in two permanent clinics and a number of mobile clinics financed by nongovernmental organizations that provide treatment for sexually transmitted infections and other health issues. However, access to health care services for undocumented migrants is generally limited by various barriers, such as a lack of knowledge of navigating the health care system, language problems, and cultural and structural barriers.



### ■ 7.2.2 *Benefits package*

The scope of health care services provided is defined only in broad terms in the Danish Health Act. On the one hand, the service level offered to patients is regulated by law by specifying maximum waiting times before the region must offer access to services at a private hospital. On the other hand, the scope of the health care services for which the region must provide this service level is not specified but left up to the individual doctor's professional assessment. According to the Law of Authorization, doctors must act with dedication and conscientiousness (Sundheds- og Ældreministeriet, 2019c).

Local and regional variations are viewed as an indication of problematic quality, service or effectiveness and quality indicators are measured and published yearly as part of the National Quality Programme. Furthermore, the introduction of free choice of hospital, in effect, eliminated the regional administrative level's capacity to pursue a distinct service level. Therefore, even if there is no explicit benefits package, there is strong pressure on the regions to provide medical care with documented effects.

Benefits are the same across the registered population regardless of age. Treatment and care are offered based on the patient's needs and capacity to benefit, as assessed by the treating doctor.

### ■ 7.2.3 *Availability of services*

Ensuring the availability of health care in all parts of Denmark is increasingly seen as an issue both in terms of distance and waiting times. A total of 1.8 million Danes live in areas with a GP shortage (both a rural and urban phenomenon, but the latter in disadvantaged areas mainly). This has been the subject of concerted policy efforts to restructure the specialist training of GPs and increase flexibility in the way GP services are financed and organized (see Section 5.3).

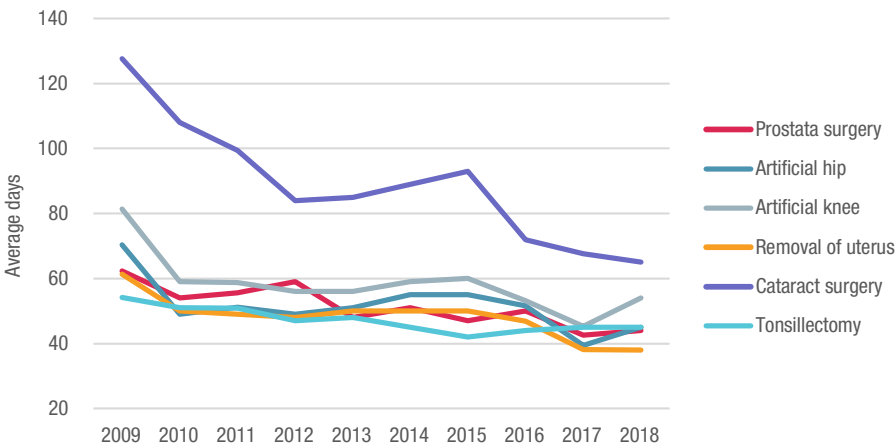
Following structural reforms in 2007, smaller hospitals were closed to consolidate hospitals into larger units and establish fewer emergency units to increase the quality of services. As a result, the geographical distance to emergency hospitals has increased (see Section 5.5). Danes have to travel, on average, 19.6 km to the nearest emergency hospital, and 25% of Danes

have more than 30 km to the nearest emergency hospital (Kommunernes Landsforening, 2016). However, transport infrastructure is good and air ambulances are available to serve remote areas, so these differences do not constitute a major barrier to accessing care (see Box 4.1).

Average waiting times for elective surgeries in Denmark decreased from 58 days in January 2005 to 45 days in January 2019 (eSundhed.dk, 2023). Although waiting times for selected surgery groups have all decreased since 2009, Danes wait longer for cataract surgery than for prostate surgery, hip replacement, knee replacement, hysterectomy and tonsillectomy (Fig. 7.1).

In 2019, the regions changed their reporting method for elective waiting times. Consequently, it is not possible to compare data before 2019 with data after the reporting method changes. However, there are indications that waiting times are increasing. Mainly due to the impact of the COVID-19 pandemic in 2020 and the nurses' strike in the summer of 2021, the number of patients waiting for treatment has increased, especially for elective surgery (Indenrigs- og Sundhedsministeriet, 2023). In addition, internal medicine wards have had increasing capacity challenges for several years due to an ever-increasing demand for treatment and changing demographics. Further, the regions struggle to recruit sufficient health care staff, mainly nurses (see Box 4.2). In 2022, around 4700 nursing positions were unfilled, and short-staffing resulted in cancelled surgeries and prolonged waiting times and thus a large drop in productivity at the hospitals (Indenrigs- og

**FIG. 7.1** Experienced waiting times for selected surgeries, 2009–2018



Source: eSundhed.dk, 2023.

Sundhedsministeriet, 2023). An analysis from the Ministry of Health from January 2023 shows that recruitment challenges of nurses are most critical in relation to nurses in anaesthetics and intensive care nurses, which affect the hospitals' ability to carry out planned operations; for example, orthopaedic and gastrointestinal surgery. In addition, there are also recruitment challenges for nurses in emergency departments and in departments with on-call duties (Indenrigs- og Sundhedsministeriet, 2023). Establishing the 25 "local hospitals" could also exacerbate shortages of health care staff at existing hospitals.

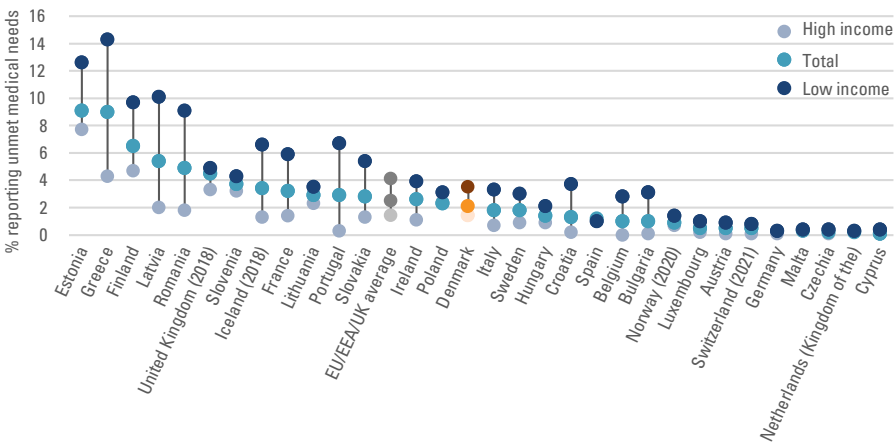
Due to the waiting time guarantees, capacity constraints in the statutory system will increase public spending on private hospitals. Currently, it is uncertain whether this is a passing issue, which in a post-COVID-19 context will be normalized, or whether it is the beginning of a new situation, where patient rights regarding waiting time guarantees, etc. will be revised.

#### ■ 7.2.4 *Accessibility of services*

Around 2% of the population reported unmet needs for medical care due to cost, distance or waiting times in 2022 (Fig. 7.2). Differences in unmet medical needs between persons in the lowest and highest income quintiles are smaller than the EU average. However, as with other European countries, the share of the population experiencing unmet needs is higher in the low-income group compared with the high-income group. A total of 7.5% reported unmet needs for dental care in 2022, mainly due to cost (Eurostat, 2023f). Social inequalities in health by income were larger than in the EU overall (OECD/European Observatory on Health Systems and Policies, 2021).

Low health literacy is a social determinant of poor access to the health care system. There has been an increasing awareness of what can be done at a structural level to accommodate patients' different health literacy levels (Sundhedsstyrelsen, 2022d), but no formal policies have been implemented yet. Likewise, migrants face greater barriers to accessing health care than ethnic Danes, including financial barriers, language problems and a lack of knowledge of how to navigate the health care system (Hempler et al., 2020). Recommendations to reduce these issues have been put forward and include strengthening health policies and strategies to meet the needs of people with an ethnic minority background, including health literacy, linguistic, cultural

**FIG. 7.2** Unmet needs for a medical examination (due to cost, waiting time or travel distance), by income quintile, EU/EEA countries, 2022 (or latest available year)



EEA: European Economic Area; EU: European Union; UK: United Kingdom.  
Notes: Data are for 2022 except for Iceland (2018), United Kingdom (2018), Norway (2020) and Switzerland (2021). The EU/EEA/UK average is unweighted.  
Source: Eurostat, 2023g.

and social differences, as well as strengthening competencies of professionals in terms of cultural knowledge, awareness, reflexivity and skills, and increasing information and resources as well as interpreting assistance (Jervelund et al., 2023). In addition, scattered initiatives regarding diversity training have been introduced, but no formal policies have yet been formulated.

7.3 Financial protection

The level of financial protection in Denmark appears to be high, and unmet needs for medical care due to cost are generally low, although more commonly reported by people in the lowest income group (Eurostat, 2023g), but there are no national data exploring capacity to pay or impoverishing/catastrophic expenditure. OOP spending in Denmark as a share of current health expenditure was 12.4% in 2021, and it has been steadily falling since 2000 (see Table 3.1). It is now comfortably below the 15% threshold above which OOP spending reduces a government’s capacity to protect citizens from financial hardship and unmet need (WHO Regional Office for Europe, 2021). All Danish residents enjoy universal access to a comprehensive package of health services, so gaps in coverage are concentrated in specific areas

which are co-financed by OOP payments – particularly dental care and outpatient prescription medicines (see Box 3.1). Patients also pay OOP for some outpatient services, corrective lenses (glasses), hearing aids and access to private specialists and clinics outside the statutory referral scheme (see Section 3.4). However, these charges represent a smaller proportion of total OOP payments than spending on dental care and outpatient medicines. There is a system of stepwise increasing subsidies for outpatient medicines, and pharmaceutical expenditures above DKK 4435 (€594.7) a year are fully covered. Terminally ill patients and persons with low income receive higher subsidies. Persons aged 19 years and over (increasing to 20 in 2024 and 21 in 2025) pay user charges for dental care (see Section 3.4). Co-payments for outpatient medicines are capped but in dentistry they are not, and this has consequences for individual patients and equity. Inequity in dental health has been attributed to the high cost of accessing care (Petersen et al., 2021).

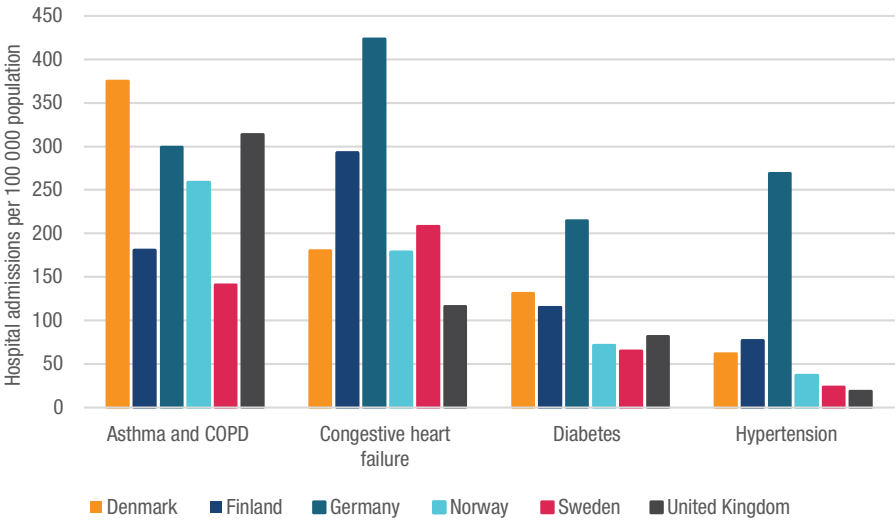
Almost half the Danish population has purchased VHI primarily to cover co-payments for pharmaceuticals, dental care and physiotherapy, but this is not an affordable option for all households (see Section 3.5), and unmet needs for these types of care are higher than for other types of care, and particularly among low-income groups.

## ■ 7.4 Health care quality

### ■ 7.4.1 *Primary (ambulatory) care*

Hospital admission rates in Denmark remain high for some chronic conditions that could be managed effectively in outpatient settings – particularly asthma and COPD (Fig. 7.3). This points to possible inefficiencies and weaknesses in primary care. Conversely, hospitalization rates for diabetes and congestive heart failure are lower than in most other EU countries. Avoidable admissions and readmissions have had a significant political focus since the early 2010s. They have resulted in political plans to strengthen municipal health services, such as home nursing, municipal acute care and GPs assigned to a specific nursing home and all its residents (as opposed to each resident having their own GP). A series of GP contracts have had a specific focus on improving care for patients with type 2 diabetes, COPD and cancer, and strengthening GP follow-up after hospital discharge. Recent contracts

**FIG. 7.3** Avoidable hospital admission rates for asthma, COPD, congestive heart failure, hypertension and diabetes-related complications, Denmark and selected countries, 2019



COPD: chronic obstructive pulmonary disease.

Source: OECD, 2023b.

have aimed to substitute hospital care with primary care and to establish easier access to home-based care for vulnerable patients and chronic care. Reducing preventable hospitalizations and readmissions is a national policy goal. This is reflected in the performance-based payment scheme to regions that receive a special fund if they reduce the number of hospitalizations per citizen and the proportion of hospitalizations that lead to acute readmission (see Section 3.3.3).

From July 2022, 21 health clusters have been established as collaborations between regional and municipal health services tasked with strengthening prevention and care coordination activities for patients – particularly those with chronic conditions. However, the impact of these has yet to be assessed.

The Danish Programme for Surveillance of Antimicrobial Consumption and Resistance (DANMAP) found that the number of antibiotics prescribed by GPs and the level of antibiotic resistance dropped jointly and significantly during the COVID-19 pandemic (DANMAP, 2022), accelerating a year-on-year decrease in antibiotic consumption since 2013. In 2021 the total number of prescriptions was 396 per 1000 inhabitants, a 32% reduction from the 583 prescriptions per 1000 inhabitants in 2012, and in the same period

the total number of patients treated decreased by approximately 10% to 208 per 1000 inhabitants. In Denmark, cephalosporins, fluoroquinolones and carbapenems have been defined as antimicrobials of special critical interest due to their resistance potential and their reserved use for the treatment of severe infections. Fluoroquinolones accounted for 0.32 DDD per 1000 inhabitants per day, approximately 3% of the total number of prescriptions, which is the lowest in a decade. There is very low use of cephalosporins/aminoglycosides (0.03 DDD per 1000 inhabitants per day (0.23%)), as well as no use of carbapenems in primary health care (DANMAP, 2022).

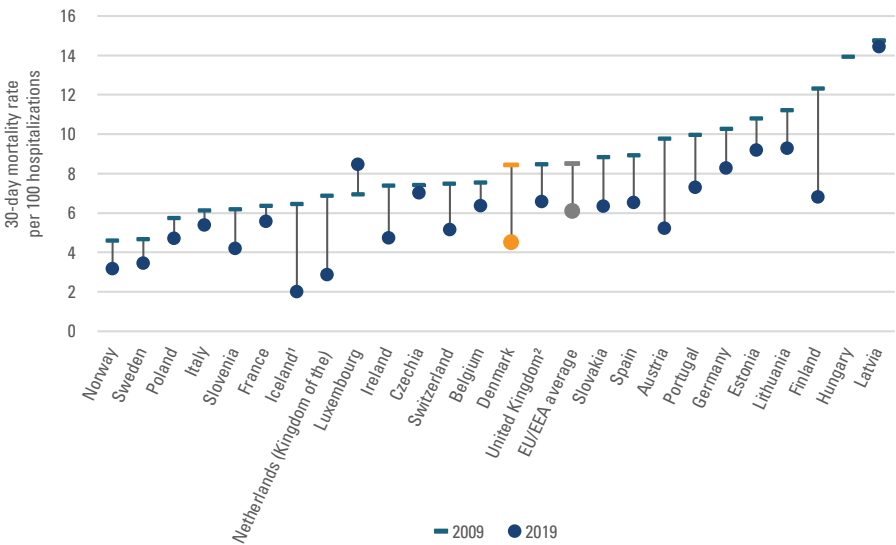
#### ■ 7.4.2 *Hospital (inpatient) care*

The effectiveness of specialist care in Denmark is high in terms of those indicators that assess in-hospital mortality rates. For example, Denmark now has among the best outcomes in terms of mortality from acute myocardial infarction (AMI) within 30 days of hospitalization in Europe (Fig. 7.4). The marked improvement over the past decade results from investments in acute care in general and policy efforts aimed directly at mortality rates from heart disease. One example was the introduction of the so-called heart packages care pathways in 2010. A heart package is a description of those examinations and treatments that must be carried out within a certain time frame when a patient is referred to hospital with suspected heart disease and now also includes related cross-sectional activities in general practice and municipal care after hospitalization. In 2017, the heart packages were phased out as they did not function optimally and were considered an example of redundant tests in the health care system.

#### ■ 7.4.3 *Cancer care*

The cancer incidence rate in Denmark increased from 39 065 new cancer cases in 2011 to 45 205 new cases in 2020 (Kræftens Bekæmpelse, 2022). Despite this increase, cancer survival rates in Denmark have improved markedly since the 2000s, and national data and research have shown that the improvements in survival rates have continued. The improvements in

**FIG. 7.4** In-hospital mortality rates (deaths within 30 days of admission) for admissions following acute myocardial infarction, in Denmark and selected countries, 2009 and 2019



EEA: European Economic Area; EU: European Union.

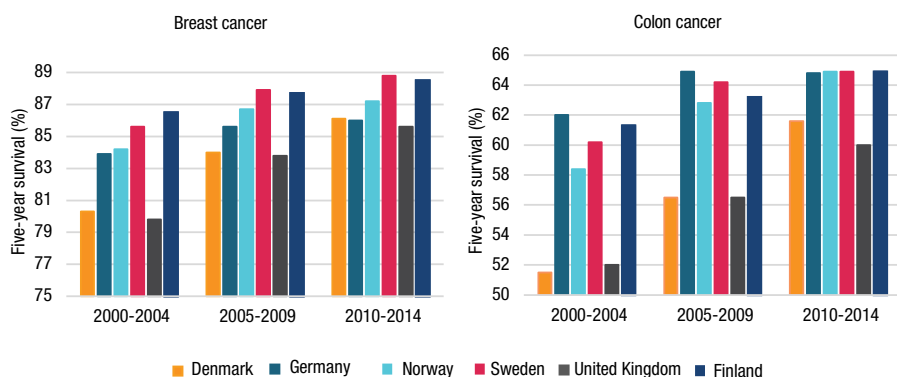
Notes: 1. 3-year average for all years except 2020. 2. 2020 data are provisional and include England only.

Source: OECD, 2021b.

survival rates are partly due to different policy measures, such as cancer plans, cancer packages with fast-track cancer care pathways, efforts to enable early and safe diagnosis, such as the national screening programmes for colorectal cancer and breast cancer (see Section 5.1), and improved treatments, such as precision radiotherapy, new biological treatments, immunotherapy and new chemotherapy (Kræftens Bekæmpelse, 2022).

In the Danish national cancer plan IV from 2016, one goal is to improve cancer survival rates to the same level as the best of the neighbouring Nordic countries by 2025. Another goal is that at least three out of four cancer patients survive cancer (Sundheds- og Ældreministeriet, 2021b). However, as seen in Fig. 7.5, the 5-year cancer survival rate for patients diagnosed in 2010–2014 was lower in Denmark than in the other Nordic countries. A comprehensive research project on cancer survival in the Nordic countries for the years 1990–2016 showed that the 1-year and 5-year survival rates in Denmark were on a par with those of the other Nordic countries. The study also showed that survival generally improved in all countries and that the previously observed differences between the Nordic countries have



**FIG. 7.5** Cancer survival rates for colon cancer and breast cancer (among women)

Source: OECD, 2023c; Allemani et al., 2018.

become smaller (Lundberg et al., 2020). Survival rates following diagnosis for various types of cancer in Denmark compare favourably with most other EU countries.

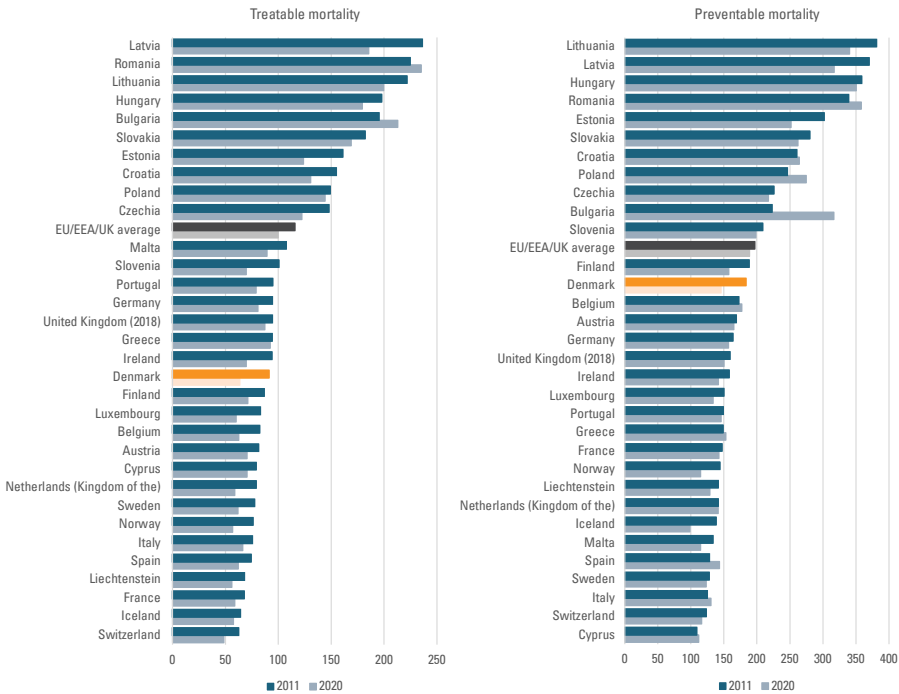
#### ■ 7.4.5 Overall quality of care

Overall improvements in hospital readmission rates and cancer survival rates are the result of concerted policy efforts to improve the quality of care (see Section 2.7.2), and the difference between health indicators in Denmark and other Nordic countries has narrowed significantly. A political focus on quality of primary care and municipal services has similarly reduced the avoidable admissions rates for certain conditions. A key barrier to further improvements in quality of care, particularly for chronic conditions, is the difficulty in strengthening the integration of care between providers and levels of care (see Box 5.3). There is also a need to address inequalities in the quality of care (see Section 7.5). Nevertheless, patients are broadly satisfied with the care they receive (see Box 5.4).

### ■ 7.5 Health system outcomes

In Denmark, the treatable mortality rate decreased from 91.2 deaths per 100 000 population in 2011 to 63.5 deaths per 100 000 population in 2020

**FIG. 7.6** Preventable and treatable mortality in Denmark and selected countries, 2011–2020



EEA: European Economic Area; EU: European Union; UK: United Kingdom.

Note: Data are for 2020 except for the United Kingdom (2018).

Source: Eurostat, 2023h.

(Fig. 7.6). This testifies to the Danish health system's capacity to provide effective and timely treatment for life-threatening conditions. Mortality from treatable causes in Denmark is below the EU average (99.9 deaths per 100 000 population), the United Kingdom (87.4 deaths per 100 000 population in 2018) and Germany (80.8 deaths per 100 000 population) but higher than in Sweden (62.1 deaths per 100 000 population) and Norway (56.9 deaths per 100 000 population).

In 2020, the health system in Denmark could have prevented 145.9 deaths per 100 000 population through effective public health interventions, compared with 183.4 in 2011 (Fig. 7.6). This is better than the EU average for preventable mortality (188.9 deaths per 100 000 population). Preventable mortality in Denmark is lower than in Germany (157.2 deaths per 100 000 population) and the United Kingdom (150.4 deaths per 100 000 population

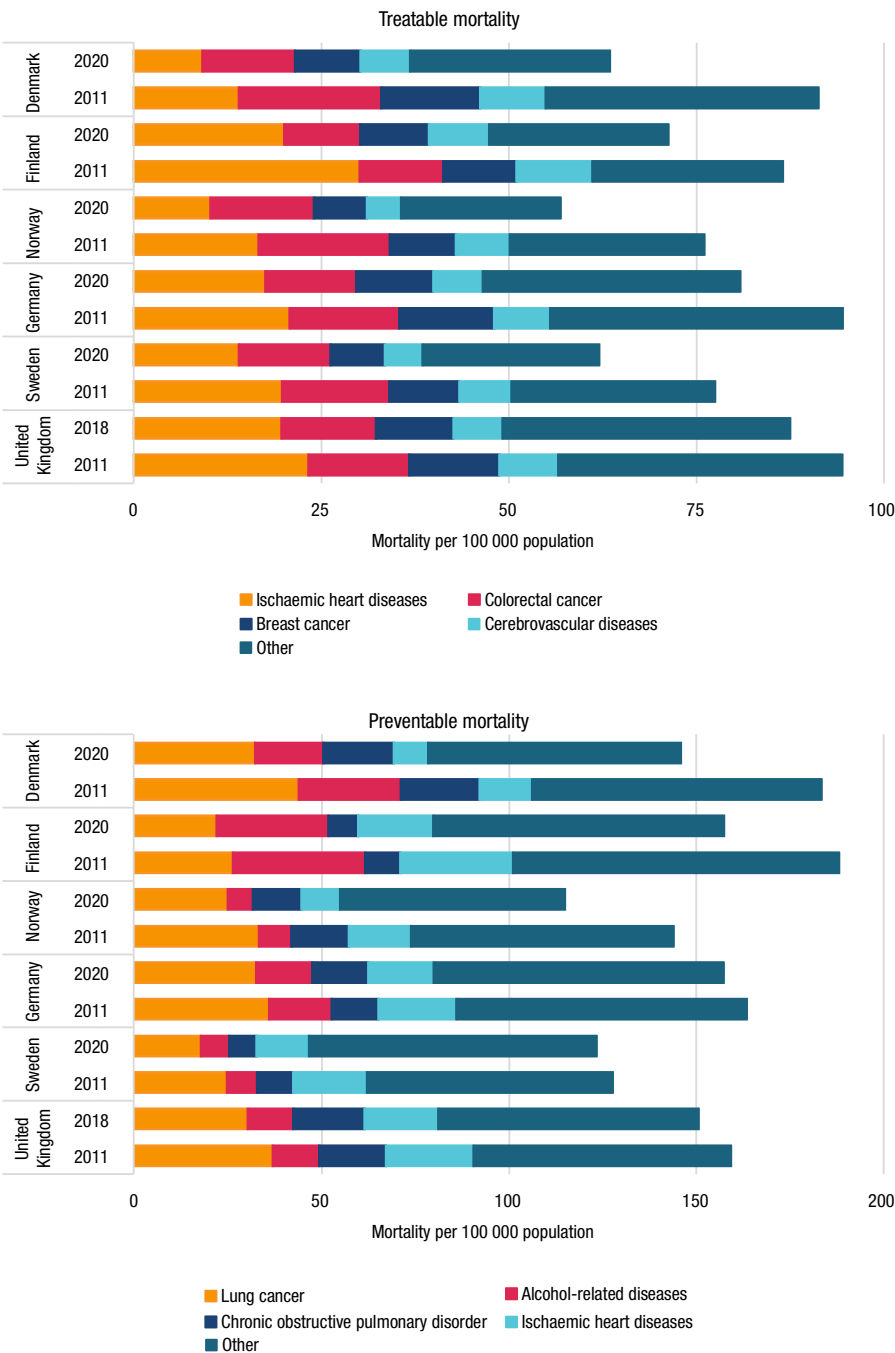
in 2018) but far behind that of Norway (114.9 deaths per 100 000 population) and Sweden (123.3 deaths per 100 000 population). Although preventable deaths fell by 20% between 2011 and 2020, further prioritization of public health and prevention policies – particularly around tobacco and alcohol control – would help Denmark reduce preventable deaths even further.

Colorectal cancer is the primary driver of treatable mortality in Denmark, accounting for 20.1% of all treatable deaths in 2020 (12.3 per 100 000 population) (Fig. 7.7). This is a decrease from 19.0 deaths per 100 000 population in 2011, which is higher than in Finland (10.2 per 100 000 population), but on par with that of Sweden (12.2 per 100 000 population) and Germany (12.1 per 100 000 population) and lower than the rate in Norway (13.8 per 100 000 population). Lung cancer is the primary driver of preventable mortality in Denmark, which accounted for 32.2% of all preventable deaths in 2020. Despite a decrease from 43.8 per 100 000 population in 2011, the rate is by far the highest, besides Germany, among the selected neighbouring comparator countries in 2020. Other drivers of preventable mortality are COPD (18.8 per 100 000 population) and alcohol-related diseases (18.2 per 100 000 population).

Although treatable and preventable mortality rates for both sexes have decreased for every cause since 2011, there are considerable gender gaps. For example, in 2020, 4.1 per 100 000 population of women and 14.2 per 100 000 population of men (3.5 times higher) died from ischaemic heart disease (Eurostat, 2023i). Furthermore, for men, the rates of alcohol-related diseases decreased from 40.2 per 100 000 population in 2011 to 26.0 per 100 000 population in 2020 (–35.3%); for women, it decreased from 14.7 per 100 000 population in 2011 to 10.5 in 2020 (–28.6%). Despite this reduction, the share of men dying from alcohol-related diseases in 2020 was 1.9 times higher than that of women.

Life expectancy and lifespan equality have improved in Denmark since 1995 but still lag behind those for Sweden (Aburto et al., 2018). Although the introduction of fast-track cancer care pathways (cancer packages) in 2007 contributed to better survival rates and shortened waiting times for cancer diagnosis and treatment (Allemani et al., 2018), the comparison with Sweden suggests that there is still scope for Denmark to reduce inequality in lifespans and increase life expectancy further by reducing cancer and infant mortality (Aburto et al., 2018).

**FIG. 7.7** Main causes of treatable and preventable mortality in Denmark, 2011 and 2020 (or latest available year)



Source: Eurostat, 2023i.

### ■ 7.5.1 *Equity of outcomes*

Despite the principle of easy and equal access to health care, persons with only primary-level education experience more illnesses, worse consequences of ill health and die earlier than people with tertiary education (Sundhedsstyrelsen, 2022e). Social inequality is seen in 5-year survival rates among people with ischaemic heart disease and people with cerebrovascular disease; for both men and women, survival rates are higher for people with a higher level of education. The same pattern of social inequality in mortality is seen for patients with COPD and certain cancer patients (breast cancer, lung cancer and bowel cancer), which suggests social inequality in the outcome of treatment efforts (Sundhedsstyrelsen, 2020). Further, a register-based study investigating treatment quality at hospitals and unjustified differences therein showed that between 2007–2016, a significant proportion of patients did not meet all relevant process indicators (measures of the quality of care) for heart failure, stroke and femur fractures: the lowest income patients more often failed to fulfil all relevant process indicators than the highest income patients (Rigsrevisionen, 2019), which suggests social inequality in treatment.

There are also inequalities in health outcomes between different ethnic groups. The incidence of preterm birth (Pedersen et al., 2012), caesarean section (Rasmussen et al., 2019b) and the severity of low birth weight for gestational age (Pedersen et al., 2012) are much higher for some ethnic minority groups than ethnic Danes. In terms of realized access, children of refugees have lower participation in the childhood vaccination programme and routine child health checks compared with ethnic Danish children (Møller et al., 2016; Møller, Kristiansen & Norredam, 2018). Similar results are also seen among migrants and some descendant groups (Slättelid Schreiber et al., 2015; Sundhedsstyrelsen, 2016; Hertzum-Larsen et al., 2020). Migrant adults use the health care system differently from the majority population (Hempler, 2010; Nielsen et al., 2012): emergency rooms are used more (Hempler, 2010; Nielsen et al., 2012), while dentists are used less (Nielsen et al., 2012), indicating barriers to accessing primary care and dental services for these groups.

## ■ 7.6 Health system efficiency

### ■ 7.6.1 Allocative efficiency

While there is no objective measure of allocative efficiency, and while the Danish health care system has reduced mortality and avoidable mortality, stagnating improvements in reducing behavioural risk factors indicate that there is still considerable potential for improving population health by allocating more resources to public health in general and preventive measures in particular.

Furthermore, the challenges faced by general practice and patients concerning multimorbidity, an ageing population and coordination of patient pathways in a necessarily highly specialized health care system indicate a major potential for improvement by strengthening primary care. Gatekeeping in the Danish health system is already strong and most care is delivered at the primary care level. This is a cost-effective and efficient use of resources. The political ambition to strengthen community care to reduce pressure on inpatient providers also makes good sense. However, decisions about prioritization at the national level are not fully transparent. Allocations between disease categories are predominantly shaped by political considerations so much more money is allocated to certain categories as political priorities (e.g. cancer, heart disease) rather than, for example, muscular/skeletal conditions, COPD and mental health.

To support flexibility and fairness in resource allocation from the national to the regional level, risk-adjusted resource allocation formulae (*bloktilskud*) are used, but there is still scope for further refinement of these mechanisms to ensure that regions with poorer health receive more funds to meet the health needs of their populations.

### ■ 7.6.2 Technical efficiency

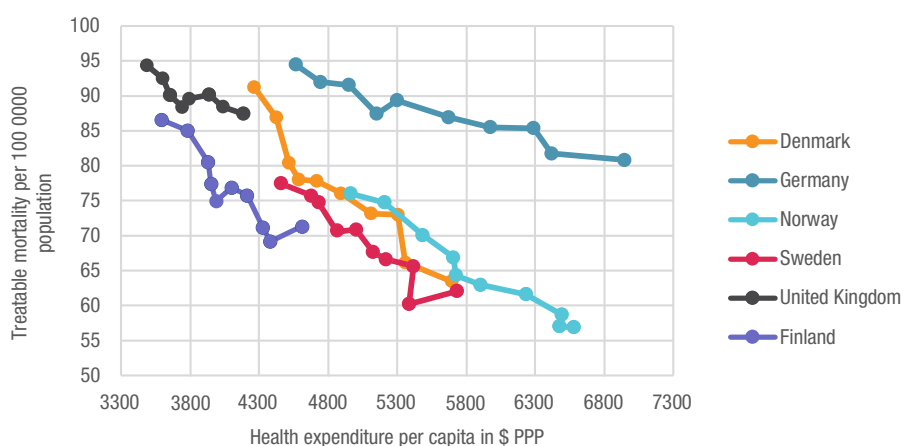
It is often difficult to assess how a health system is performing regarding input, costs and outcomes. One attempt to provide a very cursory illustration is to plot current expenditure on health against the treatable mortality rate. It is not possible to fully disentangle the role of health behaviours and the health care system in influencing the level of treatable mortality. Still, the indicator

provides a helpful entry point for discussion. The treatable mortality rate in Denmark has continuously decreased between 2011–2020 as health spending has increased (Fig. 7.8). Treatable mortality in Denmark remains below that of Germany and Finland but relatively high compared with Norway and Sweden. The relatively steep drop in treatable mortality between 2011 and 2014 in Denmark was achieved at a lower cost compared with Germany and Norway, but lower levels of treatable mortality were achieved in Finland and Sweden with the same or lower health expenditure per capita.

In 2017, the requirement that the productivity of public hospitals must grow by at least 2% a year was abolished. This requirement has been in place since the introduction of an incentive pool to increase hospital productivity in 2002. Each county (region, since 2007) would receive a predefined share of the incentive pool if their hospitals increased their annual productivity (measured in DRG points) by at least 2% (1.5% until 2007).

While average annual productivity increases of 2.4% were achieved from 2003 to 2016, there had been growing concerns about unintended side-effects leading up to the decision. Health professionals complained about increasing workplace stress. Regions and independent observers argued that the focus on activity, measured as (hospital) DRGs, tended to disincentivize innovations

**FIG. 7.8** Treatable mortality per 100 000 population versus health expenditure per capita, in Denmark and selected countries, 2011–2020 (or latest available year)



PPP: purchasing power parity.

Note: Data for the UK are until 2018.

Source: Eurostat, 2023h; OECD, 2023a.

in telemedicine; treatment at home; prevention; substituting outpatient visits for hospitalizations; and critically reviewing whether outpatient visits are clinically indicated.

Since 2017, the regions and their hospitals have remained subject to diagnosis/treatment guarantees with strict time limits and a hard budget constraint imposed by legislation. The criteria for regional funding from the state and the municipalities largely remain unchanged. This means that hard budget constraints are maintained for the block grants allocated from the state to the regions and that municipal co-funding remains activity-based within an overall frame. The state will also continue monitoring the regional activity level along with other performance criteria.

Meanwhile, the demand for health services continues to grow, requiring efficiency increases in the health care sector. Therefore, the main effect of removing the 2% productivity rule has been increased flexibility for the regions and hospitals to re-design their incentive structures and work processes to increase efficiency while adhering to general performance requirements.

Conversely, the regions have been experimenting with ways to adjust their internal resource allocation schemes for hospitals. While the global budgeting framework will be maintained, there is a stronger emphasis on value for patients, as opposed to the current focus on activity measured in DRG points. The assumption behind this change is that the new mechanisms will encourage hospitals to focus on improving patient outcomes while eliminating the adverse effects of activity-based financing.

The gradual shift from activity-based financing of the hospitals towards global budgeting makes it difficult to assess and compare productivity with previous years. However, a report from the Ministry of Health described a fall in productivity of 4% from 2019–2022 (Indenrigs- og Sundhedsministeriet, 2023). In the same period, the number of employed health professionals saw an increase of 7%. The number of nurses, however, saw a slight overall decrease.



## Conclusions

The Danish health system effectively provides good quality care in an equitable way that ensures very high levels of patient satisfaction. The health of the population is generally high. As a decentralized system, an ongoing challenge has been coordination and overcoming fragmentation in governance. How to ensure coordination and continuity of care has been an ongoing focus area for policy discussions and reforms; however, it remains an issue of concern. Waves of reforms have consolidated the number of municipalities and regions and sought to optimize hospital services by balancing efficiencies of scale and geographical accessibility. However, a key lesson from the ongoing trend of reorganizing hospital care is that there is no perfect solution for centralization or decentralization, as all policies involve trade-offs. A new structural commission has been set up to deal with acute challenges in the health system, and the proposal has the potential to change how it is organized, but it is not clear what the impact might be on the long-standing challenges the system has faced.

Over the past decade, digitization in the health system has been strengthened, both in terms of internal IT systems and the increased use of digital communications technology. The recruitment and retention of GPs to serve populations in remote and underserved areas have proved difficult. Digital tools are, therefore, also increasingly seen as an important means of maintaining access to services in these areas. Still, with such strong gatekeeping in primary care, access to a GP is essential for access to the Danish health system. The COVID-19 pandemic accelerated the uptake of digital tools. The

psychological impact of the physical distancing measures implemented in response to the COVID-19 pandemic has also focused attention on mental health and mental health services, particularly for young people. Generally, treatment services are afforded a much higher priority in the system than prevention services. Danish Regions have been pushing for a public health law, together with several public and private institutions, since 2020. Effectively tackling the commercial determinants of health requires national policies to strengthen, for example, alcohol and tobacco control. Such measures would be necessary to help close the gap in population health indicators between Denmark and its Nordic neighbours.

The decentralized nature of the Danish health system means that it is flexible in responding to external shocks. This was highlighted by the COVID-19 response as the country was able to rapidly scale up testing and laboratory capacity and roll out successful information and vaccination campaigns. However, it is hard to maintain resilience to external shocks over the longer term, and the pandemic exacerbated pre-existing shortages of nurses – particularly in intensive care and surgery. The key political challenge is coping with increasing waiting times for elective care as the health system struggles to clear the backlog of mainly surgeries that arose as the system had to deal with the increased burden of treating COVID-19 cases. However, the shortage of nurses limits the scope for surging capacity to meet this need.

The main challenge to the sustainability and resilience of the health system is therefore ensuring sufficient health workers, but particularly nurses, to be recruited and retained to meet the health needs of the population. A comprehensive package of policies has been put in place to increase the number of nurses being trained and to retain nurses already working in the system, but such measures need time to work. There is no quick fix to staffing shortages, and profound changes in working practices and working environments will be required to ensure the sustainability of the health workforce and, by extension, the health system into the future.

# Appendices

## 9.1 References

- Aburto JM et al. (2018). Potential gains in life expectancy by reducing inequality of lifespans in Denmark: An international comparison and cause-of-death analysis. *BMC Public Health*.18(1):831. doi: 10.1186/s12889-018-5730-0.
- Allemani C et al. (2018). Global surveillance of trends in cancer survival 2000–14 (CONCORD-3): Analysis of individual records for 37 513 025 patients diagnosed with one of 18 cancers from 322 population-based registries in 71 countries. *Lancet*.391(10125):1023–75. doi: 10.1016/s0140-6736(17)33326-3.
- Behandlingsrådet (2022). The Danish Health Technology Council [webpage]. Aalborg (<https://behandlingsraadet.dk/in-english>, accessed 23 September 2022).
- Birk HO, Henriksen LO (2003). *Brugen af det frie sygehusvalg inden for tre amter, 1991–1999* [The use of the free choice of hospital rights in three different counties, 1991–1999]. *Ugeskr Læger*.165(38):3613–16.
- Bollerup S et al. (2018). *Ny styring i et patientperspektiv. Resultater fra følgeforskning* [New governance from a patient perspective. Results from follow-up research]. Aarhus: DEFACTUM.
- Brabrand M et al. (2022). Mandatory referral for unplanned hospital admissions led to a 9.4% reduction in attendances. *Intern Emerg Med*.17(3):915–6. doi: 10.1007/s11739-021-02867-w.
- Burau V et al. (2018). Beyond activity based funding. An experiment in Denmark. *Health Policy*.122(7):714–21. doi: 10.1016/j.healthpol.2018.04.007.
- Centre for Patientinddragelse (2022a). *LUP Somatik 2021* [LUP somatic care]. Hillerød: Region Hovedstaden ([https://www.regionh.dk/patientinddragelse/LUP/aktuel-undersogelse/Documents/LUP%20Somatik%202021\\_one-pager.pdf](https://www.regionh.dk/patientinddragelse/LUP/aktuel-undersogelse/Documents/LUP%20Somatik%202021_one-pager.pdf), accessed 6 January 2023).

- Centre for Patientinddragelse (2022b). *LUP Akutmodtagelse 2021* [LUP acute care]. Hillerød: Region Hovedstaden ([https://www.regionh.dk/patientinddragelse/LUP/aktuel-undersogelse/Documents/LUP%20Akutmodtagelse%202021\\_one-pager.pdf](https://www.regionh.dk/patientinddragelse/LUP/aktuel-undersogelse/Documents/LUP%20Akutmodtagelse%202021_one-pager.pdf), accessed 6 January 2023).
- Christiansen T, Vrangbæk K (2018). Hospital centralization and performance in Denmark – ten years on. *Health Policy*.122(4):321–8. doi: 10.1016/j.healthpol.2017.12.009.
- Danish Competition Council (2016). Competition in the distribution of medicines. Copenhagen (<https://www.en.kfst.dk/media/3296/141016-competition-in-the-distribution-of-medicines.pdf>, accessed 22 August 2023).
- DANMAP (2022). DANMAP Report 2021 (<https://www.danmap.org/reports/2021>, accessed 17 August 2023).
- Danmarks Apotekerforening (2021a). *Typer af apoteksenheder* [Pharmacy types]. Copenhagen (<https://www.apotekerforeningen.dk/om-os/regulering-af-apotekerne/typer-af-apoteksenheder>, accessed 22 August 2023).
- Danmarks Apotekerforening (2021b). *Lægemidler i Danmark 2020–2021 – Lægemiddelforbrug og apoteksdrift i Danmark* [Pharmaceuticals in Denmark 2020–2021 – Pharmaceutical consumption and pharmacy operations in Denmark]. Copenhagen (<https://www.apotekerforeningen.dk/-/media/apotekerforeningen/aarbog-laegemidler-i-danmark-2020-21.pdf>, accessed 17 August 2023).
- Danmarks Statistik (2019). *Færre ældre bor i pleje- og ældreboliger* [Fewer older people live in care and retirement housing]. Copenhagen (<https://www.dst.dk/da/Statistik/nyheder-analyser-publ/nyt/NytHtml?cid=30289>, accessed 22 August 2023).
- Danmarks Statistik (2020a). *Kontakt til almen læge – hver for sig* [Contacts to general practitioners – separately]. Copenhagen (<https://www.dst.dk/da/Statistik/nyheder-analyser-publ/nyt/NytHtml?cid=30625>, accessed 1 December 2022).
- Danmarks Statistik (2020b). *Flest kvinder bor på plejehjem eller i plejebolig* [Most women live in nursing homes or residential care]. Copenhagen (<https://www.dst.dk/da/Statistik/nyheder-analyser-publ/nyt/NytHtml?cid=30746>, accessed 1 December 2022).
- Danmarks Statistik (2021). *Rekordhøj stigning i indkomst under COVID-19* [Record increase in income during COVID-19]. Copenhagen. (<https://www.dst.dk/da/Statistik/nyheder-analyser-publ/nyt/NytHtml?cid=33389>, accessed 1 December 2022).
- Danmarks Statistik (2022a). *It-anvendelse I befolkningen – 2021* [IT use in the population – 2021]. Copenhagen (<https://www.dst.dk/Site/Dst/Udgivelser/GetPubFile.aspx?id=39431&sid=itbef2021>, accessed 12 September 2022).
- Danmarks Statistik (2022b). *Fortsat færre ældre bor i pleje- og ældreboliger* [Still fewer older people live in care and retirement housing]. Copenhagen (<https://www.dst.dk/da/Statistik/nyheder-analyser-publ/nyt/NytHtml?cid=44271>, accessed 22 August 2023).

- Danske Regioner (2015). *Afrapportering. Styring efter værdi for Patienten* [Debriefing. Managing for patient value]. Copenhagen (<https://www.regioner.dk/media/1313/afrapportering-styring-efter-vaerdi-for-patienten.pdf>, accessed 30 January 2023).
- Danske Regioner (2016). *Værdibaseret styring tager form i regionerne* [Value-based governance takes shape in the regions]. Copenhagen (<https://www.regioner.dk/services/nyheder/2016/juni/vaerdibaseret-styring-tager-form-i-regionerne>, accessed 30 January 2023).
- Danske Regioner (2017). *Sundhed for livet – Forebyggelse er en nødvendig investering* [Health for life – prevention is a necessary investment]. Copenhagen (<https://www.regioner.dk/services/publikationer/sundhed/sundhed-for-livet>, accessed 17 August 2023).
- Danske Regioner (2018). *Mental Sundhed – Bedre behandling til mennesker med svær psykisk sygdom* [Mental health – Better treatment for people with severe mental illness]. Copenhagen (<https://www.regioner.dk/media/9714/mental-sundhed-bedre-behandling-til-mennesker-med-svaer-psykisk-sygdom.pdf>, accessed 12 September 2022).
- Danske Regioner (2020). *Appel til regeringen og folketinget. Skab et sundere, mere lige og bæredygtigt Danmark med en folkesundhedslov* [Appeal to the government and parliament. Create a healthier, more equal, and sustainable Denmark with a public health law]. Copenhagen (<https://moedrehjaelpen.dk/wp-content/uploads/2020/11/Faelles-appel-om-en-folkesundhedslov-i-Danmark.pdf>, accessed 1 December 2022).
- Danske Regioner (2021a). *Godt sygehusbyggeri* [Danish hospital construction]. Copenhagen (<https://godtsygehusbyggeri.dk/maal-og-styring/english>, accessed 1 December 2022).
- Danske Regioner (2021b). *Ny aftale med privathospitaler og klinikker* [New agreement with private hospitals and clinics]. Copenhagen (<https://www.regioner.dk/services/nyheder/2021/juli/ny-aftale-med-privathospitaler-og-klinikker>, accessed 1 December 2022).
- Danske Regioner (2022). *Nærhedsfinansiering* [Proximity financing]. Copenhagen (<https://www.regioner.dk/aftaler-og-oekonomi/oekonomisk-styring/finansiering/naerhedsfinansiering>, accessed 23 September 2022).
- DEFACTUM (2022). *LUP Psykiatri 2021* [LUP psychiatry 2021]. Aarhus ([https://www.defactum.dk/siteassets/defactum/3-projektsite/lup-psykiatri/2021/rapporter/lup-psykiatri\\_national-one\\_pager-2021.pdf](https://www.defactum.dk/siteassets/defactum/3-projektsite/lup-psykiatri/2021/rapporter/lup-psykiatri_national-one_pager-2021.pdf), accessed 6 January 2023).
- Dehn P et al. (2009). *Implementering af Speciallægereformens syv roller* [Implementing the seven roles of the specialist training reform]. *Ugeskr Laeger*.171(19):1580–4.
- Dunlavy A et al. (2023). Health outcomes in young adulthood among former child refugees in Denmark, Norway and Sweden: A cross-country comparative study. *Scand J Public Health*.51(3):330–8. doi: 10.1177/14034948211031408.
- Eriksen L et al. (2016). *Sygdomsbyrden i Danmark – risikofaktorer* [The disease burden in Denmark – risk factors]. Copenhagen: Sundhedsstyrelsen.

- [eSundhed.dk](https://www.esundhed.dk/Emner/Patienter-og-sygehuse/Sengepladser-og-belaegning-paa-sygehuse) (2022). *Sengepladser og belægning på sygehuse* [Beds and occupancy in hospitals]. Copenhagen: Sundhedsdatastyrelsen (<https://www.esundhed.dk/Emner/Patienter-og-sygehuse/Sengepladser-og-belaegning-paa-sygehuse>, accessed 12 September 2022).
- [eSundhed.dk](https://www.esundhed.dk/Emner/Patienter-og-sygehuse/Erfarede-ventetider#tabpanel602EF812A31340E0AAAB4C327AEC22D3) (2023). *Erfarede ventetider* [Experienced waiting times]. Copenhagen: Sundhedsdatastyrelsen (<https://www.esundhed.dk/Emner/Patienter-og-sygehuse/Erfarede-ventetider#tabpanel602EF812A31340E0AAAB4C327AEC22D3>, data retrieved 27 January 2023).
- Etisk Nævn for Lægemiddelindustrien (2011). *Etisk Nævn for Lægemiddelindustrien* [Ethical Committee of the Pharmaceutical Industry] [website]. Copenhagen: Ethical Committee for the Pharmaceutical Industry (<http://www.enli.dk>, accessed 27 November 2023).
- Eurostat (2023a). Life expectancy by age and sex [online database]. Luxembourg ([https://ec.europa.eu/eurostat/databrowser/view/demo\\_mlexpec\\_custom\\_8221947/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/demo_mlexpec_custom_8221947/default/table?lang=en), accessed 31 October 2023).
- Eurostat (2023b). Hospital beds by function and type of care [online database]. Luxembourg ([https://ec.europa.eu/eurostat/databrowser/view/hlth\\_rs\\_bds1\\_custom\\_8241524/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/hlth_rs_bds1_custom_8241524/default/table?lang=en), accessed 31 October).
- Eurostat (2023c). Hospital discharges and length of stay for inpatient and curative care [online database]. Luxembourg ([https://ec.europa.eu/eurostat/databrowser/view/hlth\\_co\\_inpagg/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/hlth_co_inpagg/default/table?lang=en), data retrieved 2 July 2023).
- Eurostat (2023d). Medical technology – historical data [online database]. Luxembourg ([https://ec.europa.eu/eurostat/databrowser/view/HLTH\\_RS\\_EQUIP\\_custom\\_4395998/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/HLTH_RS_EQUIP_custom_4395998/default/table?lang=en), data retrieved 6 January 2023).
- Eurostat (2023e). Health personnel [online database]. Luxembourg ([https://ec.europa.eu/eurostat/databrowser/view/hlth\\_rs\\_prs2/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/hlth_rs_prs2/default/table?lang=en), accessed 31 October 2023).
- Eurostat (2023f). Self-reported unmet needs for dental examination by sex, age, main reason declared and income quintile [online database]. Luxembourg ([https://ec.europa.eu/eurostat/databrowser/view/hlth\\_silc\\_09\\_custom\\_7873266/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/hlth_silc_09_custom_7873266/default/table?lang=en), accessed 2 November 2023).
- Eurostat (2023g). Self-reported unmet needs for medical examination by sex, age, main reason declared and income quintile [online database]. Luxembourg ([https://ec.europa.eu/eurostat/databrowser/view/hlth\\_silc\\_08/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/hlth_silc_08/default/table?lang=en), data retrieved 20 December 2022).
- Eurostat (2023h). Standardised preventable and treatable mortality [online database]. Luxembourg ([https://ec.europa.eu/eurostat/databrowser/view/SDG\\_03\\_42\\_custom\\_4351086/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/SDG_03_42_custom_4351086/default/table?lang=en), accessed 31 October 2023).
- Eurostat (2023i). Treatable and preventable mortality of residents by cause and sex [online database]. Luxembourg ([https://ec.europa.eu/eurostat/databrowser/view/HLTH\\_CD\\_APR\\_custom\\_4364803/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/HLTH_CD_APR_custom_4364803/default/table?lang=en), accessed 31 October 2023).

- Flojstrup M et al. (2023). Mortality before and after reconfiguration of the Danish hospital-based emergency healthcare system: A nationwide interrupted time series analysis. *BMJ Qual Saf.*32(4):202–13. doi: 10.1136/bmjqs-2021-013881.
- Forsikring og Pension (2023). *Antal forsikrede, præmieindtægter og erstatningsudgifter* [Number of insured, premiums earned and claims incurred]. Hellerup (<https://www.fogp.dk/statistik/sundhedsforsikringer/>, accessed 9 March 2023).
- Hauschultz FP, Munk-Nielsen A (2017). *Pris cykler i markedet for receptpligtig medicin efter patentudløb* [Price cycles in the market for prescription drugs after patent expiry]. Valby: Konkurrence- og Forbrugerstyrelsen ([https://www.kfst.dk/media/49083/pris-cykler-i-markedet-for-receptpligtig-medicin-efter-patentudloeb\\_final.pdf](https://www.kfst.dk/media/49083/pris-cykler-i-markedet-for-receptpligtig-medicin-efter-patentudloeb_final.pdf), accessed 22 August 2023).
- Hempler NF (2010). *Indvandreres brug af sundhedsvæsenet* [Immigrants' use of the health care system]. In: Vinther-Jensen K, Primdahl R eds. *Etniske minoriteter i det danske sundhedsvæsen – en antologi*. Copenhagen: Sundhedsstyrelsen.
- Hempler NF et al. (2020). *Veje til etnisk lighed i sundhed* [Pathways to ethnic equality in health]. Odense: Danish Society for Public Health ([https://www.danskelskabforfolkesundhed.dk/media/hbldbpov/gps\\_veje-til-etnisk-lighed-i-sundhed\\_final.pdf](https://www.danskelskabforfolkesundhed.dk/media/hbldbpov/gps_veje-til-etnisk-lighed-i-sundhed_final.pdf), accessed 17 August 2023).
- Hertzum-Larsen R et al. (2020). Human papillomavirus vaccination in immigrants and descendants of immigrants in Denmark. *Eur J Cancer Prev.*29(2):149–56. doi: 10.1097/cej.0000000000000524.
- Holstein MA (2019). *Privathospitalernes markedsandele er halveret på 10 år* [Market share of private hospitals halved in 10 years]. Copenhagen: CEPOS ([https://cepos.dk/media/2903/privathospitalernes\\_markedsandele\\_er\\_halveret\\_paa\\_10\\_aar.pdf](https://cepos.dk/media/2903/privathospitalernes_markedsandele_er_halveret_paa_10_aar.pdf), accessed 1 December 2022).
- Hospice Forum Danmark (2021). *Hospice – oversigt over hospicer i Danmark* [Hospice – overview of hospices in Denmark]. Esbjerg (<https://www.hospiceforum.dk/Hospicer.2555.aspx>, accessed 1 December 2022).
- IHME (2021). Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2019 (GBD 2019) Results. Seattle, United States: Institute for Health Metrics and Evaluation.
- Indenrigs- og Boligministeriet (2022a). *Kommunal udligning og generelle tilskud 2023* [Municipal equalisation and general subsidies 2023]. Copenhagen: Ministry of the Interior and Housing (<https://im.dk/Media/638003844048197422/Kommunal%20udligning%202023.pdf>, accessed 30 January 2023).
- Indenrigs- og Boligministeriet (2022b). *Bloktilskud til regionerne for 2023* [Block grants to regions for 2023]. Copenhagen: Ministry of the Interior and Housing (<https://im.dk/arbejdsmraader/kommunal-og-regionaloekonomi/tilskud-og-udligning/regional-finansiering/bloktilskud-til-regionerne-for-2023>, accessed 30 January 2023).
- Indenrigs- og Sundhedsministeriet (2023). *Eftersyn af sygehusvæsenet* [Review of the hospital system]. Copenhagen (<https://sum.dk/Media/638095617135578721/>



- [Udfordringsbillede-Et-grundigt-eftersyn-af-sygehusv%c3%a6senet.pdf](#), accessed 6 January 2023).
- Jakobsen GS, Sølvhøj IN, Holmberg T (2020). *Monitorering af kommunernes forebyggelsesindsats 2019* [Monitoring of the municipalities' preventive efforts 2019]. Copenhagen: Statens Institut for Folkesundhed, Syddansk Universitet ([https://www.sdu.dk/da/sif/rapporter/2020/monitorering\\_af\\_kommunernes\\_forebyggelsesindsats\\_2019](https://www.sdu.dk/da/sif/rapporter/2020/monitorering_af_kommunernes_forebyggelsesindsats_2019), accessed 17 August 2023).
- Jensen HAR et al. (2022). *Danskernes sundhed: Den Nationale Sundhedsprofil 2021* [The National Health Profile 2021]. Copenhagen: Statens Institut for Folkesundhed, Syddansk Universitet (<https://www.sst.dk/-/media/Udgivelser/2022/Sundhedsprofil/Sundhedsprofilen.ashx>, accessed 17 August 2023).
- Jervelund SS et al. (2023). Recommendations for ethnic equity in health: A Delphi study from Denmark. *Scand J Public Health*.51(3):339–46. doi: 10.1177/14034948211040965.
- Kjellberg J, Andreassen MN, Søgaard J (2010). *Private sundhedsforsikringer: notat udarbejdet for LO* [Private health insurance: memo prepared for the TUC]. Copenhagen: Danish Institute of Health Services Research (<https://www.vive.dk/da/udgivelser/private-sundhedsforsikringer-4xky2rzt/>, accessed 17 August 2023).
- Knudsen LB, Hansen CD (2008). *Registerforskning* [Register-based research]. In: Vallgård S, Koch L eds. *Forskningsmetoder i Folkesundhedsvidenskab* [Research Methods in Public Health Science]. Copenhagen: Munksgaard, pp. 303–329.
- Kommunernes Landsforening (2016). *Afstand til nærmeste sygehus: Fugleflugt eller vejafstand?* [Distance to nearest hospital: bird's eye view or road distance?]. Copenhagen (<https://www.kl.dk/media/18668/afstand-til-naermeste-sygehus-fugleflugt-eller-vejafstand.pdf>, accessed 17 August 2023).
- Kommunernes Landsforening (2017). *Forebyggelse for fremtiden – samling af anbefalinger* [Prevention for the future – a collection of recommendations]. Copenhagen (<https://www.kl.dk/media/10493/forebyggelse-for-fremtiden-pixi-udgave.pdf>, accessed 17 August 2023).
- Kræftens Bekæmpelse (2022). *Kræft i Danmark 2022* [Cancer in Denmark 2022]. Copenhagen (<https://www.cancer.dk/dyn/resources/File/file/9/9699/1665127828/kræft-i-danmark-2022-bog-singlepages-3udg.pdf>, accessed 13 January, 2023).
- Kristensen FB (2020). *Danmarks 46 sygehusbyggerier er forsinket med 44 år* [Denmark's 46 hospital buildings are delayed by 44 years]. Sundhedsmonitor. 26 November 2020 (<https://sundhedsmonitor.dk/nyheder/art8011993/Danmarks-46-sygehusbyggerier-er-forsinket-med-44-%C3%A5r>, accessed 21 September 2022).
- Lægeforeningen (2019). *Udenlandske uddannede læger* [Foreign educated doctors]. Copenhagen (<https://www.laeger.dk/foreninger/laegeforeningen/politik/laegeforeningens-politikomraader-fra-a-aa/arbejdskraft/udenlandsk-uddannede-laeger/>, accessed 14 August 2023).
- Lægemiddelstyrelsen (2019). *Prices of medicine* [website]. Copenhagen: Danish Medicines Agency (<https://laegemiddelstyrelsen.dk/en/reimbursement/prices/>, accessed 22 August 2023).



- Lægemiddelstyrelsen (2023a). Danish Medicines Agency [website]. Copenhagen: Danish Medicines Agency (<http://laegemiddelstyrelsen.dk/en>, accessed 4 January 2023).
- Lægemiddelstyrelsen (2023b). *Medicintilskudsgrænser* [Medication subsidy limits]. Copenhagen: Danish Medicines Agency (<https://laegemiddelstyrelsen.dk/da/tilskud/beregn-dit-tilskud/tilskudsgraenser/>, accessed 30 January 2023).
- Lindstroem M et al. (2021). The effect of the employment of experienced physicians in the emergency department on quality of care and equality—a quasi-experimental retrospective cohort study. *Eur J Public Health*.31(6):1163–70. doi: 10.1093/eurpub/ckab137.
- Lundberg FE et al. (2020). Trends in cancer survival in the Nordic countries 1990–2016: The NORDCAN survival studies. *Acta Oncol*.59(11):1266–74. doi: 10.1080/0284186x.2020.1822544.
- Maribo T et al. (2022). *Hvidbog om rehabilitering, 1. Udgave* [White paper on rehabilitation, 1st edition]. Aarhus: Rehabiliteringsforum Danmark.
- Medicinrådet (2022). Danish Medicines Council – About us [website]. Copenhagen (<https://medicinraadet.dk/om-os/in-english>, accessed 23 September 2022).
- Ministry of Health, Danish Regions, KL (2018). National goals of the Danish healthcare system. Copenhagen: Ministry of Health (<https://sum.dk/Media/637643696872604100/National%20goals%20of%20the%20Danish%20Healthcare%20System.pdf>, accessed 4 December 2023).
- Møller SP et al. (2016). Differences in uptake of immunisations and health examinations among refugee children compared to Danish-born children: A cohort study. *Eur J Pediatr*.175(4):539–49. doi: 10.1007/s00431-015-2663-9.
- Møller SP, Kristiansen M, Norredam M (2018). Human papillomavirus immunization uptake among girls with a refugee background compared with Danish-born girls: A national register-based cohort study. *Eur J Cancer Prev*.27(1):42–5. doi: 10.1097/cej.0000000000000274.
- Møller SR et al. (2023). *Udviklingen i social ulighed i dødelighed fra 1995–2019. Betydningen af ryge- og alkoholrelaterede dødsfald* [The development in social inequality in mortality from 1995–2019. The impact of smoking- and alcohol-related deaths]. Copenhagen: National Institute of Public Health ([https://www.sdu.dk/da/sif/rapporter/2023/udviklingen\\_i\\_social\\_ulighed](https://www.sdu.dk/da/sif/rapporter/2023/udviklingen_i_social_ulighed), accessed 27 November 2023).
- National Board of Health (2007). Danish Patient Safety Database. Copenhagen: Sundhedstyrelsen (<https://stps.dk/en/health-professionals-and-authorities/laering/~media/E5A852E8037D4A20A83CD385243C27CD.ashx>, accessed 23 August 2023).
- Nielsen Arendt J, Christensen ML (2022). Income inequality and public income redistribution. Study Paper No. 178. Copenhagen: The ROCKWOOL Foundation Research Unit (<https://rockwoolfonden.s3.eu-central-1.amazonaws.com/wp-content/uploads/2022/09/RFF-Study-paper-178-Income-Inequality-and-Public-Income-Redistribution-September-2022.pdf?download=true>, accessed 14 August 2023).

- Nielsen SS et al. (2012). Is there equity in use of healthcare services among immigrants, their descendants, and ethnic danes? *Scand J Public Health*.40(3):260–70. doi: 10.1177/1403494812443602.
- OECD (2021a). Health expenditure and financing. OECD.Stat (<https://stats.oecd.org/Index.aspx?ThemeTreeId=9>, data retrieved 12 March 2023).
- OECD (2021b). Mortality following acute myocardial infarction (AMI). In: *Health at a Glance 2021: OECD Indicators*. Paris: OECD Publishing. doi: 10.1787/f17a2af6-en.
- OECD (2023a). Health expenditure and financing. OECD.Stat (<https://stats.oecd.org/Index.aspx?ThemeTreeId=9#>, data retrieved 2 January 2023).
- OECD (2023b). Health care quality indicators. Primary care. OECD.Stat (<https://stats.oecd.org/Index.aspx?ThemeTreeId=9>, data retrieved 2 January 2023).
- OECD (2023c). Health care quality indicators. Cancer care. OECD.Stat (<https://stats.oecd.org/Index.aspx?ThemeTreeId=9>, data retrieved 2 January 2023).
- OECD/European Observatory on Health Systems and Policies (2021). Denmark country health profile 2021. State of Health in the EU. Paris: OECD Publishing ([https://www.oecd-ilibrary.org/social-issues-migration-health/denmark-country-health-profile-2021\\_2dce8636-en](https://www.oecd-ilibrary.org/social-issues-migration-health/denmark-country-health-profile-2021_2dce8636-en), accessed 4 December 2023).
- Olejaz M et al. (2012). Denmark health system review. *Health Syst Transit*.14(2):1–192.
- Palm W et al. (2021). Gaps in coverage and access in the European Union. *Health Policy*.125(3):341–50. doi: 10.1016/j.healthpol.2020.12.011.
- Pedersen GS et al. (2012). Preterm birth and birthweight-for-gestational age among immigrant women in Denmark 1978–2007: A nationwide registry study. *Paediatr Perinat Epidemiol*.26(6):534–42. doi: 10.1111/ppe.12010.
- Pedersen KM, Christiansen T, Bech M (2005). The Danish health care system: Evolution – not revolution – in a decentralized system. *Health Econ*.14(Suppl 1):S41–57. doi: 10.1002/hec.1028.
- Pedersen KM, Søgaard J, Kjellberg J (2022). *Sundhedsøkonomer: Den økonomiske omfordeling mellem regionerne er dybt usolidarisk* [Health economists: The economic redistribution between the regions is profoundly disjointed]. *Altinget*. 21 October 2022. (<https://www.altinget.dk/kommunal/artikel/sundhedsprofessorer-bloktilskuddene-skaber-ikke-lighed-mellem-regionerne>, accessed 24 February 2023).
- Petersen PE et al. (2021). Trends in dentate status and preventive dental visits of the adult population in Denmark over 30 years (1987–2017). *Eur J Oral Sci*.129(5):e12809. doi: 10.1111/eos.12809.
- PLO (2019a). *PLO Analyse: 1,8 mio. danskere i lægedækningsstruede områder* [PLO analysis: 1.8 million Danes live in an area where medical coverage is threatened]. Copenhagen: Domus Medica ([https://www.laeger.dk/media/kowdgtk5/plo\\_analyse\\_18\\_mio\\_danskere\\_i\\_laegedackningstruede\\_omraader.pdf](https://www.laeger.dk/media/kowdgtk5/plo_analyse_18_mio_danskere_i_laegedackningstruede_omraader.pdf), accessed 9 March 2023).

- PLO (2019b). *PLO Analyse – Høj tilfredshed med almen praksis* [PLO analysis – high satisfaction with general practice]. Copenhagen: Domus Medica ([https://www.laeger.dk/media/qvbnpy3f/plo\\_analyse\\_hoej\\_tilfredshed\\_med\\_almen\\_praksis\\_-\\_januar\\_2019.pdf](https://www.laeger.dk/media/qvbnpy3f/plo_analyse_hoej_tilfredshed_med_almen_praksis_-_januar_2019.pdf), accessed 17 August 2023).
- PLO (2021). *Aktivitet og økonomi i almen praksis i dagtid og vagttid 2011 til 2020* [Activity and economy in general practice in daytime and on-call time 2011 to 2020]. Copenhagen: Domus Medica ([https://www.laeger.dk/sites/default/files/aktivitet\\_og\\_oekonomi\\_2020.pdf](https://www.laeger.dk/sites/default/files/aktivitet_og_oekonomi_2020.pdf), accessed 12 September 2022).
- PLO (2022a). *Statistik om videokonsultationer. Data from March 2022* [Statistics on video consultations]. Copenhagen: Domus Medica (<https://www.laeger.dk/statistik-om-videokonsultationer>, accessed 10 October 2022).
- PLO (2022b). *PLO faktaark 2022* [PLO fact sheet 2022]. Copenhagen: Domus Medica ([https://laeger.dk/media/1e3cuf/t/plo\\_faktaark\\_2022.pdf](https://laeger.dk/media/1e3cuf/t/plo_faktaark_2022.pdf), accessed 16 October 2023).
- Rasmussen M et al. (2019a). *Skolebørnsundersøgelsen 2018 – Helbred, trivsel og sundhedsadfærd blandt 11-, 13- og 15-årige skoleelever i Danmark* [Health Behaviour in School-aged Children 2018 – health, well-being and health behaviour among 11, 13 and 15-year-old school-aged children in Denmark]. Copenhagen: National Institute of Public Health.
- Rasmussen TD et al. (2019b). Ethnic differences in the risk of caesarean section: A Danish population-based register study 2004–2015. *BMC Pregnancy Childbirth*.19(1):194. doi: 10.1186/s12884-019-2331-6.
- Regeringen (2022). *Ansvar for Danmark. Det politiske grundlag for Danmarks regering* [Responsibility for Denmark. The political basis for Denmark's government]. Copenhagen: Statsministeriet (<https://www.stm.dk/statsministeriet/publikationer/regeringsgrundlag-2022/>, accessed 8 February 2023).
- Regeringen, Danske Regioner, KL (2016). *Aftale om nationale mål for sundhedsvæsenet – 2016* [Agreement on national targets for health care – 2016]. Copenhagen: Indenrigs- og Sundhedsministeriet (<https://sum.dk/Media/9/0/Aftaletekst%20Nationale%20m%c3%a5%20for%20sundhedsv%c3%a6senet%202016.pdf>, accessed 30 January 2023).
- Regeringen, Danske Regioner, KL (2021). *Aftale om sammenhæng og nærhed (sundhedsklynger)* [Agreement about continuity and proximity (health clusters)]. Copenhagen: Indenrigs- og Sundhedsministeriet (<https://sum.dk/Media/637589953597284286/Aftaletekst%20vedr.%20sundhedsklynger%20pdf.pdf>, accessed 14 August 2023).
- Region Hovedstaden (2018). *Renoveringsanalysen: Regionens bygninger i dårlig stand* [Renovation analysis: the region's buildings in poor condition]. Hillerød.
- REHPA (2019). *Kortlægning af den specialiserede palliative indsats i Danmark – spørgeskemaundersøgelse blandt 51 enheder* [Mapping of specialized palliative care in Denmark – questionnaire survey among 51 units]. Nyborg: Videncenter for

- Rehabilitering og Palliation (<https://www.rehpa.dk/wp-content/uploads/2021/04/Kortlaegning-af-den-specialiserede-palliative-indsats-i-DK-REHPA-rapport-2021.pdf>, accessed 17 August 2023).
- Retsinformation (2023). *Sundhedsloven* [Danish Health Act]. Viborg: Civil Service Agency (<https://www.retsinformation.dk/eli/lta/2023/1011>, accessed 22 August 2023).
- Rigsrevisionen (2019). *Forskelle i behandlingskvaliteten på sygehusene* [Differences in the quality of treatment in hospitals]. Copenhagen (<https://rigsrevisionen.dk/revisionssager-arkiv/2019/jan/beretning-om-forskelle-i-behandlingskvaliteten-paa-sygehusene>, accessed 17 August 2023).
- Rigsrevisionen (2021). *Indsatsen for at nedbringe brug af tvang i psykiatrien* [Efforts to reduce coercion in psychiatry]. Copenhagen (<https://rigsrevisionen.dk/revisionssager-arkiv/2021/feb/beretning-om-indsatsen-for-at-nedbringe-brug-af-tvang-i-psykiatrien->, accessed 17 August 2023).
- Rudkjøbing A (2014). Towards coordinated care: governance in a fragmented healthcare system. PhD thesis. University of Copenhagen.
- Seiersen A, Hansen JV, Borchsenius V (2011). *Sundhedsforsikringer I Danmark: marked contra regulering* [VHI in Denmark: market versus regulation]. Nordisk Försäkringstidsskrift (<https://www.nft.nu/da/sundhedsforsikringer-i-danmark-marked-contra-regulering>, accessed 24 February 2023).
- Slättelid Schreiber SM et al. (2015). Socioeconomic predictors of human papillomavirus vaccination among girls in the Danish childhood immunization program. *J Adolesc Health*.56(4):402–7. doi: 10.1016/j.jadohealth.2014.12.008.
- Socialministeriet (2021). *Orlov til pasning af syge og døende pårørende* [Leave to care for sick and dying relatives]. Copenhagen (<https://www.borger.dk/aeldre/Hjemmehjaelp-og-aeldrepleje/Orlov-til-pasning-af-syge-og-doeende-paaroerende>, accessed 1 December 2022).
- SSI (2020). *Screening af gravide var også en succes i 2019* [Screening of pregnant women was also a success in 2019]. Copenhagen: Statens Serum Institut ([https://www.ssi.dk/aktuelt/nyheder/2020/2020\\_05\\_epinyt\\_21\\_gravidscreening](https://www.ssi.dk/aktuelt/nyheder/2020/2020_05_epinyt_21_gravidscreening), accessed 19 February 2021).
- Strandberg-Larsen M et al. (2007). Denmark: Health system review. *Health Syst Transit*.9(6):1–164.
- Strandberg-Larsen M, Bernt Nielsen M, Krasnik A (2007). Are joint health plans effective for coordination of health services? An analysis based on theory and Danish pre-reform results. *Int J Integr Care*.7:e35. doi: 10.5334/ijic.220.
- Sundheds- og Ældreministeriet (2018). *Regeringen fordeler 200 millioner kroner til læge – og sundhedshuse* [Government allocates DKK 200 million to doctors' and health centres]. Copenhagen (<https://www.regeringen.dk/nyheder/2018/regeringen-fordeler-200-millioner-kroner-til-laege-og-sundhedshuse-i-hele-danmark/>, accessed 23 September 2022).
- Sundheds- og Ældreministeriet (2019a). *Faktaark – Forbedring af kapaciteten og normeringerne i psykiatrien* [Ordinance of the Act on the Authorisation of Health

- Professionals and on Health Professional Activities]. Copenhagen: (<https://sum.dk/Media/637619400624262986/Forbedring%20af%20kapaciteten%20og%20normeringerne%20i%20psykiatrien.pdf>, accessed 23 August 2023).
- Sundheds- og Ældreministeriet (2019b). *National handleplan mod børn og unges rygning* [National action plan against children and young people's smoking]. Copenhagen (<https://sum.dk/Media/A/3/Aftaletekst%20-%20National%20handleplan%20mod%20b%20c%20b8rn%20og%20unges%20rygning.pdf>, accessed 17 August 2023).
- Sundheds- og Ældreministeriet (2019c). *Bekendtgørelse af lov om autorisation af sundhedspersoner og om sundhedsfaglig virksomhed* [Ordinance of the Act on the Authorisation of Health Professionals and on Health Professional Activities]. Copenhagen.
- Sundheds- og Ældreministeriet (2020a). *Epidemiloven. LBK nr 1444 af 01/10/2020. Bekendtgørelse af lov om foranstaltninger mod smitsomme og andre overførbare sygdomme* [Epidemic law. LBK no 1444 of 01/10/2020. Consolidation Act on Measures against Infectious and Other Communicable Diseases]. Copenhagen.
- Sundheds- og Ældreministeriet (2020b). *Lov nr 359 af 04/04/2020. Lov om ændring af lov om foranstaltninger mod smitsomme og andre overførbare sygdomme og forskellige andre love* [Law no 359 of /04/04/2020. Law amending the law on measures against communicable and other communicable diseases and various other laws]. Copenhagen.
- Sundheds- og Ældreministeriet (2021a). *Epidemiloven. Lov nr 285 af 27/02/2021. Lov om epidemier m.v. (epidemiloven)* [Epidemic law. No 285 of 27/02/2021L. Law on epidemics, etc. (epidemic law)]. Copenhagen.
- Sundheds- og Ældreministeriet (2021b). *Status på udmøntning af Kræftplan IV – 2020* [Status of implementation of the Cancer Plan IV – 2020]. Copenhagen (<https://sum.dk/Media/A/0/Kr%C3%A6ftplan%20IV%20-%202020.pdf>, accessed 17 August 2023).
- Sundhedsdatastyrelsen (2021). *Patienter og ophold i det psykiatriske sygehusvæsen* [Patients and stays in psychiatric hospitals]. Copenhagen: Danish Health Data Authority (<https://www.esundhed.dk/Emner/Patienter-og-sygehuse/Noegletal-for-sygehusvaesenet-og-praksisomraadet#tabpanel4B38CDB03BD94738AD1ECF2098C36FE7>, accessed 1 December 2022).
- Sundhedsdatastyrelsen (2022a). *Dødeligheden falder fortsat i 2020* [Mortality also fell in 2020]. Newsletter. January 2022. Copenhagen: Danish Health Data Authority ([https://sundhedsdatastyrelsen.dk/-/media/sds/filer/find-tal-og-analyser/doedsaarsager/doedeligheden\\_falder\\_2020.pdf](https://sundhedsdatastyrelsen.dk/-/media/sds/filer/find-tal-og-analyser/doedsaarsager/doedeligheden_falder_2020.pdf), accessed 17 August 2023).
- Sundhedsdatastyrelsen (2022b). *Takstsystem 2023. Vejledning* [DRG system 2023]. Copenhagen: Danish Health Data Authority (<https://sundhedsdatastyrelsen.dk/da/afregning-og-finansiering/takster-drg/takster-2023>, accessed 30 January 2023).
- Sundhedsdatastyrelsen (2023). *De nationale sundhedsregistre* [The national health registers]. Copenhagen: Danish Health Data Authority (<https://sundhedsdatastyrelsen.dk/da/registre-og-services/om-de-nationale-sundhedsregistre>, accessed 9 March 2023).



- Sundhedsministeriet (2016). *Ændring af den Kommunale Medfinansiering* [Change of the municipal co-financing]. Copenhagen (<https://sum.dk/Media/8/2/Aendring-af-den-kommunale-medfinansiering-juni-2016.pdf>, accessed 23 September 2022).
- Sundhedsministeriet (2017). *Aftale om bedre lægedækning* [Agreement on better medical coverage]. Copenhagen (<https://sum.dk/nyheder/2017/februar/samtlige-partier-indgaar-aftale-om-styrket-laegedækning>, accessed 29 September 2022).
- Sundhedsministeriet (2021). The Danish Super Hospital Program. Copenhagen (<https://sum.dk/Media/637683227529083454/The%20Danish%20Super%20Hospital%20Programme%202021.pdf>, accessed 23 September 2022).
- Sundhedsministeriet (2022). *Aftale om Sundhedsreform* [Agreement on a health reform]. Copenhagen (<https://sum.dk/Media/637888973082282053/Aftale%20-%20Et%20sammenhængende,%20nært%20og%20stærkt%20sundhedsvæsen.pdf>, accessed 23 September 2022).
- Sundhedsstyrelsen (2016). *Børnevaccinationsprogrammet – Årsrapport 2014* [The childhood vaccination programme – Annual report 2014]. Copenhagen: Danish Health Authority ([https://www.sst.dk/-/media/Udgivelser/2016/B%C3%B8rnevaccinationsprogrammet-%C3%A5rsrapporter/BoerneVaccProgrAar2014\\_apr2016.ashx](https://www.sst.dk/-/media/Udgivelser/2016/B%C3%B8rnevaccinationsprogrammet-%C3%A5rsrapporter/BoerneVaccProgrAar2014_apr2016.ashx), accessed 17 August 2023).
- Sundhedsstyrelsen (2017). *Anbefalinger for den palliative indsats* [Recommendations for palliative care]. Copenhagen: Danish Health Authority (<https://www.sst.dk/da/sygdom-og-behandling/-/media/79CB83AB4DF74C80837BAAAD55347D0D.ashx>, accessed 1 December 2022).
- Sundhedsstyrelsen (2018). *Evidens for livsstilsinterventioner til børn og voksne med svær overvægt* [Evidence for lifestyle interventions towards children and adults with obesity]. Copenhagen: Danish Health Authority (<https://www.sst.dk/-/media/Udgivelser/2018/Evidens-for-livsstilsinterventioner-til-boern-og-voksne-med-svaer-overvaegt/Evidens-for-livsstilsinterventioner-til-b%C3%B8rn-og-voksne-med-sv%C3%A6r-overv%C3%A6gt.ashx?la=da&hash=E779621AE670B282DAD516E7220FB77813D92F74>, accessed 23 August 2023).
- Sundhedsstyrelsen (2019a). *Ulighed i sundhed. Årsager og indsatser* [Inequity in health. Causes and interventions]. Copenhagen: Danish Health Authority (<https://www.sst.dk/da/viden/sundhedsvæsen/ulighed-i-sundhed/aarsager-og-indsatser>, accessed 21 January 2023).
- Sundhedsstyrelsen (2019b). *Status på forløbsprogrammer 2019* [Status on disease management programmes 2019]. Copenhagen: Danish Health Authority (<https://www.sst.dk/-/media/Udgivelser/2019/Status-paa-forloebprogrammer-notat-2019.ashx?la=da&hash=9C1F4F310620FFDB5C95E02A39BE4A8BE6E231AF>, accessed 17 August 2023).
- Sundhedsstyrelsen (2020). *Social ulighed i sundhed og sygdom – Udviklingen i Danmark i perioden 2010–2017* [Social inequalities in health and disease – Trends in Denmark

- 2010–2017]. Copenhagen: Danish Health Authority (<https://www.sst.dk/-/media/Udgivelser/2020/Ulighed-i-sundhed/Social-ulighed-i-sundhed-og-sygdom-tilgaengelig.ashx>, accessed 21 August 2023).
- Sundhedsstyrelsen (2021). *Monitorering af tvang i psykiatrien – opgørelse for perioden 1. januar–31. december 2020* [Monitoring of coercion in psychiatry – overview for the period 1 January–31 December 2020]. Copenhagen: Danish Health Authority (<https://www.sst.dk/da/udgivelser/2021/monitorering-af-tvang-i-psykiatrien-2020>, accessed 21 August 2023).
- Sundhedsstyrelsen (2022a). *Lægeprognose 2021–2045. Udbuddet af læger og speciallæger*. [Physician forecast 2021–2045. The supply of doctors and specialists]. Copenhagen: Danish Health Authority ([https://www.sst.dk/-/media/Udgivelser/2022/L%C3%A6geprognose/Lægeprognose-2021-2045---udbuddet-af-læger-og-speciallæger.ashx?sc\\_lang=da&hash=9ED04DCAE11905A1B3232C3414FE3428](https://www.sst.dk/-/media/Udgivelser/2022/L%C3%A6geprognose/Lægeprognose-2021-2045---udbuddet-af-læger-og-speciallæger.ashx?sc_lang=da&hash=9ED04DCAE11905A1B3232C3414FE3428), accessed 2 November 2023).
- Sundhedsstyrelsen (2022b). *Anbefalinger for svangeromsorgen* [Recommendations for prenatal care]. Copenhagen: Danish Health Authority ([https://www.sst.dk/-/media/Udgivelser/2021/Anbefalinger-svangreomsorgen/Svangreomsorg-2022-ny.ashx?sc\\_lang=da&hash=F89081C3D9BCBF3367F0098F1961FF89](https://www.sst.dk/-/media/Udgivelser/2021/Anbefalinger-svangreomsorgen/Svangreomsorg-2022-ny.ashx?sc_lang=da&hash=F89081C3D9BCBF3367F0098F1961FF89), accessed 15 June 2023).
- Sundhedsstyrelsen (2022c). *Fagligt oplæg til en 10-årsplan. Bedre mental sundhed og en styrket indsats til mennesker med psykiske lidelser* [Technical paper for a 10-year plan. Improving mental health and strengthening services for people with mental disorders]. Copenhagen: Danish Health Authority ([https://www.sst.dk/-/media/Udgivelser/2022/psykiatriplan/10AARS\\_PSYK-PLAN\\_260122\\_LOW.ashx?sc\\_lang=da&hash=AAEF690AFCD2E7998A4E687613C905ED](https://www.sst.dk/-/media/Udgivelser/2022/psykiatriplan/10AARS_PSYK-PLAN_260122_LOW.ashx?sc_lang=da&hash=AAEF690AFCD2E7998A4E687613C905ED), accessed 11 September 2022).
- Sundhedsstyrelsen (2022d). *Sundhedskompetence i det danske sundhedsvæsen* [Health literacy in the Danish healthcare system]. Copenhagen: Danish Health Authority ([https://www.sst.dk/-/media/Udgivelser/2022/Sundhedskompetence/SST-Rapport-Sundhedskompetence\\_TILG.ashx](https://www.sst.dk/-/media/Udgivelser/2022/Sundhedskompetence/SST-Rapport-Sundhedskompetence_TILG.ashx), accessed 22 August 2023).
- Sundhedsstyrelsen (2022e). *Sygdomsbyrden* [The burden of disease]. Copenhagen: Danish Health Authority (<https://www.sst.dk/-/media/Udgivelser/2023/Sygdomsbyrden-2023/Sygdomme-Sygdomsbyrden-2023.ashx>, accessed 23 August 2023).
- Sundhedsstyrelsen (2023a). *Danskernes Rygevaner 2022* [Smoking habits 2022]. Copenhagen: Danish Health Authority (<https://www.sst.dk/-/media/Udgivelser/2023/Tobak/Danskernes-Rygevaner-2022.ashx>, accessed 31 October 2023).
- Sundhedsstyrelsen (2023b). *Røgfrie nikotinprodukter (snus, nikotinposer mv.)* [Smokeless nicotine products (snus, nicotine pouches, etc.)]. Copenhagen: Danish Health Authority (<https://www.sst.dk/da/Viden/Roegfri-nikotinprodukter>, accessed 9 March 2023).

- Sygeforsikring “danmark” (2021). *Årsrapport 2020* [Annual Report 2020]. Copenhagen ([https://www.sygeforsikring.dk/files/media/pdf/Årsrapport\\_2020.pdf](https://www.sygeforsikring.dk/files/media/pdf/Årsrapport_2020.pdf), accessed 30 January 2023).
- Sygeforsikring “danmark” (2023). *Tilskud* [Subsidy]. Copenhagen (<https://www.sygeforsikring.dk/tilskud>, accessed 23 August 2023).
- Tandlægeforeningen (2021). *Klager over tandbehandling* [Complaints about dental treatment]. Copenhagen (<https://www.tandlaegeforeningen.dk/til-patienter/erstatnings-og-klagesystemet/klager-over-tandbehandling>, accessed 1 December 2022).
- Thygesen LC, Ersbøll AK (2011). Danish population-based registers for public health and health-related welfare research: Introduction to the supplement. *Scand J Public Health*.39(7 Suppl):8–10. doi: 10.1177/1403494811409654.
- Vallgård S (1989). Hospitals and the poor in Denmark, 1750–1880. *Scand J Hist*.13:95–105.
- Vallgård S (1999a). The rise, heyday, and incipient decline of specialization: Hospitals in Denmark, 1930–1990. *Int J Health Serv*.29(2):431–57. doi: 10.2190/lqub-bfmu-lqmw-htxh.
- Vallgård S (1999b). Who went to a general hospital in the eighteenth and nineteenth centuries in Copenhagen? *Eur J Pub Health*.9(2):97–102. doi: 10.1093/eurpub/9.2.97.
- Vallgård S (2010). Tackling social inequalities in health in the Nordic countries: Targeting a residuum or the whole population? *J Epidemiol Community Health*.64(6):495–6. doi: 10.1136/jech.2009.102459.
- Vallgård S (2011). Addressing individual behaviours and living conditions: Four Nordic public health policies. *Scand J Public Health*.39(6 Suppl):6–10. doi: 10.1177/1403494810378922.
- Vallgård S (2021). Evidence as a fig leaf: obesity policies and institutional filters in Denmark. In: Gard M, Powell D, Tenorio J eds. *Routledge Handbook of Critical Obesity Studies*. London/New York: Routledge.
- Vallgård S, Krasnik A (2010). *Sundhedsvæsen og sundhedspolitik* [Health care system and health politics]. Copenhagen: Munksgaard.
- Vallgård S, Krasnik A eds. (2008). *Health services and health policy*. Copenhagen: Gyldendal Akademisk.
- Vrangbæk K (1999). *Markedsorientering i sygehussektoren* [Market-orientation in the hospital sector]. Copenhagen: Institut for Statskundskab, Københavns Universitet.
- Vrangbæk K (2020). International health care system profiles: Denmark. New York: The Commonwealth Fund (<https://www.commonwealthfund.org/international-health-policy-center/countries/denmark>, accessed 30 January 2023).
- Vrangbæk K (2021). Denmark. In: Immergut E et al. eds. *Health politics in Europe: a handbook*, 1st edition. Oxford: Oxford University Press.



- Wadmann S, Kjellberg J (2019). New model for prioritised adoption and use of hospital medicine in Denmark since 2017: Challenges and perspectives. *Health Policy*.123(7):606–10. doi: 10.1016/j.healthpol.2019.05.007.
- WHO (2023). Global health expenditure database. Geneva: World Health Organization (<https://apps.who.int/nha/database/ViewData/Indicators/en>, accessed 26 January 2024).
- WHO Regional Office for Europe (2021). Spending on health in Europe: entering a new era. Copenhagen (<https://who.int/europe/publications/i/item/9789289055079>, accessed 27 November 2023).
- WHO Regional Office for Europe (2022). European mortality database (MDB). Copenhagen (<https://gateway.euro.who.int/en/datasets/european-mortality-database/>, accessed 21 August 2023).
- World Bank (2023). World development indicators [online database]. Washington, DC: The World Bank (<https://databank.worldbank.org/source/world-development-indicators>, accessed 16 October 2023).

## 9.2 Useful websites

Ministry of the Interior and Health	<a href="https://sum.dk/">https://sum.dk/</a>
Danish Health Authority	<a href="https://www.sst.dk/da/">https://www.sst.dk/da/</a>
Danish Medicines Agency	<a href="https://laegemiddelstyrelsen.dk/da/">https://laegemiddelstyrelsen.dk/da/</a>
Danish Patient Safety Authority	<a href="https://stps.dk/da/">https://stps.dk/da/</a>
Danish Patient Complaints Agency	<a href="https://stpk.dk/">https://stpk.dk/</a>
Danish Health Data Authority	<a href="https://sundhedsdatastyrelsen.dk/da">https://sundhedsdatastyrelsen.dk/da</a>
Danish Medical Association	<a href="https://www.laeger.dk/">https://www.laeger.dk/</a>
Danish Nurses Organization	<a href="https://dsr.dk/">https://dsr.dk/</a>
Danish Regions	<a href="https://www.regioner.dk/">https://www.regioner.dk/</a>
Local Government Denmark	<a href="https://www.kl.dk/">https://www.kl.dk/</a>
Sundhed.dk	<a href="https://www.sundhed.dk/">https://www.sundhed.dk/</a>
eSundhed.dk	<a href="https://www.esundhed.dk/">https://www.esundhed.dk/</a>
Danish Medicines Council	<a href="https://medicinraadet.dk/">https://medicinraadet.dk/</a>
Danish Health Technology Council	<a href="https://behandlingsraadet.dk/">https://behandlingsraadet.dk/</a>
Healthcare Denmark	<a href="https://healthcaredenmark.dk/">https://healthcaredenmark.dk/</a>
Danish Health Act	<a href="https://danskelove.dk/sundhedsloven">https://danskelove.dk/sundhedsloven</a>

## ■ 9.3 HiT methodology and production process

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

Authors draw on multiple data sources for the compilation of HiTs, ranging from national statistics, national and regional policy documents to published literature. Furthermore, international data sources may be incorporated, such as those of the OECD and the World Bank. The OECD Health Data contain over 1200 indicators for the 34 OECD countries. Data are drawn from information collected by national statistical bureau 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 the states. In the summer 2007 edition, the Health for All database started to take account of the enlarged EU of 27 Member States.

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.

- Introduction: outlines the broader context of the health system, including geography and sociodemography, economic and political context and population health.
- 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, complaints procedures, public participation and cross-border health care.
- 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 OOP payments, VHI and how providers are paid.
- 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.
- 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, dental care, complementary and alternative medicine, and health services for specific populations.
- Principal health reforms: reviews reforms, policies and organizational changes; and provides an overview of future developments.
- Assessment of the health system: provides an assessment based on the stated objectives of the health system, financial protection and equity in financing; user experience and equity of access to health care; health outcomes, health service outcomes and quality of care; health system efficiency; and transparency and accountability.

- **Conclusions:** identifies key findings, highlights the lessons learned from health system changes; and summarizes remaining challenges and future prospects.
- **Appendices:** includes references, useful websites and legislation.

The quality of HiTs is of real importance because 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.

Two authors are also members of the Observatory staff team and 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 About the authors

**Hans Okkels Birk** (MSc, PhD) is an External lecturer at the Section for Health Services Research, Department of Public Health at the University of Copenhagen.

**Karsten Vrangbæk** (MSc, PhD) is Professor at the Department of Political Science and at the Section for Health Services Research, Department of Public Health as well as Director of Center for Health Economics and Policy (CHEP) at the University of Copenhagen.

**Andreas Rudkjøbing** (MD, MSc, PhD) is the Director of Steno Diabetes Center Zealand. He is also an affiliated Lecturer at the Section for Health Services Research, Department of Public Health at the University of Copenhagen.

**Allan Krasnik** (MD, MPH, PhD) is Professor Emeritus at the Section for Health Services Research, Department of Public Health at the University of Copenhagen.

**Astrid Eriksen** is a Research Fellow at the Berlin University of Technology's Department of Health Care Management and works at the Berlin Hub of the European Observatory on Health Systems and Policies.

**Erica Richardson** (PhD) is Technical Officer and works at the London hub of the European Observatory on Health Systems and Policies at the London School of Hygiene and Tropical Medicine.

**Signe Smith Jervelund** (MSc, PhD) is Associate Professor at the Section for Health Services Research, Department of Public Health at the University of Copenhagen.



# The Health Systems in Transition Series

## A series of the European Observatory on Health Systems and Policies

The Health Systems in Transition (HiT) country reports provide an analytical description of each health system and of reform initiatives in progress or under development. They aim to provide relevant comparative information to support policy-makers and analysts in the development of health systems and reforms in the countries of the WHO European Region and beyond.

The HiTs are building blocks that can be used:

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

## How to obtain a HiT

All HiTs are available as PDF files at [www.healthobservatory.eu](http://www.healthobservatory.eu) where you can also join our list for monthly updates of the activities of the European Observatory on Health Systems and Policies, including new HiTs, books in our co-published series with Cambridge University Press, Policy briefs, Policy Summaries, and the Eurohealth journal.

If you would like to order a paper copy of a HiT, please contact us at: [contact@obs.who.int](mailto:contact@obs.who.int)



The publications of the  
European Observatory on  
Health Systems and Policies  
are available at:  
[www.healthobservatory.eu](http://www.healthobservatory.eu)

# HiT Country Reviews Published to Date

## **Albania**

(1999, 2002<sup>a,g</sup>)

## **Andorra**

(2004)

## **Armenia**

(2001<sup>g</sup>, 2006, 2013)

## **Australia**

(2002, 2006)

## **Austria**

(2001<sup>g</sup>, 2006<sup>g</sup>, 2013<sup>g</sup>, 2018)

## **Azerbaijan**

(2004<sup>g</sup>, 2010<sup>g</sup>)

## **Belarus**

(2008<sup>g</sup>, 2013)

## **Belgium**

(2000, 2007, 2010, 2020)

## **Bosnia and Herzegovina**

(2002<sup>g</sup>)

## **Bulgaria**

(1999, 2003<sup>b</sup>, 2007<sup>g</sup>, 2012, 2018)

## **Canada**

(2005, 2013<sup>c</sup>, 2020)

## **Croatia**

(1999, 2006, 2014, 2022)

## **Cyprus**

(2004, 2012)

## **Czechia**

(2000, 2005<sup>g</sup>, 2009, 2015, 2023)

## **Denmark**

(2001, 2007<sup>g</sup>, 2012)

## **Estonia**

(2000, 2004<sup>g,i</sup>, 2008, 2013, 2018, 2023)

## **Finland**

(2002, 2008, 2019)

## **France**

(2004<sup>c,g</sup>, 2010, 2015, 2023)

## **Georgia**

(2002<sup>d,g</sup>, 2009, 2017)

## **Germany**

(2000<sup>e</sup>, 2004<sup>e,g</sup>, 2014<sup>e</sup>, 2020)

## **Greece**

(2010, 2017)

## **Hungary**

(1999, 2004, 2011)

## **Iceland**

(2003, 2014)

## **Ireland**

(2009)

## **Israel**

(2003, 2009, 2015)

## **Italy**

(2001, 2009, 2014, 2022)

## **Japan**

(2009)

## **Kazakhstan**

(1999<sup>g</sup>, 2007<sup>g</sup>, 2012)

## **Kyrgyzstan**

(2000<sup>g</sup>, 2005<sup>g</sup>, 2011<sup>g</sup>, 2022)

## **Latvia**

(2001, 2008, 2012, 2019)

## **Lithuania**

(2000, 2013)

## **Luxembourg**

(1999, 2015)

## **Malta**

(1999, 2014, 2017)

## **Mexico**

(2020)

## **Mongolia**

(2007)

## **Netherlands**

(2004<sup>g</sup>, 2010, 2016)

## **New Zealand**

(2001\*)

## **North Macedonia**

(2000, 2006, 2017)

## **Norway**

(2000, 2006, 2013, 2020)

## **Poland**

(1999, 2005<sup>k</sup>, 2011, 2019)

## **Portugal**

(1999, 2004, 2007, 2011, 2017)

## **Republic of Korea**

(2009\*)

## **Republic of Moldova**

(2002<sup>g</sup>, 2008<sup>g</sup>, 2012)

## **Romania**

(2000<sup>i</sup>, 2008, 2016)

## **Russian Federation**

(2003<sup>g</sup>, 2011<sup>g</sup>)

## **Serbia**

(2019)

## **Slovakia**

(2000, 2004, 2011, 2016)

## **Slovenia**

(2002, 2009, 2016, 2021)

## **Spain**

(2000<sup>h</sup>, 2006, 2010, 2018)

## **Sweden**

(2001, 2005, 2012, 2023)

## **Switzerland**

(2000, 2015)

## **Tajikistan**

(2000, 2010<sup>g</sup>, 2016)

## **Türkiye**

(2002<sup>g,i</sup>, 2011<sup>i</sup>)

## **Turkmenistan**

(2000)

## **Ukraine**

(2004<sup>g</sup>, 2010<sup>g</sup>, 2015)

## **United Kingdom of Great Britain and Northern Ireland**

(1999<sup>g</sup>, 2015, 2022)

## **United Kingdom (England)**

(2011)

## **United Kingdom (Northern Ireland)**

(2012)

## **United Kingdom (Scotland)**

(2012)

## **United Kingdom (Wales)**

(2012)

## **United States of America**

(2013, 2020)

## **Uzbekistan**

(2001<sup>g</sup>, 2007<sup>g</sup>, 2014<sup>g</sup>)

## **Veneto Region, Italy**

(2012)

All HiTs are available in English.

When noted, they are also available in other languages:

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





**The publications of the  
European Observatory  
on Health Systems  
and Policies  
are available at**  
[www.healthobservatory.eu](http://www.healthobservatory.eu)





The Observatory is a partnership, hosted by WHO Regional Office for Europe, which includes other international organizations (the European Commission); national and regional governments (Austria, Belgium, Finland, Ireland, Netherlands, Norway, Slovenia, Spain, Sweden, Switzerland, the United Kingdom and the Veneto Region of Italy (with Agenas)); other health system organizations (the French National Union of Health Insurance Funds (UNCAM), the Health Foundation); and academia (the London School of Economics and Political Science (LSE) and the London School of Hygiene & Tropical Medicine (LSHTM)). The Observatory has a secretariat in Brussels and it has hubs in London (at LSE and LSHTM) and at the Berlin University of Technology.

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

Print ISSN 1817-6119, ISBN 978 9 2890 5956 5 Web ISSN 1817-6127, ISBN 978 9 2890 5955 8

