

Belgium

Health system review

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Health Systems in Transition

Belgium

Health System Review 2020

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Belgian Health Care
Knowledge Centre

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European Observatory on Health
Systems and Policies



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PREFACE

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

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

- learn in detail about different approaches to the organization, financing and delivery of health services, and the role of the main actors in health systems;
- 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 the World Health Organization (WHO) Regional Office for Europe's European Health for All database, data from national

statistical offices, Eurostat, the Organisation for Economic Co-operation and Development (OECD) Health Data, data from the International Monetary Fund (IMF), the World Bank's World Development Indicators and any other relevant sources considered useful by the authors. Data collection methods and definitions sometimes vary, but typically are consistent within each separate review.

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

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

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

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The Health Systems in Transition (HiT) profile on Belgium was co-produced by the European Observatory on Health Systems and Policies and the Belgian Health Care Knowledge Centre (KCE), which is a member of the Health Systems and Policy Monitor (HSPM) network. The HSPM is an international network that works with the Observatory on Country Monitoring. It is made up of national counterparts that are highly regarded at national and international level and have particular strengths in the areas of health systems, health services, public health and health management research. They draw on their own extensive networks in the health field and their track record of successful collaboration with the Observatory to develop and update the HiT. For this edition of the HiT, Sciensano, the Federal research institute for animal and human health in Belgium, has also contributed to some sections.

The 2020 version of the HiT was edited by Sophie Gerkens (KCE) and Sherry Merkur (European Observatory on Health Systems and Policies). Sophie Gerkens was assisted by Jolyce Bourgeois (KCE), Charline Maertens de Noordhout (KCE), Céline Pouppez (KCE), Anja Desomer (KCE), Petronille Bogaert (Sciensano), and Aline Scohy (Sciensano) in the writing of chapters (see List of contributors below) and by Christophe Janssens as project coordinator.

KCE works to ensure the quality and transparency of studies. It aims to achieve this by imposing rigorous scientific procedures based on international standards and using external expert reviewers. For the writing of the HiT and their updates, KCE has created an advisory board, with representatives of the main public health institutions: Joëlle Belpaire (AVIQ), Karin Cormann (German-speaking community – Health Department), Brecht Devleeschauwer (Sciensano), Pol Gerits (MoH, FPS Public Health), Olivier Gillis (region of Brussels-Capital – Health and Social Observatory), Hugues Malonne (FAMHP), Pascal Meeus (NIHDI), Dirk Moens (FPS Social Security), Annalisa Tancredi (French community – ONE), Solvejg Wallyn (Flemish Agency for Care and Health), Guillaume Westenbohm (German-speaking community – Health

Department) (see List of members of the advisory board below). They reviewed the preliminary version of the HiT. Subsequently, a (final) version was submitted to Belgian validators Jo De Cock (NIHDI) and Pedro Facon (MoH, FPS Public Health) and to internal reviewers of the Observatory.

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The Observatory is a partnership that includes the Governments of Austria, Belgium, Finland, Ireland, Norway, Slovenia, Spain, Sweden, Switzerland and the United Kingdom; the Veneto Region of Italy; the French National Union of Health Insurance Funds (UNCAM); the Health Foundation; WHO; the European Commission; the World Bank; 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, LSHTM and the Berlin University of Technology. The Observatory team working on HiTs is led by Josep Figueras, Director; Elias Mossialos, Martin McKee, Reinhard Busse (Co-directors); Ewout van Ginneken and Suszy Lessof. The Country Monitoring Programme of the Observatory and the HiT series are coordinated by Anna Maresso. The production and copy-editing process was coordinated by Jonathan North and Lucie Jackson, with the support of Lesley Simon (copy-editing) and Steve Still (typesetting).

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LIST OF ABBREVIATIONS

Abbreviation	English term	Dutch term	French term
–	Licensing (for health care facilities)	<i>Erkenning (voor gezondheidszorginstellingen)</i>	<i>Agrément (pour les établissements)</i>
–	Recognition (for health care professionals)	<i>Erkenning (voor professionelen in de gezondheidszorg)</i>	<i>Agrément (pour les professionnels de la santé)</i>
–	Conventioned	<i>Geconventioneerd</i>	<i>Conventionné</i>
ABSYM-BVAS	Belgian Association of Medical Unions	<i>Belgische Vereniging van Artsensyndicaten</i>	<i>Association Belge des Syndicats Médicaux</i>
ALOS	Average length of stay	–	–
AMI	Acute myocardial infarction	–	–
APB	Belgian Pharmaceutical Association	<i>Algemene Pharmaceutische Bond</i>	<i>Association Pharmaceutique Belge</i>
AROE	At-risk-of-poverty or social exclusion rate	–	–
AVIQ	Agency for a quality life	–	<i>Agence wallonne pour une vie de qualité</i>
BCR	Belgian Cancer Registry	<i>Stichting Kankerregister</i>	<i>Fondation Registre du Cancer</i>
BE	Belgium	–	–
BELMIP	Belgian Medical Imaging Platform	–	–
BeIRAI	Belgian Resident Assessment Instrument	–	–
BS-MB	Belgian Official Journal	<i>Belgisch Staatsblad</i>	<i>Moniteur Belge</i>
COCOF	French Community Commission	–	<i>Commission communautaire française</i>
CRP	Commission for the Reimbursement of Medicinal Products	<i>Commissie Tegemoetkoming Geneesmiddelen</i>	<i>Commission de Remboursement des Médicaments</i>
CT	Computed tomography (imaging technique)	–	–
DDD	Defined Daily Dose	–	–
DGEC-SECM	Department for Medical Evaluation and Inspection	–	–

ED	Emergency Department	—	—
EHR	Electronic Health Record	—	—
EMA	European Medicines Agency	—	—
EU	European Union	—	—
EU-15	EU Member States before May 2004	—	—
EU-28	EU Member States after 1 July 2013	—	—
EU-SILC	European Union Statistics on Income and Living Conditions	—	—
FAMHP	Federal Agency for Medicines and Health Products	<i>Federaal Agentschap voor Geneesmiddelen en Gezondheidsproducten</i>	<i>Agence fédérale des Médicaments et des Produits de Santé</i>
FANC	Federal Agency for Nuclear Control	<i>Federaal Agentschap voor Nucleaire Contrôle</i>	<i>Agence fédérale de Contrôle nucléaire</i>
FFS	Fee-for-service	—	—
FPS	Federal Public Service	<i>Federale overheidsdienst (FOD)</i>	<i>Service public fédéral (SPF)</i>
FASFC	Federal Agency for the Safety of the Food Chain	<i>Federaal Agentschap voor de veiligheid van de voedselketen</i>	<i>Agence fédérale pour la sécurité de la chaîne alimentaire</i>
FTE	Full-time equivalent	—	—
GATS	General Agreement on Trade in Services	—	—
GDP	Gross domestic product	—	—
GGC-COCOM	Joint Community Commission	<i>Gemeenschappelijke Gemeenschapscommissie</i>	<i>Commission communautaire commune</i>
GP	General practitioner	—	—
HBD-AZV-SHA	Hospital Billing Data	<i>Anonieme ziekenhuis verblijven</i>	<i>Séjours hospitaliers anonymisés</i>
HSPA	Health system performance assessment	—	—
IMA-AIM	Common Sickness Funds Agency	<i>Intermutualistisch Agentschap</i>	<i>Agence Intermutualiste</i>
IQED-IKED-IPQED	Initiative for Quality Promotion and Epidemiology in Diabetes Care	<i>Initiatief voor Kwaliteitsbevordering en Epidemiologie bij Diabetes</i>	<i>Initiative pour la Promotion de la Qualité et Épidémiologie du Diabète sucré</i>
K&G	Child and Family	<i>Kind & Gezin</i>	—
KCE	Belgian Health Care Knowledge Centre	<i>Federaal Kenniscentrum voor de Gezondheidszorg</i>	<i>Centre fédéral d'expertise des soins de santé</i>
LE	Life expectancy	—	—

LOGO	Local Health Network	<i>Lokaal Gezondheidsoverleg</i>	—
LUSS	French federation of patients' associations	—	<i>Ligue des Usagers des Services de Santé</i>
MA	Market authorisation	—	—
MAF	Medical Accident Fund	—	—
MEA	Managed Entry Agreements	—	—
MHD-MZG-RHM	Minimum Hospital Data	<i>Minimale Ziekenhuisgegevens</i>	<i>Résumé Hospitalier Minimal</i>
MoH	Ministry of Health – Federal Public Service Health, Food Chain Safety and Environment	<i>Federale overheidsdienst Volksgezondheid, Veiligheid van de Voedselketen en Leefmilieu</i>	<i>Service public fédéral Santé publique, Sécurité de la Chaîne alimentaire et Environnement</i>
MPD-MPG-RPM	Minimal Psychiatric Data	<i>Minimale Psychiatrische Gegevens</i>	<i>Résumé Psychiatrique Minimum</i>
MRI	Magnetic resonance imaging	—	—
MUG-SMUR	Mobile Urgency Group	<i>Mobiele urgentiegroep</i>	<i>Service mobile d'urgence</i>
NATO	North Atlantic Treaty Organization	—	—
NEHAP	National Environmental Health Action Plan	—	—
NIHDI	National Institute for Health and Disability Insurance	<i>Rijksinstituut voor Ziekte- en Invaliditeitsverzekering</i>	<i>Institut National d'Assurance Maladie-Invalidité</i>
NSIH	National Surveillance of Health Care-Associated Infections and Antimicrobial Resistance in Belgian hospital (NSIH)	<i>Nationale Surveillance van zorginfecties & Antimicrobiële Resistentie</i>	<i>Surveillance Nationale des infections liées aux soins & antibiorésistance</i>
NSSO	National Social Security Office	<i>Rijksdienst voor Sociale Zekerheid</i>	<i>Office National de Sécurité Sociale</i>
OCM-CDZ	Supervising Authority for sickness funds and mutual health insurers	<i>Office de contrôle des mutualités</i>	<i>Controledienst voor de ziekenfondsen</i>
OCMW-CPAS	Public centres for social assistance	<i>Openbare Centra voor Maatschappelijk Welzijn</i>	<i>Centres Publics d'Action Sociale</i>
ODC	Organised duty centres	<i>Wachtposten</i>	<i>Postes de gardes</i>
OECD	Organisation for Economic Co-operation and Development	<i>Organisatie voor Economische Samenwerking en Ontwikkeling</i>	<i>Organisation de Coopération et de Développement Economiques</i>
ONE	Birth and Childhood Organisation Office	—	<i>Office de la Naissance et de l'Enfance</i>
OOP	Out-of-pocket	—	—

P4P	Pay for performance	—	—
PAB	Personal Assistance Budget	<i>Persoonlijke-assistentiebudget</i>	<i>Budget d'assistance personnel</i>
PET	Positron Emission Tomography	—	—
PIT	Paramedical Intervention Team	<i>Paramedisch interventieteam</i>	<i>Equipe d'intervention paramédicale</i>
PMO	Patient Mobility Observatory	<i>Observatorium voor patiëntenmobiliteit</i>	<i>Observatoire de la mobilité des patients</i>
PPP	Purchasing power parity	<i>Koopkrachtpariteit</i>	<i>Parité de pouvoir d'achat</i>
SHA	System of Health Accounts	—	—
SSSE	National Institute for the Social Security of the Self-employed	<i>Rijksinstituut voor de Sociale Verzekeringen der Zelfstandigen</i>	<i>Institut national d'assurances sociales pour travailleurs indépendants</i>
STATBEL	Belgian statistical office	<i>Belgische statistiekbureau</i>	<i>Office belge de statistique</i>
VAPH	Flemish Agency for People with Disabilities	<i>Vlaams Agentschap voor Personen met een Handicap</i>	—
VAT	Value added tax	—	—
VGC	Flemish Community Commission	<i>Vlaamse Gemeenschapscommissie</i>	—
VHI	Voluntary health insurance	—	—
VPP	Flemish Federation of Patients Associations	<i>Vlaams Patiëntenplatform</i>	—
WHO	World Health Organization	—	—
WTO	World Trade Organization	—	—

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ABSTRACT

The Belgian health system covers almost the entire population for a large range of services. The main source of financing is social contributions, proportional to income. The provision of care is based on the principles of independent medical practice, free choice of physician and care facility, and predominantly fee-for-service payment.

The Belgian population enjoys good health and long life expectancy. This is partly due to the population's good access to many high-quality health services. However, some challenges remain in terms of appropriateness of pharmaceutical care (overuse of antibiotics and psychotropic drugs), reduced accessibility for mental health and dental care due to higher user charges, socioeconomic inequalities in health status and the need for further strengthening of prevention policies. The system must also continue to evolve to cope with an ageing population, an increase of chronic diseases and the development of new technologies.

This Belgian HiT profile (2020) presents the evolution of the health system since 2014, including detailed information on new policies. The most important reforms concern the transfer of additional health competences from the Federal State to the Federated entities and the plan to redesign the landscape of hospital care. Policy-makers have also pursued the goals of further improving access to high-quality services, while maintaining the financial sustainability and efficiency of the system, resulting in the implementation of several measures promoting multidisciplinary and integrated care, the concentration of medical expertise, patient care trajectories, patient empowerment, evidence-based medicine, outcome-based care and the so-called one health approach. Cooperation with neighbouring countries on pricing and reimbursement policies to improve access to (very high price) innovative medicines are also underway. Looking ahead, because additional challenges will be highlighted by the COVID-19 crisis, a focus on the resilience of the system is expected.

EXECUTIVE SUMMARY

The Belgian population enjoys good health and long life expectancy

Living standards are considered high in Belgium, which was relatively less affected by the 2008 financial crisis compared with other European countries. Efforts to reduce the public debt and the at-risk-of-poverty or social exclusion rates, and efforts to increase the employment rate will nevertheless continue.

The Belgian population is growing at a rate of about 0.5% each year as a result of positive net migration (more immigrations than emigrations) and a positive “natural balance” (more births than deaths). The ageing population is expected to increase in the future, at least until 2070. The proportion of the population aged 67 years and over (a new cut-off based on the increased retirement age) is estimated to increase from 16.5% in 2018 to 22.9% in 2070.

The health status of the Belgian population is generally good, with an increasing life expectancy situated just above the EU-28 (European Union Member States at 1 July 2013) average [but below the EU-15 (EU Member States before May 2004) average]. Nevertheless, obesity as well as alcohol and tobacco consumption are high and have a significant impact on population health. Reducing socioeconomic inequalities also remains a challenge and prevention policies could be further strengthened with a focus on risks factors and diseases that cause most of the disease burden. Cerebrovascular and ischaemic heart diseases are the leading causes of death; followed by dementia (including Alzheimer’s diseases), lung cancer and chronic obstructive pulmonary disease.

Health care competences are shared between the Federal State and the Federated entities

Belgium has three official languages (Dutch, French and German) and three levels of power, i.e. Federal authorities, Federated entities (three regions based on territory and three communities based on language) and local authorities (provinces and municipalities).

Belgium is a Federal state with a parliamentary democracy. The political system is based on proportional representation and there are many different political parties (Dutch-speaking, French-speaking or German-speaking). Jurisdiction over health policy and regulation of the health care system – based on compulsory health insurance requiring social contributions – is divided among the Federal State and the Federated entities. The Federal State (Federal authorities) is competent for matters in the general interest of all Belgians, such as the national compulsory health insurance, the setting of the hospital budget and of general organisation rules, the regulation of health products and activities, the regulation of health care professionals, and patients' rights. The National Institute for Health and Disability Insurance (NIHDI) manages the compulsory health insurance while the Ministry of Health (MoH, Federal Public Service Health, Food Chain Safety and Environment – Health Directorate) is responsible for the general organisation and planning rules of the health system.

Federated entities are the main competent authorities in the fields of care for older people, disabled care (including the granting of allowances), mental health care, primary and home care and rehabilitation. They are also the main competent authorities for health promotion and disease prevention. To facilitate cooperation between the Federal authorities and the Federated entities, inter-ministerial conferences are regularly organised.

The health insurance budget and health policy rely on negotiations between representatives of the government, patients (via the sickness funds), employers, salaried employees and self-employed workers. Health care provider representatives are also involved in decisions on the tariffs and reimbursement levels of health care services via national conventions or agreements between health care providers' and sickness funds' representatives.

The compulsory health insurance system is financed by social contributions proportional to income

The Belgian health system is based on compulsory health insurance characterised by solidarity between all Belgian residents. Social contributions, the main financing source, are considered as proportional receipts (the tax rate remains unchanged whatever the income, with some exceptions). Other sources are government subsidies and an alternative financing. Government subsidies come from receipts that are mostly considered as progressive (the tax rate increases with the level of income), such as personal income tax. Alternative financing consists mainly of receipts from value added taxes (VAT), which are regressive (the burden decreases with income) and, to a lesser extent, of receipts from withholding tax, which are progressive. Especially since the 6th State Reform, public financing of the compulsory health insurance has become more progressive, with a ratio of progressive receipts on total receipts of 7.3% in 2007 and 14.1% in 2017. Nonetheless, the shares of both proportional receipts and regressive receipts (52.6% and 26.7%, respectively) exceeded the share of progressive receipts (14.1%) in 2017. Given the decrease in the share of social contributions as a financing source (see Section 3.3.2), proportional receipts have shown a downward trend, from 61.5% in 2007 to 52.6% in 2017.

To control expenditure, a real growth cap has been established since 1995 to determine the overall budgetary objective of the compulsory health insurance.

The compulsory health insurance is managed by the NIHDI, which allocates a prospective budget to the sickness funds. Sickness funds are non-profit, private players that operate the reimbursement system of health care services covered by the compulsory health insurance for their members and the payment of a replacement income in case of long-term illness. All Belgian residents must be affiliated to a sickness fund of their choice or to the public auxiliary fund. Since 1995, a mechanism has been introduced to make sickness funds more accountable for the health expenditure of their members. At the end of the year, the NIHDI calculates the difference between the actual health expenditure of their members and their so-called normative (risk-adjusted) expenditures, and sickness funds are held financially responsible for a proportion of this difference.

In addition, Belgian residents can also take out voluntary health insurance for services that are only partially covered, or are not covered, by the compulsory health insurance (for example, for extra-billings when patients opt for a single room in hospitals). Voluntary health insurance is provided by both non-profit-making mutual insurance companies and sickness funds, and by private for-profit insurers.

Belgian residents are covered for a wide range of health services

Compulsory health insurance covers 99% of Belgian residents for a large range of services and with no selection based on health risks. The approximately 1% that is not covered comprises people whose administrative and/or financial requirements have not been fulfilled. It should nevertheless be noted that some categories of vulnerable people (for example, irregular migrants) are excluded from this calculation. People covered by another insurance scheme are also not included in this calculation (for example, foreign people working for international organisations). This does not mean that “uninsured people” have no right to necessary medical care. They can be covered through other systems, mainly via the public centre for social assistance (for example, urgent medical aid provided for irregular migrants).

In 2017, current health expenditure was 10.3% of gross domestic product (GDP) and health expenditure, expressed in US\$ (purchasing power parity) per capita, was 5 119.1. More than three quarters of current health expenditure is financed by the public sector (77.25% in 2017). Voluntary health insurance represents a small share (5.12% in 2017) of health expenditure. Patients’ out-of-pocket payments (17.63% in 2017) apply for non-reimbursed services, official co-payments and extra-billings. Official co-payments represented about 22% of patients’ out-of-pocket payments in 2017 (after deduction for the reimbursements related to the system of maximum co-payments). The exact share of extra-billings is not known – in particular in outpatient care. Official co-payments vary from service to service and patients with preferential reimbursement status pay reduced co-payments. A series of protection mechanisms are also in place (for example, a system of maximum co-payments), which mainly depend on a households’ income.

All reimbursed services are described in the nationally established fee schedule (called the nomenclature), which specifies the official fees and cost-sharing mechanisms determined through conventions and agreements negotiated yearly or every 2 years between representatives of sickness funds and health care providers. Reimbursement decisions are based on criteria such as the therapeutic added value of the intervention and the budget impact. Evidence-based practices with a high therapeutic value are preferably reimbursed, whereas comfort or aesthetic services, such as plastic surgery and orthodontics, are only reimbursable under certain conditions (for example, breast reconstruction after cancer). When looking at patients' out-of-pocket payments, reimbursement is more limited for mental health care and for dental care compared with other care services.

To avoid overconsumption and promote the responsible use of public money, the large majority of patients have to pay in advance the fees for services and then request reimbursement from their sickness fund. Initially, a third-party payment system (where sickness funds directly pay their share) only applied for the purchase of prescribed medicines and hospital/residential care, but this is being gradually extended to primary care (currently for vulnerable social groups and chronic patients). Additionally, in community health centres (*wijkgezondheidscentra/maisons médicales*) with a capitation-based remuneration system, registered patients who have opted for this system do not have to pay for the services they receive from these centres.

Care is provided based on independent medical practice, freedom of choice and fee-for-service payments

The provision of care is based on the principles of independent medical practice, direct access (no gatekeeping), free choice of physicians and of health care facilities (including hospitals), and predominantly fee-for-service payment (although in recent years, the use of fixed payments has increased).

Reimbursed health care services are provided by both public and private institutions and individual health care providers who mainly comply with the same set of rules, enjoy the same therapeutic freedoms and offer the same services. Patients are free to choose their health care providers and can access most of the specialised and inpatient care without prior assessment by a general practitioner (GP).

Physician numbers are regulated by a system of quotas

The density of practising physicians has been quite stable (3.1 per 1 000 inhabitants in 2018) and is below the EU-15 average (3.8 per 1 000 inhabitants in 2018, but the definition of practising physicians varies across countries).

It is also important to highlight that physicians in Belgium are getting older, especially GPs. In 2018, 44.3% of practising physicians were aged 55 years and over, in comparison to 24.1% in 2000. Concerning nurses, the number of practising nurses has increased (from 8.8 to 11.2 per 1 000 inhabitants from 2004 to 2017) but the patient to nurse ratio (the number of patients per nurse) in hospitals remains high.

Access to specialisation for physicians (including GPs) is limited by a quota system, with overall quotas defining the maximum number of physicians as well as minimum quotas for some specialties where a possible shortage has been identified (for example, for GPs). These quotas are determined by the Federal Minister of Social Affairs and Public Health based on the advice of the Planning Commission of Medical Supply of the MoH, which assesses the medical workforce needs. A similar quota system is in place for dentists.

The regulation of health professionals is being modernised

Since 2014, a reform of the regulation of health care professionals has been in progress, articulated around three pillars: competent health care providers, integrated and multidisciplinary health care and patient-centred care. New professional titles and competences have been created (such as advanced practice nurses and oral hygienists) and a new law on the quality of practice in health care has been elaborated.

The hospital landscape is changing

Concerning the hospital sector, mergers have led to larger hospitals, which are spread over different hospital sites. Hospitals can be classified into acute care hospitals, specialised or geriatric hospitals and psychiatric hospitals. In December 2018, there were 174 hospitals (105 acute care hospitals, 9 specialised or geriatric hospitals and 60 psychiatric hospitals) spread over 288 sites. The geographical distribution of hospital care facilities and the number of beds is in line with the population distribution.

The maximum number of beds in acute care hospitals has been fixed since 1982. There is also national planning for heavy medical equipment and some specialised services and care programmes. There has been a gradual decrease in the density of curative beds (from 620 to 497 per 100 000 population between 2000 and 2018), which is expected to continue. In contrast, the capacity for day hospitalisation, geriatric and chronic care beds will need to increase to meet changing population needs. Similar to other neighbouring countries, the average length of stay in curative care beds has decreased due to multiple factors, including incentives to increase efficiency.

Belgian hospital financing features a dual remuneration structure according to the type of services provided. Nursing and non-medical activities are financed by a national close-ended budget that is fixed annually and allocated to hospitals according to a large set of criteria and parameters (with the main subpart of clinical operational costs allocated based on the so-called “justified activities” that focus on pathology-weighted length of stay). Medical and medico-technical acts (consultations, laboratories, medical imaging and technical procedures) and paramedical activities (physiotherapy) are mainly paid through a fee-for-service system.

A redesign of the hospital landscape, including emergency care, is also underway with initiatives on care concentration for complex, expensive and technology-intensive services as well as cooperation and tasks assignment within loco-regional networks and supra-regional networks.

Specific measures were also undertaken to control expenditures and improve the quality of care, such as the introduction of a pay-for-performance (P4P) programme and a lump sum payment for hospital stays requiring a standard process of low-complexity care, which varies little between patients.

Strengthening of primary care and integrated care

Although GPs do not have a gate-keeping role, measures have been taken to strengthen their position as the preferred entry point for health services. Initiatives have also been developed to improve the continuity and quality of care (for example, care pathways and pilot projects on integrated care for some patients with a chronic condition or the development of a national Evidence-Based Practice Network).

Patients are increasingly involved in their own care

Further attention has been focused on patient empowerment and patients' involvement in their own care, especially for chronic patients. Efforts are underway to increase information on patients' rights, to give patients access to their personal health information, and to include them in research and decision-making processes. Patient satisfaction is also increasingly taken into account in the financing of care, in particular through the integration of patient-reported experience measures (PREMs) in the P4P programme of hospitals.

International collaborations have been fostered to address high pharmaceutical prices

Pharmaceuticals, including over-the-counter medicines, are exclusively distributed through community and hospital pharmacies. To be reimbursed, pharmaceuticals must be included on a positive reimbursement list. The percentage of reimbursement varies according to the therapeutic importance of the pharmaceutical and the socioeconomic status of the patient (whether the patient has access to a preferential reimbursement or not). Different measures were taken to sustain innovation, strengthen the role of the community pharmacist, improve accessibility and promote the cost-effective use of pharmaceuticals. Nevertheless, the exponential increase in the price of innovative treatments and the lack of transparency in confidential price agreements threaten the system and new solutions such as the recent

BeNeLuxA initiative are needed. The objective of this initiative is to increase accessibility by building country collaboration on drug policies (horizon scanning, health technology assessment, information sharing and policy exchange, and pricing and reimbursement decisions).

Maintaining the patients at their home for as long as possible

Regarding mental, palliative, long-term and rehabilitation care, the main focus is now on the deinstitutionalisation of patients and the development of home-based and community-based care so that the patient can remain at home for as long as possible.

Additional efforts needed for preventive care and dental care

Health promotion and disease prevention are under the responsibility of Federated entities but inter-ministerial conferences between Federal State and Federated entities on public health also play an important role. Assessments of the health status of the population and of the performance of the health system nevertheless highlight the need for a strengthening of prevention policies.

Concerning dental care, even though having regular contacts with a dentist is incentivised (for example, with full reimbursement for the majority of preventive and restorative procedures for all children up to 18 years and reimbursement for some dental care made conditional upon a registered dental contact during the previous year), several treatments (for example, fixed prosthodontics, most periodontal treatments, dental implants, orthodontics in adults and fluoride applications) are not reimbursed at all. Overall dental care is the health service with the lowest coverage, with only 38.6% of dental expenditure covered by the compulsory health insurance in 2017.

Reforms focus on improving accessibility, sustainability, efficiency and quality

Ensuring accessibility to health care and the sustainability of the health system have been long-standing policy objectives. Between 2014 and 2019, quality and efficiency have been additional major objectives. This has resulted in the implementation of several measures aimed at improving the structure and quality of health care. Consequently, “multidisciplinary and integrated care”, “expertise concentration”, “patient care trajectories”, “patient empowerment”, “evidence-based medicine”, “outcome-based care” and the “one health” approach were promoted and the regulation of health professionals was restructured. An eHealth plan has also focused on improving information exchange between health care providers and settings, including the digitalisation of medical records, electronic prescribing and patients’ access to their personal health information. The Belgian health care system has also been evolving to cope with an ageing population, an increase of chronic diseases and the development of new technologies.

In terms of governance, the transfer of additional health competences from the Federal State to the Federated entities is in line with the general reorganisation of the Belgian State. Initiatives to increase public accountability and to monitor performance through the Health System Performance Assessment (HSPA) framework have also occurred. A deliberation on the setting of national health targets to guide health policy-makers is also underway.

Over the next few years, major measures are expected to be introduced in Belgium to continue improving the quality of care and efficiency of the health system. Among them are the continuation of the hospital landscape reform, of the mental health care reforms and of the integrated care projects, the development of a national health research system, the reform of the national fee schedule, the implementation of a new law on quality practice in health care, and the possible integration of some vulnerable people currently covered by other systems (such as prisoners) into the compulsory health insurance system.

There is good overall access to health services of high quality, even if some challenges remain

In terms of performance, the health system was recently assessed as having overall good access to health services of high quality (2019 evaluation). The trend is also towards a more efficient use of care services, such as with an increase in the use of low-cost medicines and a decrease in the length of stay for normal delivery of a child. Nevertheless, some challenges remain in terms of appropriateness of pharmaceutical care (overuse of antibiotics and psychotropics), availability of GPs in the future (due to their increasing average age), availability of nurses in hospitals (due to the high number of patients per nurse) and accessibility to some care such as dental care, especially for the lowest income groups. Indeed, the share of individuals reporting unmet needs due to costs, waiting times, or travel distance is 3.7% (EU-15: 3.6%) for dental examinations and 2.2% (EU-15: 2.0%) for medical examinations. Cost is the main reason in Belgium, with the share of individuals reporting unmet needs because of costs higher than the EU-15 average (3.6% versus 3.1% for dental examinations and 2.0% versus 1.1% for medical examinations in 2017), especially in the lowest income quintile, where these are respectively 8.9% for dental examinations (EU-15: 6.9%) and 5.6% for medical examinations (EU-15: 2.5%).

It should also be noted that while the health status of the population is generally good, and avoidable and preventable mortality rates are decreasing, important socioeconomic inequalities are observed through the whole spectrum of health indicators.

In terms of governance, the new division of competences (and budgets) between the Federal State and the Federated entities risks increasing the complexity and fragmentation of the system. Avoiding duplication of efforts and inefficiencies will therefore be a challenge.

In conclusion, what are the next steps?

In the coming years, policy-makers will continue to tackle these challenges and to pursue the goals of improving access to high-quality care while making the system efficient and sustainable. With the current COVID-19 crisis, new challenges will be highlighted and a focus on the resilience of the system is expected.

Introduction¹

Chapter summary

- Belgium is situated in the west of Europe and has three official languages: Dutch, French and German. It has a population of 11.4 million (January 2019) with one of the highest population densities in Europe.
- There are three levels of power: Federal, Federated entities (three regions based on territory and three communities based on language) and local authorities.
- Belgium is facing an ageing population and immigration.
- Living standards are considered high in Belgium, which was, relative to other European countries, less affected by the 2008 financial crisis. Efforts to reduce the public debt and the at-risk-of-poverty or social exclusion rate as well as to increase the employment rate are notable challenges that are being addressed.
- The health status of the Belgian population is generally good and life expectancy continues to rise. In 2018 life expectancy at birth was 79.2 years for men and 83.7 years for women. The main causes of death are cerebrovascular and ischaemic heart diseases.
- There are important socioeconomic disparities and prevention policies could be strengthened.

1 This chapter was written by Jolyce Bourgeois, Sophie Gerkens, and Aline Scohy.

1.1 Geography and sociodemography

Belgium is situated in the west of Europe and shares borders with the Netherlands, Luxembourg, Germany, France and the United Kingdom (the latter beyond the North Sea) (Fig. 1.1). Belgium has one of the highest population densities in Europe, with 11 431 406 inhabitants (January 2019) living in a total area of 30 528 km² (374 people per km²) (STATBEL, 2019h). Brussels is the capital and is the site of major international organisations such as the European Commission, the European Council, the European Parliament and the North Atlantic Treaty Organization (NATO) (Be. Brussels, 2018b).

FIG. 1.1 Map of Belgium



Source: Authors

Belgium has three official languages: Dutch, mainly spoken in the Flemish region (6.5 million inhabitants); French, mainly spoken in the Walloon region (3.6 million inhabitants); and German, spoken in nine

municipalities of the Walloon region (77 185 inhabitants). The region of Brussels-Capital (1.2 million inhabitants) is officially bilingual, but its dominant language is French (STATBEL, 2019h).

The Belgian population is growing at a rate of about 0.5% each year (see Table 1.1). In 2018, 12.5% of population growth was due to a positive “natural balance”, with more births than deaths. Another reason is positive net migration, with more immigrations than emigrations (+50 180 persons in 2018) (STATBEL, 2019h) and a global upward trend. In 2016, 56% of immigrants were people with European Union (EU) nationality, predominantly Romanian, French and Dutch. Syrians were the most numerous immigrants from a non-EU country of origin (Myria, 2018). There is also an upward trend in the acquisition of Belgian nationality (27 385 in 2015 and 37 468 in 2017). In 2017, most new Belgians originated from Morocco (11%), followed by Romania (4%), the Netherlands (4%), Poland (4%) and the United Kingdom (3%) (Myria, 2018). The requirements are detailed in a report by the Federal Public Service Foreign Affairs (FPS Foreign Affairs 2016).

TABLE 1.1 Trends in population/demographic indicators, selected years

	1995	2000	2005	2010	2015	2017	2018
Total population (thousands; 1 January)	10 131	10 239	10 446	10 840	11 209	11 322	11 376
Population aged 0–14 years (% of total)	18.03%	17.63%	17.18%	16.90%	16.99%	16.96%	16.95%
Population aged 67 and above (% of total) ^a	13.67%	14.74%	15.26%	15.24%	15.89%	16.32%	16.52%
Population growth (annual growth rate compared with previous year), own calculation	0.30%	0.25%	0.48%	0.81%	0.52%	1.01%	0.48%
Population density (people per km ²), own calculation	332	335	342	355	367	371	373
Fertility rate (births per woman 15–49) ^b	1.56	1.67	1.76	1.86	1.7	1.68	–
Distribution of population (% urban population) ^c	96.8	97.1	97.6	97.7	97.9	98	–

Sources: STATBEL (2019h); ^b Eurostat (2018); ^c World Bank (2019).

Note: ^a New cut-off chosen in Belgium based on the increased retirement age.

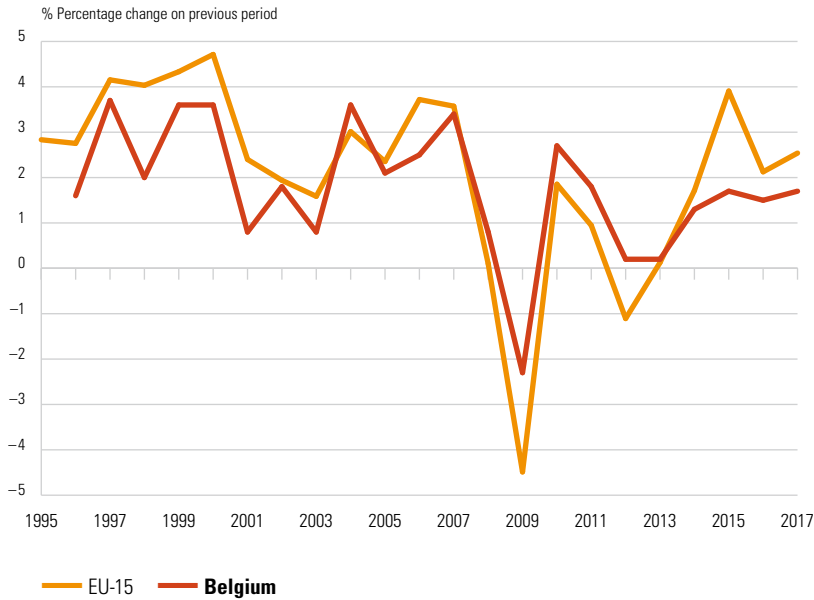
Conversely, the decline in the fertility rate since 2010 provides a negative impact on population growth.

The ageing population will increase in the future, at least until 2070. The proportion of the population aged 67+ years (a new cut-off based on the increased retirement age) will increase from 16.5% in 2018 to 22.9% in 2070. The ageing intensity ratio, measuring the proportion of “very old people” (80+ years) within the group of old people (67+ years), will increase from 33.9% in 2018 to 45.6% in 2070 (STATBEL, 2019f).

1.2 Economic context

Living standards are considered high in Belgium. Gross domestic product (GDP) per capita, adjusted by purchasing power standard, amounted to € 35 000 in 2017, which is slightly above the EU-15 average of € 32 300 (Eurostat, 2018). The impact of the 2008 financial crisis on GDP growth was most significant in 2009, with a decrease of –2.3 percentage points with respect to the previous year; but, overall, Belgium was less affected by the financial crisis than other European countries. As a result, at the time of the recovery, the catch-up was more limited for Belgium (but also less necessary). As shown in Fig. 1.2, the real GDP growth rate from 2014 in Belgium was slightly below the EU-15 average (Eurostat, 2018).

Concerning public debt, the 2008 financial crisis brought levels back to over 100% of GDP from 2011. Public debt then fell from 107.6% in 2014 (its highest level) to 103.4% in 2017; however, further efforts are still needed as public debt remains particularly high, while the ageing of the population will entail additional budgetary costs (BNB-NBB, 2018). The budget deficit also decreased significantly in 2017. Public expenditure in percentage of GDP has been quite stable and remained slightly above the EU-15 average (see Table 1.2).

FIG. 1.2 Real GDP growth, evolution over time (2000–2017)

Source: OECD (2018a); EU-15 average calculated by the Belgian Health Care Knowledge Centre (KCE).

TABLE 1.2 Macroeconomic indicators, selected years

	1995	2000	2005	2010	2015	2017
GDP per capita (current prices, in million €)	21 800	25 200	29 700	33 500	36 600	38 700
GDP per capita, purchasing power standard (current international prices, in million EU-27 €)	19 000	24 500	28 300	30 600	34 500	35 000
GDP real annual growth rate (%) ^a	—	3.6	2.1	2.7	1.7	1.7
Public expenditure (general government expenditure as % of GDP)	21.1	20.9	22.1	23.6	23.9	23.3
Government deficit/surplus (% of GDP)	-4.4	-0.1	-2.8	-4.0	-2.5	-0.9
General government consolidated gross debt (% of GDP)	130.5	108.8	94.7	99.7	106.5	103.4
Unemployment, total (% of active population)	9.7	6.9	8.5	8.3	8.5	7.1
Poverty rate (people at risk of poverty or social exclusion by age and sex as % of total population)	—	—	22.6	20.8	21.1	20.3
Income inequality (Gini coefficient of disposable income)	29.0	30.0	28.0	26.6	26.2	26.0

Source: Eurostat (2018).

Note: ^aBased on GDP chain-linked volumes 2010.

The social impact of the 2008 financial crisis was relatively moderate. The employment rate (for people aged 20–64 years) was stable in Belgium up to 2014 (67.1% in 2009 and 67.3% in 2014) and increased to 68.5% in 2017. This employment rate nevertheless remains below the EU-15 average of 72.4%. The improvement of labour market indicators in 2017 was, among other things, due to the creation of new job opportunities, with 66 000 additional jobs. Some measures have been implemented to stimulate the labour market, such as the reduction of employers' social security contributions (BNB-NBB 2018). To achieve the European objective for Horizon 2020, with an employment rate set at 73.2%, it will be important for Belgium to continue investing in measures stimulating the labour market (European Commission, 2015, 2017).

Comparison of the distribution of total gross household income, as measured by the Gini index, also shows that the financial crisis has not increased inequalities in household income. The Gini coefficient in Belgium remains lower than the EU-15 average, with 2017 values of 26.0 versus 29.6. The at-risk-of-poverty or social exclusion rate was quite stable and slightly decreased in 2017 but is far off the EU target for 2020, with an increase of 102 000 people at risk between 2008 and 2017 whereas the target was a decrease of 380 000 people at risk (European Commission, 2017; Eurostat, 2018). More details on the evolution of the socio-economic situation in Belgium and an update of these figures can be found in the annual reports of the FPS Social Security (FPS Social Security, 2019a).

1.3 Political context

Belgium is a Federal parliamentary democracy under a constitutional monarchy. The King is the head of the state, but in practice the executive power is exercised by the government. Federal legislation is approved by a bicameral parliament consisting of a Chamber of Representatives and a Senate.

At the Federated level, Belgium is divided into three regions (based on territory) and three communities (based on language) (Fig. 1.3). Because both French- and Dutch-speaking citizens live in the Brussels-Capital region, three special institutions were also created (see Section 2.2) (Be.Brussels, 2018a).

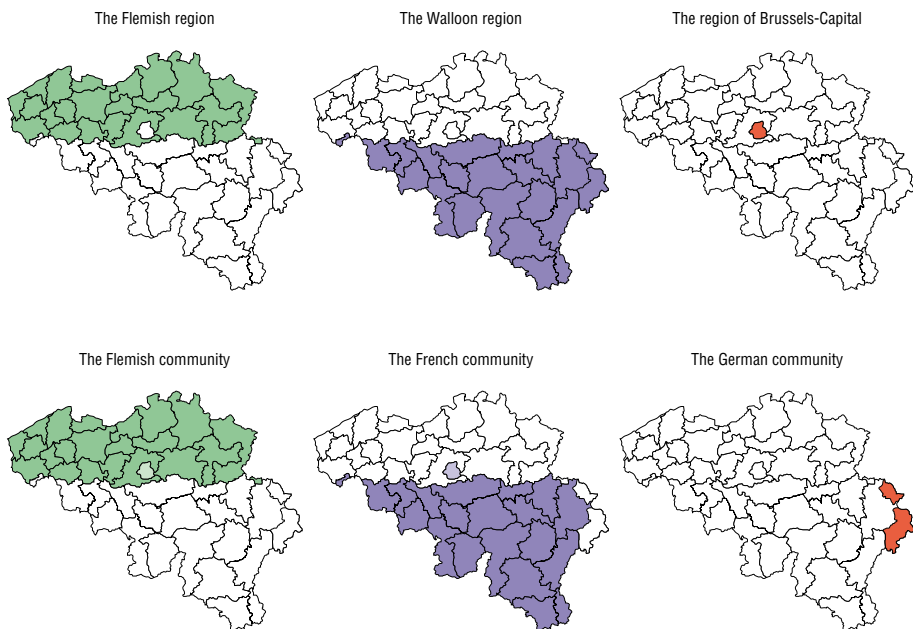
Each region and each community has a legislative body (parliament) and an executive body (government). In Flanders, however, institutions merged in 1980 so that a single government and a single parliament are responsible for both the community and the region's competences (Be.Belgium, 2019).

Federal and Federated elections are held every 5 years. Voting is compulsory for all citizens aged 18 years and over. Belgium has a proportional system of elections where political parties present lists of candidates. According to results of the election, parties have to agree on a coalition government.

At the local level, there are 10 provinces (see Fig. 1.1) and 581 municipalities (since 2019), for whom executive bodies are elected every 6 years (Be.Belgium 2019).

The division of competences between the three levels of power (Federal, Federated and Local authorities) is discussed in Section 2.4. International collaborations are described in Box 1.1.

FIG. 1.3 Belgian regions and communities



Source: Be.Belgium (2018).

BOX 1.1 International collaborations

At the international level, Belgium is a member of the EU, the Council of Europe, the World Trade Organization (WTO), the United Nations, NATO, the World Health Organization (WHO) and the Organisation for Economic Co-operation and Development (OECD), and has signed up to major international treaties, such as the General Agreement on Trade in Services (GATS), the Convention on the Rights of the Child, the European Human Rights Convention and the International Bill of Human Rights (Council of Europe, 2019; European Union, 2019; United Nations, 1989; WTO, 2019). Focusing on international collaboration regarding health, Belgium signed the WHO framework Convention on Tobacco Control in 2004 (United Nations, 2003) and the United Nations protocol to Eliminate Illicit Trade in Tobacco Products in 2013 (United Nations, 2012).

1.4 Health status

A comprehensive overview of the health status of the Belgian population can be found at <https://www.healthybelgium.be>. Here we highlight the most important observations and trends.

Life expectancy at birth in 2018 was 79.2 years for men and 83.7 years for women. Life expectancy continues to increase, and is just above the EU-28 average (78.3 for men, 83.5 for women) (see Table 1.3), but is lower than the EU-15 average (79.6 for men, 84.2 for women) (STATBEL, 2019e). With the ageing of its population and the increasing burden of non-communicable diseases, measuring healthy life-years (combining mortality and disability) better reflects health status. In 2018, women and men could expect to live 63.8 and 63.2 years in good health, respectively, comparable to the EU-28 average (Eurostat, 2019).

Infant mortality has been declining in Belgium similarly to the trend in the EU-28. As only a few cases of maternal deaths are registered, yearly fluctuations are important, so this indicator is presented as a 5-year average (STATBEL, 2019d).

Data on causes of death are currently available up to the year 2016 from Statistics Belgium (STATBEL, 2019b). Despite a decrease of 50% in mortality rates from circulatory diseases between 1995 and 2016 (Table 1.3), cerebrovascular and ischaemic heart diseases were still the leading causes of deaths. Dementia (including Alzheimer's disease), lung cancer and chronic obstructive pulmonary disease completed the top five. The burden of

premature mortality (deaths occurring before 75 years) is better understood by the potential years of life lost, a measure giving more weight to deaths occurring at younger ages. Suicide, lung cancer and ischaemic heart diseases in men and breast cancer in women present the highest burden (Table 1.4).

TABLE 1.3 Mortality and health indicators, selected years

	1995	2000	2005	2010	2015	Latest available year
LIFE EXPECTANCY (YEARS)	2018					
Life expectancy at birth, total	76.9	77.8	79.0	80.0	80.9	81.5
Life expectancy at birth, men	73.4	74.6	76.1	77.4	78.5	79.2
Life expectancy at birth, women	80.2	80.9	81.9	82.6	83.2	83.7
Life expectancy at 65 years, men	14.8	15.5	16.5	17.4	18.0	18.4
Life expectancy at 65 years, women	19.1	19.6	20.2	20.9	21.2	21.6
Health expectancy at birth, men	63.3	65.7 ^a	62.4	64.0	64.4	63.2
Health expectancy at birth, women	66.4	69.1 ^a	62.3	62.6	64.0	63.8
MORTALITY	2016					
All causes, men ^{b, c}	1 816	1 680	1 506	1 348	1 239	1 202
All causes, women ^{b, c}	1 078	1 022	949	872	840	794
Circulatory diseases ^{b, c}	528	478	404	332	286	267
Malignant neoplasms ^{b, c}	348	314	294	280	262	258
Respiratory diseases ^{b, c}	137	152	142	112	109	100
Communicable diseases ^{b, c}	20	25	29	25	21	19
External causes of death ^{b, c}	71	74	67	65	62	60
Infant mortality rate (per 1 000)	6.0	4.8	3.9	3.6	3.3	3.2
Maternal mortality rate (5-year average) ^c	—	6.7	5.1	5.6	3.7 (2014)	—

Sources: Statbel (2019), Sciensano (SPMA), Eurostat (2019).

Notes: ^a Break in time series; ^b age-adjusted rates with the European standard population 2010; ^c per 100 000.

TABLE 1.4 Potential years of life lost, <75 years

POTENTIAL YEARS OF LIFE LOST	2000	2005	2010	2015	Latest available year (2016)
All causes, ^{a, b} men	8 501	7 312	6 580	5 781	5 664
All causes, ^{a, b} women	4 258	3 802	3 639	3 369	3 211
Suicide, ^{a, b} men	842	766	720	625	628
Suicide, ^{a, b} women	311	258	261	231	228
Lung cancer, ^{a, b} men	863	768	684	533	501
Lung cancer, ^{a, b} women	217	275	295	295	282
Breast cancer, ^{a, b} women	519	436	373	299	293

Source: Own calculation based on Statbel data.

Notes: ^a Age-adjusted with the European standard population 2010; ^b per 100 000.

The burden of non-communicable diseases is high in Belgium. A diabetes prevalence of 6.1% was estimated from health insurance data (IMA-AIM, 2019b). However, the Belgian Health Examination Survey has revealed a prevalence of 10%, indicating that one third of people with diabetes are not aware of it (Van der Heyden et al., 2019). The cancers with the highest incidence were breast cancer in women and prostate cancer in men (Table 1.5). Bronchus and lung cancers are still the second most frequent cancer in men, but the incidence is decreasing over time, whereas in women the incidence is increasing (BCR, 2019a). The apparent recent increase in the incidence of prostate cancer may be a reflection of increased screening practices rather than a true increase in risk, as indicated by the decreasing prostate cancer mortality rates.

Six health interview surveys have been performed by Sciensano (in 1997, 2001, 2004, 2008, 2013, 2018) (Sciensano, 2020b). Belgium performs better than the EU-15 average for self-perceived health, chronic morbidity and activity limitations (Table 1.6). Mental health indicators are summarised in Box 1.2.

TABLE 1.5 Morbidity indicators, selected years

	2005	2010	2015	Latest available year (2017)
Diabetes prevalence (crude estimates) ^b	5 100 (2007)	5 300	6 000	6 100
All-sites cancer incidence, men ^{a, b}	551	532	540	546
All-sites cancer incidence, women ^{a, b}	389	404	425	425
Bronchus and lung cancer incidence, men ^{a, b}	87	82	77	73
Bronchus and lung cancer incidence, women ^{a, b}	23	31	34	36
Colon cancer incidence, men ^{a, b}	42	42	44	39
Colon cancer incidence, women ^{a, b}	28	29	30	28
Prostate cancer incidence, men ^{a, b}	156	128	113	124
Breast cancer incidence, women ^{a, b}	145	144	141	142

Source: IMA-AIM (2019b), BCR (2019a).

Notes: ^a Age-adjusted rates for all ages with the European standard population 2010; ^b per 100 000.

BOX 1.2 Mental health and suicide

Most mental health indicators showed a worsening in the 2018 health interview survey (Sciensano, 2020b). Using the general health questionnaire (with a cut-off of 4+), it was estimated that 17.7% of the population over 15 years of age had a probable mental disorder (13.2% in 2001). The 2018 health interview survey also revealed that 4.3% of the population had an experience of suicide attempt(s) in their life. The suicide rate is particularly high in Belgium (17.1 per 100 000) compared with the EU-15 average (10.3 per 100 000).

TABLE 1.6 Minimum European Health Module and risk factors affecting health status (%), selected years

	1997	2001	2004	2008	2013	2018	EU-15 average
MINIMUM EUROPEAN HEALTH MODULE							2018
Self-perceived health ^a	78.3	76.2	76.9	76.8	77.9	77	71.3
Having any long-standing illness or health problem ^a	—	25.1	25.7	28.1	28.6	29.3	33
Activity limitations ^a	—	21.1	20.6	21	22.7	22.6	25.8
RISK FACTORS							Last year available
Smoking (daily smokers) ^a	25.5	24.1	24.0	20.7	18.9	15.4	18.7
Total alcohol sales ^{a,b}	—	—	—	11.4 (2010)	—	12.1 (2016)	11.1
Heavy episodic drinking ^{a,c}	—	—	—	—	27.5	27.4	16.8
Overweight (self-reported) ^d	41.3	44.5	44.1	46.9	48.1	49.3	50.3
Overweight (measured) ^d	—	—	—	—	53.1 (2014)	55.4	60.5 ^e
Obesity (self-reported) ^d	10.8	12.1	12.7	13.8	13.7	15.9	16.0
Obesity (measured) ^d	—	—	—	—	19.5 (2014)	21.2	24.0 ^e
Physical activity (at least 150 minutes of health-enhancing physical activity per week)	—	—	—	—	—	30.1 ^a	36.2 ^d
Consumption of fruits and vegetables (5+ a day) ^a	—	—	—	—	12.6 (2014)	12.7	16.3

Sources: Food consumption surveys, Health interview surveys, Health examination survey, OECD health data, WHO GISAH.

Notes: ^a Population aged >15 years; ^b total alcohol (recorded 3-year average + unrecorded) per capita consumption (in litres of pure alcohol); ^c 6+ drinks on one occasion at least once a month;

^d population aged >18 years; ^e only countries with available information are included (BE, FI, FR, DE, IE, LU, PT, UK).

The prevalence of daily smoking among those aged 15 years and over is continuously decreasing, reaching its lowest point in 2018 (15.4%), and is now under the EU-15 average. Between 2013 and 2018, a decrease was witnessed in the number of consumers of alcohol (81.8% to 76.6%), of daily consumers (14.2% to 9.7%) and of hazardous consumption (6.4% to 5.9%, defined as more than 21 and 14 drinks per week for men and women, respectively) and an increase of people who have never consumed alcohol (13.2% to 16.8%). However, the share of people with heavy episodic drinking at least once a month was stable and much higher than the EU-15 average (Sciensano, 2020b). The consumption of alcohol per capita has increased between 2010 and 2016 and was above the EU-15 average (WHO 2016).

Belgium conducted its first Health Examination Survey in 2018 to collect objective health information (Van der Heyden, 2019). The Health Examination Survey allows the objective measurement of weight and height. Based on the survey results, 55.4% and 21.2% were overweight and obese, compared with 49.3% and 13.7% with self-reported measures, with Belgium under the EU-15 average. About a third of the population (30.1%) performed at least 150 minutes of health-enhancing physical activity per week, which was lower than the EU-15 average (36.2%). The consumption of five or more fruits and vegetables a day was lower in Belgium (12.7%) than in the EU-15 (16.3%) (Sciensano, 2020b).

Health inequalities remain substantial in Belgium with important regional and socioeconomic differences, measured by education level (see Box 1.3).

BOX 1.3 Health inequalities

For life expectancy (LE), residents of Brussels and Wallonia live 0.8 and 2.5 years less, respectively, than residents of Flanders in 2018. The socioeconomic LE differences at 25 are very important, with LE differences in less versus highly educated people reaching 6.1 and 4.6 years, respectively, in men and women in 2011. The socioeconomic differences in healthy life-years showed an even greater difference in low versus highly educated people reaching 10.5 and 13.4 years in men and women, respectively, in 2011 (Renard et al., 2019b).

Based on a follow up of mortality between 2001 and 2006, men in the lowest educational category were 1.9 times more likely to die before the age of 75 years than men in the highest educational category (after correction for age), while women were 1.6 times more likely (Renard et al., 2017).

For many risk factors, regional and socioeconomic differences were observed in 2018. In Flanders, there were fewer daily smokers (–5.4%), fewer people overweight (–13.7%) and obese (–7.7%), and more physically active people (+17.2%) than in Wallonia. However, more people ate five or more fruits and vegetables a day in Wallonia than in Flanders (+2.7%). People with a higher education were less often daily smokers (–10.1%), overweight (–18.3%) and obese (–10.7%), and were more active (+11.8% to +27.4%), and likely to meet the nutritional recommendations (+6.0% to +8.5%) than people with a lower education level (Sciensano, 2020b).

Organisation and governance²

Chapter summary

- Belgium is a Federal State where jurisdiction over health policy and regulation of the health care system is divided among the Federal State and the Federated entities.
- Human resources planning for health professionals is based on a stock-and-flow planning model, which is updated regularly.
- A “One Health” approach is undertaken, which aims to promote collaboration across multiple sectors to achieve better public health outcomes. This principle is supported by a governance model and implemented through different themes and a research programme.
- Improvements in the field of health information have been made but some challenges remain (such as the need for data on non-reimbursed ambulatory care and the lack of a unique patient identifier to link between databases).
- The health care system relies on a model of compulsory health insurance, administered by sickness funds. All individuals entitled to compulsory health insurance must register with a sickness fund. Over time, sickness funds have been made increasingly

2 This chapter was written by Céline Pouppez, Charline Maertens de Noordhout, Sophie Gerkens, Jolyce Bourgeois, and Petronille Bogaert.

accountable for the health expenditure and health status of their insured members. Reimbursed health care services are provided by both public and private institutions and individual health care providers who mainly comply with the same set of rules, enjoy the same therapeutic freedom and offer the same services. For patients, the difference between the two sectors lies mainly in the extra-billings charged.

- Efforts are being made to put patients more at the centre of care. To this end, their rights (for example, free choice of their health care providers) are enshrined in a law, the Federal Commission for Patients' Rights ensures that they are respected and the MoH and patients' associations promote them. Patients are also increasingly well informed and included in research and decision-making processes.

2.1 Historical background

A detailed description of the historical background is available in the previous HiT (Gerkens and Merkur, 2010). Three milestones include:

Introduction of compulsory health insurance in 1944

The origins of the Belgian health care system can be traced back to the voluntary mutual-aid organisations created by workers in the 19th century in the context of industrialisation to protect their affiliated members against the risk of disease, unemployment and incapacity to work. The foundations of the social security system subsidised by the State were laid down in the Social Security Act of 28 December 1944. This established the first compulsory social security system for all salaried workers including the introduction of compulsory health insurance. Since 1944, the health insurance system has gradually evolved towards universal coverage, expanding progressively to non-workers, vulnerable persons, self-employed and civil servants.

Structure of health insurance and medical activities in 1963–1964

The law of August 1963 organised the compulsory health insurance based on the principles of independent medical practice, free choice of physician and hospital, and fee-for-service payment. This law introduced a system of agreements (conventions) negotiated by health care providers and sickness funds, setting fees and reimbursement levels.

Decentralisation of health competences by State reforms in 1980 and 2014

For the first time in 1980, the regulation of health policy was shared between the Federal State and the communities. At that time, most of the competences granted to the communities in the field of health care were complementary or executory competences. The 2014 reform backed away from this logic and transferred comprehensive competences packages to the communities in order to unify and harmonise certain areas in health care (see Section 2.3).

2.2 Organisation

Jurisdiction over health policy and regulation of the health care system is divided among the Federal State and the Federated entities. This situation results in nine ministers or deputy ministers in charge of health-related matters in 2020 (see Figs 2.1 and 2.2).

Since 1980, so-called inter-ministerial conferences have been regularly organised to facilitate cooperation between the Federal government and Federated entities. These conferences have no binding decision-making power but they are necessary for coordination between the governments, resulting in protocol agreements.

2.2.1 *Main actors at the Federal level*

The Federal parliament is the legislative body. The Federal government is the executive body and includes one single Minister of Social Affairs and Public Health. The main actors supporting the Federal Minister are:

- **The Federal Public Service (FPS) Health, Food Chain Safety and Environment (MoH)** is involved in the three pillars of the Federal policy regarding health, which are the protection of human health, of animal and plant health (including Food Chain Safety) and of environmental health. This administration has very broad competences regarding health care professionals and hospitals. They coordinate and control the recognition and licensing criteria and general quality rules of all health care facilities and practitioners, provide advice on quotas and control the implementation of patients' rights. They are also responsible for the coordination of prevention and monitoring of health crises and organisation of emergency medical assistance. Other competences involve following up on the international health situation and policy concerning infectious diseases.
- **The FPS Social Security** mainly coordinates Federal social security policy by carrying out research, initiating studies, analysing data and developing regulations in cooperation with all actors involved in social protection (social partners, advisory bodies). This FPS is also in charge of the recognition of benefits for disabled people.
- **The National Social Security Office (NSSO)** is the central institution in the social security system for private sector employees and most civil servants. The NSSO collects both employers' and employees' social security contributions and redistributes the social security budget to the payment institution for each social security sector (which is the National Institute for Health and Disability Insurance for compulsory health insurance).
- **The National Institute for the Social Security of the Self-employed (SSSE)** plays the same role as the NSSO for employed persons, but for the self-employed.

- **The National Institute for Health and Disability Insurance (NIHDI)** is responsible for the general organisation and financial management of compulsory health and benefits insurance. Its most important tasks are to organise and control the reimbursement of health care services and products; organise and control the replacement income in case of incapacity; prepare the budget and make sure that activities of health care providers and sickness funds are appropriately financed; and monitor the evolution of health care insurance expenditure. In addition to the government's representatives, different stakeholders (patients, health care professionals, employers, employees and self-employed) are represented in several decision-making bodies within the NIHDI.
- **The Federal Agency for Medicines and Health Products (FAMHP)** ensures the quality, safety and effectiveness of pharmaceuticals and health products for humans and animals (see Sections 2.7.4 and 2.7.5).
- Sickness funds are private, non-profit-making organisations with a public interest mission operating the compulsory health and disability insurance. Patients may choose their sickness fund or choose to be a member of the publicly organised auxiliary fund health insurance (see S2.7.2). The general control of those actors is exercised by the **Supervising Authority for Sickness Funds and National Associations of Sickness Funds**.

2.2.2 *Main actors at the Federated level*

Each Federated entity has a parliament, a government, passes its laws and has its own budget (see exceptions below). The executive power is exercised by several Ministers and Deputy Ministers in charge of health care or other related matters, with the support of various administrations:

- **Flemish community:** There is a single legislative and political power, a single administration and a single budget for both matters related to the Flemish community and to the Flemish region (see Section 2.3). Under the supervision of the Flemish Ministry of

Public Health, Family and Social Welfare, the Flemish Agency for Care and Health implements all Federated health competences in Flanders and for the institutions located in Brussels and organised exclusively in Dutch.

- **French community – Walloon region (French-speaking part):** Since 1993, some responsibilities of the French community have been devolved to the Walloon region (for the French-speaking part of the region) and to the French Community Commission (or COCOF) in the region of Brussels-Capital (see Box 2.1). The matters transferred mainly concern social welfare and health policy. The Walloon Minister of Health and Welfare relies on the Agency for Quality Life (AVIQ), which implements the Federated health competences in the French-speaking part of the Walloon region. The French community remains competent for birth and childhood matters (including school medicine) and for licensing and financing (i.e. capital and investment costs) of university hospitals.
- **German-speaking community:** The government and parliament of the German-speaking community exercise all of the health care competences under their responsibilities (see Section 2.3). The Department of Health and Senior Citizens of the Ministry of the German-speaking community is responsible for matters related to public health and health promotion. In addition, the Agency for Autonomous Life (*Dienststelle für selbstbestimmtes Leben*) is responsible for matters related to people in a dependency situation due to age or a physical or mental disability.
- **Brussels:** Brussels has a bilingual status (French and Dutch) and as such, three specific commissions were created (see Box 2.1). As most health care services are bilingual, the GGC-COCOM exercises the most important part of Federated competences in Brussels. The GGC-COCOM created Iriscare which is an additional administration responsible for bilingual assistance to older and disabled people. Iriscare licenses and finances facilities and services related to these sectors, including home care services. It also pays out certain allowances such as family allowances, aids for older people and mobility aids.

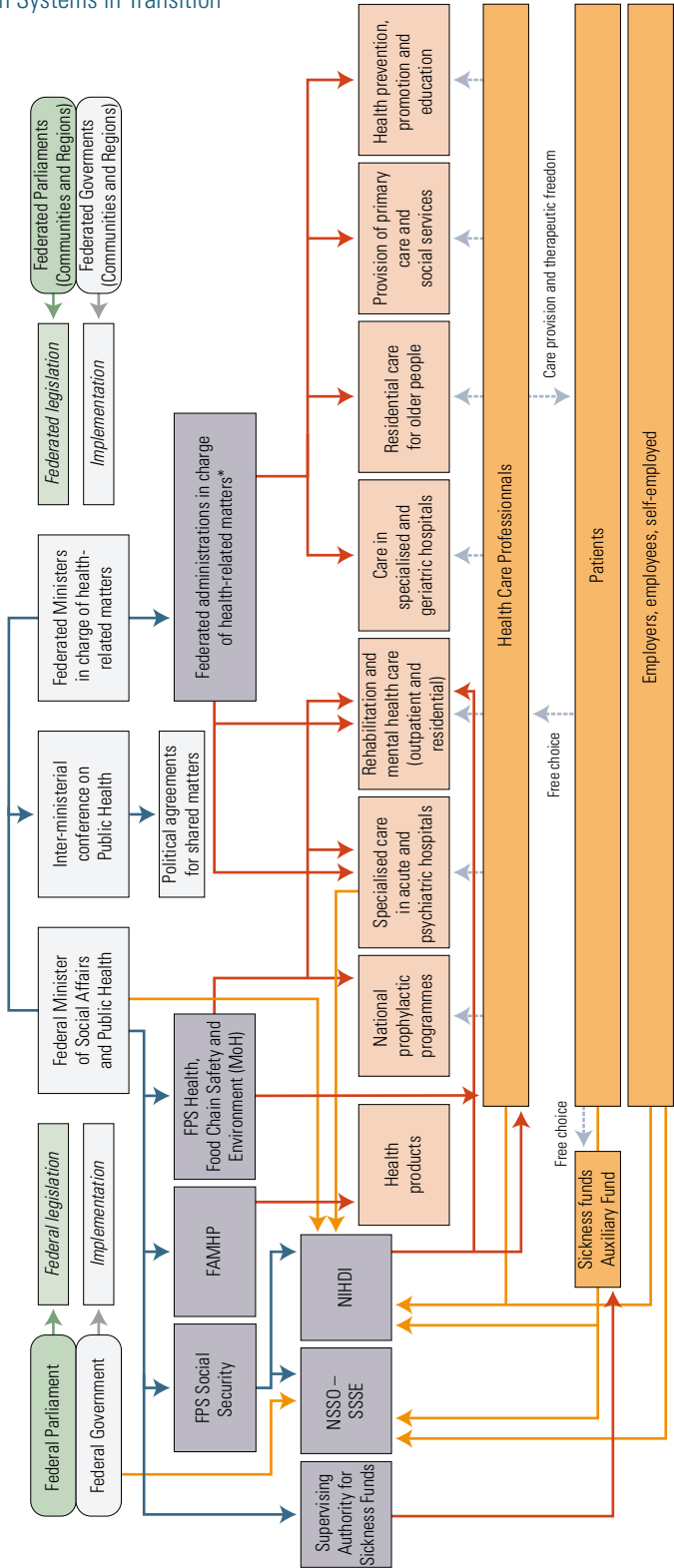
BOX 2.1 Specific Commissions involved in the region of Brussels-Capital

The Flemish Community Commission (*Vlaamse Gemeenschapscommissie*; VGC) has no legislative power: it cannot therefore adopt legislative texts, but only execute decrees, under the supervision of the Flemish community. The VGC executing decrees must respect and apply, taking into account the specificities of Brussels, the decrees of the Flemish community. It is competent for facilities and services organised exclusively in Dutch.

The French Community Commission (*Commission communautaire française*; COCOF) has legislative power in matters transferred by the French community (mainly related to social assistance and health). It is therefore competent for facilities and services organised exclusively in French. In personal matters not transferred by the French community, as well as in cultural and educational subjects, the COCOF acts under the supervision of the French community. Its executing decrees must respect and apply, taking into account the specificities of Brussels, the decrees of the French community.

The Joint Community Commission (*Gemeenschappelijke Gemeenschapscommissie*; GGC; *Commission communautaire commune*; COCOM) is responsible, in the bilingual region of Brussels-Capital for measures applying directly to individuals and for facilities which, because of their organisation, are not attached exclusively to one of the communities. With regard to all these facilities organised in a bilingual manner, the Joint Community Commission acts as a legislative power: it autonomously adopts legislative texts.

FIG. 2.1 Overview of the health system: organisational relationships between the main actors (simplified schema)



Notes: Green arrows, legislative power; Grey arrow, executive power; Red arrow, evaluation, control; yellow arrows, representation; blue arrows, supervision; dashed grey arrows, service provision/contractual relationship. See Section 2.3 for explanation of asterisk. This figure only describes the relationship between the main regulators/decision-makers (governments in light grey, main administrations and governmental agencies in dark grey). Other administrations and governmental agencies are described in Fig. 3.6. Detailed division of competences between Federal State and Federated entities are described in Table 2.1. FAMHP: Federal Agency for Medicines and Health Products; NIHDI: National Institute for Health and Disability Insurance; NSSO: National Social Security Office; SSSE: National Institute for the Social Security of the Self-employed.

Source: Authors' own.

2.2.3 *Other actors at the Federal level*

Some tasks have been entrusted to specific agencies, including:

- **The Federal Agency for Nuclear Control (FANC)** ensures that the population and the environment are effectively protected against the dangers of ionising radiation. FANC determines and controls the basic standards for radiation protection in classified facilities, including medical ones. It also ensures the radiological monitoring of the territory and implements emergency plans.
- **The Federal Agency for the Safety of the Food Chain (FASFC)**, is responsible for the assessment and management of risks that may be harmful to the health of consumers as well as the health of animals and plants. The Agency carries out food safety inspections throughout the food chain.

To advise Federal State and Federated entities on scientific and technical matters in the health care sector, various advisory and consultative bodies exist.

- **Sciensano** is the Federal research institute for animal and human health. It conducts studies on communicable and non-communicable diseases, food, medicines and consumer safety, public health and surveillance. Sciensano was created in April 2018, resulting from the merger between the Scientific Institute of Public Health (WIV-ISP) and the Veterinary and Agrochemical Research Centre (CODA-CERVA).
- **The Belgian Health Care Knowledge Centre (KCE)** provides independent scientific support to health care decision-makers. It carries out research in the following areas: the analysis of clinical practice and the development of guidelines for good clinical practice; the assessment of health interventions and health products (health technology assessment); and the study of health organisation and financing (health services research). Since 2015, the KCE is also in charge of coordinating the Belgian non-commercial clinical research programme.

- **The Superior Health Council** is the link between government policy and the scientific community in the field of public health. It provides independent advice and recommendations to the Minister of Social Affairs and Public Health, on the Minister's specific request for information or on its own initiative.

A merger of these three institutions is currently under discussion.

Health care organisation and policies are also highly influenced by a number of non-governmental stakeholders including professionals and deontological associations of health care professionals, health care institutions, associations representing the pharmaceutical industry, trade unions, employer organisations and others. Patients' associations are also beginning to have an impact on health policy (see Section 2.8.1).

2.3 Decentralisation and centralisation

Belgium is a Federal State consisting of one Federal level and of Federated entities (three communities and three regions; see Section 1.3). General competences are described in Box 2.2. The inter-ministerial conference is the coordinating structure (see also Section 2.2).

FIG. 2.2 Main administrations and agencies in charge of health-related matters (situation in 2020)

FEDERAL LEVEL		FEDERATED LEVEL			
<p>Belgium</p> <p>Federal parliament</p> <p>Federal government: Minister of Social Affairs and Public Health</p>	<p>VGC, COCOF, GGC-COCOM (Brussels)</p> <p>Parliaments of the: • COCOF • GGC-COCOM</p> <p>Assembly of the VGC</p> <p>Executive College of the: • VGC: one president in charge of well-being, health, and other matters^a • COCOF: one minister-president in charge of health promotion and other matters^a and one member in charge of health and social welfare • GGC-COCOM: two members in charge of health and social welfare^a</p>	<p>Flemish-speaking Community</p> <p>→ Flemish parliament</p> <p>Flemish government: one minister of well-being, public health, family and social welfare</p>	<p>French-speaking Community and Walloon Region (French-speaking part)</p> <p>Parliaments of the: • French Community • Walloon region</p> <p>Governments of the: • French-speaking Community: one minister of health (childhood) and other matters and one minister of university hospitals and other matters^a • Walloon region: one minister of health and social welfare</p>	<p>German-speaking Community</p> <p>Parliament of the German-speaking Community</p> <p>Government of the German-speaking Community: One minister of health, social affairs and family</p>	<p>Main federal departments and agencies: • FPS Public Health, Food Chain Safety and Environment (MoH) • National Institute for Health and Disability Insurance (NIHDI) • FPS Social Security • National Office for Social Security (NOSS) and National Institute for the Social Security of the Self-employed (ISSE) • Supervising authority for sickness funds and national associations of sickness funds • Federal Agency for Medicines and Health Products • The Federal Agency for Nuclear Control • Federal Agency for the Safety of the Food Chain (FASFC)</p>

Scientific advice

Scientific bodies: Ex. Sciensano
Belgian Health Care Knowledge Centre
Superior Health Council

Source: Authors' own.

Notes: ^a Non-health-related; ^b in Brussels, the two members of the joint college of the GGC-COCOM in charge of health-related matters (one French-speaking and one Dutch-speaking) are also the people in charge of health-related matters in the colleges of the COCOF and of the VGC, respectively. A total of three persons are therefore in charge of health-related matters in Brussels in 2020.

BOX 2.2 Distribution of competences between Federal and Federated entities

Regions are historically competent for matters closely related to the management of their territory: economy, employment, agriculture, water policy, housing, public works, energy, environment, town and country planning, foreign trade, and supervision of local entities (provinces and municipalities) (Be.Brussels, 2018a).

Communities are historically competent for person-related matters linked to the citizen's language: culture, education, health and assistance to individuals (for example, protection of youth, social welfare, aid to families, immigrant assistance services).

It should however be noted that in the north of Belgium, there is one single government and one single parliament for both matters of the Flemish region and of the Flemish community. The situation is reversed in the south where, since 1993, some competences of the French community are exercised partly by the Walloon region and by the COCOF (see Section 2.2.2). This difference has to do with the geographical differences: in Flanders, 'community' and 'region' cover the exact same geographical area, which is not the case in Wallonia where 'region' and 'community' cover different geographical areas (due to the German-speaking community in the east of the Walloon region, see Fig. 1.3).

The Federal State is competent for matters in the general interest of all Belgians: public finances, army, judicial system, social security (pensions; unemployment; insurance for accidents at work; insurance for occupational diseases; annual vacation; and the compulsory health insurance), foreign affairs as well as substantial parts of public health and home affairs. Furthermore, the Federal State is responsible for the obligations of Belgium in the context of international treaties (Be.Brussels, 2018a).

Six constitutional reforms have resulted in devolution of responsibilities from the Federal level to the communities and regions (in 1970, 1980, 1988, 1993, 2001 and 2014) in various domains. The devolution of health-related matters concerns the 1980 and 2014 reforms (called the 6th State Reform).

Regarding health competences, as a consequence of the 6th State Reform, more than € 5 billion were transferred from the Federal State to the Federated entities (nearly 15% of public expenditure on health, see Fig. 3.7). The implementation of this reform required major reorganisation and the adoption of new legislative frameworks within the Federated authorities that were mainly completed in 2018–2019, with some parts still underway.

Roughly stated, the Federal State remains competent for the regulation of the:

- compulsory health insurance
- hospital budget
- general organisation rules
- health products and activities
- health care professions and practices
- patient's rights.

Federated authorities are the main competent authorities in the fields of older people and disabled care (including the granting of allowances), mental health care, primary and home care and rehabilitation policies (see Table 2.1). They are also the main competent authorities for health promotion and disease prevention.

Health care responsibilities of the provinces and municipalities are limited to matters of local interests and they act under the supervision of the regions. Municipalities are mainly responsible for organising social support for low-income groups and if applicable manage public hospitals or health care settings they have created. Provinces exercise certain powers that go beyond municipal boundaries and interests, such as health screening and coordination of mental health services.

TABLE 2.1 Division of competences after the 6th State Reform (special law of 6 January 2014)

FEDERAL STATE	FEDERATED ENTITIES
CURATIVE CARE AND PSYCHIATRIC HOSPITALS	
<ul style="list-style-type: none">• Financing of operational costs	<ul style="list-style-type: none">• Financing of capital and investment costs (infrastructure and heavy medical equipment)
<ul style="list-style-type: none">• National planning: determination of programming criteria and of the number of hospitals, hospital's services, and heavy medical equipment	<ul style="list-style-type: none">• Determination of geographic spread of hospitals, hospital's services, and heavy medical equipment on their territories (with respect to the national planning)
<ul style="list-style-type: none">• Determination of basic organisational rules and characteristics of hospitals, hospital's units, services and care programmes, and of hospital's cooperation (including minimal staff, equipment, type of care, ...)	<ul style="list-style-type: none">• Determination of licensing criteria specifying quality, organisational and architectural norms for hospitals and hospital's services (in respect with the national planning and the Federal basic organisational rules and budget)
<ul style="list-style-type: none">• Designation as university hospital	<ul style="list-style-type: none">• Granting licenses to hospitals and control of the compliance with licensing criteria
<ul style="list-style-type: none">• Determination of the management rules and decision-making process	
<ul style="list-style-type: none">• Determination and reimbursement of fees for medical and medico-technical services (regulation and financing of the compulsory health insurance)	
REHABILITATION AND LONG-TERM CARE	
<ul style="list-style-type: none">• Organisation and financing of existing rehabilitation conventions not specifically transferred to the Communities in 2014 (NIHDI conventions)	<ul style="list-style-type: none">• Organisation and financing of transferred rehabilitation conventions, i.e. for diverse group of care services (such as centres for ambulatory rehabilitation, psychosocial rehabilitation for adults, care settings for neurological and musculoskeletal rehabilitation, or care settings for children with respiratory and neurological disorders) and patients (such as for autism, addicted persons, persons with hearing/vision impairments, or psychiatric disorders in children).
<ul style="list-style-type: none">• Organisation and financing of rehabilitation care in acute care hospitals	<ul style="list-style-type: none">• Organisation, programming, licensing and financing of other rehabilitation centres and specialised hospitals (e.g. for cardiopulmonary diseases, locomotor diseases, neurological disorders, etc.).
<ul style="list-style-type: none">• Determination and reimbursement of fees for medical and medico-technical services (regulation and financing of the compulsory health insurance)	<ul style="list-style-type: none">• Organisation of outpatient rehabilitation care.

FEDERAL STATE	FEDERATED ENTITIES
CARE FOR OLDER PEOPLE	
<ul style="list-style-type: none"> Determination and reimbursement of fees for medical and medico-technical services, including nursing care at home (regulation and financing of the compulsory health insurance) 	<ul style="list-style-type: none"> Organisation, programming, licensing, financing and control of residential care: <ul style="list-style-type: none"> Homes for older people, nursing homes, and short-term residential care (day-centre, night/day community-care centre) Geriatric hospitals, including the financing of collective care (nurses, staff etc.)
	<ul style="list-style-type: none"> Organisation, licensing, financing and control of home care and family services and community services
	<ul style="list-style-type: none"> Organisation and control of services flats
	<ul style="list-style-type: none"> Granting of allowances for dependent people
MENTAL HEALTH CARE (EXCLUDING ACUTE CARE AND PSYCHIATRIC HOSPITALS, DESCRIBED ABOVE)	
<ul style="list-style-type: none"> Mental health home ambulatory care (including article 107 projects and mobile teams) 	<ul style="list-style-type: none"> Organisation, programming, licensing, financing and control of: <ul style="list-style-type: none"> Psychiatric care homes Mental health centres and services Initiatives for sheltered living facilities Rehabilitation centres with a convention related to specific mental health problems such as addiction or psychosocial needs (see also rehabilitation), including the funding of collective care and functioning (nurses, staff etc.)
	For more details see KCE report 318 (Mistiaen 2019)
<ul style="list-style-type: none"> Organisation and financing of rehabilitation centres with a non-transferred convention linked to mental health problems (see also rehabilitation) 	
<ul style="list-style-type: none"> Determination and reimbursement of fees for medical and medico-technical services (regulation and financing of the compulsory health insurance) 	
PRIMARY CARE	
<ul style="list-style-type: none"> Reimbursement of fees for medical and medico-technical services (regulation and financing of the compulsory health insurance) 	<ul style="list-style-type: none"> Organisation of primary care, home care, palliative care, and social support
HEALTH CARE PROFESSIONALS	
<ul style="list-style-type: none"> Norms, conditions and regulations 	<ul style="list-style-type: none"> Education
<ul style="list-style-type: none"> Granting and withdrawal of the license to practice (Visa) 	<ul style="list-style-type: none"> Granting professional recognition (Title and qualification)

FEDERAL STATE	FEDERATED ENTITIES
<ul style="list-style-type: none">• Global quota and minimum quota for physicians and global quota for dentists	<ul style="list-style-type: none">• Organisation of measures to respect the quota (e.g. admission test)
<ul style="list-style-type: none">• Granting of NIHDI number for the reimbursement of their medical and medico-technical services by the compulsory health insurance	
<ul style="list-style-type: none">• Organisation and quality of health care practices by individual health care providers (regardless the location, reimbursement status or nationality of the patient)	
<ul style="list-style-type: none">• Development of E-health	
<ul style="list-style-type: none">• Patient's rights	
HEALTH PROMOTION AND PREVENTION	
<ul style="list-style-type: none">• Compulsory vaccinations (Polio vaccine), national prophylaxis and protection of the population against ionising radiations	<ul style="list-style-type: none">• Health education, health promotion and preventive health care
	<ul style="list-style-type: none">• Preventive health care for children and supporting parents and families in the care of young children
	<ul style="list-style-type: none">• Anti-addiction initiatives, vaccination, screening programmes
PHARMACEUTICALS AND HEALTH PRODUCTS	
<ul style="list-style-type: none">• Regulation, monitoring and reimbursement of pharmaceuticals and health products (manufacturing, placing on the market, distribution etc.)	

Source: BS-MB, 31 January 2014.

2.4 Planning

Evaluation of needs concerning the supply of human resources for health is a Federal competence. The Planning Commission of Medical Supply, created in 1996, is responsible for assessing medical workforce needs in the professions of physicians, dentists, physiotherapists, nurses, midwives and speech therapists (BS-MB 29 August 1996). The Commission provides non-binding opinions on human resource planning to the Minister of Social Affairs and Public Health. The Planning Unit for the Supply of Health Care Professions brings administrative and technical support to the Planning

BOX 2.3 Workforce planning model

The planning model elaborated by the Planning Unit and the Planning Commission is a stock-and-flow model; it assumes that for each health care profession there is a demand (based on population needs for health care) and a supply (the number of professionals). Stock refers to the available supply of health care providers and flow refers to the flow of new health care providers and individuals who cease to work in a given health care profession, for example upon their death. The future stock is projected starting from the present stock of professionals taking into account changes in the flow. It also incorporates a demand component based on the evolution of the Belgian population. The results of the model are presented as raw or weighted densities of number of individual professionals and the corresponding full-time equivalent professionals. Although being considered as one of the most complete among EU countries (European Union, 2016), the Belgian supply-based model is regularly challenged and improved on – see also the KCE reports on strategies for improving the medical workforce projection model (Vandenbroeck et al., 2017) and health human resources planning and midwifery data (Benahmed et al., 2016). Since 2015, the PlanCad project has been developed to complement the cadastral data (the data on the number of registered health professionals of the MoH that are used in the planning model) with additional external data (BS-MB 18 June 2015). This allows for a better estimate of the activity rate of the health care professionals included in the cadastre and therefore better planning of the workforce needs.

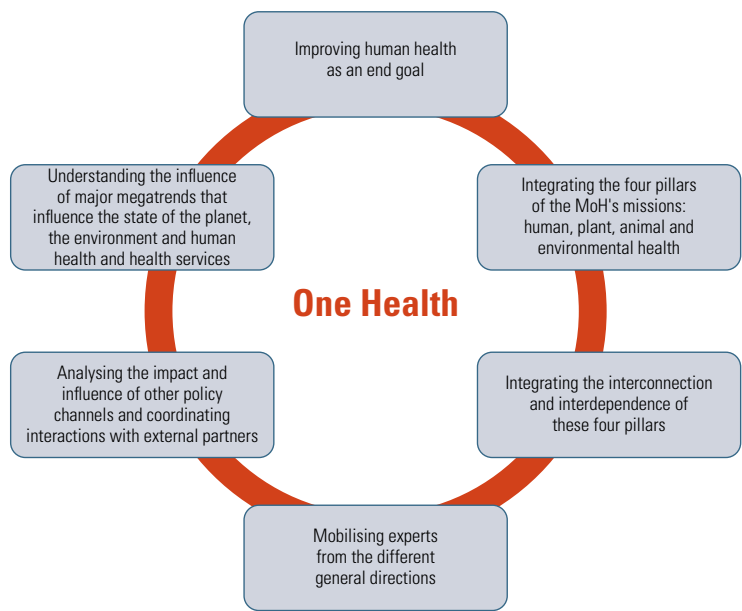
Commission. The Planning Unit quantifies and predicts the staffing and workforce needs of health care professionals using modelling (see Box 2.3) (Benahmed et al., 2019).

Based on the advice of the Planning Commission, a system of quotas for physicians and dentists is established. An overall quota is set up for Belgium and stratified by community (sub-quotas). Sub-quotas are managed by the Federated entities, which are currently creating their own planning commissions to manage them (see Box 4.3 in Chapter 4) (BS-MB 31 January 2014). There is also national planning for inpatient care, which determines for instance the maximum number of beds per hospital service and the maximum amount of heavy medical equipment (see Section 2.7.2).

2.5 Intersectorality

In recent years, the MoH has aimed to promote the One World, One Health principle to facilitate the appropriation of the universal objectives of the United Nations *Horizon 2030* Programme by all the stakeholders (MoH, 2018a). The MoH developed its own operational definition of and approach to the concept based on six principles (see Fig. 2.3)

FIG. 2.3 The six principles of the One Health concept



Source: MoH (2018a).

The One Health approach is implemented through different themes, actions/projects and the creation of a medium- and long-term research programme. A governance model has also been developed to support and encourage this collaboration. Four prospective projects related to the following themes have been initiated: combating antimicrobial resistance, combating social inequalities in health and the environment, implementation of awareness-raising actions on the impact of travelling on health and the environment, and developing strategies to support health and food systems in the context of environmental challenges (MoH, 2018a).

In July 2019, the Belgian One Health Network was implemented with the aim of promoting the One Health approach and to bring together those working on it in Belgium (Sciensano, 2019a).

Concerning environmental challenges, the MoH also supports the Belgian National Environmental Health Action Plan³ (NEHAP), which brings together the Belgian ministers responsible for health and the environment and provides a coherent overall framework for environment–health action at all institutional levels. NEHAP is intended to be a toolbox towards achievements by promoting synergies at all levels, between actors, sectors, themes and policies (MoH, 2018a).

To make the health and environmental issues relevant and interpretable, the MoH also plans to promote the availability of data on human health, food safety and the environment for its different partners in the preparation and evaluation of related policies.

2.6 Health information systems

Belgium has made improvements in the field of health information, partially due to the efforts in eHealth (see Section 4.1.3), the regular assessment of the performance of the health system (see Chapter 7), the periodic health interview surveys, the collection of death certificate registration at national level, and the creation of Healthdata.be, an IT platform designed to centralise data for health research (Sciensano, 2019d). Yet, while a substantial amount of data is collected, important challenges remain (Devos et al., 2019). Some of the collected data are not used, and for other areas only limited data are available, for example, nursing, primary care, psychiatry, older people's homes and nursing homes, and non-reimbursed payments. The lack of a Unique Patient Identifier between databases does not allow the tracking of readmissions or patient follow ups in the health system after discharge. Additionally, coupling of data sources can take a lot of time, where linkage is carried out on an ad hoc basis rather than systematically.

3 National Environmental Health Action Plan (NEHAP), available at <https://www.nehap.be/en> (last access 25 September 2019).

An overview of the main databases according to the main actors involved is presented in Table 2.2⁴. Data compilation at the national level may require cooperation with Federated entities.

Moreover, since 2019, a new website, healthybelgium.be, brings together assessment reports on performance and other key data in health care (see Table 2.3).

TABLE 2.2 Overview of main data sources

METHOD	POPULATION	TOPIC	ORGANISATION(S)
Surveys	General population	Health Interview Survey, collecting data on health status, lifestyle, use of health services and prevention (e.g. cancer screening) (Sciensano, 2020b) Health Examination Survey, collecting objective health information (e.g. weight, blood pressure, blood cholesterol) (Van der Heyden et al., 2019) Food Consumption Survey, collecting data on eating habits and the quality of diet (Sciensano, 2019b)	Sciensano
		Socioeconomic surveys including health items; e.g. the survey on income and living conditions (EU-SILC) including unmet needs or the Household Budget Survey including the health budget (STATBEL, 2019c)	Statbel
Administrative data	General population	Vital statistics (data on population, birth and mortality) (STATBEL, 2019g)	Statbel
	Health care users	Minimum Hospital Data Set (MHD-MZG-RHM), with administrative, medical and nursing data of all non-psychiatric hospitals (MoH, 2019c) Mobile Urgency Group Data (MUG-SMUR) (MoH, 2019i) (see Section 5.5.1) Minimal Psychiatric Data (MPD-MPG-RPM) from psychiatric hospitals and wards (MoH, 2019i) Hospital Billing Data (HBD-SHA-AZV), i.e. billing data for hospitalised patients sent to the sickness funds (MoH, 2019i)	MoH
		Technical Unit's data providing an overview of the care provided and reimbursed per medical condition and per diagnosis-related group (MoH, 2019i)	MoH
		Health care expenses data set including Pharamanet (outpatient reimbursed pharmaceuticals) (NIHDI, 2019t)	NIHDI

4 This list is not exhaustive. For a more detailed list of available databases related to infectious diseases see Van Goethem (2019).

METHOD	POPULATION	TOPIC	ORGANISATION(S)
Administrative data	Health care users	Common Sickness Funds Agency (IMA-AIM) data sets including: <ul style="list-style-type: none"> – the Permanent Sample (<i>Echantillon Permanent/Permanente Steekproef</i>) containing longitudinal information for 2.5% of the population and combining information on demographic and socioeconomic characteristics of patients, the use of medicines (from Pharmanet) and health services (IMA-AIM, 2019b). – IMA-AIM Atlas, with health data gathered by the sickness funds (interactive web application) (IMA-AIM, 2019a) 	IMA-AIM
		Social protection statistics, including health expenditure according to the System of Health Accounts methods (FPS Social Security, 2020)	FPS Social Security
	Health care professionals	Annual statistics on health care professionals (licensed, practising, in training) (MoH, 2017d; NIHDI, 2020b) and new graduates (MoH, 2017d)	MoH and NIHDI
Registers	All cases	Infectious diseases: HIV/AIDS and sexually transmitted infections Chronic diseases: <ul style="list-style-type: none"> – cystic fibrosis – Neuromuscular disorders – Rare diseases 	Sciensano (see also Section 5.1.6 on notification and surveillance of disease outbreaks)
		Cancer Registry (since 2005): collecting, registering and analysing information on all new cancer diagnoses and their follow up (BCR, 2019b)	Belgian Cancer Registry
	Primary care	Intego: Data from general practices in Flanders (diagnoses, laboratory results and prescriptions for medication) (KU Leuven, 2019)	KU Leuven
Surveillance	Hospitals	National Surveillance of Health Care-Associated Infections and Antimicrobial Resistance in Belgian hospital (NSIH) Quality Promotion and Epidemiology in Diabetes Care (IQED-IKED-IPQED)	Sciensano (see also 5.1.6)
	Sentinel Laboratories	Infectious diseases	
	Reference laboratories and centres	Infectious diseases	
	Clinicians	General practitioners	
		Paediatricians Gynaecologists	

Source: Devos et al. (2019).

TABLE 2.3 Overview of the website Healthybelgium.be

METHOD	TOPIC	ORGANISATION(S)
Performance assessment of the health system	Assessment of five dimensions: quality (effectiveness, appropriateness, safety, continuity, patient-centred care), efficiency, accessibility, sustainability and equity; and Assessment of five specific domains: Preventive care, Care for the older people, End of life care, Mental health care, and Mother and Newborn care.	KCE, MoH, NIHDI, Sciensano
Health status report	Assessment of the health status of the population: life expectancy, quality of life, mortality, morbidity, risk factors and inequalities (Sciensano, 2019c).	Sciensano
Medical practice variation	Unwarranted variations in health care examined by gender, age group, region, social status (with or without preferential reimbursement), category of care (hospitalisation or one-day hospital visit and outpatient), trend in rate of use, and technique used.	NIHDI
Key data on general hospitals	Organisation of the hospital landscape, care activity, financing and quality.	MoH

Source: Devos et al. (2019).

2.7 Regulation

2.7.1 Regulation and governance of third-party payers

Compulsory health insurance is administered by sickness funds, which are private non-profit-making organisations with a public interest mission controlled by the Supervising Authority for Sickness Funds and National Associations of Sickness Funds (see Fig. 2.1) (Sickness Funds Act; BS-MB 28 September 1990).

All individuals entitled to health insurance must register with a sickness fund. The choice is free, except for railway workers, who are automatically covered by the health insurance fund of the Belgian railway company. Sickness funds are mainly organised according to religious or political affiliations into five national alliances: the National Alliance of Christian Mutualities, the National Union of Neutral Mutualities, the National Union of Socialist Mutualities, the National Union of Liberal Mutualities and the National Union of the Free Mutualities (NIHDI, 2014b). In 2019, the National Alliance of Christian Mutualities and the National Union of Socialist Mutualities together had the largest share of the general system, covering about 40.7% and 28.5% of the population, respectively.

Besides the management of the compulsory health insurance, they provide a mandatory entitlement to complementary advantages on services like orthodontics or homeopathy and VHI, for example to cover for extra-billing for a single room in hospital (see Section 3.5). Members have to pay an additional flat-rate contribution (a community-rated premium) for these complementary advantages and services. Otherwise, people who do not want these mandatory complementary services must enrol in the Auxiliary Fund, an additional neutral public body that only manages the compulsory health insurance (0.95% of the population). People who have not registered with a sickness fund will be affiliated to this Auxiliary Fund.

Competition among sickness funds concentrates mainly on their mandatory complementary services. Legally, sickness fund members have the opportunity to change their sickness fund each quarter if they have been enrolled for a period of at least 1 year, but insurance mobility in practice remains limited (Schokkaert et al., 2003).

Sickness funds receive a prospective budget to finance the health care costs of their members and their accountability has been increased over time (see Box 3.5 in Chapter 3).

2.7.2 Regulation and governance of provision

Reimbursed health care services are provided by both public and private facilities and individual health professionals who mainly comply with the same set of rules, enjoy the same therapeutic freedom and offer the same services. For patients, the difference between the two sectors lies mainly in the extra-billings charged. An overview of the regulation of providers is described in Table 2.4.

Health facilities

For hospitals, national planning has been established at the Federal level, defining programming criteria such as the number of beds per 100 000 inhabitants or, in the case of maternity wards, per 1 000 births and based on the size, age pyramid and morbidity of the target population, as well as on geographical distribution. In 1982, the government decided to freeze the number of licensed beds for all general hospitals (BS-MB 7 November 1964).

This rule is still in effect today, with the creation of a new bed necessarily being accompanied by the closure of another. Programming criteria have also been introduced for heavy medical equipment, some medical and medico-technical services and some care programmes (MoH, 2016c). More recently, the project of reform of the hospital payment system, launched in April 2015, includes a reflection on determining capacity planning according to the needs of the population and scientific evidence (Van de Voorde et al., 2017).

Besides programming criteria, hospitals, services, functions and care programmes must also comply with licensing criteria that ensure quality of care (Justel 7 November 2008). Each hospital, service and care programme must be licensed by the Federated authorities to receive financing (from both Federal State and Federated entities). Federal authorities have defined basic organisational rules and Federated entities are competent to define licensing rules in accordance with the national planning and the Federal basic organisational rules. The Federal State may exercise its veto if these rules have a negative impact on the Federal budget. Licensing criteria are of different types: organisational norms related to staff requirements (for example, qualification levels, ratio between qualified personnel and auxiliaries) and responsibilities (for example, hygiene, ethics); architectural criteria (for example, the number, size and hygiene standard of rooms); functional standards (for example, convenience, accessibility); minimum activity and facility standards; and expected staff numbers (BS-MB 7 November 1964).

Regulation of other health facilities, such as homes for older people, nursing homes or mental care centres is the responsibility of Federated entities (see Table 2.1).

In addition, health care facilities can apply voluntarily for accreditation, for an external evaluation (for example, Canada international accreditation) (see Section 5.4.3). Some other quality labels can also be requested voluntarily, such as Baby-Friendly (MoH, 2016d) for hospitals.

Additional quality initiatives are described in Box 2.4.

BOX 2.4 Health facilities: quality initiatives

- To address significant differences in medical practice between hospitals that cannot be explained medically, a system of reference amounts for standard interventions was implemented in 2002 (All Patients Refined Diagnosis Related Groups). This classification system is used to divide patients into homogeneous clinical groups that use similar treatments, tests and services and so incur similar costs to the hospital for the duration of their stay. The result of this distribution determines, for example, the number of days of hospitalisation for which the hospital will be compensated during the stay and enters in account in the calculation of various flat-rate allowances relating to that stay; see Gerkens and Merkur (2010) for additional information.
- Hospitals can download individual reports via the MoH Portahealth web portal (<https://www.health.belgium.be/fr/e-services/applications-portahealth>) containing feedback on their Minimum Hospital Data Set (MHD-MZG-RHM) and their position compared with to other hospitals (Cour des comptes, 2017).
- Several hospitals also rely on an external organisation or private company to provide additional feedback. There are also groups of hospitals that exchange data with each other (for example, the KU Leuven hospital network) as well as umbrella associations of hospitals offering similar services (such as Santhea in Wallonia and Brussels). Affiliated hospitals pay a membership fee.
- From 2013 to 2017, the second national quality plan for hospitals was implemented and encouraged hospitals to implement improvement actions in four areas: high-risk medicines, safe surgery, identity control and restriction of freedom (for patients in psychiatric hospitals) and transmural care (MoH, 2016k). In the third national quality plan (2018–2022), a focus on psychiatric hospitals has been included. Several other national initiatives, including Evidence-Based Practice plan, P4P programme, new law of quality of care, care pathways for patients with diabetes and chronic renal insufficiency and integrated care projects for the management of chronic patients (see Section 5.2), have also been implemented to improve the quality of care in health facilities. They are further described in Chapter 6.
- Other initiatives have also been taken by the Federated entities to ensure the quality of care in health care facilities. In Flanders,

inspections are performed unannounced, whereby a care trajectory of a certain type of patient is followed. The Flemish Indicators Project for Patients and Professionals (VIP²) measures the quality of care in Flemish general hospitals. The hospitals choose which indicators they measure. Results appear (if the hospital agrees) on a website www.zorgkwaliteit.be (Flemish Agency for Care and Health, 2019f). In Flanders, there is also a legislative framework to improve quality of care: the Flemish Decree of 17 October 2003 on the quality of health and welfare services (BS-MB 10 November 2011) or the Flemish Ministerial Decree of 10 December 2001 on quality of care in homes for older people, nursing homes, daycare centres, short-stay centres, service flats and housing complexes with services for older people (BS-MB 28 March 2002). In the German-speaking community, previously announced quality inspections are regularly organised in hospitals in collaboration with the Flemish inspection organisation. In Brussels and the Walloon region, the organisation Plateforme pour l'Amélioration continue de la Qualité des soins et de la Sécurité des patients (PAQS) has set up quality indicators in close collaboration with the sector for benchmarking (each hospital receives their results compared with the average) (PAQS, 2018). Nevertheless, these data are not yet collected in a systematic way. Workshops to analyse some of these indicators are proposed by PAQS. A commitment to strive for quality in any accommodation or care facility for older people is also included in the Walloon regulation, including the establishment of a Quality-Food-Nutrition plan (Wallonie, 2018).

Health care professionals

The practice of health care professionals, such as physicians, dentists, physiotherapists, pharmacists, nurses, midwives and other practitioners of a paramedical profession, are regulated by the Practice of Health Care Professions Act (BS-MB 18 June 2015) (see Section 4.2.1). The planning of health care professionals is described in Section 2.4. The organisation of education is a competency for the Flemish and French communities. Some training aspects differ between the two communities (see Section 4.2.4). Quality initiatives are described in Box 2.5.

BOX 2.5 Health professionals: quality initiatives

- A system of accreditation has been developed since 1993. Accreditation is possible for physicians, dentists and clinical biologists if they satisfy some additional training criteria. Accreditation is not mandatory but is encouraged through financial incentives (such as increased consultation fees or an annual indemnity to partially cover the training costs). The proportion of accredited physicians (in full-time equivalents) increased from 88% in 2014 to 91% in 2016 for GPs and from 78% in 2014 to 84% in 2016 for medical specialists.
- Depending on the health care profession, some forms of continuing training are provided in the legislation. For some professions, the conditions are vague, for example, to remain recognised as a GP, they are required 'to maintain and develop their skills throughout their career through practical and scientific training' (BS-MB 4 March 2010). The exercise of the pharmacist profession in community pharmacies is also subject to continuous training to ensure the quality of pharmaceutical care (BS-MB 31 July 2014). Moreover, recognition as hospital pharmacists must be renewed every 5 years and conditions to be renewed include continuing training (BS-MB 3 December 2012). The holder of the professional title of midwife is also required to have followed a minimum number of hours of continuing training every 5 years (art.9 of the Royal Decree of 1 February 1991 on the exercise of the profession of midwife (BS-MB 16 April 1991)). For nurses with a special professional title, the retention of the title is also linked to continuing training.
- The Appropriate Care Unit of NIHDI (see Section 7.4) provides feedback on the individual activity of GPs having had more than 500 patient contacts. GPs receive individual feedback on three main topics (medications, clinical biology and medical imaging and preoperative examinations) presenting the most striking results. Their practice is also compared with the national results. A detailed analysis of their feedback accompanied by the evidence-based recommendations currently in force concerning the use and prescriptive behaviour of the indicators is also available through their personal eHealthBox. An anonymised detailed report is published online. Nursing homes also receive feedback comparable to that received by GPs. Specialists practising on an outpatient basis receive feedback on their drug prescriptions (NIHDI, 2019e).

- A new law on the quality of health care practice also contains a series of measures to help ensure the quality and safety of patient care. Health care providers will have to maintain a dynamic portfolio, in which basic education, specific skills and additional/continuing training will be tracked, this will allow them to demonstrate that they have the appropriate skills (see Chapter 6).

2.7.3 Regulation of services and goods

Basic benefit package

The services that are (partially) covered by compulsory health insurance are described in the national fee schedule (called the nomenclature) and can be found on the NIHDI website (<https://www.riziv.fgov.be/fr/nomenclature/Pages/default.aspx>). The fee schedule is negotiated yearly or biennially between representatives of the sickness funds and of health care professionals (see Section 3.3).

In 2019, the NIHDI began a major project: the structural reform of the fee schedule for physicians (see Section 6.1).

Health technology assessment

Since 2002, the KCE was established with health technology assessment as one of its core activities and is recognised as the national reference in this field (KCE, 2019).

The KCE imposes rigorous scientific procedures based on international standards and using external expert reviewers (so-called validators), while paying attention to potential conflicts of interest. Each report is submitted for approval to the board of directors, which is composed of representatives of the different health care stakeholders and includes recommendations for health policy-makers. The KCE is involved in neither the policy decisions nor their implementation. The KCE is for instance not implicated in the reimbursement decision process for pharmaceuticals but can perform a health technology assessment on a pharmaceutical at the NIHDI's request.

All reports are published and can be downloaded free of charge. For the 2010–2019 period, 200 reports have been published, including 45 health technology assessments.

TABLE 2.4 Overview of the regulation of providers

	LEGISLATION	PLANNING	LICENSING	PRICING/ TARIFF SETTING	QUALITY/ ASSURANCE	PURCHASING/ FINANCING
Public health services	<ul style="list-style-type: none"> Mainly Federated entities 	<ul style="list-style-type: none"> Mainly Federated entities but also Federal authorities (national plan, prevention at works) 	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> Federal authorities (national programmes, national fee schedule) Federated entities (preventive programmes such as vaccination) 	<ul style="list-style-type: none"> Federated entities 	<ul style="list-style-type: none"> Mainly Federated entities Federal authorities Sickness funds (compulsory health insurance) Households Voluntary health insurance
Ambulatory care (primary and secondary care)	<ul style="list-style-type: none"> Mainly Federated entities for ambulatory care organisation 	<ul style="list-style-type: none"> Both Federal authorities (overall and minimum quotas) and Federated entities (respect of overall and minimum quotas) 	<ul style="list-style-type: none"> Federal authorities (visa) Federated authorities (recognition) 	<ul style="list-style-type: none"> Federal authorities (National fee schedule) Providers for extra-billings and non-reimbursed care (see Section 3.4.1) 	<ul style="list-style-type: none"> Mainly Federal authorities (quality law, feedback) 	<ul style="list-style-type: none"> Mainly Federal authorities: <ul style="list-style-type: none"> Sickness funds (compulsory health insurance) Households OOP payments Voluntary health insurance
Inpatient care	<ul style="list-style-type: none"> Federal State and Federated authorities 	<ul style="list-style-type: none"> Mainly Federal authorities (national planning, see Section 4.1.1) Federated entities (capital and investments costs) 	<ul style="list-style-type: none"> Federated entities with respect to the national planning 	<ul style="list-style-type: none"> Federal authorities (national fee schedule and hospital budget) Federated authorities for the fixed amount per day for inpatient costs (to cover for capital and investment costs) Providers for extra-billings and non-reimbursed care (see Section 3.4.1) 	<ul style="list-style-type: none"> Both Federal authorities (quality law, P4P) and Federated entities (definition of licensing quality norms) 	<ul style="list-style-type: none"> Mainly Federal authorities: <ul style="list-style-type: none"> Sickness funds (compulsory health insurance) Federated entities for capital and investments costs Households OOP payments Voluntary health insurance

LEGISLATION		PLANNING	LICENSING	PRICING/ TARIFF SETTING	QUALITY/ ASSURANCE	PURCHASING/ FINANCING
Dental care	• Mainly Federal authorities	• Federal authorities (quota)	• Federal authorities (visa) • Federated entities (recognition)	• Federal authorities (national fee schedule) • Providers for extra-billings and non-reimbursed care (see Section 3.4.1)	• Mainly Federal authorities (quality law)	• Sickness funds (Compulsory health insurance) • Households OOP: payments • Voluntary health insurance
	• Federal authorities	• Federal authorities (e.g. planning of community of pharmacies)	• Federal authorities (e.g. licensing of community of pharmacies)	• Federal authorities (for both reimbursed and non-reimbursed pharmaceuticals)	• Federal authorities (feedback, monitoring)	• Sickness funds (Compulsory health insurance) • Households OOP: payments • Voluntary health insurance
Long-term care	• Mainly Federated entities	• Mainly Federated entities	• Federated entities	• Federal authorities (e.g. nursing care at home: national fee schedule) • Federated entities (e.g. accommodation price in residential care infrastructure and community services)	• Federated entities	• Mainly Federated entities • Federal authorities: – Sickness funds (compulsory health insurance) – Households OOP: payments – Voluntary health insurance
	• Federated entities	• Federated entities	• Federated entities	• Federated entities	• Federated entities but Federal authorities for continuing education	• Federated entities • Households

Source: Authors' own.

Note: OOP: out-of-pocket; P4P: pay for performance.

2.7.4 *Regulation and governance of pharmaceuticals*

This section focuses on Pharmaceuticals for Human Use, which are mainly regulated by the Medicines Act (BS-MB 17 April 1964). The FAMHP is the main institution for the regulation of pharmaceuticals and is responsible for the quality, safety and efficacy of pharmaceuticals and health products. FAMHP is responsible (FAMHP, 2019a) for the assessment (including authorisation) and monitoring of:

- clinical trial requests
- registration and marketing authorisation (MA) requests
- manufacture, distribution, delivery, imports and exports
- pharmacists' activities
- pharmacovigilance
- proper patient information and health care professional information on health products
- advertising activities.

Market authorisation

Market authorisation is under the responsibility of the Minister of Social Affairs and Public Health, and is based on the recommendations of FAMHP. The first MA is valid for 5 years, after which renewal can be requested. After renewal, the MA is valid indefinitely, except when there is still doubt on safety or by application of the Sunset Clause (FAMHP, 2019c). During the MA or registration procedure, pharmaceuticals are classified into prescribing and non-prescribing pharmaceuticals (over-the-counter pharmaceuticals) (BS-MB 17 April 1964).

Quality and pharmacovigilance

Every MA holder needs a qualified person to control the quality of produced and imported products. They also need a qualified person responsible for establishing and operating the pharmacovigilance system (BS-MB 22 December 2006).

They are obliged to record all suspected adverse reactions in the European database EudraVigilance (EMA, 2018).

Also, health care professionals and patients are encouraged to report any adverse reactions they observe to the FAMHP web portal (www.eenbijwerkingmelden.be) (article 67bis; BS-MB 22 December 2006), before the FAMHP transmits them to the EudraVigilance database.

Communication on pharmacovigilance is available on the FAMHP website (VIG-News, Direct Healthcare Professional Communications). In addition, dedicated communication for health care professionals is carried out in collaboration with the Belgian Centre for Pharmacotherapeutic Information, via a website (www.bcfi.be) and a smartphone application.

Distribution

In contrast to some other countries, pharmaceuticals are not available via supermarkets in Belgium. The law provides a monopoly for distribution of pharmaceuticals (prescription and over-the-counter) via community and hospital pharmacies. Some exceptions are allowed for physicians to deliver pharmaceuticals, such as in urgent cases, for samples of pharmaceuticals, for compassionate use, for clinical trials and for prophylaxis campaigns against infectious diseases (BS-MB 14 November 1967; BS-MB 18 June 2015). Distribution via the internet is possible for registered over-the-counter pharmaceuticals, but only when a Belgian community pharmacy owns the website (BS-MB 30 January 2009).

Wholesaling of pharmaceuticals is submitted to license issued by the Minister of Social Affairs and Public Health via the FAMHP (BS-MB 22 December 2006). Wholesalers with a public service obligation, called full-line wholesalers (*Grossistes-répartiteurs/Groothandelaars-verdelers*) are the main suppliers of the daily distribution of all authorised medicines in Belgium and have the legal obligation to deliver products within 24 hours to the pharmacist (BS-MB 22 December 2006). Pharmaceutical companies have the obligation to deliver within 3 working days to the full-line wholesalers and pharmacists (BS-MB 03 February 2020).

The opening, transfer or merger of community pharmacies must be licensed by the Minister of Social Affairs and Public Health and is submitted to demographic and geographical criteria to ensure an adequate supply (BS-MB 5 October 1974). To avoid oversupply, a moratorium on the number of community pharmacies was introduced in 1999, and is valid until 2023 (BS-MB 6 December 2019). Nevertheless, compared with

other neighbouring countries Belgium has a high density of community pharmacies – 43.4 per 100 000 inhabitants in 2017 compared with an EU-15 average of 28.8 (OECD, 2019c).

Measures to tackle pharmaceutical shortage are described in Box 2.6.

Advertising

Advertising on pharmaceuticals (including granting of advantages to health professionals) are subject to specific legislation. Any advertising to the general public on prescribing pharmaceuticals, narcotics and psychotropic is prohibited; see FAMHP (2019b) for more details.

BOX 2.6 Pharmaceutical shortages

Pharmaceutical shortages can originate from either a manufacturing problem or a distribution problem. Manufacturers can also decide, mainly for economic reasons, to stop the production of old products even if no alternative is available. Any shortage (“temporary suspension”, which means no delivery possible within 3 working days) or definitive cessation must be communicated to the FAMHP (art.6 of the law of 25 March 1964 on pharmaceuticals) and information is available on a public website (www.pharmastatus.be). In July 2019, around 5% of the total number of packages on the Belgian market experienced temporary unavailability (FAMHP, 2019d).

Parallel export also contributes to shortages, as well as the deliberate stockpile restrictions of manufacturers that determine production quota per country to counter potential parallel export by wholesalers.

The increasing problem of medicine shortages has led to new legislation introduced in 2019 that clarifies the obligation of pharmaceutical companies to supply full-line wholesalers (as part of their own special obligations) and pharmacists within 3 working days. Partial or interrupted deliveries are now automatically considered to be shortages (referred as temporary cessations) and must be notified to the FAMHP. A notification must clearly describe the cause and duration of the unavailability. The export of an unavailable medicinal product may be temporarily prohibited or restricted under certain conditions and pharmacists will be able, under certain conditions, to substitute an unavailable medicine with an alternative equivalent medicine. Any costs resulting from a shortage will be borne by the MA holder (to avoid that such costs burden the patient or the social security budget) (BS-MB 3 February 2020).

Price setting

Price setting is under the responsibility of the Minister of Economic Affairs, based on the recommendations by the Committee of Pricing for Pharmaceutical Specialties of the FPS Economy (FPS Economy, 2019) (see Box 2.7).

BOX 2.7 Price setting

Applications for price setting or price increases must be introduced individually by the pharmaceutical company, including among others a justification of production, import, analysis, transfer and research & development costs as well as on labour, marketing and other cost elements. With the exception for over-the-counter pharmaceuticals, the companies must also provide the annual accounts from the last 3 years and the prices applied in the Member States of the European Union. To the aforementioned cost elements, a producer's margin is then added (usually 10% when the pharmaceutical is produced and 5% when it is imported) to determine the maximum ex-factory price. This price decision must be communicated to the applicant within 90 days following the application (45 days for parallel imported pharmaceuticals).

The Minister of Economic Affairs also fixes the maximum distribution margins for wholesalers and pharmacists, as well as the maximum public price including VAT. The margins differ depending on whether or not the product is reimbursed (see Box 2.8).

The CRP evaluates the reimbursement request based on five evaluation criteria: the therapeutic added value, the price and the proposed reimbursement basis, the importance of the medicine in medical practice in function of the therapeutic and social needs, the budgetary impact for the Health Insurance, and the ratio between the costs for the insurance and therapeutic value. A cost-effectiveness evaluation is only required when an added therapeutic value is claimed. There are also specific procedures for “orphan” drugs, biosimilar drugs and parallel imported drugs.

BOX 2.8 Composition of the public price (situation on 1 January 2020)

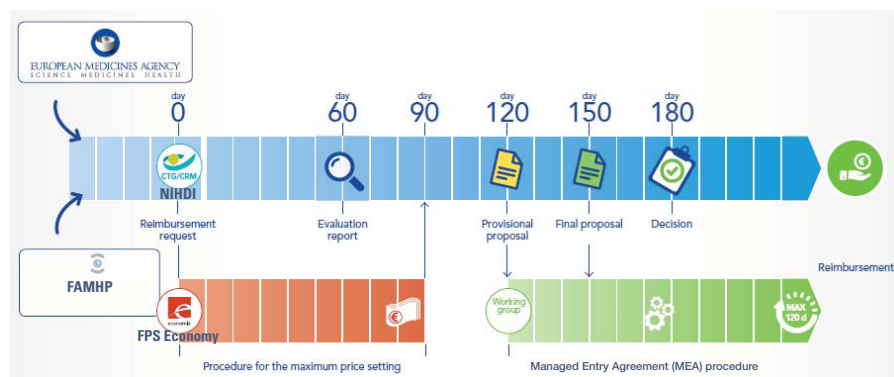
For reimbursed pharmaceuticals:

- The ex-factory price → example: ACCUPRIL 20 mg (28 tablets) at € 4.78
- The wholesaler margin: (i) € 0.35 if the ex-factory price is less than € 2.33; (ii) 15% if the ex-factory price is between € 2.33 and € 13.33, or (iii) a fixed € 2.0 + 0.9% on the amount above € 13.33 if the ex-factory price is more than € 13.33 → +€ 0.72
- The pharmacist margin: a fee of € 4.33 per package + a delivery margin of (i) 6.55% if the ex-factory price is less than € 60 or (ii) a fixed € 3.93 + 2.16% on the amount above € 60 if the ex-factory price is more than € 60 → +€ 4.64
- A value-added tax of 6% → $€ 10.14 * 1.06 = € 10.75$
- For non-reimbursed pharmaceuticals: the distribution margin for wholesalers is 13% with a maximum limit of € 2.18 and the margin for the pharmacist is 31% with a maximum limit of € 7.44.

Reimbursement

For prescribed pharmaceuticals, the applicant can request to be included in the positive list for reimbursed medicines. The procedure is examined at the same time as the price setting (see Fig. 2.4) by the Commission for the Reimbursement of Medicinal Products (CRP) of the NIHDI, which formulates proposals to the Minister of Social Affairs and Public Health. Cost-sharing mechanisms for reimbursed pharmaceuticals are described in Section 3.4.1.

The CRP must give a proposal on the reimbursement to the minister within 150 days and, based on this proposal, the Minister takes the final decision before day 180. If the pharmaceutical company does not receive a decision within 180 days, its application for reimbursement is automatically accepted (see Fig. 2.4).

FIG. 2.4 Reimbursement process

Source: Adapted from Gerkens et al. (2017).

Note: FAMHP: Federal Agency for Medicines and Health Products; FPS: Federal Public Service.

In case of uncertainty (clinical or economic) and for some legally defined pharmaceuticals (for example, orphan drugs or pharmaceuticals with a claimed added therapeutic value), managed entry agreements (MEA) can be concluded at the applicant request, (i) when a reimbursement decision by the CRP was not possible at day 150; (ii) if proposed by the CRP during the process; or (iii) in case of negative decision of the CRP, after a motivated proposal of the Minister (see chapter V of the Royal Decree of 1 February 2018, BS-MB (15 March 2018)). Most of the time, they include financial compensation mechanisms that are confidential. MEAs have been possible since 2010 and conditions to conclude an MEA have been enlarged over time. Consequently, the procedures for conventions are rising and have become the rule rather than the exception for a majority of new innovative and expensive pharmaceuticals. The gross expenditure of pharmaceuticals under MEAs rose from € 487 018 000 in 2014 (13% of total expenditure) to € 1 430 953 000 in 2018 (31% of total expenditure). It should nevertheless be noted that actual expenditure for these MEAs are lower because of the agreed refunds. More details on MEA can be found in the KCE report 288 (Gerkens et al., 2017).

2.7.5 *Regulation of medical devices and aids*

Before placing a device on the market, manufacturers must undertake a conformity assessment of the device, according to a procedure related to their risk class and affix the CE marking. For higher-risk devices, the intervention of a notified body is necessary to perform the conformity assessment and obtain a certificate. Notified bodies are designated and supervised by the FAMHP. In addition to the mandatory CE-marking, a registration of the distributors and exporters including limited information on their products to the FAMHP is necessary for traceability reasons (BS-MB 20 December 2013; BS-MB 7 December 2017; BS-MB 26 April 2019).

Every incident with a medical device must be notified to the FAMHP. Manufacturers must have a vigilance system and report the incidents. Belgian hospitals and distributors including community pharmacies must have a contact point for performing this notification (BS-MB 7 December 2017). The FAMHP evaluates these incidents and the proposed corrective and preventive actions to prevent reoccurrence.

Concerning distribution, liberalisation began in 2019 (BS-MB 28 January 2019) and some risk-free products such as sterile dressings, probes, heat ointments and cooling sprays can now be distributed in supermarkets and are no longer restricted to community and hospital pharmacies.

In the past, some criticism had been expressed regarding the regulation of medical devices, which was considered as less stringent than for pharmaceuticals because pharmaceuticals must prove efficacy while medical devices only have to prove safety and performance (Hulstaert et al., 2012). In 2017, new regulations were issued [(EU) 2017/745 for medical devices and (EU) 2017/746 for in vitro diagnostic medical devices] and tighter controls were imposed on high-risk devices, including registration in the Eudamed system, the use of a unique code for traceability and the increase of communication between Member States. Controls will also be tightened on clinical trials and on the notified bodies (European Council, 2017). All vigilance reports, including incidents, need to be reported in Eudamed.

Placing a device on the market does not automatically imply reimbursement from the compulsory health insurance. For the reimbursement process, a distinction is made between invasive and non-invasive devices and the decision is made in different committees and commissions. An optimisation

of the procedure is foreseen for 2020, for example with the creation of a single committee for different domains.

For invasive devices and implants, the added value must be proven with scientific studies, and health economic and epidemiological data. Reimbursement criteria include the importance of the device in medical practice based on therapeutic and social needs, the budgetary impact, and the ratio between the costs for insurance and the therapeutic value of the device (BS-MB 1 July 2014). The defined reimbursement modalities include:

- the reimbursement basis (which may differ from the public price);
- the reimbursement category (invasive device or implant) and two additional sub-categories defining the method of reimbursement (such as a lump sum or not, included in a nominative list or not) and patient contributions (see Section 3.4.1);
- the reimbursement conditions;
- the security margin, for example, a percentage of the reimbursement basis defining the maximum authorised public price to be reimbursed (NIHDI, 2019q; Vinck et al., 2018)).

For mobility aids such as wheelchairs, reimbursement is transferred from the Federal level to the Federated entities due to the 6th State Reform. The particular regulations regarding mobile health applications can be found at <https://mhealthbelgium.be/>.

2.8 Person-centred care

2.8.1 Patient information

Patients have the right to receive all information to gain insight into their health state from their care provider. This information should be supplied in clear language and, in principle, verbally. Patients have also the right to refuse to be informed, unless there is a risk to the patient, his relatives, or others in his environment. Health care professionals can also decide not to inform the patient if the communication may cause obvious damage to the patient's health and if another health care professional has been consulted.

Professional reasons for this choice have to be included in the patient's record and the potential confidant of the patient has to be notified (Gerken and Merkur, 2010).

Various sources of information for patients exist from sickness funds, patients associations, and Federal and Federated organisations as well as through various digital health platforms (see Table 2.5). Federations of patients associations, such as the *Ligue des Usagers des Services de Santé* (LUSS) for French-speaking patients, the *Vlaamse Patiëntenplatform* (VPP) for Dutch-speaking patients and the *Patiënten Rat & Treff* (PRT) for German-speaking patients (LUSS, 2019; PRT, 2019; VPP, 2019) also play a crucial role. For instance, they collaborate on the development of online platforms on care and well-being with Federated authorities.

However, some patients (mainly older people and patients with low socioeconomic backgrounds) are less likely to be well-informed about their rights or to get access to their own medical records. This is partly related to the complex and fragmented structure of the system (Anthierens et al., 2014). There is also some information that is not available for the health user at all (for example, information on waiting times or medical errors) (see Table 2.5).

2.8.2 Patient choice

Patient choice (regarding health professionals, health care facilities, treatment, sickness fund) is an integral part of the health system, as described in Table 2.6 and in the law of 22 August 2002 on patient rights (BS-MB 26 September 2002a). Physicians have the possibility to refuse treatment for professional or personal reasons. In this case, they must inform the patient or the patient's relatives, make sure that the continuity of care is ensured and transmit any useful information to the successor physician.

TABLE 2.5 Patient information

TYPE OF INFORMATION	IS IT EASILY AVAILABLE?	COMMENTS
Information about statutory benefits	Yes/No	Preferential reimbursement status has been automatically attributed to some patient categories since 2014. It remains challenging for some patients (e.g. older people) to know where they can find information about statutory benefits and who they can contact.
Information on hospital clinical outcomes	Yes	A discharge report is mandatory after every hospital stay (BS-MB 30 July 1999).
Information on hospital waiting times	No	Waiting times are not monitored. A KCE project, expected for mid-2021, aims to describe if the waiting times for elective care are an issue and if so, to propose an appropriate monitoring system.
Comparative information about the quality of other providers (e.g. GPs)	No	This type of information is not available for patients. Some indicators of geographical variation of practices are available at https://www.healthybelgium.be/en/ , but they are not yet presented at practitioner level.
Patient access to own medical record	Yes/No	Myhealth (https://www.masante.belgique.be) is the Federal online portal that allows patients to consult various personal health data since 2018. My Health Viewer and Vitalink for Flanders (https://www.myhealthviewer.be , https://www.vitalink.be/), Réseau Santé Wallon (https://www.reseausantewallon.be) for the Walloon region (including the German-speaking part) and Réseau Santé Bruxellois for Brussels are also online platforms allowing patients to consult their personal health data. Some hospitals also share some health data with patients (such as laboratory results, discharge letters, X-ray images). In practice, it remains challenging for many patients to easily access their personal medical record.
Interactive web or 24/7 telephone information	Yes/No	During working hours, patients can directly contact health providers, sickness funds or other types of information sources to receive health information. There is also a national phone number (1733) (see Section 5.5.1) for non-urgent medical help during nights, weekends and public holidays (MoH, 2016a), but the primary objective of this service is not to inform the patient but to refer them to an on-call doctor. A national website with up-to-date information and a national call centre are also foreseen in case of health crisis.
Information on patient satisfaction collected (systematically or occasionally)	Yes (occasionally)	In the P4P programme of 2018, 94% of the hospitals who participated (96 out of 102) reported measurement of PREMs. In the future, PREMs would be more (systematically) measured in hospitals (Desomer et al., 2018).
Information on medical errors	No	Since 2010, the MAF has been in charge of providing advice and possibly compensation to patients who have suffered a medical error (BS-MB 2 April 2010). The request must come from the patient (or his legal representative or lawyer). The MAF does not bring information on medical errors to the patient.

Source: Authors' own.

Note: KCE: Belgian Health Care Knowledge Centre; MAF: Medical Accident Fund; P4P: pay for performance; PREM: patient-reported experience measures.

TABLE 2.6 Patient choice

TYPE OF CHOICE	IS IT AVAILABLE?	DO PEOPLE EXERCISE CHOICE? ARE THERE ANY CONSTRAINTS (E.G. CHOICE IN THE REGION BUT NOT COUNTRY-WIDE)? OTHER COMMENTS?
CHOICES AROUND COVERAGE		
Choice of being covered or not	No	It is a compulsory national system of health insurance (public coverage) but people can freely choose to contract with private insurance to cover for non- or partially reimbursed services.
Choice of public or private coverage	No	
Choice of purchasing organisation	Yes	The choice of sickness fund is free, except for railway workers that have a dedicated sickness fund.
CHOICES OF PROVIDER		
Choice of primary care practitioner	Yes	This is not an absolute right. This right may be limited by legal provisions (such as for medical adviser and urgent medicine) or may be subject to factual limitations such as the practitioner's refusal to treat the patient, the existence of waiting lists, the internal organisation of hospitals, etc. (BS-MB 26 September 2002a).
Direct access to specialists	Yes	Consultation with some specialists is a little less expensive if the patient is referred by a GP and has a global medical record (NIHDI, 2017a).
Choice of hospital	Yes	This is not an absolute right (see above). Exceptions can be for instance, emergency care and forced admission of a person with a mental illness (BS-MB 26 September 2002a).
Choice to have treatment abroad	Yes	Yes in other EU countries but for some specific and expensive planned health care, an authorisation from the NIHDI is necessary (NIHDI, 2015c). Authorisation must be granted if the treatment is part of the benefits covered in Belgium and cannot be provided within a medically acceptable period of time (De Mars et al., 2011).
Choices of treatment	Yes	This is not an absolute right (see above). The patient can also write a negative advance statement regarding health care ensuring that the choice of the type of treatment is respected if the patient is no longer able to make decisions. It must precisely indicate which intervention the patient refuses to give consent for (BS-MB 26 September 2002a). In practice, its application is nevertheless complicated (for example, in emergency situations) (Ordre des médecins, 2015).
Participation in treatment decisions	Yes	As described in Article 8 of the Law of 22 August 2002 (BS-MB 26 September 2002a).
Right to informed consent	Yes	See Section 2.8.3.
Right to request a second opinion	Yes	There is no limit on number of opinions and consultation will be (partly) refunded each time.
Right to information about alternative treatment options	Yes	As described in Article 8 of the Law of 22 August 2002 (BS-MB 26 September 2002a).

Source: Authors' own.

Note: EU: European Union; GP: general practitioner; NIHDI: National Institute for Health and Disability Insurance.

2.8.3 Patient rights

The law of 22 August 2002 defines patient rights and lays the foundations for a good and lasting relationship between the patient and the carer (BS-MB 26 September 2002a). This law, which is very close to some legal principles and ethical rules that existed before it, made possible the listing of the fundamental rights of patients in a single text and is structured around eight principles (see Fig. 2.5).

FIG. 2.5 Main patient rights in the law of 22 August 2002



Source: BS-MB 26 September (2002a).

Patient complaints avenues are described in Table 2.7.

The MoH plays an important role in promoting patient rights. In addition to their mediation service, they publish brochures, elaborate campaigns and organise conferences to better inform patients about their rights. The Federal Commission for Patients’ Rights, established within the MoH also evaluates the application of the law and advises authorities on patient rights (MoH, 2016b).

TABLE 2.7 Patient rights

	Y/N	COMMENTS
PROTECTION OF PATIENT RIGHTS		
Does a formal definition of patient rights exist at national level?	Yes	See above
Are patient rights included in legislation?	Yes	See above
Does the legislation conform with the WHO's patient rights framework?	Yes	—
PATIENT COMPLAINTS AVENUES		
Are hospitals required to have a designated desk responsible for collecting and resolving patient complaints?	Yes	Each hospital must have a mediation function and must ensure that all complaints are lodged with and dealt with by the mediation function (Justel 7 November 2008).
Is a health-specific ombudsman responsible for investigation and resolving patient complaints about health services?	Yes	Complaints regarding violation of patients' rights outside hospitals can be addressed to the Federal mediation service of the MoH (see https://www.health.belgium.be/fr/le-service-de-mediation-federal-droits-du-patient) (BS-MB 13 May 2003). In the mental health care sector, mediation is exercised either by an external ombudsman service or by the hospital ombudsman (Gerkens and Merkur, 2010).
Are there other complaint avenues?	Yes	Other avenues are the civil courts (compensation for violations of the law on patient rights), Federated administrations competent for inspection of hospitals (complaints related to hygiene and standards of quality in hospitals) or the physician/pharmacist order (disciplinary process).
LIABILITY / COMPENSATION		
Is liability insurance required for physicians and/or other medical professionals?	Yes	It is not a legal obligation but it is an ethical obligation which, if it is not fulfilled, prevents the issuance of the visa and therefore the license to practice.
Can legal redress be sought through the courts in the case of medical error?	Yes	According to the Civil Code, "any act of man, which causes damage to others, obliges the person through whose fault he arrived, to make reparation," article 1382 (BS-MB 3 September 1807).
Is there a basis for no-fault compensation?	Yes	The law of 31 March 2010 on compensation for damage resulting from health care is the legal basis (BS-MB 2 April 2010).
If a tort system exists, can patients obtain damage awards for economic and non-economic losses?	Yes	Article 1382 of the Belgian Civil Code (case law of the supreme court) requires integral reparation of all damages (BS-MB 3 September 1807).
Can class action suites be taken against health care providers, pharmaceutical companies, etc.?	Yes	Action suits can be taken against health care providers under strict conditions (only via consumers associations) (BS-MB 29 April 2014).

Source: Authors' own.

Note: MoH: Ministry of Health; WHO: World Health Organization.

2.8.4 *Patients and cross-border health care*

There is lots of experience of cross-border health care in Belgium; see Gerkens and Merkur, (2010) for details on the legislation. Since the early 2000s, the increasing development of international agreements and the related increasing influx of foreign patients has been considered as a financial threat to Belgian hospitals. The Law on Patient Mobility (4 June 2007) and the Health Law of 10 May 2010 are two legal instruments used to address potential problems in the financing of hospitals. The Patient Mobility Observatory (PMO) has also been created by MoH and NIHDI to monitor the influx of foreign patients into Belgian hospitals (BS-MB 2 June 2010). Since 2014, the nomenclature codes were also adapted, to better identify hospital stays from foreign patients through the Minimum Hospital Data Set (MHD-MZG-RHM).

In its last annual report (2014 data), the PMO concluded that the number of stays of patients not affiliated to Belgian health insurance remains limited (only around 1.3% of the overall hospital stays). Among them, 37.8% were related to patients not domiciled in Belgium (mainly from the Netherlands, France and Germany). Additionally, the hospitalisations of foreign patients reimbursed by the compulsory health insurance scheme under international agreements represent 0.23% of all general hospital stays (Observatoire de la mobilité des patients, 2017).

As data invoiced to patients without health care coverage in Belgium are directly communicated by hospitals to the MoH, the PMO observed a lack of reporting by hospitals and concluded that only 78% of stays were reported in 2014. To improve the situation in the future, feedback is organised each year to hospitals and additional controls have been planned.

Financing⁵

Chapter summary

- Health care expenditure accounted for 10.3% of Belgium's GDP, ranking Belgium 8th in the WHO European Region in terms of the share of GDP spent on health. Per capita health expenditure was US\$ PPP 5 119 (2017).
- Public health expenditure is quite stable, at 76.8% in 2005 and 77.2% in 2017. Private health financing comes from households' out-of-pocket payments, which represented 17.6% of current health expenditure in 2017 for non-reimbursed services, official co-payments and extra-billings. Voluntary health insurance represent 5.1%.
- The Belgian health system is based on compulsory health insurance characterised by solidarity between all Belgian residents and 99% of Belgian residents are covered for a large range of services, with no selection of health risks.
- Social contributions, proportional to income level and paid by employers and employees, are the main source of financing of the social security system but the share has slightly declined due to reforms.
- Patients have to pay in advance fees for services and then request reimbursement from their sickness fund. A third-party payment

5 This chapter was written by Sophie Gerken.

system only applies for the purchase of prescribed medicines, hospital care and residential care but is being gradually extended to include ambulatory care (for example, for vulnerable social groups).

- Out-of-pocket payments apply for non-reimbursed services, official co-payments and extra-billings. Co-payments vary from service to service and patients with preferential reimbursement status pay reduced co-payments. A series of protection mechanisms are in place (such as maximum co-payments), which mainly depend on household income.
- Remuneration of health care providers is mainly based on fee-for-service. However, the use of fixed payments also prevails. The health insurance budget and policy rely on negotiations between representatives of the government, patients (sickness funds) and employers, salaried employees and self-employed workers. Decisions on tariffs and reimbursement levels are made via national conventions or agreements between health care provider and sickness funds representatives.

3.1 Health expenditure

Current health expenditure has increased from 9.0% of GDP in 2005 to 10.3% in 2017 (see Table 3.1) and has stabilised around 10% of GDP since 2009. The EU average follows the same trend but is slightly less (see Fig. 3.2). Belgium is ranked 8th among countries in the WHO European Region (2017 data, decreasing order, see Fig. 3.1).

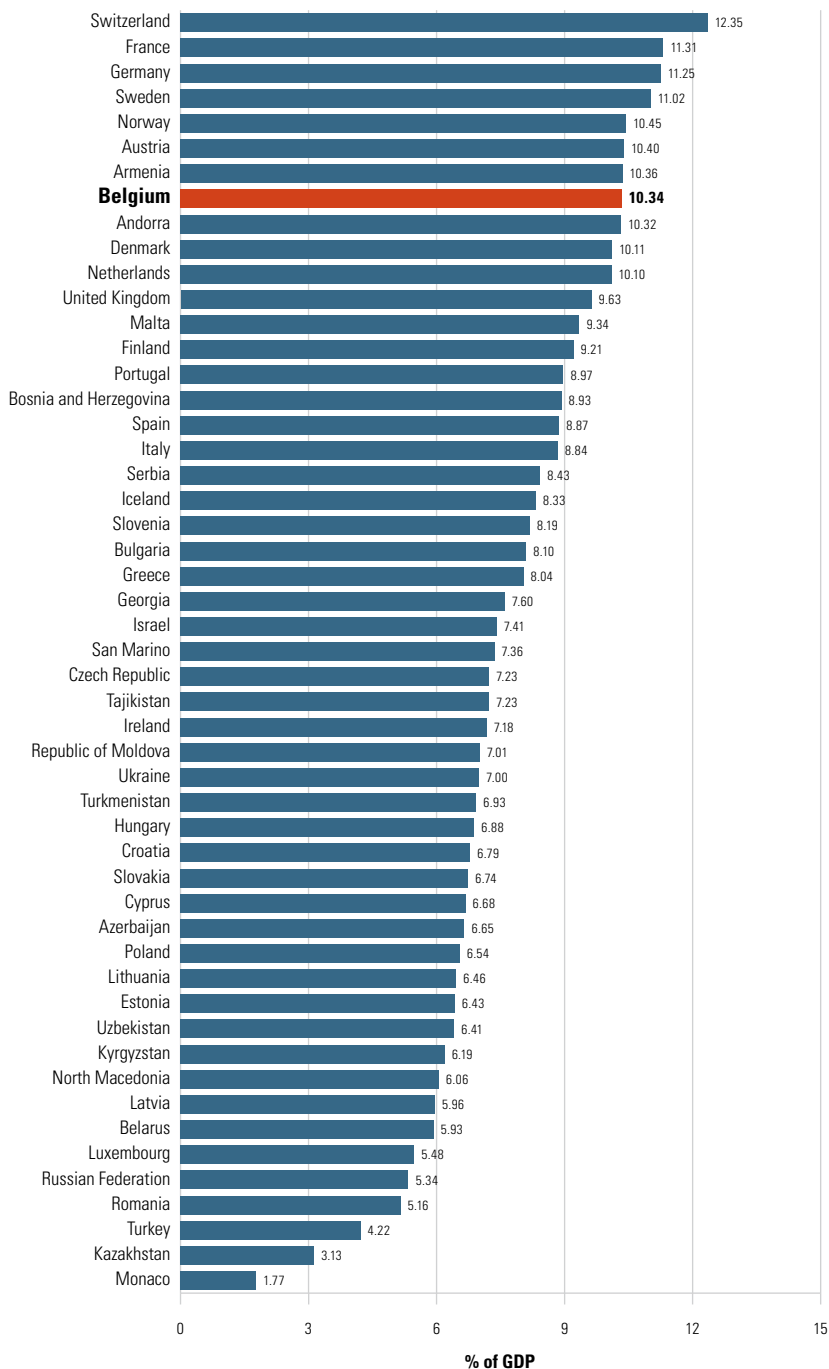
TABLE 3.1 Trends in health expenditure in Belgium, 2000–2017 (selected years)

	2000 ^a	2005	2010	2015	2016	2017
Current health expenditure per capita in international US\$ (purchasing power parity)	2 225.5	3 011.7	4 015.6	4 702.4	4 873.9	5 119.1
Current health expenditure as a % of GDP	7.9	9.0	10.0	10.3	10.3	10.3
Public expenditure on health as % of current expenditure on health	74.6	76.8	77.8	77.6	77.1	77.2
Public expenditure on health per capita in purchasing power parity	1 660.3	2 313.8	3 122.7	3 649.1	3 758.8	3 954.2
Private expenditure on health as % of current expenditure on health	25.4	23.2	22.2	22.4	22.9	22.8
Public expenditure on health as % of general government expenditure	12.1	13.4	14.5	14.8	15.0	15.3
Government health spending as % of GDP	5.9	6.9	7.8	8.0	7.9	8.0
OOP payments as % of current expenditure on health	20.2	17.9	18.2	17.5	17.9	17.6
OOP payments as % of private expenditure on health	79.6	77.4	81.7	78.3	78.1	77.5
Private insurance as % of private expenditure on health	20.4	22.6	18.3	21.7	21.9	22.5

Source: WHO (2019).

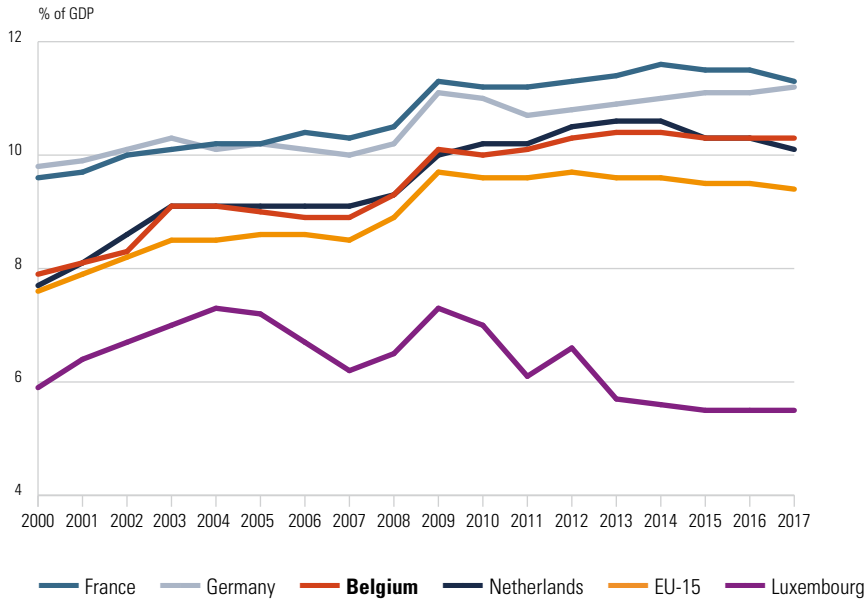
Notes: GDP: gross domestic product; OOP: out-of-pocket; ^aBreak in time series: before 2003, data are drawn from national accounts, which have another scope than the System of Health Account used since 2003.

FIG. 3.1 Current health expenditure as a share (%) of GDP in the WHO European Region, 2017



Source: WHO (2019).

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



Source: WHO (2019).

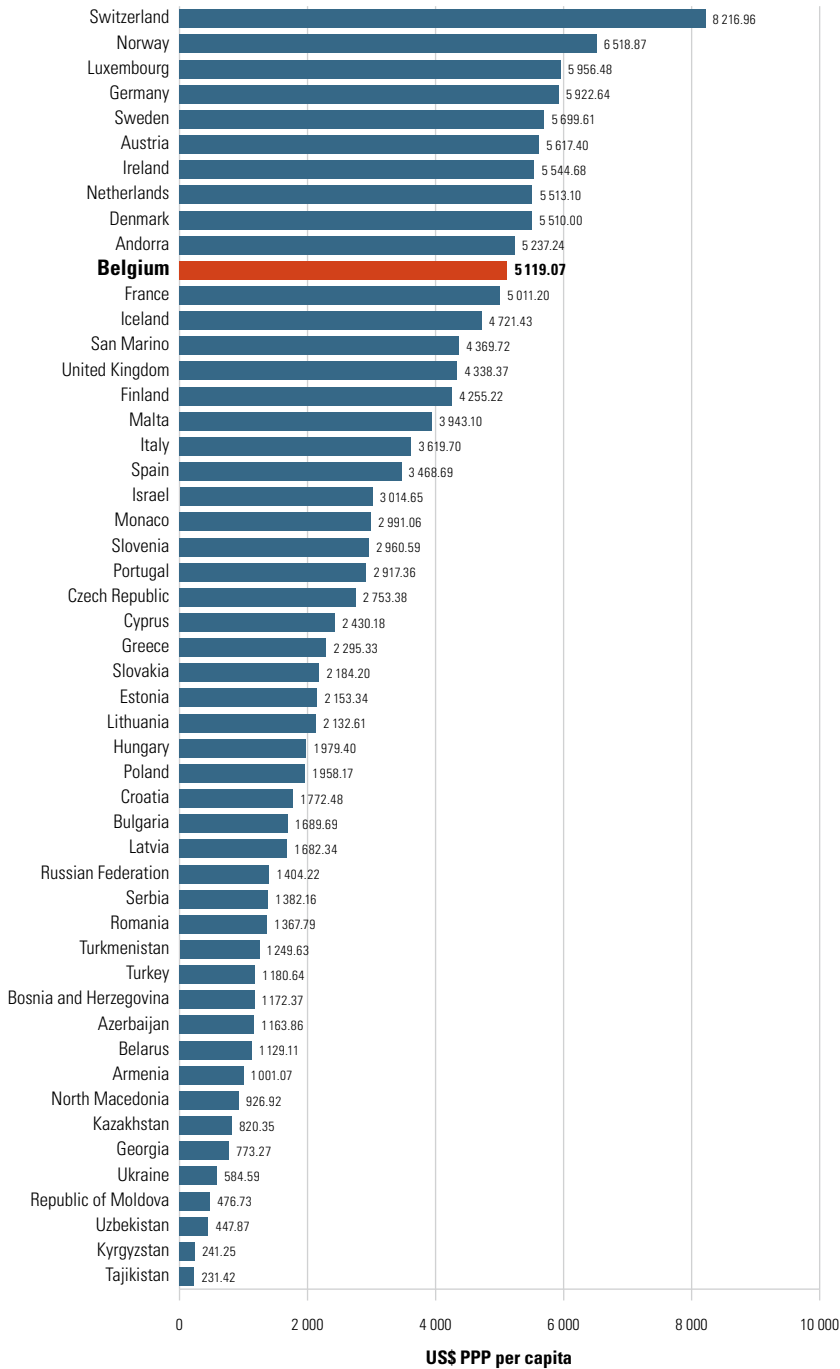
Note: EU-15 average: own calculation.

Current health expenditure per capita, expressed in US\$ purchasing power parity (PPP) increased from US\$ 3 011.7 in 2005 to US\$ 5 119.1 in 2017. Belgium ranked 11th among countries of the WHO European Region (2017 data, decreasing order, see Fig. 3.3).

The percentage of health expenditure financed by the public sector is quite stable, with 76.8% in 2005 and 77.2% in 2017. Belgium ranked 15th among countries of the WHO European Region (2017 data, decreasing order, see Fig. 3.4). Belgium attaches high importance to health care financing and in 2017, public expenditure on health amounted to 15.3% of total government expenditures (see Table 3.1 and Fig. 3.5).

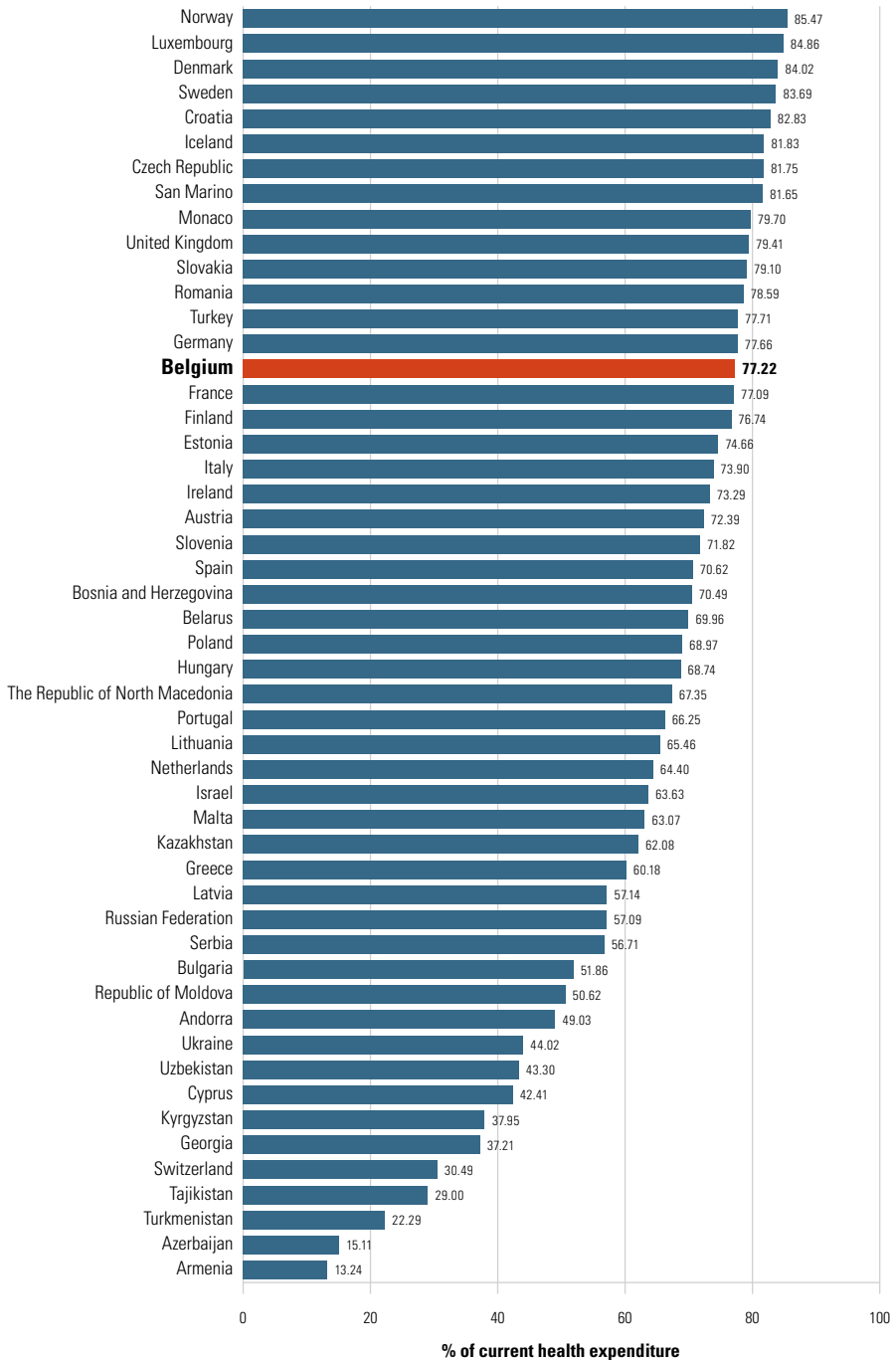
Out-of-pocket payments represented 17.6% of current health expenditure in 2017 (see Tables 3.1 and 3.2) and are discussed in Section 3.4.1.

FIG. 3.3 Current health expenditure in US\$PPP per capita in the WHO European Region, 2017



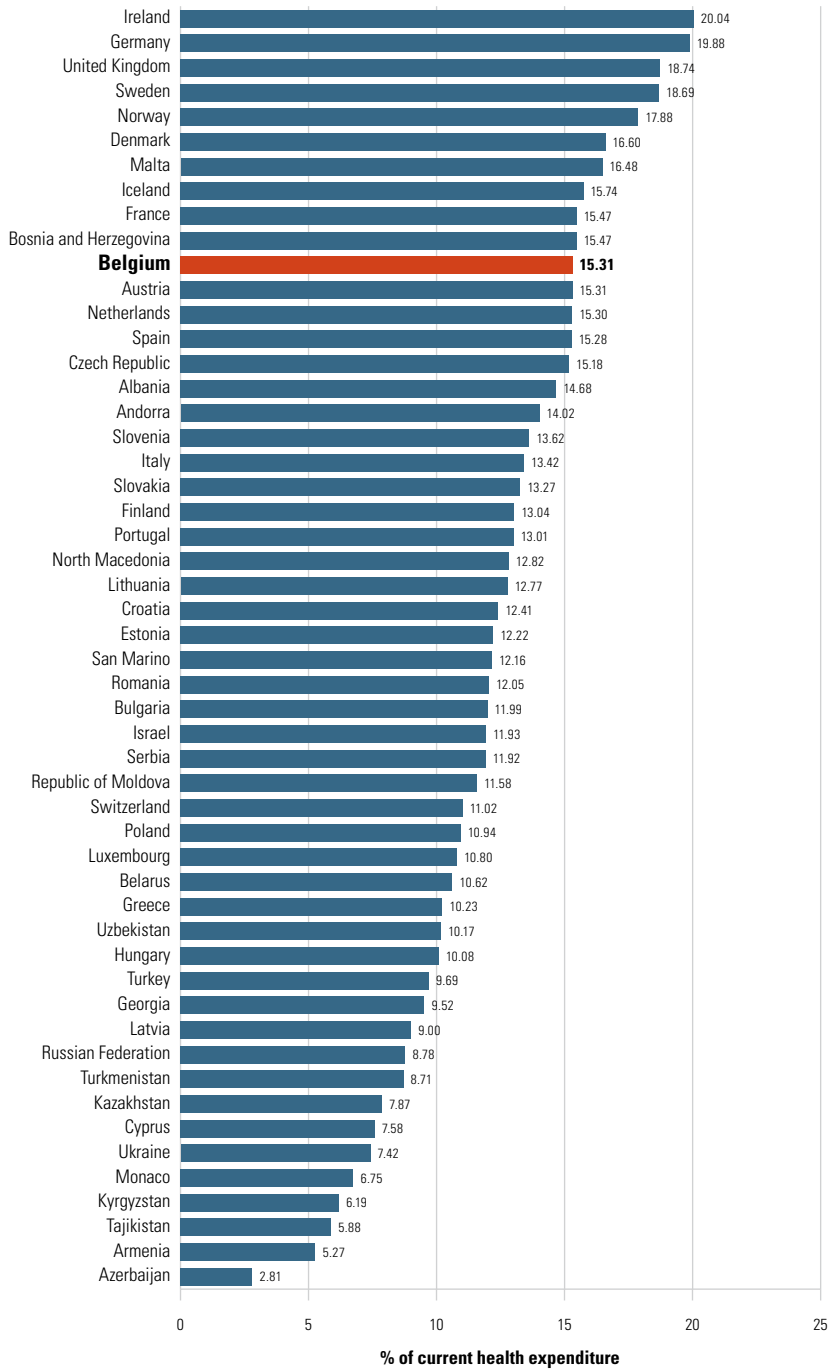
Source: WHO (2019).

FIG. 3.4 Public expenditure on health as a share (%) of current health expenditure in the WHO European Region, 2017



Source: WHO (2019).

FIG. 3.5 Public expenditure on health as a share (%) of general government expenditure in the WHO European Region, 2017



Source: WHO (2019).

3.2 Sources of revenue and financial flows

The main share of current health expenditure is publicly funded (77.2% in 2017), mostly through reimbursement taking place within the compulsory health insurance (56.1%), whereas government finance represent a smaller share (21.2%). Public financing of the health system is mainly based on social security contributions but also on alternative financing (mainly from VAT), government subsidies, own allocated and diverse receipts and own receipts (see Section 3.3.2). Out-of-pocket payments and VHI represent 17.6% and 5.1%, respectively (2017 data, see Table 3.2).

The compulsory health insurance is managed by the NIHDI, which gives a prospective budget to the sickness funds to finance the health care costs of their members (see Fig. 3.6 and Section 3.3.3).

Inpatient care, outpatient (or ambulatory) care and medical goods are mainly covered by the compulsory health insurance, whereas long-term care and preventive care are mainly financed by the Federated entities (see Table 3.2).

Voluntary health insurance is mainly used for inpatient care and household out-of-pocket payments mainly concern inpatient care, outpatient care and medical goods.

TABLE 3.2 Expenditure on health (as % of current health expenditure) according to function and type of financing, 2017

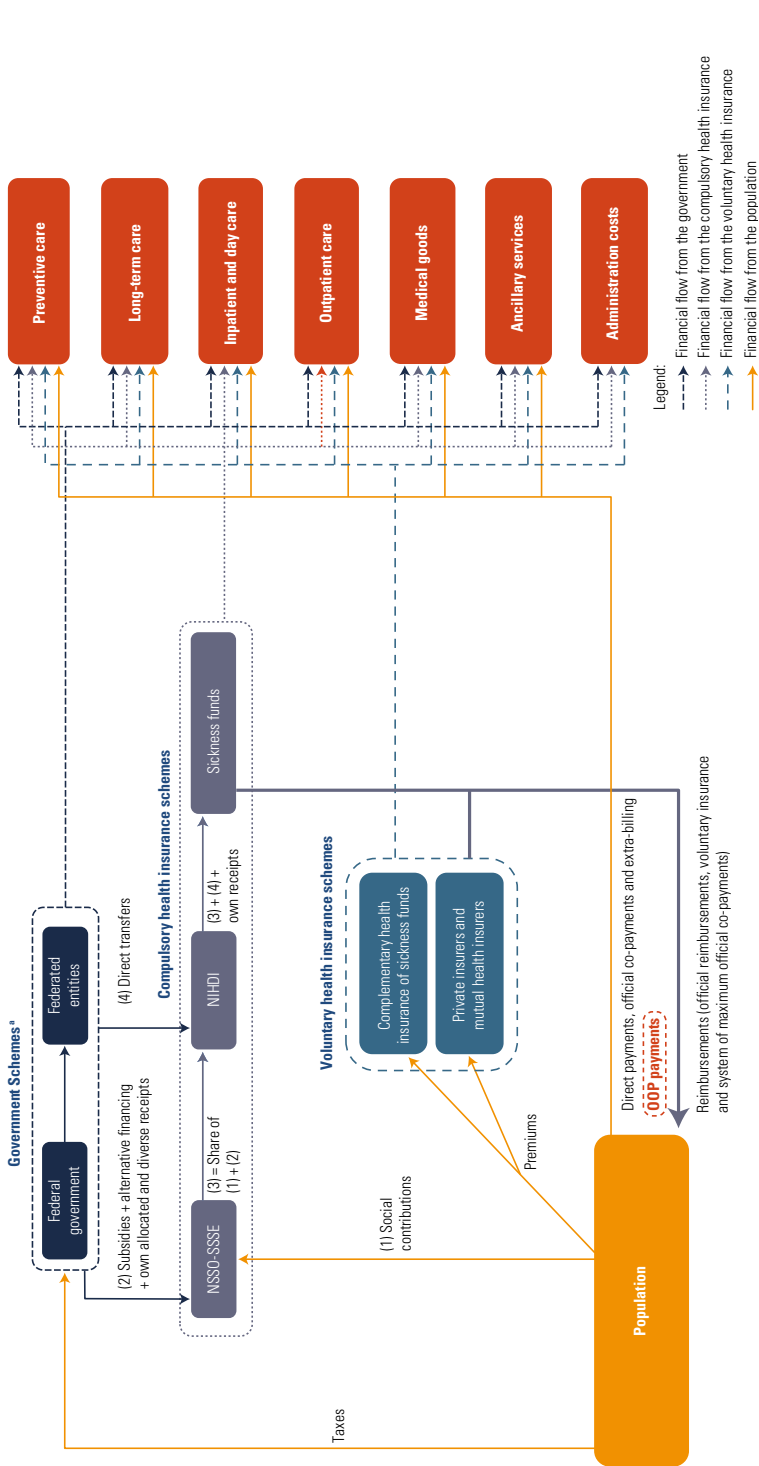
	INPATIENT CARE	OUTPATIENT CARE	LONG-TERM CARE ^a	ANCILLARY SERVICES	MEDICAL GOODS	PREVENTIVE CARE ^a	ADMINISTRATION	OTHER ^b	TOTAL
Governments	1.76	0.82	15.54	0.13	0.21	1.72	0.28	0.70	21.16
Compulsory health insurance	19.42	12.35	5.20	4.23	10.68	0.45	2.08	1.69	56.09
Household out-of-pocket payment	3.86	5.45	1.59	0.36	5.35	NA	–	1.02	17.64
Voluntary health insurance	2.72	0.23	0.66	0.14	0.01	<0.01	1.08	0.28	5.12
Total	27.76	18.85	22.99	4.85	16.24	2.16	3.44	3.69	100.00

Source: OECD (2019a).

Notes: NA: no data available. ^a It should be noted that the division of health expenditure according to the functions defined in the System of Health Accounts is not straightforward and that some expenditure on preventive care and long-term care is for example included in other functions such as inpatient and outpatient care;

^b Other concerns day care (outside day hospitalisations, which are included in inpatient care) and home-based care.

FIG. 3.6 Financial flow



Source: Authors' own.

Notes: NSSO: National Social Security Office; SSSE: Social Security for Self-employed; NIHDI: National Institute for Health and Disability Insurance; OOP: out-of-pocket payments. ^a More details on the repartition between Federal State and Federated entities can be found in Section 2.7.2.

3.3 Overview of the statutory financing system

3.3.1 Coverage

Breadth: who is covered?

Inspired by the Bismarckian model, the Belgian health system is based on compulsory health insurance characterised by the solidarity between all citizens and there is no selection based on health risks.

There are two requirements to be covered by the compulsory health insurance. First, each individual must register with a sickness fund. The choice is free, except for railway workers (see Section 2.7.1). Second, social contributions must have been paid.

About 99% of the Belgian population is covered by the compulsory health insurance. There are two main schemes: (i) the general scheme covering the main part of the population (employees, employees in incapacity, unemployed, retired people, widows, orphans, students, residents) and (ii) the scheme for the self-employed. This means that both economically active and non-active people, as well as their dependants, are covered. The approximately 1% that is not covered concerns people whose administrative and/or financial requirements have not been fulfilled. This does not mean that uninsured people have no right to necessary medical care. They can be covered by the public centre for social assistance [*Openbare Centra voor Maatschappelijk Welzijn/Centres Publics d'Action Sociale* (OCMW-CPAS)] of their municipality.

It should nevertheless be noted that some categories of vulnerable people (for example irregular migrants) are excluded from this calculation and are not covered by the compulsory health insurance. Nevertheless, they can benefit from health care through other provisions (see Box 3.1). People covered by another insurance scheme are also not included in this calculation (for example foreign people working for the European Commission and other international organisations).

BOX 3.1 Coverage of vulnerable people

Irregular migrants are individuals without a residence permit. They include individuals who have entered the country irregularly, people whose residency status has expired or become invalidated, those who have been unsuccessful in obtaining asylum, and those born to parents who are irregular migrants. Irregular migrants cannot be affiliated to a sickness fund; however, they are entitled to receive care via Urgent Medical Aid – see Roberfroid et al. (2015) for details.

Applicants for international protection describes asylum seekers and people applying for subsidiary protection. Three main systems co-exist in providing access to health care for asylum seekers, characterised by a high degree of discretionary decisions and a lack of centralised information. For those living in collective reception centres (the Federal Agency for the Reception of Asylum Seekers (Fedasil) or partner structures such as the Red Cross), primary care is mostly provided within the reception centre. Health care not provided in these centres (such as inpatient care) is delivered in the mainstream systems. All costs are covered by Fedasil. Health care is free at the entry point in these centres for the asylum seekers. For asylum seekers living in a Local Reception Initiative (a reception facility organised at the municipal level), health care is organised and paid for by the Ministry of Social Integration via the local centres for social assistance (*Openbare Centra voor Maatschappelijk Welzijn/Centres Publics d'Action Sociale*; OCMW/CPAS). For asylum seekers who prefer to stay in a place of their choice (with friends or families), health care is directly funded by the medical cell of Fedasil. They are required to request a payment guarantee before accessing health care – see Dauvrin et al. (2019) for details.

Refugees and Belgian residents born with a foreign nationality must affiliate with a Belgian sickness fund and are therefore covered by the compulsory health insurance.

Prisoners. Historically, the health care of prisoners has been covered by the Ministry of Justice but a reform that aims to integrate all prisoners into the compulsory health insurance system is underway (see Section 6.2).

Homeless people are entitled to the same rights as the rest of the population and can ask for help from OCMW/CPAS for the payment of contributions if needed. However, because of a lack of a regular address and a reluctance to seek health care, these people often access health care through hospital emergency departments or non-governmental organisations. The obstacles they face go beyond the strictly medical field, e.g. a lack of follow up, administrative problems or barriers related to language or culture.

Scope: what is covered?

All reimbursed services are described in the nationally established fee schedule (called the nomenclature), which specifies the official fees and cost-sharing mechanisms determined through conventions and agreements negotiated yearly or every 2 years between representatives of sickness funds and health care providers. These conventions and agreements can also contain specific conditions related to the content, quality or quantity of care. Each agreement must fall within the budget and is submitted to the Budget Control Committee of the NIHDI (see Section 3.3.3).

A large range of services is covered, with about 15 500 codes in the national fee schedule in December 2018. Services not included in the fee schedule are not reimbursed. Sickness funds are legally bound to reimburse the claim from their registered members at the official reimbursement levels.

Reimbursement decisions are under the responsibility of different commissions within the NIHDI, such as the Commission for the Reimbursement of Medicinal Products, which assesses the request based on criteria such as the therapeutic added value of the product and the budget impact (see Section 2.7.4). Evidence-based practices with a high therapeutic value are preferentially reimbursed, whereas aesthetic services such as plastic surgery or orthodontics are only reimbursable under certain conditions (for example, breast reconstruction after cancer). Alternative therapies such as acupuncture, homeopathy and osteopathy are excluded but may be partially covered by the complementary advantages provided by the sickness funds (see Section 3.5). Some preventive health care services are co-financed by the Federal government and the Federated entities and are provided free to patients (for example, programmed vaccinations for children and programmed breast cancer screening).

Depth: how much of benefit cost is covered?

The share of out-of-pocket payments in current health care expenditure slightly decreased from 19.2% in 2007 to 17.6% in 2017. Since 2014, it has been below the EU-15 average (17.8% in 2017). VHI represents 5.1% of current health expenditure in 2017. Looking at the extent to which different health services are financed through out-of-pocket payments indicates the main gaps in health coverage (see Box 3.2).

BOX 3.2 What are the key gaps in coverage?

In 2017, out-of-pocket payments accounted for :

- 28.9% of spending for outpatient care, with 61.3% for dental care
- 32.9% of spending for medical goods
- 13.9% of spending for inpatient care
- 7.4% of spending for ancillary services
- 6.9% of spending for long-term care.

The share of out-of-pocket payments on dental care expenditure is high and increased from 51.2% to 61.3% in the 2007–2017 period but is similar to the European average (59.6% in 2017). The high European average is mainly due to the fact that dental care in Greece (99.7%) and Spain (98%) are scarcely covered. The coverage is much higher in bordering countries such as Germany (25.3%) and the Netherlands (20.8%) than in Belgium.

Concerning mental health care, reimbursement is more limited than for acute care but accessibility has been improved by the reimbursement of ambulatory psychological care for adults in 2019 (see Section 5.11).

According to the EU-SILC survey, the proportions of individuals postponing medical or dental examinations because of cost in 2017 were 2.0% and 3.6%, respectively, which is slightly higher than the EU-15 average (1.1% and 3.1%, respectively). Moreover, for the lowest income quintile group, these are among the highest in Europe for both medical (5.6%) and dental (8.9%) examinations. These data should nevertheless be used with caution and further analysis is needed to fully understand differences in magnitude and fluctuation of this indicator between years and between surveys (Devos et al., 2019).

However, it is important to note that in Belgium, precise data on out-of-pocket payments in the ambulatory sector are not available and there are some doubts on the reliability of these estimations (Calcoen et al., 2015).

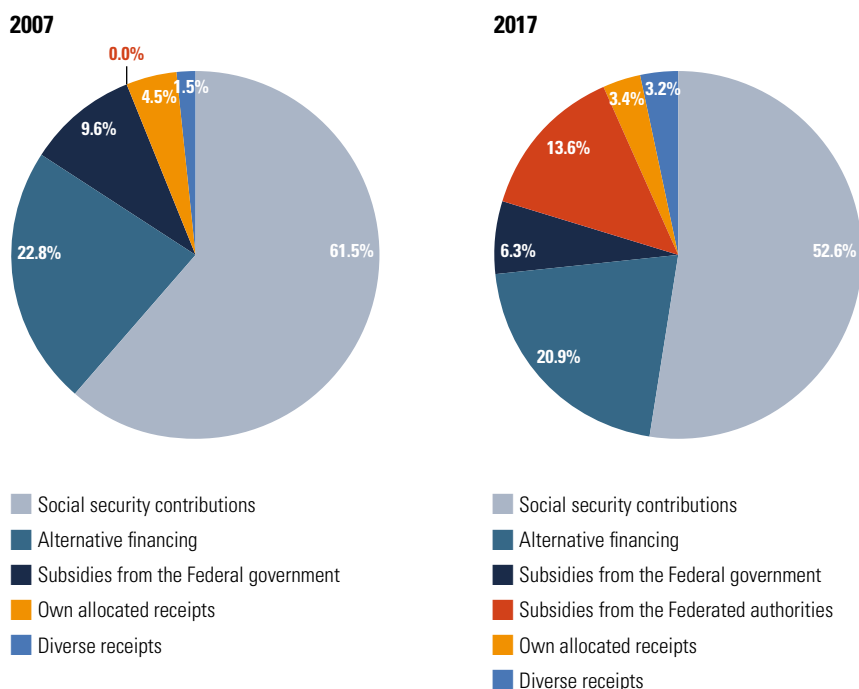
3.3.2 Collection

Since 1995, the financing of the Belgian social security system has been based on the principle of pooling funds (so-called financial global management). This means that the majority of resources used to finance the seven branches of social security are combined and then transferred to each branch dependent on its respective financial need. The seven branches include:

old-age and survivor's pensions; unemployment; insurance for accidents at work; insurance for occupational diseases; family benefits; annual vacation; and the compulsory health insurance managed by the NIHDI.

Public financing of the compulsory health insurance is only partly funded through this financial global management, the rest being financed by “own receipts”. Social security contributions are the main public funding revenue sources (52.6% of the public financing of health in 2017, based on KCE estimates) but their share has slightly decreased compared with 2007. The other sources of public financing of health include alternative financing (mainly from VAT), government subsidies, own allocated receipts and diverse receipts (see Fig. 3.7 and Devos et al. (2019) for details). The decrease in the share of social security contributions is the result of on the one hand, an increase in direct government subsidies as source of finance related to the transfer of competences to the Federated entities in the 6th State Reform, and on the other hand, a tax reform to lower labour costs, which in particular led to a reduction of social contributions from employers.

FIG. 3.7 Evolution of the sources of public funding



Source: Devos et al. (2019).

Note: 2017 values are provisional; based on estimations.

Both in the general system and in the system for the self-employed, social contributions are proportional to income level and are independent of health risk.

In the general scheme, there is both an employee's and an employer's contribution, which are paid to the National Social Security Office (NSSO). They are based on a proportion of the entire gross income, which varies according to the statute of the worker (for example, working in the private or the public sector). As an example, for a person working in the private sector, the contribution is 13.07% and 24.92% of the entire gross income for employees and employers, respectively (for more details, see NSSO (2019)). In addition, a range of additional (special) social contributions for employers and reductions of social contributions for both employers and employees exist (NSSO, 2019).

Self-employed people pay their own social contributions to the Social Insurance Fund to which they are affiliated, which in turn forwards the contributions to the Social Security Office for Self-employed. In 2019, the social contributions of a self-employed person varied between € 709.68 and € 4 067.20 per trimester according to their net income, excluding management costs of the Social Insurance Fund of approximately 4%; see FPS Social Security (2019b) for details and exceptions, such as for those with annual income below € 7 253.83. Since 2015, social contributions have been calculated on the basis of the income of the year itself. As this income is not yet known, the Social Insurance Fund initially requires a provisional quarterly contribution based on indexed income from 3 years ago.

A reform of the financing of this social security system was undertaken in 2017, among other things to better control the growth in public expenditure on health (see Box 3.3).

3.3.3 *Pooling and allocation of funds*

To control expenditure, a real growth cap has been established since 1995 to determine the overall budgetary objective of the compulsory health insurance. This cap is determined based on the previous budgetary objective, increased by a real growth norm and indexed (health index). Variation in the real growth norm can be observed over time (4.5% in 2012 and 1.5% in 2019). It should be noted that this is a cap on an objective and not on actual expenditure, meaning that actual expenditure may exceed this

BOX 3.3 Is health financing fair?

Equity

Especially since the 6th State Reform, public financing of the compulsory health insurance became more progressive, with a ratio of progressive receipts on total receipts of 7.3% in 2007 and 14.1% in 2017. Nonetheless, both the share of proportional receipts and regressive receipts exceeded the share of progressive receipts in 2017 (52.6% and 26.7%, respectively). Given the decrease in the share of social contributions as a financing source, proportional receipts have shown a downward trend, from 61.5% in 2007 to 52.6% in 2017 (Devos et al., 2019). Further detailed analysis of equity in financing is expected at the end of 2020 (see the KCE website).

Resilience

A challenge for the resilience of the health system financing is the heavy reliance on social security contributions. The low participation rate of people aged 55–64 years in the workforce and the growing proportion of inactive (non-working) people are potential threats. In March 2017, a new reform on the financing of social security programmes, including health care, was adopted. The objective was to better control the growth in public spending by increasing accountability of social partners and transferring some of the tax burden from social security contributions to other forms of taxation such as VAT. The main elements include (OECD, 2017):

- The alternative financing (see Fig. 3.7) for health care will exclusively include revenues from VAT and some earmarked taxes;
- General government subsidies might be increased by the so-called ageing coefficient only in specific conditions (for example, if both the real growth of GDP is greater than 1.5% and people leave the labour market at an older age on average);
- The “financial equilibrium contribution” provided by the Federal government to offset any deficits will depend on a set of macro-level accountability factors.

estimated expenditure. A procedure is nevertheless established to detect early any budget overrun and thus take corrective measures to remain below the objective. The overall budgetary objective is broken down into partial budgetary objectives for each sector (e.g. physicians, hospitalisations, pharmaceuticals, etc.). The determination of these objectives and related measures are based on the procedures described in Box 3.4.

BOX 3.4 Determination of the overall budgetary objective and partial objectives

Carrying out technical estimates and audits: The Health Care Department of the NIHDI calculates technical estimates on the level of expenditure that would be achieved in the next financial year under the assumption of unchanged legislation (for no later than 31 May). These technical estimates are the result of an extrapolation of the expenditure of the last 3–5 years and are indexed. Audit reports are also done (no later than 30 June). In September, a revision of the technical estimates is calculated, based on the expenditure of the first 5 months of the year preceding the financial year to adapt the first estimates against more recent information.

Identifying potential economy measures: The Budget Control Committee presents some saving measures that are based upon the permanent audit reports and must be applied in several sectors to reach the budgetary objectives.

Determining the needs and saving measures: The conventions and agreements commissions of the NIHDI determine their financial needs and the necessary changes and savings measures for their sector (no later than 1 September). The inventory of needs is centralised by the Health Care Department of the NIHDI.

Suggesting the overall budgetary objective and partial objectives: The Insurance Committee sends to the General Council and the Budget Control Committee an overall proposition in compliance with the real growth rate and the increase of the health care index (no later than the first Monday in October). To establish the partial budgetary objectives, the Insurance Committee mentions for the sectors concerned either the amount to be saved (and the concrete corresponding savings measures), or the amounts corresponding to positive measures (and a description of these measures). If there is no proposition, the General Council is empowered to establish the partial objectives.

Approving the overall budgetary objective and partial objectives: Considering the propositions of the Insurance Committee and the savings measures suggested by the Budget Control Committee, the General Council approves the annual overall budgetary objective, the annual partial budgetary objectives, and the necessary structural savings measures (no later than the third Monday in October). If the overall budgetary objective is not approved, the General Council informs the Minister of Social Affairs and the objective is set by the Council of Ministers.

Negotiating conventions and agreements: After approving the overall budgetary objective and its breakdown into partial objectives, the various conventions and agreement commissions of each sector start the negotiations to conclude new conventions/agreements or to adapt existing conventions/agreements (taking into account the savings measures determined above).

To control actual expenditure and compare it to estimated expenditure, the so-called continuing audit procedure has been established. These audit reports contain information such as the evolution of expenditure for each sector, the difference compared with the budgetary objectives, or the impact of savings measures and initiatives of the government and of the conventions and agreements commissions. The Minister of Social Affairs and the General Council of the NIHDI (potentially after the advice of the Budget Control Committee) can suggest corrective savings measures at any time to prevent an overrun of the budgetary objectives.

3.3.4 *Purchasing and purchaser–provider relations*

The budget for the compulsory health insurance is allocated between sickness funds so that they can make reimbursements and payments to their members. The sickness funds are paid each month based on their income and expenditure during the previous year (divided by 12). Over the years, sickness funds have been made increasingly accountable for the health expenditure and health status of their insured members (see Box 3.5).

Health care providers in Belgium are not directly contracted by the sickness funds. They are independent and their practice is private, but they can commit to respecting the national tariffs (so-called conventioned physicians). These conventions and agreements are established to determine the official fees and cost-sharing mechanisms. These tariffs are specified in the nationally established fee schedule and are determined by the conventions and agreements commissions of the different sectors (see also Section 3.3.3). These commissions include both representatives of sickness funds and health care providers. Health care providers who accede to these agreements are called conventioned practitioners and must respect these tariffs in ambulatory care. Those who do not accede to these agreements and conventions are called non-conventioned practitioners and can ask for extra-billings (see Section 3.4 for more details). They may (or may not) renew this membership each time a new agreement is concluded. In exchange for this membership, they receive certain social benefits. For physicians, 84.3% of them acceded to the 2018–2019 agreement; see (NIHDI (2018c) for details per specialty and district.

BOX 3.5 Are resources put where they are most effective?

Details on the allocative efficiency of resources are described in Section 7.6.1. To make efficient use of financial resources in the health care sector, the NIHDI also developed a Health Care Monitoring Action Plan for 2016–2018 (see Section 7.1).

In the past, sickness funds' expenditure was systematically reimbursed, but since 1995 they have been held financially accountable for a proportion of any discrepancy between their actual expenditure and their normative risk-adjusted health expenditure. The parameters for calculating the normative expenditure include demographic factors (age, gender, household composition), socioeconomic factors [income, occupational status (self-employed, employee, unemployed)], health factors (mortality, morbidity) and environmental factors (urbanisation rate). The objective of this system is to increase efficiency through a more active role for competition between sickness funds. Additionally, in 2016, the Minister of Social Affairs and Public Health signed a pact with the sickness funds concerning their future role and to reinforce their role as health coaches. They will, for example, further strengthen efforts to inform members about health in general and the health care system, promote healthy lifestyles and promote patient empowerment. The pact also contains commitments to support health policy through the provision of data and provides guidelines on good governance and financial management (see Section 2.7.1).

3.4 Out-of-pocket payments

3.4.1 Cost sharing (user charges)

In Belgium, the following terminology is used: the national fee schedule establishes the official fees, divided into both the official reimbursed tariffs and the official patient's co-payments⁶ (*remgeld/ticket modérateur*). Patient's co-payments can either be a fixed amount or a proportion of the official fee (or be equal to zero). On top of these national fees, extra-billing (*ereeloonsupplementen/supplement d'honoraire*), an increased fee, can also be required by health care providers under some conditions (see Table 3.3).

⁶ It should be noted that internationally, a co-payment refers to a fixed fee (flat-rate) per item or service and co-insurance refers to a fixed proportion of the total cost. Both are cost-sharing arrangements which require the individual covered to pay part of the cost of care. In Belgian reports, for simplification, the term co-payment is used to refer to both co-payments and co-insurance.

BOX 3.6 Fixed co-payments for consultations at the physician's office**For people with a preferential reimbursement:**

- For consultation in the office of a medical specialist:
€ 3 for every speciality
- For consultations in the GP office: € 1 if the patient has a global medical record or € 1.50 if the patient does not have a global medical record.

For people without a preferential reimbursement:

- For consultation in the office of a medical specialist:
€ 12 for every specialty
- For consultations in the GP office: € 4 if the patient has a global medical record or € 6 if the patient does not have a global medical record.

Co-payments vary from service to service but are usually equal for everyone, except for patients with preferential reimbursement, who pay reduced co-payments (see Box 3.7 and Table 3.3). It should also be noted that for some health care providers (such as midwives and physiotherapists), patients' co-payments also differ according to the status (conventioned / non-conventioned) of the provider, hence patients without preferential reimbursement will both have higher co-payments and potentially extra-billings with non-conventioned providers.

Patients' co-payments are usually a percentage of the national fee, but a simplification of the system was introduced in December 2011 for consultations at a GP's office and in January 2015 for consultations at a medical specialist's office, and the co-payment is now a fixed amount, not indexed (see Box 3.6).

TABLE 3.3 User charges for health services

	TYPE OF USER CHARGE IN PLACE	EXEMPTIONS AND/OR REDUCED RATES	CAP ON OOP SPENDING	OTHER PROTECTION MECHANISMS
Primary care and outpatient specialists' care	<ul style="list-style-type: none"> Co-payments^a: Fixed amount (for consultation at the GP/specialist office) or percentage of the official fee. Extra-billings: For non-conventioned practitioners. Direct payments: For non-reimbursed services. 	<ul style="list-style-type: none"> Reduced co-payments: <ul style="list-style-type: none"> For people entitled to preferential reimbursement; for people with a global medical record (for GP consultations); If referred by a GP (for medical specialists' consultations). Increased co-payments: <ul style="list-style-type: none"> For people without preferential reimbursement for a few categories of non-conventioned health practitioners (such as midwives and physiotherapists) Exemptions: For patients registered in community health centres (<i>wijkgezondheidscentra/maisons médicales</i>) with a capitation based remuneration system, there is no patient contribution for GP services, physiotherapists services (if available in the centre) and nurses services (if available in the centre), see also Section 5.3) 	<ul style="list-style-type: none"> System of co-payment maximum: cap on the annual amount of co-payments (see Box 3.7) 	<ul style="list-style-type: none"> Social third-party payer system Fixed payments Status of chronic patients Solidarity fund (see Box 3.7)
Outpatient prescription drugs	<p>Co-payments^a:</p> <ul style="list-style-type: none"> If delivered by a community pharmacy: If <€ 14.38: a percentage of the reimbursement basis at the ex-factory price level; If ≥€ 14.38: a fixed amount + a percentage of the reimbursement basis. If delivered by a hospital pharmacy (to an ambulatory patient): a percentage of the reimbursement basis (that differs from the percentage in community pharmacy). <p>These percentages vary according to the category of pharmaceutical (see Section 2.7.4).</p> <ul style="list-style-type: none"> Extra-billings due to reference pricing: For original products having a generic or a copy (see the reference reimbursement system in Section 5.6.4), a reference supplement can be requested from the patient (25% of the reimbursement basis, with a cap). 	<ul style="list-style-type: none"> Reduced co-payments: For people entitled to preferential reimbursement The percentage also varies according to (i) the category of the pharmaceuticals (e.g. 0% for vital drugs and 141.43% for contraceptive pills) and (ii) the pharmacy (community pharmacy or in hospital); see (NIHDI, 2019b). 	<ul style="list-style-type: none"> System of co-payment maximum: cap on the annual amount of co-payments (see Box 3.7) Cap on the co-payments according to the category of the pharmaceutical; see (NIHDI, 2019a) Cap on extra-billings due to reference pricing: i.e. on the reference supplement of the original product: maximum € 5. 	<ul style="list-style-type: none"> Solidarity fund (if for an unmet medical need, see Box 3.7).

TYPE OF USER CHARGE IN PLACE		EXEMPTIONS AND/OR REDUCED RATES	CAP ON OOP SPENDING	OTHER PROTECTION MECHANISMS
Inpatient pharmaceuticals	<ul style="list-style-type: none"> Co-payments: € 0.62 per day. Direct payments: For non reimbursed pharmaceuticals. 	–	<ul style="list-style-type: none"> System of co-payment maximum: cap on the annual amount of co-payments (see Box 3.7). 	<ul style="list-style-type: none"> Solidarity fund (if for an unmet medical need, see Box 3.7).
Inpatient stay	<p>Co-payments:</p> <ul style="list-style-type: none"> Fixed amount per day for inpatient costs that varies according to the patient status (with/without preferential reimbursement, with/without dependants, unemployed, dependent children), the type of hospital (acute care or psychiatric), and the duration of the stay: see (NIHD, 2019m); Fixed amount per day for pharmaceuticals: € 0.62; Fixed amount per stay for biological tests (€ 7.44 or € 0 for patients without or with preferential reimbursement, respectively), for medical imaging (€ 6.20 or € 0 for patients without or with preferential reimbursement, respectively) and for technical acts (€ 16.40 or € 0 for patients without or with preferential reimbursement, respectively); Percentage of the medical fees Extra-billings: on the fixed amount per day hospitalisation and on the medical fees (conventioned and non-conventioned) if the patient has requested a single room. Direct payments: For non-reimbursed pharmaceutical products, devices and equipment (e.g. thermometer). Note: Non-reimbursed invasive medical devices are usually at the hospital charge, see below. 	<ul style="list-style-type: none"> Reduced co-payments: <ul style="list-style-type: none"> For people entitled to preferential reimbursement; For unemployed or dependent children (on the fixed amount per day for inpatient costs). Extra-billing is not allowed for double or multiple-bed rooms. It is also not allowed in single rooms in some conditions (for example, if necessitated by the state of the patient or if no bed in double/multiple-bed rooms is available). 	<ul style="list-style-type: none"> System of co-payment maximum: cap on the annual amount of co-payments (see Box 3.7). 	<ul style="list-style-type: none"> Solidarity fund (see Box 3.7).

	TYPE OF USER CHARGE IN PLACE	EXEMPTIONS AND/OR REDUCED RATES	CAP ON OOP SPENDING	OTHER PROTECTION MECHANISMS
Dental care	<ul style="list-style-type: none"> Co-payments: Fixed amount (for consultation at the office of a physician specialised in dental care) or percentage of the official fee. Extra-billings: For non-conventioned practitioners. Direct payments: For non-reimbursed services. 	<ul style="list-style-type: none"> Reduced co-payments: <ul style="list-style-type: none"> For people entitled to preferential reimbursement; No co-payments for the majority of preventive and restorative procedures for all children up to 18 years old. 	<ul style="list-style-type: none"> System of co-payment maximum: cap on the annual amount of co-payments (see Box 3.7). 	<ul style="list-style-type: none"> Facultative application of the third-party payer system for all care of children up to 18 years old and for some services (e.g. dental extractions) or for some categories (e.g. patients with preferential reimbursement or chronic patients) of people aged over 18 years old. Solidarity fund (see Box 3.7).
Non-implantable diagnostic devices and non-invasive medical devices	<ul style="list-style-type: none"> Co-payments: <ul style="list-style-type: none"> For outpatient devices, a percentage that varies according to the reimbursement category; For inpatient devices, it is included in the fixed amount per day of € 0.62 Direct payments: For non-reimbursed outpatient devices. 	<ul style="list-style-type: none"> Reduced co-payments: <ul style="list-style-type: none"> For people entitled to preferential reimbursement. The percentage also varies according to the reimbursement category (e.g. 0% for vital devices). 	<ul style="list-style-type: none"> System of co-payment maximum: cap on the annual amount of co-payments (see Box 3.7) Cap on the co-payments according to the reimbursement category. 	
Invasive medical devices and implants	<ul style="list-style-type: none"> Co-payments: A percentage that varies according to the sub-categories defining the patient contribution (see Section 2.7.5). Direct payments: Non-reimbursed invasive devices are charged to the hospital. The costs of implants that are not on the reimbursement list can be borne by the patients only in some conditions, see (Vnck et al., 2018). It should also be noted that the difference between the reimbursed basis and the price must be born by the hospitals and not by the patients. Other: Patients can pay a delivery margin (e.g. to cover the costs related to the storage, sterilisation and delivery of implants) of 10% of the price with a cap. 	<ul style="list-style-type: none"> Reduced percentage of co-payments: Co-payments vary according to the sub-categories defining the patient contribution (from 0% to 88%). 	<ul style="list-style-type: none"> System of co-payment maximum: cap on the annual amount of co-payments (the delivery margin is included in the calculation, see Box 3.7) Caps on the security margin (the price cannot exceed 20% of the reimbursement basis) and the delivery margin (cap of € 148.74). 	<ul style="list-style-type: none"> Solidarity fund (see Box 3.7).

Source: NIHD (2019g).

Note: ^aIn Belgium, the term co-payment is used to refer to both co-payments and co-insurance.

3.4.2 *Direct payments*

Patients' contributions concern non-reimbursed services, co-payments and extra-billings (see Table 3.3). Official co-payments (after reimbursements due to the system of maximum co-payments) represented about 22% of patients' contributions in 2017.

For inpatient care and both inpatient and outpatient pharmaceuticals, the third-party payer system applies: patients only pay official co-payments and extra-billings and the third-party payer (the sickness funds) pays the remaining part (the official reimbursed tariffs).

For ambulatory care, patients are in principle required to pay up front the full fee and then claim for reimbursement from their sickness fund (based on the official reimbursed tariffs). Nevertheless, for patients entitled to a preferential reimbursement, the application of the third-party payer system is mandatory for consultations at the GP's office and patients only pay co-payments and extra-billings. This system is also mandatory in some specific situations – (i) for the opening of a global medical record, fully supported by sickness funds and (ii) for a protocol-based follow up of patients with a type 2 diabetes under demand – or can be applied voluntarily under some conditions (for example, for patients with a chronic status).

In ambulatory care, as data are only collected on official co-payments, the total contribution paid by patients remains an estimate because the exact share of extra-billings is not known.

3.4.3 *Informal payments*

Informal payments are not common in Belgium and no data are available. Corruption remains limited, some data can be found in Section 7.1.

3.5 Voluntary health insurance

Voluntary health insurance aims to provide cover for services that are only partially covered or are not covered by the compulsory health insurance and is mainly taken up to cover for extra-billings when patients opt for a single room in hospitals or for improved dental care coverage. Since 2008, self-employed people are also covered for outpatient care so substitutive VHI is no longer needed.

BOX 3.7 Protection mechanisms (see (NIHDI 2019o) for details)

- Preferential reimbursement** (*Verhoogde tegemoetkoming/intervention majorée*) Some categories of the population are entitled to preferential reimbursement and pay reduced co-payments. People with granted social benefit (social integration revenue, etc.) and some children under specific conditions (having a recognised disability of at least 66%, unaccompanied foreign minors and orphans) are automatically entitled. Other people are entitled under demand based on their taxable gross annual income (below € 19 566.25 + € 3 622.24 per dependent for widower, disabled, pensioner, unemployed, people unable to work for at least 1 year and mono-parental family, and below € 18 855.63 + € 3 490.68 per dependent for others in 2019). Since January 2015, sickness funds have tried to proactively identify them because some people are not aware of their rights.
- System of maximum co-payments** (*maximumfactuur/maximum à facturer*) In 1994, a system of caps on the annual amount of official patient co-payments has been introduced (with evolution over time, see Gerkens and Merkur (2010)). Beyond the cap, co-payments are reimbursed by the sickness funds. There are four different systems. In the first system, caps are set according to the net annual income of the household (five caps for five income ranges). The three other systems target specific populations. For chronically ill patients, the system is similar (based on household income) but with lower caps. For people entitled to preferential reimbursement and for children under 19 years old, a single cap is set (€ 477.54 and € 689.78, respectively, in 2019). Not all medical costs charged to the patients are included in the calculation (for example, extra-billings or daily rate for long-term hospitalisations (>1 year) in psychiatric hospitals are not included). Medical costs taken into account are: co-payments for health care provider services, for reimbursed pharmaceuticals, for enteral feeding by catheter or stoma of young people under 19 years old, for endoscopic and viscerosynthesis equipment; the per diem amounts for inpatient pharmaceuticals and for inpatient costs in general hospitals, and only limited to the first year for psychiatric hospitals; and the delivery margins for implants.
- Social third-party payer system** Patients entitled to a preferential reimbursement only pay co-payments and extra-billings for consultations at the GP's office (see Section 3.4.2)

- **Fixed payments** To financially support people with high medical expenditure, fixed payments systems have also been introduced: for example, for chronically ill patients (BS-MB 9 June 1998), for patients in a persistent vegetative state (BS-MB 30 November 2005) or for patients suffering from Sjögren's syndrome (BS-MB 25 June 2007) (see NIHDI (2019h) for additional examples of fixed payments).
- **Patients with a chronic status** For people with a chronic disease, a specific status was set up in September 2013 to facilitate their access to care (see Section 5.8 on long-term care).
- **The solidarity fund** From 1990, the Special Solidarity Fund was established at the NIHDI to grant additional reimbursement for a rare indication, a rare disorder that needs continuous and complex care, an innovative medical device or intervention/service (excluding pharmaceuticals), chronically ill children, some treatments abroad, or pharmaceuticals for an unmet medical need. For each case, specific conditions must be fulfilled and the total reimbursement is set according to the availability of funds.

Previously, VHI could either be provided by sickness funds or by private companies. Nevertheless, following a complaint to the European Commission about unfair treatment between private insurers and sickness funds, new legislation required that since 2012, VHI provided by sickness funds can no longer be managed by the sickness funds themselves but by a separate legal entity, such as a mutual health insurance company (BS-MB 1 July 2010, 28 May 2010).

Both private insurers and mutual health insurers are subject to the same rules and cannot, for example, refuse to cover people over 65 years old having a disability or a chronic disease (although they can exclude the costs linked to these pre-existing conditions). Private health insurers are supervised by the Financial Services and Markets Authority and mutual health insurers are supervised by the Supervising Authority for sickness funds and mutual health insurers (OCM-CDZ) (see Fig. 2.1 in Chapter 2).

Measures were also taken up to increase the accessibility of VHI by better regulating the increase of premiums (since 2007, private insurers can only change the premiums and benefits of the individual policies in specific cases such as an adjustment linked to the evolution of the health index); see Gerkens (2016) for details on VHI.

Voluntary health insurance represents 5.1% of current expenditure on health, but valid data on the proportion of individuals with VHI is currently not available (because of a risk of double counting for individuals with VHI both with a private company and with a mutual health insurance).

It should also be noted that sickness funds automatically provide complementary advantages and services to their members. The list of services and advantages provided differ between sickness funds and is very diverse (for example, fixed payments for alternative medicine, orthodontics and glasses, but also for sport clubs membership). Since 2012, subscription to these complementary services has been mandatory and members have to pay a community-rated premium for them. This can nevertheless be considered as voluntary because people who do not want to pay for these complementary services and advantages can enrol with the Auxiliary Fund, a neutral public body that only manages the compulsory health insurance and does not provide complementary services and advantages.

3.6 Other financing

There are no other significant sources of funding in Belgium.

3.7 Payment mechanisms

A summary of the main payment mechanisms of health care providers can be found in Table 3.4 and of their financing sources in Table 3.5.

TABLE 3.4 Provider payment mechanisms

PAYMENT MECHANISMS	
GPs and medical specialists	<ul style="list-style-type: none"> • Mainly fee-for-service (FFS). • Other: Salaried (in a limited number of hospitals and homes for older people). • In community health centres (<i>wijkgezondheidscentra/maisons médicales</i>) with a capitation payment system, GPs are salaried (see Section 5.3).
Other ambulatory care providers	<ul style="list-style-type: none"> • Mainly FFS. In community health centres (<i>wijkgezondheidscentra/maisons médicales</i>) with a capitation system, health care providers are salaried (see Section 5.3).
Hospitals (acute, specialised and psychiatric hospitals)	<ul style="list-style-type: none"> • FFS for medical and medico-technical services, except in a limited number of hospitals (such as university hospitals), where physicians are salaried. • Nurses in hospitals are salaried and financed by the hospital budget. • For clinical biology and medical imaging: mixed financing: FFS and flat rate per admission and per diem (see Section 3.7.1). • Pay-for-performance programme (only in general hospitals, on a voluntary basis).
Hospital outpatient	<ul style="list-style-type: none"> • Mainly FFS.
Dentists	<ul style="list-style-type: none"> • Mainly FFS.
Pharmacies	<ul style="list-style-type: none"> • Depending on how the pharmacy is organised, pharmacists are either salaried or self-employed. They can also be owner of the pharmacy. For the delivery of reimbursed pharmaceuticals, the community pharmacy is paid per product: an economic margin on the ex-factory price, a fee per package delivered and in some specific cases a fee for delivering specific pharmaceutical care (such as guidance in the use of inhalation corticoids for asthma; see Section 2.7.4).
Public health services (vaccination, screening)	<ul style="list-style-type: none"> • Depending on how the public health service is organised, people are either salaried or self-employed. Depending on the preventive programme, the services are mainly paid by FFS but can also receive budgets.
Social care (social workers)	<ul style="list-style-type: none"> • Mainly salaried.

Source: Authors' own.

TABLE 3.5 Share of health expenditure by types of provider and financing sources, 2017

	GOVERNMENT SUBSIDIES	COMPULSORY HEALTH INSURANCE	VOLUNTARY HEALTH INSURANCE	OOP PAYMENTS
Medical care (GPs and medical specialists)	0.71%	75.96%	0.07%	23.26%
Dentists	0.00%	50.55%	0.05%	49.40%
Pharmacies ^a	0.00%	60.08%	0.06%	39.86%
Preventive care	0.71%	75.96%	0.07%	23.26%
Acute hospitals	5.56%	73.17%	9.26%	12.00%
Other hospitals	10.16%	54.08%	5.42%	30.34%
Home health care services	44.86%	42.67%	9.38%	3.09%
Residential long-term care facilities	89.87%	0.33%	0.05%	9.75%

Source: OECD (2019a).

Notes: Based on the system of health accounts (SHA) terminology. OOP: out-of-pocket;
^aHealth expenditure in pharmacies include prescribed medicines, over-the-counter medicines, therapeutic appliances and other medical goods.

3.7.1 Paying for health services

Most health care services are paid on a fee-for-service (FFS) basis except for inpatient care. In hospitals, a dual system has been established:

- A national hospital budget covering nursing and non-medical activities, called the Budget of Financial Means (*Budget des moyens financiers/Het Budget Financiële Middelen*). This is a national close-ended budget fixed annually and allocated to hospitals according to a large set of criteria and parameters (see Box 3.8).
- Fees for medical activities: Medical and medico-technical acts (consultations, laboratories, medical imaging and technical procedures) and paramedical activities (physiotherapy) are mainly paid via an FFS system to the service provider. The providers then give a share of their fees to the hospital to pay for (part of) the costs (for hospital space, equipment, personnel). The amount

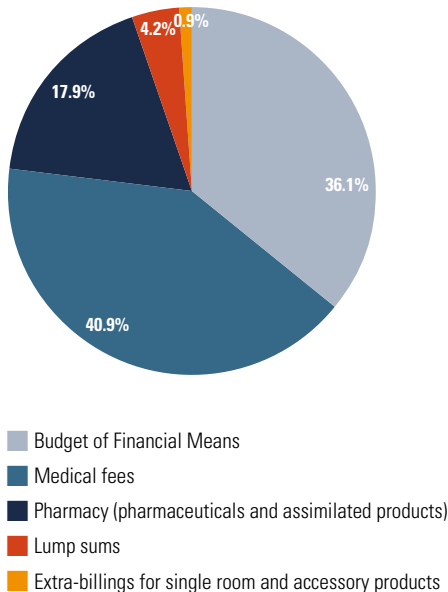
and mechanisms of providers paying for these hospital costs differ between hospitals and specialties. It should also be noted that to counter potential overconsumption, a mixed system (FFS and flat-rate) has been introduced for medical imaging and clinical biology (see below).

Together, these two remuneration systems account for almost 80% of a hospital's turnover (see Fig. 3.8).

Hospitals receive additional funding from:

- Outpatient and inpatient sale of pharmaceuticals and assimilated products
- Lump sums for specific ambulatory activities, such as day care, dialysis and rehabilitation
- Extra-billings charged to patients for single rooms
- Non-hospital activities, such as commercial operations, cafeteria, newspaper shop
- Private legacy or corporate grants.

FIG. 3.8 Hospital turnover breakdown, 2018



Source: Belfius (2019).

Key data on the financing of acute care hospitals can be consulted at www.healthybelgium.be/en/key-data-in-healthcare.

Specific measures were also undertaken to control expenditures and improve the quality of care:

- A mixed financing system for clinical biology and medical imaging (since 1988 and 1991, respectively): Financing partly consists of FFS payments and, for the greater part, of flat rate per admission and per diem (Crommelynck, Degraeve and Lefèbvre, 2013; Gerkens and Merkur, 2010). For clinical biology, it was estimated that flat rate payments accounted for about 80% and FFS for about 20% (Crommelynck, Degraeve and Lefèbvre, 2013; Gerkens and Merkur, 2010).
- The system of reference amount (from 2002 to 2019): In order to address significant differences in medical practice between hospitals which cannot be explained medically, a system of reference amounts for standard interventions (such as a selection of frequent and less severe pathologies for which medical practice can be harmonised and standardised) was introduced. A significantly divergent consumption profile is compared to a national reference amount. At the start, the system only concerned a feedback report sent to the hospitals, then financial consequences were introduced in 2009. The amount to be refunded retrospectively by hospitals is based on the difference between real expenditures and median reference expenditures (Van de Voorde et al., 2014). This recuperation system is only applied for a selection of All Patient Refined Diagnosis-Related Groups, severity levels of the disorder (minor and moderate), and services groups (clinical biology, medical imaging and other technical activities) (Van de Voorde et al., 2014).
- The hospital budget for pharmaceuticals (since 2006): Most pharmaceuticals are integrated into a prospective budget for 75% of their value. The remaining 25% is still reimbursed per product. Each hospital's pharmaceutical budget is calculated based on its case mix and the national average cost per All Patients Refined Diagnosis Related Groups, taking into account the severity of illness. These average costs are established annually for all NIHDI-reimbursed hospital stays of the last available year (generally 3 years earlier). It only concerns inpatient pharmaceuticals in acute care hospitals. Furthermore, it does not include all pharmaceuticals. Exclusions

BOX 3.8 The budget of financial means

A closed-ended budget

The national hospital budget covering non-medical activities is composed of three parts: (A) capital and investment costs, transferred to the Federated entities since the 6th State Reform (except for the short-term credit charges A2), (B) operational costs, and (C) some corrections (positive or negative) of budgets for past financial years. Each part is further divided into subparts. Common operational costs (administration, maintenance, laundry, etc., are B1) and clinical operational costs (nursing and care personnel and medical equipment, are B2) are the two major parts of the budget, with a respective share of 23.6% and 42.9% in 2019.

It is a close-ended national budget fixed annually (€ 6 251 249 619 for general hospitals in July 2019) and allocated to hospitals according to a large set of criteria and parameters. Each subpart has its own method and allocation key (see Crommelynck, Degraeve and Lefèbvre (2013) for details). The allocation of the main subpart, i.e. clinical operational costs (B2), is based on the so-called justified activities, which focus on pathology-weighted length of stay.

Payment to hospitals

Since 2002, the payment of the individual hospital budget consists of:

- a fixed part (theoretically 80% of the subparts B1 and B2 and 100% of all other parts), paid on the basis of monthly advances called provisional twelfths
- a variable part (theoretically for 20% of the subparts B1 and B2) paid according to the number of admissions, which is a hospital-specific fixed payment per admission (theoretically 10%), and the number of nursing days, which is a hospital-specific fixed payment per day (theoretically 10%).

concern highly expensive pharmaceuticals that are very relevant to medical practice, in terms of therapeutic and social value, and some specific pharmaceuticals such as orphan drugs.

- The P4P programme (since 2018): All general hospitals can participate voluntarily in a P4P programme granting them a specific budget based on the quality of the care they deliver. Quality is assessed by the authorities based on indicators regarding their structure, process and results (accreditation process, incidents notification, patient experience measurement, clinical processes and outcomes) (MoH, 2018i)).

- Lump sum payment for specific standard care during hospital stays (since 2019, replacing the system of reference amount). A lump sum payment is paid for hospital stays requiring a standard process of low-complexity care that varies little between patients (57 groups were defined). The lump sum is determined prospectively and currently only concerns fees for medical providers. In the coming years, other resources (such as medicines) will be integrated (BS-MB 26 July 2018) in the system.

3.7.2 *Paying health workers*

Delivery of health care in Belgium is mainly private. Physicians are self-employed, as are most dentists, pharmacists and physiotherapists. Most physicians, whether they are GPs or specialists, are paid on an FFS basis. Less than 1% of physicians with a clinical practice are salaried.

As specified in Section 3.3.3, fees for services provided by health professionals within compulsory health insurance are fixed collectively within the NIHDI by conventions and agreements between sickness funds and the representative organisations of health professionals. Specialists working in hospitals and office-based specialists have the same tariffs.

For pharmacists, a new remuneration system began in April 2010 with the objective of reinforcing the intellectual role of the pharmacist and partly disconnecting their remuneration from the pharmaceutical's price (see Table 3.4 and Section 5.6.3).

Nurses working in hospitals are salaried, whereas those providing home care are either self-employed or salaried. Different payment systems contribute to the financing of home nursing, most importantly lump sum payments and FFS. A per-diem lump sum system covers nursing interventions for patients with deficiencies in their activities of daily living, with the dependency level assessed using the Katz scale. At the same time, the FFS system covers technical nursing interventions. All technical nursing interventions, except hygienic care, require a doctor's prescription. In order to limit supply-induced care provision in the FFS financing, a maximum day-limit was fixed, which equals the smallest lump sum, namely, for the lowest level of dependency. Since 2003, there has been a growing trend

to only reimburse some nursing interventions if they are performed by a nurse with higher professional qualifications. For example, self-management education of patients with diabetes is only reimbursed if performed by a nurse specialised in diabetes care.

For salaried employees (for example, technical and administrative staff, social workers), their salaries and career evolution in the health sector are negotiated through a series of collective agreements. Salaries are indexed with respect to the cost of living and are fixed according to length of service as well as level and field of expertise.

Physical and human resources⁷

Chapter summary

- The hospital sector is changing such that mergers have led to larger hospitals that are spread over different hospital sites. The maximum number of acute hospital beds is fixed. There is also national planning for heavy medical equipment, some specialised services and care programmes.
- There has been a gradual decrease in the density of curative beds, which is expected to continue. In contrast, the capacity for day hospitalisation, and for geriatric and chronic care beds will need to increase to meet changing population needs. Since 2015, a hospital reform has focused on capacity planning, task alignment and concentration of expertise, as well as a change towards a more equitable and predictable funding.
- Since 2013, an eHealth plan has been focused on improving information exchange between health care providers and settings, including the digitalisation of medical records. Recent measures focus on electronic prescribing and patients' access to their personal health information.
- Access to specialisation for physicians is limited by a quota system, with overall quotas defining the maximum number of physicians

7 This chapter was written by Jolyce Bourgeois.

as well as minimum quotas for some specialties where a possible shortage has been identified.

- Since 2014, reform of the regulation of health care professionals is underway with the creation of new titles and a focus on a more flexible approach for professional competence (via an electronic portfolio). Measures to improve the attractiveness of the professions of GPs and nurses need strengthening because of expected shortages.

4.1 Physical resources

4.1.1 *Infrastructure, capital stock and investments*

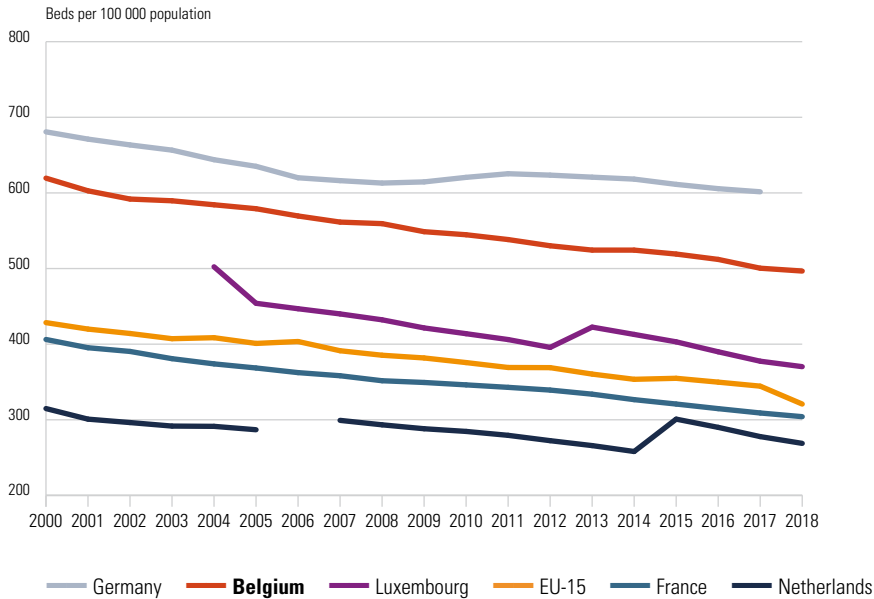
Infrastructure

The density of curative care beds decreased to 496.7 per 100 000 population in 2018. Compared with Belgium's bordering countries, only Germany has a higher bed density (Fig. 4.1). A projection study on the required hospital capacity for 2025 concluded that there will be a decreased need for traditional hospital beds (–5.4%) especially maternity beds and surgical beds, but indicated a higher need for day hospitalisation, geriatric beds and chronic care beds (Van de Voorde et al., 2017).

Current capital stock

Key data on acute care hospitals can be consulted at www.healthybelgium.be/en/key-data-in-healthcare. The number of hospitals decreased from 521 in 1980 to 174 in 2018 (December 2018 data), mainly as the result of mergers rather than an actual decrease in the number of sites. Most hospitals have multiple sites on diverse locations (288 hospital sites in December 2018) (see Box 4.1 and Fig. 4.2).

FIG. 4.1 Curative care beds in hospitals per 100 000 population in Belgium and selected countries, 2000–2018

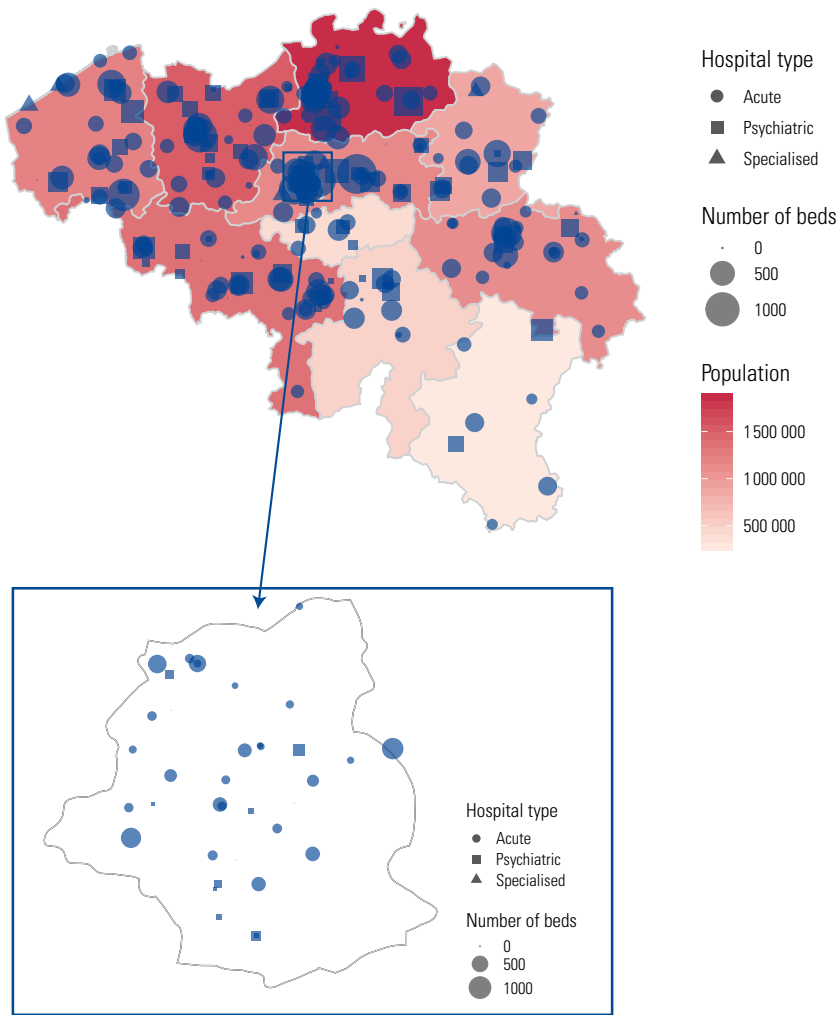


Source: Eurostat (2020).

Note: Definition: curative care beds in all hospitals, including general hospitals, mental health hospitals and other specialised hospitals. EU-15 average is author's own calculation.

Among the 174 hospitals, 105 were acute care hospitals, 9 were specialised or geriatric hospitals and 60 were psychiatric hospitals. Geriatric hospitals are dedicated solely to older patients who need specialised care, whereas acute care hospitals also have a geriatrics department. Specialised hospitals concentrate on one or more health care specialties such as cardiopulmonary diseases, locomotor diseases, neurological disorders. Beyond the psychiatric hospitals, there are also psychogeriatric and neuropsychiatry care units in some acute hospitals (for short-stay treatment) (MoH, 2018d; Van de Voorde et al., 2014).

FIG. 4.2 Geographical distribution of hospital sites in Belgium (December 2018)



Source: MoH (2019).

Note: Hospitals with zero beds concern day care or polyclinics only.

Acute hospitals include seven university hospitals. The university label does not necessarily mean that a university owns the hospital; however, at least three representatives of the university must be members of the university hospital’s governing body (BS-MB 10 August 2004).

BOX 4.1 Are health facilities appropriately distributed?

In 2018, the overall density of curative care beds was 5.0 beds per 1 000 inhabitants in the Flemish region, 4.8 in the Walloon region and 5.9 in the region of Brussels-Capital. The geographical distribution of hospital care facilities (Fig. 4.2) and the number of beds in each province are in line with population distribution (MoH, 2018k).

Moreover, the Belgian Hospital Act defines hospital collaboration types (Justel 7 November 2008), which also impact on geographical distribution:

Hospital group (*groepering van ziekenhuizen / le groupement d'hôpitaux*) can have a maximum distance of 25 km between the collaborating hospitals.

Hospital association is defined as two or more hospitals with joint care programmes, departments, functions or units. The association agreement contains a detailed description of the activities run by the association and to which catchment area (population) this applies.

Hospital merger (*fusie van ziekenhuizen / la fusion d'hôpitaux*) can include the integration of two or more hospitals (within a maximum distance of 35 km) under one single administrator with a single authorisation.

Since 2020, collaboration between general (basic) and specialised functions and university hospitals has been reinforced by the legal requirement that every hospital must be in a loco-regional hospital network, with task allocation within the network (see Chapter 6 on reforms) (BS-MB 28 March 2019).

Source: Information from the MoH.

Hospitals in Belgium are private non-profit-making (77.6%, 135/174 in 2018) or public (22.4%, 39/174 in 2018) institutions. Public hospitals are for the most part owned by a municipality, a province, a community or an inter-municipal association. Financing mechanisms as well as legislation are common to all hospitals, with the exception that, for public hospitals, internal management rules are more tightly defined and their deficits are covered, under certain conditions, by local authorities or inter-municipal associations (Justel 7 November 2008; BS-MB 5 August 1976). Medical centres labelled as private clinics are not considered hospitals according to legislation (see Section 5.4 on Specialised care).

In 2005, the average age of hospitals was 26 years, but since then a construction calendar with priorities has been set up and investments have been made.

Regulation of capital investment

National planning has been established at the Federal level, defining programming criteria such as number of beds per 100 000 inhabitants (see Section 2.7.2). Moreover, since 1982, the number of licensed beds for all general hospitals was frozen. Any hospital construction, extension or reconversion has to fit into this national planning (for example the creation of new beds must be compensated by closing beds elsewhere, except in the case of shortfall of that type of bed).

In April 2015, the Minister of Social Affairs and Public Health launched a project to reform the hospital landscape, with a focus on capacity planning according to not only population needs but also scientific evidence (BS-MB 28 August 2017).

Investment funding

Hospitals receive financing from the government for capital investments but can also use their own resources or private loans; however, details about how hospital investments are financed is not transparent (Van de Voorde et al., 2014). From 2012 to 2017, investments in general hospitals remained at a high level, but were concentrated within a limited number of institutions (€ 1.5 billion of gross investments) (Belfius 2018).

Due to the 6th State Reform, capital investment for hospital buildings, refurbishments, maintenance and heavy medical equipment are now the exclusive competence of the Federated entities (see Box 4.2) but decisions have to fit with the national planning (Van de Voorde et al., 2014). A protocol agreement between the Federal State and Federated entities regulating investments during this transitional period was agreed (MoH, 2007).

4.1.2 Medical equipment

This section focuses on heavy medical equipment and services. Regulation of medical devices and aids can be found in Section 2.7.5.

There are licensing criteria for the installation and running of heavy medical equipment (see Section 2.7.2) and since 2016, a national register has

BOX 4.2 Financing of hospital buildings/alterations by the Federated entities

In Flanders, there has been a new financing system since 2017 with a conservation fee for existing infrastructure, paid automatically based for example on the number of beds, operating rooms or radiotherapy units, and a strategic fee for building new hospitals and expanding existing capacity (BS-MB 6 September 2017).

In the French-speaking part of the Walloon region, since July 2019, hospitals are financed through a price per day of hospitalisation, paid by sickness funds, that is based on the needs for maintenance and replacement (without an approval procedure) and the needs in construction and equipment (with an approval procedure) (BS-MB 3 April 2017).

In the German-speaking community, from 1 January 2016, new buildings have been subsidised up to 80% (excluding certain costs) and equipment purchases up to 60%. In addition, hospitals receive a lump sum for maintenance, that is determined annually.

In Brussels, a new financing system is being considered. Awaiting the introduction of this new legislation, the existing agreement of cost sharing between Brussels and the Federal government remains: new construction and major renovation works are subsidised by Brussels up to 60% of the building cost, and the Federal government finances the remaining part by annual repayments. The total government funding is, however, limited to a maximum cost calculated on the basis of, for example, floor area, or the number of beds, operating rooms and radiotherapy units. Building maintenance, certain transformation works, sustainable development and equipment are covered by the Federal government (personal communication of O Gillis 2019).

been established (BS-MB 3 February 2016). An operating license granted by the Federal Agency for Nuclear Control is also required. Moreover, there is national planning to establish the maximum number of magnetic resonance imaging and positron emission tomography-scan devices (BS-MB 8 August 2014b; BS-MB 8 August 2014c; MoH, 2018b). Heavy medico-technical services such as medical imaging services with magnetic resonance imaging or positron emission tomography-scan, radiotherapy services, and dialysis centres are also subject to specific licensing criteria and national planning on number and distribution throughout the country (BS-MB 30 August 2000; Crommelynck, Degraeve and Lèfebvre, 2013).

The number of licensed heavy medical equipment is described in Table 4.1. The geographical distribution can be found at (<https://www.health.belgium.be/fr/publications-imagerie-medicale>).

TABLE 4.1 Items of functioning diagnostic imaging technologies, 2018

TECHNOLOGY	2018
Computed tomography (CT)	262
Magnetic resonance imaging (MRI)	121
Positron emission tomography (PET)	30 (1 PET, 29 PET-CTs, 0 PET-MRI)
Single-photon emission	134

Sources: Own calculation; MoH personal communication.

Capital costs are financed by Federated entities (see Section 4.1.1), operational costs of medico-technical services are covered by the hospital budget and related physician fees are financed by the compulsory health insurance. Only activity on licensed equipment is reimbursed. Nevertheless, an audit revealed that there were reimbursement requests for examinations on non-licensed equipment. Since 2016, reimbursement requests must report the identification number of a correctly licensed device as well as the identification number of the licensed service (BS-MB 30 April 2014). Further follow up of the number of examinations per equipment is expected (NIHDI, 2016a).

Compared with other European countries, Belgium has a higher use of medical imaging. However, some improvements on their appropriate use have been shown; for example, the use of medical imaging for the spine (computed tomography, X-ray, magnetic resonance imaging) has lowered by 2% per year (Devos et al., 2019). This may be a result of public health campaigns (since 2012) on the appropriate use of medical imaging in Belgium and other initiatives such as the setting up of the Belgian Medical Imaging Platform BELMIP (in 2010), a consultation platform between various authorities and stakeholders, including physicians. More recently, an inter-ministerial agreement on promoting appropriate practice, including the deployment of an evidence-based decision support system, an anti-fraud plan, greater accountability of prescribers and new methods of financing was concluded in 2018 (MoH, 2018b).

4.1.3 *Information technology and eHealth*

Since 2008, there has been an eHealth platform permitting the electronic exchange of secured data between health actors (BS-MB 13 October 2008). A national eHealth plan (2013–2018) was also launched, with the objectives to develop data exchanges between care providers, increase patient involvement and their knowledge related to eHealth, develop common terminology, simplify administrative procedures, improve effectiveness and create a transparent structure of governance with all involved actors (MoH, 2013). The new 2019–2021 eHealth plan will reinforce ongoing projects and strengthen coordination in eHealth initiatives (MoH, 2019b).

In 2018, most physicians had an internet connection and were encouraged to digitise their medical information in electronic health records (EHR), to upload a standardised medical summary (the SumEHR) in secure vaults, and to keep this summary up to date. This allows health care professionals to access patient health data and to avoid the duplication of data by repeated examinations and procedures. Meanwhile, there are specific efforts towards training and ICT support of health care professionals (www.eenlijn.be; www.e-santewallonie.be; www.ehealthacademy.be).

In hospitals, a recurrent accelerator budget is agreed (BS-MB 13 June 2018) for the faster implementation of EHRs. At the beginning of 2019, 15% of general hospitals had EHRs and 75% used ePrescription (MoH, 2019b).

GPs also receive an extra lump sum when they are using approved software and make sufficient use of e-services. In 2016, 65% of the global medical records was electronic (Devos et al., 2019). With a view to a mandatory use from 1 January 2020, 26% of licensed physicians and 40% of dentists were prescribing electronically in May 2019 (Vertommen, 2019).

Recent e-services being developed relate to insurance data (for consulting insurance status, for requesting reimbursement of medication, for invoicing via Mycarenet), to ePrescription of medicines and to use of real-time clinical guidelines during consultation (the Evidence Linker).

Since 2018, patients can access personal information about their health (both medical and administrative) and other general health-related information through an online portal (Personal Health Viewer: mijngezondheid.be; masante.belgique.be). There are also eHealth initiatives from the Federated entities.

4.2 Human resources

4.2.1 *Planning and registration of human resources*

Since 2014, a reform of the regulation of health care professionals has been in progress, based around three pillars: competent health care providers, integrated and multidisciplinary health care and patient-centred care.

Health care professionals are regulated and listed in a specific law (BS-MB 18 June 2015), which is regularly updated (for example, the profession of clinical psychologist was added in 2016). They are obliged to have their diploma formally registered and to obtain a visa, which is a license to practice. The visa gives permission to exercise the profession and enter the Belgian labour market. The visas are issued by the MoH and do not expire. Notwithstanding this, in cases of malpractice, a visa can be recalled under certain conditions. A recent law on quality practice in health care, which will come into force from July 2021, creates a framework for monitoring the competences of a health care professional in a more flexible way (via an electronic portfolio) and not solely on a visa (BS-MB 14 May 2019b).

Some individual health care professionals may carry particular professional titles or refer to particular professional qualifications (for example, a title can be paediatrician and the special qualification can be competence in neonatology). To obtain these titles or qualifications, they must meet a number of criteria (such as postgraduate training or internships) before being recognised (*erkenning/agrément*) by the Minister of their community. For every professional title, specific criteria apply, and a special commission is set up that grants or refuses the title (BS-MB 27 May 2014). For some professions, the professional title is limited in time (which is the case for hospital pharmacists) and re-submitting an application is necessary (BS-MB 3 December 2012).

In addition to the diploma, visa and recognition of the professional title, physicians and pharmacists must be recorded in the register of the Order of Physicians or Order of Pharmacists. The Order, regulated by law, was established to safeguard the non-commercial character of the profession and was ordered to draw up a code of ethics to establish the general principles and rules that are indispensable for the exercise of the profession. The Order investigates illegal and unethical practices under its strict Code of Ethics and has the right to impose penalties and strike physicians off the register if necessary (BS-MB 14 November 1967).

An important administrative step is for health professionals to obtain approval by the NIHDI; this allows the reimbursement of their medical acts by the compulsory health insurance (namely, they obtain an NIHDI number). This individual NIHDI number is required for GPs, medical specialists, pharmacists, midwives, home nurses, physiotherapists and dentists, but is not required for insurance doctors, occupational physicians, nurses working in hospitals and residential institutions, or pharmacists working for pharmaceutical companies. Moreover, for physicians and dentists, access is limited (see Box 4.3).

In line with the European legislation (European Council. 2005), individuals with a diploma from the 28 EU Member States or from Switzerland, Liechtenstein, Iceland and Norway can automatically apply for a license. Equivalence of the diploma must be checked for others.

For people with a non-EU diploma as well as for non-EU people wishing to specialise (postgraduate training) in Belgium, there has been a stricter procedure since May 2019 and each individual application will be investigated. This new measure was put in place to help with human resource planning in light of the quota system that considers only Belgian MD diplomas (see Box 4.3) (BS-MB 14 May 2019a; MoH, 2018c).

4.2.2 *Trends in the health workforce*

The Planning Commission of medical supply of the MoH publishes annual statistics on licensed health care professionals (STATAN reports) (MoH, 2017d) and more detailed trend analysis for some professions in the so-called PlanCAD reports.

Physicians

Different definitions are used to calculate the number of physicians (see Box 4.4).

The overall number of practising physicians increased from 28 999 (283 per 100 000 population) in 2000 to 35 762 in 2018 (313 per 100 000 population), which is below the EU-15 average (see Figs 4.3 and 4.4). It is nevertheless important to note that the definition of practising physicians varies across countries.

BOX 4.3 The Belgian quota system

In 1997, the Federal government decided on a system of overall quotas (*contingentement des médecins/contingentering van de artsen*) for access to specialisation to limit the number of physicians that may practice under the compulsory health insurance system (BS-MB 5 September 1997a). Quotas are revised regularly and appear in a Royal Decree. Quotas are based on advice from the Planning Commission of medical supply, on the basis of projection scenarios and stakeholder consultation. They also provide advice on sub-quotas per specialism (BS-MB 29 August 1996). Sub-quotas are managed by the Federated entities, which are also currently creating specific planning commissions to manage these.

Next to the overall quota, there are also minimum quotas for some specialisations for which a shortage is expected (such as generalists, child and youth psychiatrists, acute medicine, emergency medicine and geriatrics) (Article 4; BS-MB 18 June 2008). Some specific specialisations, such as data management, forensic medicine and occupational medicine, and doctors recruited by the Ministry of Defence, fall outside the quota because these are not financed through compulsory health insurance.

The restriction mechanism is applied immediately after basic training and limits the number of trainees that can access specialisation. The overall quota is set up for Belgium and stratified by community. The quotas are known 6 years in advance so that the candidates know them before they start their studies. For the year 2024, the overall quota is set at 1445 physicians: 859 for the Flemish community and 586 for the French community (BS-MB 18 June 2008).

In order to handle the quota, the communities¹, which are in charge of education policy, have had to take measures to limit the number of medical students so as to fit the number of trainees who will be eventually be allowed to further specialise as a GP or specialist. Therefore, different measures were established. In the Flemish community, an inter-university organised admission test has been introduced at the beginning of basic training. To comply with the Flemish quota, students have to pass the test and be ranked favourably. In the French community, different measures have been taken, including strict number, orientation and reorientation tests. The system is now similar to that of the Flemish community. Nevertheless, because a surplus is still observed, extra correcting measures are under discussion (BS-MB 29 March 2018).

For dentists, a similar system to that of the physicians was introduced in 1997. It is a restriction on access to postgraduate training and on obtaining the special professional titles for general dentistry, for periodontics and for orthodontics (BS-MB 5 September 1997b).

1 In the area of education, the German-speaking community is included in the French community.

BOX 4.4 Definitions of physicians

- Licensed-to-practice physicians: physicians that have obtained the license (visa) to practice in Belgium.
- Practising physicians: two definitions for Belgium:
 - OECD definition, also used by the NIHDI: Licensed-to-practice physicians that have performed more than one clinical service (consultations, visits, technical acts, but not prescriptions) during a given year. Physicians still in postgraduate training are not included in Belgium (whereas in the standard OECD definition, they are included). Both salaried and self-employed physicians working in the health care system (covered by compulsory health insurance) are included. Foreign physicians practising in Belgium are also considered (OECD, 2018c). The NIHDI also calculates the number of practising physicians in FTE¹.
 - According to the PlanCAD definition (2019 version), used for planning human resources for health, physicians active in the health care sector (i.e. practising physicians) are: salaried physicians working at least 0.1 FTE and having at least one employer in the health care system or self-employed physicians with a minimum activity threshold of 5% of the median income of the group of physicians aged 45–54 years, defined per specialism. The number in FTE is also available in the PlanCAD report.
- Professionally active physicians: also includes physicians working outside the health care system covered by compulsory health insurance, such as in occupational medicine, in insurance companies, in child services (such as ONE and Kind en Gezin). The number of professionally active physicians is published in the PlanCAD report, also in FTE.
- Conventioned physicians (or practising physicians acceding to the agreement, see Section 3.3.4): The NIHDI also registers the number of conventioned physicians – those practising physicians who agree to work at the tariffs fixed in the national fee schedule (without asking for supplements in ambulatory care), also in FTE.

1 The method to calculate the number of FTE is described on the Belgium HSPA website: <https://www.healthybelgium.be/metadata/hspa/a5.pdf>

In 2018, GPs represented 37% of practising physicians, compared with 63% of medical specialists. Because in this calculation, all physicians performing more than one clinical act are considered, results are also presented in full-time equivalents (FTE) (see Table 4.2, 2018 data). For Belgium, it is also interesting to report on practising physicians acceding to the agreement on NIHDI tariffs (so-called conventioned physicians).

TABLE 4.2 Number of practising physicians by categories, in FTE and acceding to the agreement (and density per 1 000 population), 2018

	PRACTISING PHYSICIANS	PRACTISING PHYSICIANS IN FTE ^d	CONVENTIONED PRACTISING PHYSICIANS IN FTE
GPs ^a	13 178 (1.15)	9 289 (0.81)	8 071 (0.71)
Paediatricians	1 586 (0.14)	1 012 (0.09)	876 (0.08)
Gynaecologists and obstetricians	1 495 (0.13)	970 (0.08)	376 (0.03)
Psychiatrists	1 969 (0.17)	1 316 (0.12)	1 146 (0.10)
Medical group of specialists ^b	10 079 (0.88)	6 978 (0.61)	5 194 (0.45)
Surgical group of specialists ^c	6 933 (0.61)	4 868 (0.43)	3 328 (0.29)

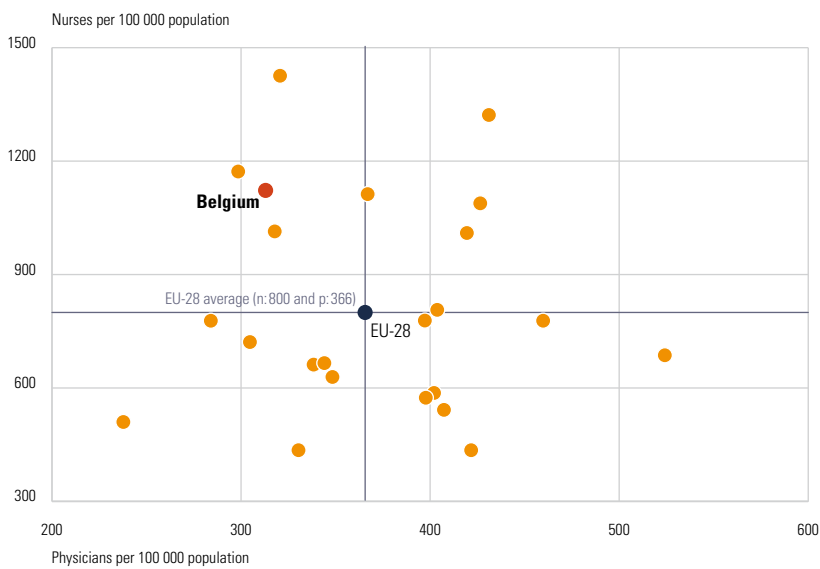
Sources: OECD (2019a) and personal communication of P. Meeus (NIHDI).

Notes: ^a GPs working in community health centres (*wijkgezondheidscentra/maisons médicales*) are included in the calculation; ^b Medical group specialists are physicians who specialise in the diagnosis and non-surgical treatment of physical disorders and diseases (OECD definition); ^c Surgical specialists are physicians who specialise in the use of surgical techniques to treat disorders and diseases, dental and oral and maxillofacial surgery are not included (OECD definition); ^d As calculated by the NIHDI (see <https://www.healthybelgium.be/metadatas/hspa/a5.pdf> for details).

It is also important to highlight that physicians in Belgium are getting older. In 2018, 44.3% of practising physicians were aged 55 years and over in comparison to 24.1% in 2000. The same is observed in other EU countries but Belgium has one of the highest shares of physicians aged 55 years and over (at around 44.3% in 2018 versus the EU-15 average of 33.0%) (OECD 2020).

This situation is especially worrying for GPs: in 2018, 52% were aged 55 years and over, which is linked to the fact that older GPs are working longer and not enough new graduates are becoming GPs to replace the retired workforce (Devos et al., 2019).

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



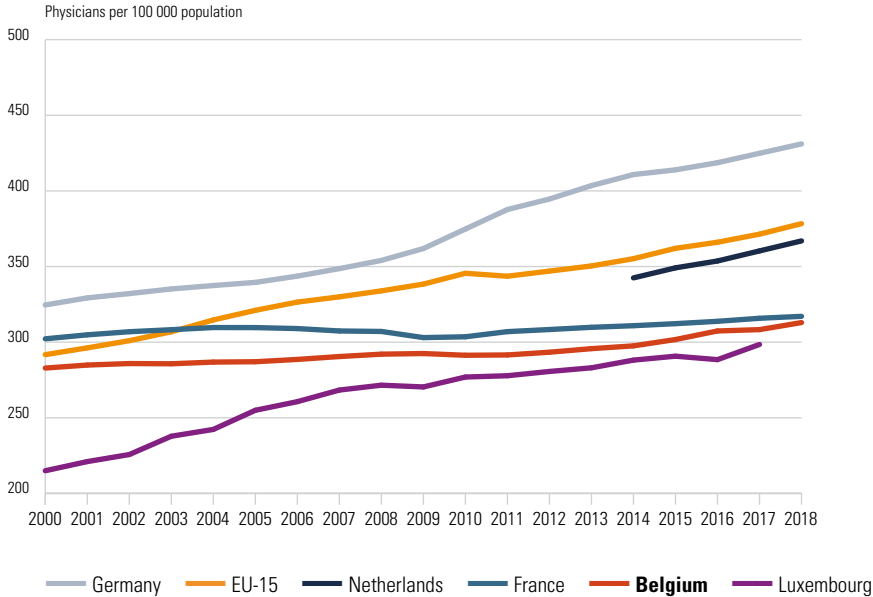
Source: Eurostat (2020).

Notes: Red dot represents Belgium. The number for Belgian nurses is from 2017 and that for physicians is from 2018. Midwives are not included; physician data were not available for Greece, Portugal and the Slovakia; and nurse data were not available for France, Ireland, Portugal and the Slovakia.

Dentists

The number of practising dentists, defined as having provided more than one clinical service during the year, has been stable since 2000 (8 516 in 2017, representing 0.75 per 1 000 population). Among these 8 516 practising dentists, 7 550 (87%) were general dentists, 180 were specialists in periodontics, 479 were specialists in orthodontics and 307 were specialists in stomatology (NIHDI, 2019k). In 2018, the title oral hygienist was legally recognised as a health profession (BS-MB 30 March 2018).

FIG. 4.4 Number of practising physicians per 100 000 population in Belgium and selected countries, 2000–2018



Sources: Eurostat (2020); (EU-15 is author's own calculation).

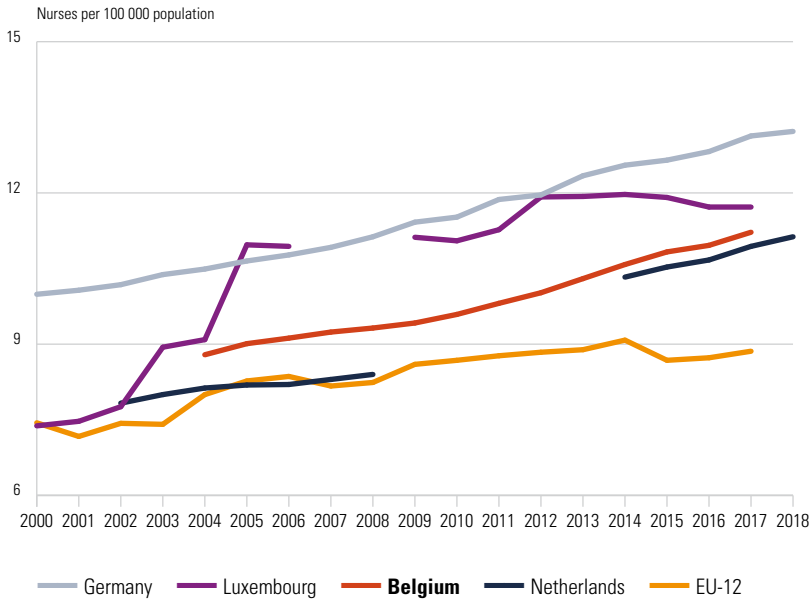
Nurses

The number of practising nurses has increased in Belgium (from 8.8 per 1 000 inhabitants in 2004 to 11.2 per 1 000 inhabitants in 2017). This increasing trend is also observed in other European countries. In Belgium the number of practising nurses per 1 000 inhabitants is above the European average of 8.9 per 1 000 inhabitants based on 12 EU countries (Fig. 4.5) (OECD data 2020).

In 2017, there were 204 256 nurses licensed to practice, 146 094 professionally active nurses on the Belgian labour market, and 127 681 practising nurses in the health care sector (so 62.5% of the nurses licensed to practice) (OECD data 2020). In 2017, 84% of practising nurses worked as employees, 8% as self-employed nurses, and 8% as both. Most employed practising nurses worked in the hospital sector (66%) (MoH, 2020a).

Recent initiatives such as the creation of advanced practice nurses are described in Box 4.6. More details on the nursing profession and on the available specialties can be found in Rafferty et al. (2019).

FIG. 4.5 Number of practising nurses per 1 000 population in Belgium and selected countries, 2000–2017



Source: OECD data 2020.

Notes: Data for France not available. EU-12: Average for 12 of the EU-15 countries for which data were available. Midwives are not included. For Belgium, 2004–2008 data and 2010–2015 data have been estimated by using the 2009 share of practising nurses among all professionally active nurses.

Other health care personnel

In Belgium in 2017, 13 436 midwives were licensed to practice, of which 58% were practising in the health care sector. Among professionally active midwives ($n = 9757$), most are employees (79.53%), 8.62% are self-employed and 11.85% have mixed status. Most self-employed midwives deliver care at home and not in hospital (prenatal and postnatal care) (MoH, 2020b) and this group is increasing over the recent years. Overall, the supply of midwives is considered high in relation to the needs of the Belgian population (65.35 practicing midwives per 1000 live births in 2017, compared to an EU average of 38.06 based on 11 of the EU-15 countries) (OECD, 2020a).

In 2016, the number of physiotherapists licensed to practice was 38 807, of which 59% were practising in the health care sector. Most of them are active as self-employed physiotherapists (57%), 23% as employees (in hospitals, revalidation centres, nursing homes) and 20% have mixed status (MoH, 2019e).

In 2018, there were 14 280 practising pharmacists (working in community and in hospital pharmacies), with a density of 1.25 pharmacists per 1 000 inhabitants, which shows that Belgium has a high density of pharmacists (compared with an EU average of 0.86 per 1 000 inhabitants based on 10 of the EU-15 countries) (for more details see Section 5.6 Pharmaceutical care) (OECD, 2020a).

Additional statistics on other health care professionals can be found in the STATAN reports of the MoH (<https://organesdeconcertation.sante.belgique.be/fr/documents/hwf-statan-2019>) and on the website of the NIHDI (<https://www.inami.fgov.be/fr/statistiques/soinsdesante/2018/Pages/default.aspx>).

More details on health workers distribution can be found in Box 4.5.

4.2.3 Professional mobility of health workers

Table 4.3 shows that the proportion of foreign-trained physicians in Belgium is increasing, from 9.4% in 2012 to 12% in 2017, but is still below the average of 13.9% in 2017 (based on 10 European countries). This includes licensed physicians, which does not imply that they are practising in the Belgian health care system. In 2017, half of all foreign-trained physicians came from France (18%), Romania (17%) and the Netherlands (16%) (OECD, 2019a). In 2019, a new law installed a quota for non-EU foreign-trained physicians (see Section 4.2.1 Planning and registration of human resources).

Among all nurses licensed to practice in Belgium, the share of foreign-trained nurses has been increasing over time (from 0.5% in 2000 to 3.5% in 2017) and is in line with the EU average. Concerning nationality, 13% of practicing nurses in the French community have foreign nationality, mostly from France (6.6%), compared with 2% in the Flemish community (MoH, 2019d).

BOX 4.5 Are health workers appropriately distributed?

- In Belgium, physicians can freely choose their practice location. This can result in geographical imbalances in physician density. There is nevertheless no huge variation between regions – the number of practising physicians is slightly lower in the Flemish region than in the Walloon region or the region of Brussels-Capital, 2.9, 3.2 and 3.8 per 1 000, respectively (in 2016, based on physician's home and not on the place of practice). Some more rural provinces such as Luxembourg, Limburg, West Flanders, have around 2.5 physicians per 1 000 inhabitants, whereas more urban areas such as Brussels and in the immediate vicinity Flemish Brabant and Walloon Brabant the ratios are 4 and 5, respectively (Devos et al., 2019).
- The risk of shortage is nevertheless present for some specialties (GPs, child and youth psychiatrists, acute medicine, emergency medicine and geriatrics), whereas some specialties are over-represented. A possible driver for this imbalance occurs because more intellectual roles are less lucrative than specific technical roles and are consequently less popular (Van de Voorde et al., 2014).
- In the case of GPs, proximity to the population is necessary to guarantee accessibility. A specific analysis in Brussels, taking into account the place of practice, stated that there were 1.23 GPs per 1 000 inhabitants in 2017 (including GPs in training) (Missinne et al., 2018). However, some localities experience a low GP count. To improve the attractiveness of the GP profession, advantages such as interest-free loans, an installation fee (since 2006), and extra budget for administrative help and a medical secretary were installed (since 2008) throughout the country (Impulso fund; see also Section 5.3).
- The density of practising nurses varies between 6.5 and 14.7 per 1 000 inhabitants depending on the province (based on place of employment). For example, the province of Luxembourg, along the border with Luxembourg (which has more attractive salaries), is struggling with a larger shortage of nurses than in others provinces. Some regions have a higher ratio of nurses, such as Brussels, which has a high concentration of patients with higher care needs (2016 data; MoH, 2019a, 2019d).
- Concerning nurses working in hospitals, a high patient to nurse ratio is observed – 9.4 in 2019 (although a ratio of more than eight is considered unsafe for patients) (Van den Heede et al., 2019).

TABLE 4.3 Number of domestically trained physicians and foreign-trained physicians (2012–2017)

	2012	2013	2014	2015	2016	2017
Total number of physicians licensed to practise	55 986	57 204	58 567	60 056	61 718	63 381
Domestically trained physicians	50 745	51 517	52 370	53 314	54 515	55 775
Foreign-trained physicians	5 241	5 687	6 197	6 742	7 203	7 606
% of foreign-trained physicians	9.4%	9.9%	10.6%	11.2%	11.7%	12.0%

Source: Devos et al. (2019).

TABLE 4.4 Number of domestically trained nurses and foreign-trained nurses (2012–2017)

	2012	2013	2014	2015	2016	2017
Total number of nurses licensed to practise	173 960	179 478	185 181	191 713	198 031	204 191
Domestically trained nurses	170 149	174 754	179 637	185 473	191 221	196 943
Foreign-trained nurses	3 811	4 724	5 544	6 240	6 810	7 248
% of foreign-trained nurses	2.2%	2.6%	3.0%	3.3%	3.4%	3.5%

Source: Devos et al. (2019).

4.2.4 Training of health personnel

The organisation of education is a competency for the Federated entities and therefore some training aspects may differ between communities. Most educational standards comply with EU Directive 2005/36/EC on the recognition of professional qualifications on the basis of harmonised minimum training requirements (see Box 4.6) (European Council, 2005; BS-MB 18 June 2015). To improve the quality of care, continuing training is also encouraged (see Section 2.7.2).

BOX 4.6 Education of health professionals

Physicians

For physicians in Belgium, basic medical training (MD degree) consists of a 6-year university course (bachelor's and master's degrees of 3 years each)¹. Belgium has seven medical schools with a complete training scheme for physicians. The universities had to take measures to limit the number of medical students so as to fit the number of trainees who will eventually be allowed to further specialise as a GP or specialist (see Box 4.3 on the quota system). After 6 years of basic training, students receive their physician's diploma, and a license to practice (*visa*) delivered by the Federal Ministry of Public Health.

To obtain recognition for a particular professional title (such as GP, cardiologist, oncologist), further training is necessary: 3 years for GPs (with the possibility of beginning training in the last year of basic medical training) and between 3 and 7 years for other specialties. Such access to specialisation is constrained by the system of quota (Box 4.3) and by the small number of training posts available at teaching hospitals.

Dentists

Before future dentists can start their 5-year university course (3-year bachelor's and 2-year master's degrees), applicants have to pass an admission test in the Flemish community. To obtain recognition for a professional title, an extra year of internship is necessary for general dentistry, 3 years for periodontics and 4 years for orthodontics.

Pharmacists

Community pharmacists follow a 5-year university course including practical internship (3-year bachelor's and 2-year master's degrees). To be recognised as an industrial pharmacist, an extra master's year and at least 6 months internship in a European pharmaceutical production unit are needed, and to be recognised as a hospital pharmacist, a complementary master's and a certificate of 3 years of internship in a hospital pharmacy are required. Access to the hospital pharmacy training is limited by a selection test, taking into account study results during previous years (in Flanders and in the French community).

Nurses

In Belgium, there are two educational pathways for nurses: bachelor-level and diploma-level (previously called A1 and A2², respectively). Nursing assistant

1 The master's degree in medicine was revised from 4 years to 3 years in 2014–2015. This means that in the academic year 2017–2018, the last cohort of students of the 4-year master's degree in medicine graduated, as did the first cohort of students of the 3-year master's degree (a double cohort).

2 *HBO-5 verpleegkundigen* in Flanders and *infirmiers brevetées* in the French-speaking community.

is a lower educational level of the nursing profession (obtained after 2 years of professional nursing education); this qualification level is fading out as the training was interrupted in 1995. In all communities, the diploma degree (A2) programme was, until recently, organised through a 3-year vocational training programme following secondary-level education. However, in the French community it was decided to extend the education (with an additional 6 months) to comply with the EU Directive. In the Flemish community, such a reform to comply with the EU directive has not yet taken place. The bachelor-level education is organised by Higher Education Institutions linked to universities (called university colleges). To comply with EU Directive 2013/55/EU, the 3-year programme was reformed to a 4-year programme, covering the required 4 600 hours including 2 300 hours of practical training (from the academic year 2016/17 onwards). Diploma-level nurses can follow a bridging programme to become a bachelor-level nurse.

The percentage of nursing graduates holding a bachelor's degree in 2017 was 55.7% (Devos et al., 2019).

Nurses can undertake specialised and complementary training for obtaining a particular professional qualification. In May 2019, a new law introduced the designation of advanced practice nurses (master's level) (BS-MB 14 May 2019a). The specific job description including the educational requirements have yet to be defined.

4.2.5 *Physicians' career paths*

In the hospital setting, most physicians are self-employed. Physicians in university hospitals and in some public hospitals are salaried. To be authorised as a hospital physician, the hospital legislation provides in article 145 of the Hospital Act the need to conclude a written agreement of rights and obligations between the hospital and the physician (these often include agreements on out-of-office hours) (Justel 7 November 2008). In most hospitals, physicians form an association with other self-employed physicians of a similar discipline in the same hospital. They pool their resources within this association and have individual financial agreements with the hospital board. Therefore, it is not that common for these physicians, who engage in a formal association with a contract and often a non-competition clause, to change their work environment.

In a hospital, the medical activity is hierarchically structured according to three levels (Article 18–22, Chapter 3 of the Hospital Act; Justel 7 November 2008). At the top, there is the chief medical director, responsible for all

aspects of patient care, especially for medical care, paramedical and nursing care and medication, as well as for the promotion and evaluation of the quality of care provided. The chief medical director is part of the hospital board and works closely with the hospital manager. For this function, a remuneration from the government is provided in the hospital budget. Next, there are the department heads, who are responsible for coordination and organisation of the services, functions or care programmes entrusted to them. The chief medical director, as well as the heads of departments, are chosen by the board of directors after consulting the medical council. Then, there is the medical staff, which is formed of all hospital physicians.

The Hospital Act also specifies the installation of a medical council, consisting of physicians elected by the other hospital physicians. The medical council has an advisory function with a focus on promoting quality and cooperation (Article 132–142 of the Hospital Act; Justel 7 November 2008).

In ambulatory care settings, almost all physicians are self-employed. Group practices joining together two or more physicians are becoming more popular (in 2011, 30% of GPs in FTE worked in a group practice and in 2016, this percentage increased to 40%, NIHDI data, personal communication of P. Meeus). The vast majority of young GPs prefer to work in a group practice after their training (Missinne et al., 2018). There is also a small number of salaried GPs who work in community health centres with a capitation-based remuneration system, in homes for older people and in nursing homes.

4.2.6 *Other health workers' career paths*

In hospitals, nursing activity is structured as follows: the director of nursing is responsible for the proper functioning and coordination of the nursing department, but often also of paramedical workers and psychologists. They are selected by the hospital board on the advice of the hospital manager and the chief medical director. For several departments, a head of nursing is appointed, and every nursing unit also has a head nurse. The nursing staff in hospitals includes hospital nurses, nurse assistants and carers (Article 23 Chapter 4 of the Hospital Act) (Justel 7 November 2008).

Concerning training and qualifications, making the change from a diploma-level nurse to a bachelor-level nurse is encouraged and special educational packages are available. Particular professional qualifications and professional titles were financially stimulated, with an annual lump

sum until 2018, but since then the system was stopped for newly hired nurses and a project to integrate this annual lump sum into an adapted wage scale with increased remuneration for the particular professional titles and professional qualifications (scale of the Institute for Functions Classification) is under discussion. Moreover, in 2019, the profession of advanced practice nurse received legal status, which will introduce new career opportunities for those who want to combine science and clinical practice (Chambre des représentants de Belgique, 2019). Nevertheless, the job description and fees are still undefined.

Efforts have been made to increase the attractiveness of the nursing profession; for example, with the attractiveness plan in 2011 and extra measures in 2013 (Gerken and Merkur, 2010). The communities have also initiated action plans to enhance the attractiveness of some health professions (Belche et al., 2019). Nevertheless, recruiting and retaining nursing professionals remains a challenge, and difficulties persist.

Provision of services⁸

Chapter summary

- Health promotion and disease prevention are the responsibility of Federated entities but the Inter-ministerial Conferences on Public Health also plays an important role in coordination.
- The provision of care is based on the principles of freedom of choice and direct access. GPs do not have a gate-keeping role but measures have been taken to strengthen their role as the preferred entry point for health services. Initiatives have been developed to strengthen primary care and improve the continuity of care (for example, care pathways for some patients with chronic diseases).
- Other initiatives focused on the quality of care include an accreditation system based on continuing education, peer review, e-learning and a minimum activity level of consultations, as well as the development of feedback, guidelines and a national evidence-based practice plan.
- Specialised care and emergency care are also based on the principles of direct access and freedom of choice. As in neighbouring countries, the average length of inpatient stays has decreased for many reasons, including incentives to increase efficiency and expand day care. A redesign of the hospital landscape, including

⁸ This chapter was written by Jolyce Bourgeois, Charline Maertens de Noordhout, Anja Desomer, Petronille Bogaert, and Sophie Gerkens.

emergency care, is underway with initiatives focused on care concentration and integration of care between settings.

- For pharmaceuticals, different measures have been taken to sustain innovation, strengthen the role of community pharmacists, improve accessibility, quality and adequacy, and promote cost-effective use.
- The main focus for mental health, palliative care, long-term care and rehabilitation care concerns the deinstitutionalisation of patients and the development of home-based and community-based care so that patients can remain at home for as long as possible. Although there is still some way to go, the creation of the legal status for informal carers and the potential forthcoming establishment of their social rights, is a major step forward in the recognition of carers.

5.1 Public health

The communities are responsible for health promotion and disease prevention. They are also responsible for the funds related to the prevention of substance abuse, vaccination, screening campaigns, nutrition plans, initiatives regarding oral health in schools and tobacco cessation programmes. Nevertheless, a number of decisions directly related to public health are taken by the Federal Government. For instance, the level of taxes on tobacco and alcohol, which are intended to reduce consumption, are determined by the Federal authorities. The Inter-ministerial Conference on Public Health plays an important role in the coordination of prevention policies (see Box 5.1). Recent reform measures in the field of prevention are described in Box 5.2 and in Section 6.1.

5.1.1 *The Flemish community*

Care and Health (*Zorg en Gezondheid*) is the Flemish agency regulating and supporting public health initiatives. The policy framework for the organisation of preventive health care in the Flemish community was first described in the decree of 21 November 2003 (Flemish Agency for Care and Health, 2019b).

BOX 5.1 Inter-ministerial Conference on Public Health: prevention

In 2016, the Federal State and Federated entities made an agreement on a specific set of prevention policies: nutrition, tobacco, alcohol and illegal drugs, psychotropic drugs, gambling addiction, sexual health, oral health, suicide prevention, vaccinations, infection diseases (tuberculosis, hepatitis C), newborn screening, cervical cancer screening, breast cancer screening and colorectal cancer screening (MoH, 2016h). Two important cross-cutting principles are health in all policies and health equity.

Targets on the following topics have been developed: healthier living, suicide prevention, cancer screening and vaccination (Flemish Agency for Care and Health, 2019d). Additionally, other priorities exist and are defined during health conferences (Flemish Agency for Care and Health, 2019a). The health conferences consist of representatives of the Flemish government, experts, target groups and local health networks (Logos). Fifteen Logos lead the health promotion work at district level. They are composed of existing local initiatives and structures, and are meant to include all health and welfare workers (Logo, 2019). For support with health promotional activities, the Flemish government appeals to the Flemish Institute for Healthy Living (before 2017 known as the Flemish Institute of Health Promotion and Sickness Prevention). With advice, ready-made packages and training, the institute supports professionals and their organisations in the health sector, schools, workplaces and local governments. It focuses on mental health, healthy eating, physical activity and reducing tobacco use, and it supports the Logos. The Flemish government organises four screening programmes in the Flemish community: detection of colorectal cancer, cervical cancer, breast cancer and neonatal anomalies (Bevolkingsonderzoek.be, 2019).

5.1.2 *The French community and the Walloon region*

In a political agreement following the 6th State Reform, the French-speaking parties decided to transfer most of the public health policy competences from the French community to the Walloon region and the French Community Commission (or COCOF). The Walloon Government decided to simplify the proceedings and create a single Walloon agency in 2016, the Agency

for Quality of Life (AVIQ). AVIQ is responsible for major policies related to well-being and health, support for older people, disability and family allowance (AVIQ, 2019c). The Walloon government has defined health objectives in the Walloon Plan for Prevention and for Health Promotion (2018–2030) (AVIQ, 2019d). These objectives relate to several themes:

- Diet and physical activity
- Prevention of substance abuse, and promotion of good mental health and overall well-being
- Chronic disease prevention
- Prevention of infectious diseases including vaccination policy
- Injury prevention and safety promotion.

The Walloon decree on prevention and on health promotion of 2 May 2019, introduced the following actors:

- Centres of expertise in health promotion that, among other things, provide scientific information useful for the implementation of the plan
- Local centres for health promotion (*Centre Local de Promotion de la Santé*) that, in particular, accompany the actors of their territory in the development of health promotion in their projects
- Operationalisation centres in preventive medicine, which pilot programmes of preventive medicine
- Other operators who implement thematic actions contributing to the achievement of the health objectives of the plan.

In the Walloon region, breast cancer and colorectal cancer screening are organised by the Community Reference Centre for Cancer Screening (*Centre Communautaire de Référence*).

5.1.3 The Brussels-Capital region

As a result of the 6th State Reform, Iriscare was created in 2017. It is competent for providing assistance to older people and people with disabilities, homes for older people and nursing homes, reception centres, home-based care, wheelchairs, primary care, etc. in Brussels (Iriscare, 2019). Additionally, the Flemish Community Commission (VGC), the French Community

Commission (COCOF) and the Joint Community Commission (COCOM) have competencies in well-being and health in the region of Brussels–Capital (Be.Brussels, 2018a). There is also a Brussels Health Plan – Growing up and living in good health (COCOM, 2019a) and a strategic plan for health promotion 2018–2022 of the Brussels French-speaking government (COCOF, 2019). In Brussels, screening programmes are organised for the detection of colorectal cancer (pilot phase) and breast cancer.

5.1.4 The German-speaking community

In the German-speaking community, expert opinions from the Council for Health Promotion (*Beirat für Gesundheitsförderung*) were used by the Government to define the global concept of health promotion, consisting of a structural level (improving infrastructure, health promotion networks and coordination between health care organisations) and an individual level (age-specific information and self-responsibility) (Ostbelgien, 2019a). The focus is on the following topics: health literacy, nutrition, physical activity, mental health, substance abuse, vaccinations, environment and health and dental health. In addition, over the next couple of years, health promotion will be focused on the socially disadvantaged population (Ostbelgien, 2019b). Also in the German-speaking community, a public service institution was created: the Agency for Autonomous Life (*Dienststelle für ein Selbstbestimmtes Leben*). The agency informs, advises and assists citizens in a dependency situation due to age, or physical or mental disability (see (Ostbelgien, 2019c) for details). The German-speaking community collaborates with the Community Reference Centre for Cancer Screening for breast cancer and colorectal cancer screening.

5.1.5 Family and child health care

Three different institutions (*Kind en Gezin/Opgroeien*⁹ for the Flemish community, *Office de la Naissance et de l'Enfance* for the French community and *Kind und Familie/Kaleido* for the German-speaking community) are in

⁹ In January 2020, a merger of *Opgroeien* combined the forces of Child and Family, Youth Welfare and part of the Flemish Agency for Persons with Disabilities. *Opgroeien* will take shape from January 2020.

BOX 5.2 Are public health interventions making a difference?**Alcohol**

A national campaign against drink-driving (BOB-campaign) was set up in 1995 by the Vias Institute (VIAS, 2020). Because of its huge success, the BOB-campaign has been renewed at the end of each year and has been implemented in other countries.

Advertisements for alcoholic products are restricted; however, the efficiency of the measures are uncertain because the control of advertising and marketing is under the Advertising Ethics Jury, which is composed of representatives from the private sector (self-regulation).

The main restrictions in place to protect minors from the negative effects of alcohol abuse include age limits (for example, hard liquor can only be sold to those over 18 years of age, while other alcoholic beverages, such as beer and wine, can only be sold to those over 16 years old). It is however still relatively easy for minors to buy hard liquor because checks are limited and the definition of hard liquor in the law is ambiguous, hampering implementation.

Tobacco

Prohibition of tobacco use includes the ban on smoking in public places, restaurants and bars, schools, workplaces and in vehicles with minors. Since 2019, the sale of tobacco products has been restricted to adults (over 18 years). Advertising tobacco products (and sponsorship by these companies) is prohibited with some exceptions, for example, labelling on posters in shops selling tobacco. From 2020, plain tobacco packaging is mandatory. All tobacco-related products need to adhere to tobacco regulations including electronic cigarettes. Tobacco regulation seems accepted by the population, which increases its efficiency; however, there are still some caveats: advertising is not banned everywhere, the ban on sale to minors could be better controlled and the ban on smoking in schools could be better applied.

Obesity

Several initiatives are in place to promote healthy eating and exercise in schools. These include promoting the consumption of healthy food and drinks (eating fruit, healthy drinks and healthy snacks) and the integration of a nutrition and physical activity policy.

In 2018, the Nutri-Score was introduced on food packages in Belgium. The Nutri-Score is defined by five letters, ranging from A (best score) to E (worst score), and five colours, with green and red as the two extremes similar to traffic lights. It was shown to effectively influence buying behaviour in a large-scale study in France. Critics of the Nutri-Score, however, point out that the label does not contain sufficient information on nutritional aspects that can harm health, such as the presence of added substances, pesticides and antibiotics. This is nevertheless monitored by the Federal Agency for the Safety of the Food Chain, which ensures the safety of the food chain and the quality of food (FASFC, 2020).

charge of the organisation of preventive medical, psychosocial and parenting/ pedagogical services for parents-to-be and families with young children. In addition to this, they provide consultations for children up to 6 years old as well as childhood immunisations.

The vaccination coverage has been lower in Wallonia and Brussels than in Flanders for a long time, but the latest figures show that this gap is narrowing (in Wallonia, no figure for Brussels), except concerning the second dose of measles vaccination (see (Devos et al., 2019) for details).

5.1.6 *Notification and surveillance of disease outbreaks*

A doctor or head of clinical laboratory is obliged to report all infectious diseases subject to a notification to Care and Health in Flanders (Flemish Agency for Care and Health, 2019c), COCOM in Brussels-Capital region (COCOM, 2019b), AVIQ in Wallonia (AVIQ, 2019b), and to the ministry of health in the German-speaking community. The list of notifiable diseases differs between the regions – see Gerkens and Merkur (2010) for additional details. The prevention of foodborne disease outbreaks is the concern of the Federal Agency for the Safety of the Food Chain (FASFC, 2020).

Sciensano has a dual task with regards to disease outbreaks and routine surveillance. It detects and rapidly identifies pathogens that are present or (re-)emerging, along with their prevention and treatment, and develops effective tools for the collection of information, which are used to assess the scale and impact of infectious diseases on public health (Sciensano, 2020a, 2020c).

5.2 Patient pathways

The patient pathway is defined as the route a patient takes from their first contact with the health system to the completion of their treatment. In Belgium, patients have direct access to medical specialists (no gatekeeping) or can go directly to the emergency department of a hospital. There is therefore no single patient pathway; however, some national initiatives have been developed to improve primary care and the continuity of care between and within settings.

- In 2009, care pathways (*zorgtraject/trajet de soins*) for patients with chronic conditions, including diabetes and chronic renal insufficiency, were established to organise cooperation between patients, their GP, specialists and other health professionals. These care pathways were shown to be effective in improving the follow up of care processes and patient satisfaction, but due to a lack of information on the existence of these pathways for both the public and health professionals their use was not optimal (NIHDI, 2014a).
- In 2018, integrated care projects for the management of chronic patients were initiated such that stakeholders (including social care) are incentivised to set up innovative initiatives of care centred around patients across different care settings in their geographical area (see also Chapter 6) (MoH, 2018e).

Some care pathways are also developed by institutions developing guidelines. For example, a clinical pathway for the diagnosis and management of lower back pain and radicular pain, developed by the KCE in 2017 in collaboration with a multidisciplinary expert team (Jonckheer et al., 2017).

Initiatives have also been developed at the hospital level (for example, the Belgian Dutch Clinical Pathway Network, established to support hospitals in developing, implementing and evaluating clinical pathways; see Gerkens and Merkur (2010) for more details on clinical pathways in hospitals). The creation of reference centres for complex care, such as pancreatic cancer surgery, have developed formalised referral agreements and cooperation between hospitals (see Chapter 6).

5.3 Primary care

Primary care is defined as the first point of contact between an individual and a professional in the health care system. In this section, the focus is on physicians, nurses and pharmacists, though other professionals can also be involved. Out-of-hours primary care is described in Section 5.5.

Primary care is accessible without a referral and patients have the freedom to choose their health care provider, get a second opinion, or even consult multiple providers simultaneously. There is also direct access to specialist care (see Section 5.4.1).

The vast majority of physicians (GPs and specialists) are self-employed, as are most dentists, pharmacists and physiotherapists. They are mostly remunerated through FFS payment. In primary care, around two thirds of nurses are self-employed and one third are employees of an organisation for home nursing (MoH, 2019d). Nurses play a key role in providing services to people with chronic diseases or disabilities, such as wound and diabetes care, administering infusions or tube feeding. Pharmacists can also serve as a first point of contact, providing advice on medications, helping with over-the-counter products, and referring patients to physicians.

As shown in Fig. 5.1, the number of outpatient contacts with a GP or a medical specialist has been relatively stable and is in line with neighbouring countries (except for Germany and the Netherlands since 2014, where higher numbers are observed)¹⁰.

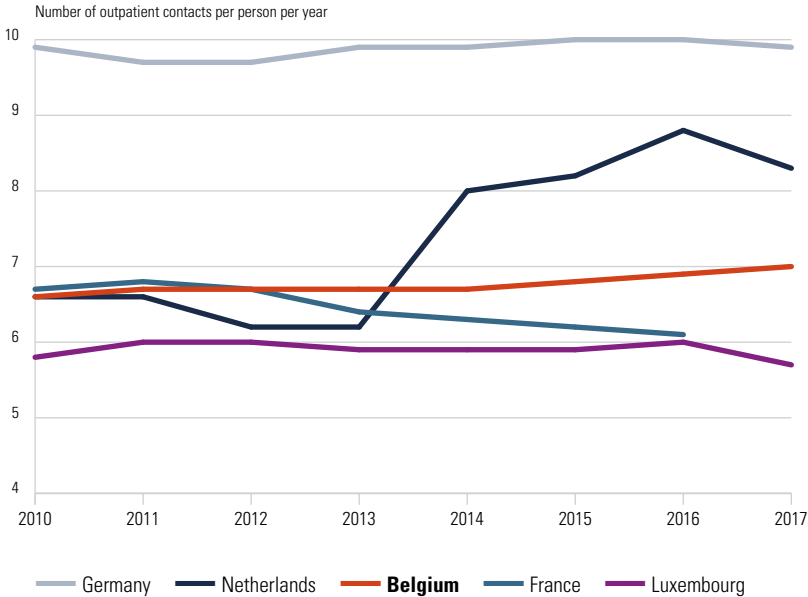
In 2017, 82% of the insured population had contact with a GP. The total number of GP encounters was around 5.5 contacts per person per year, which were mostly consultations in the GP's office. The proportion of home visits decreased from 29% of GP contacts in 2012 to 25% in 2016 (NIHDI data, personal communication of P. Meeus).

The strengths and weaknesses of primary care are described in Box 5.3.

Despite the importance attached to the principle of direct access and free choice of provider, measures have been taken to strengthen the position of the GP as the preferred entry point for health services (MoH, 2014), including the introduction of the Global Medical Record (GMR) in 2001 and increased reimbursement (see also Gerkens and Merkur, 2010). Patients who opt-in for a GMR allow a single GP to manage their medical information and have lower co-payments. The proportion of insured citizens with a GMR has increased from 32.1% in 2003 to 67.5% in 2016 (Devos et al., 2019). The electronic GMR was implemented in 2016. In 2016, nearly 68% of patients visited their preferred GP three quarters of the time over a 2-year period (Devos et al., 2019). There is also increased reimbursement to patients for the first specialist visit if referred by a GP and reduced co-payments if referred to the emergency department.

10 Comparison must nevertheless be done with caution because of different definitions of outpatient contacts between countries.

FIG. 5.1 Number of outpatient contacts (GP and specialists) in Belgium and neighbouring countries, 2010–2017



Source: OECD (2019a).

Most GPs work in solo practice, although group practices are gaining popularity among newly graduated GPs (Missinne et al., 2018). In 2011, 30% of FTE GPs worked in a group practice which increased to 40% by 2016 (NIHDI data, personal communication of P. Meeus). Some GPs also collaborate in a network (9% in 2016) i.e. they keep their own location but have regular contact and have agreements concerning, for example the sharing of the medical files. Community health centres (*wijkgezondheidscentra/maisons médicales*) with capitation based remuneration are also gaining popularity, with an increase from 53 in 2003 to 160 in 2016 (NIHDI data). Patients registered in these centres – 3.4% of the population in 2016, with a predominance in Brussels (12.6%) and Liege (7.3%) (IMA-AIM, 2019a) – do not pay user charges for their consultations but are obliged to consult at the centre with which they are registered.

Geographical accessibility of GPs needs to be reinforced in some localities, so-called priority zones¹¹. Since 2003, initiatives were taken to

11 In Flanders, priority zones are defined as having fewer than 90 GPs per 100 000 inhabitants, with 227 zones defined as a priority in 2019. In Brussels, 33 of 145 zones were defined as priority in 2017 and in Wallonia, 150 of 253 zones were defined as priority in 2019.

BOX 5.3 What are the strengths and weaknesses of primary care?

Direct access and free choice of health care professionals by the patient are important strengths of Belgian primary care. However, there are concerns about whether the availability of GPs will be sufficient to cope with an ageing population and increasing multimorbidity. Moreover, the mean age of practicing GPs is rising and there are not enough new GPs (see also Section 4.2 on Human resources).

The absence of a real gate-keeping role can lead to overconsumption and inefficient use of resources. Nevertheless, there are incentives to encourage patient loyalty to a GP and to consult their GP as a primary entry point. In addition, there are initiatives to enforce primary care professionals to work in a multidisciplinary way and to share relevant patient information (see Section 4.1.3 Information technology and eHealth).

enhance the attractiveness of the GP profession and stimulate cooperation between primary care professionals such as financial compensation to GPs to work in a priority zone, the financing of GP circles to organise out-of-hours services and enhance multidisciplinary collaboration in a geographical area, and the creation of Integrated Services for Home Care (*Geïntegreerde Diensten voor Thuisverzorging/Services Intégrés de Soins à Domicile*) (BS-MB 5 October 2002). Since the 6th State Reform, the Federated entities are responsible for the organisation of primary care – including the recognition and financing of GP circles and the financial compensations for GPs working in priority zones (BS-MB 5 October 2002; BS-MB 30 March 2012; Missinne et al., 2018; AVIQ, 2019a; Flemish Agency for Care and Health, 2019e). In Flanders, an ongoing reform will result in 60 primary care zones where integrated care is reinforced (Flemish Agency for Care and Health, 2015). In Brussels, initiatives and services are integrated into one platform, *Brusano*, providing support services and guidance to primary care and social care professionals (BS-MB 15 April 2019). Within the framework of the regional development concept (REK III, 2019–2024), the German-speaking community is also working on the support of primary care providers.

A large range of initiatives have been taken to improve the quality of primary care (NIHDI, 2017d), some selected examples include an accreditation system based on continuing education activities, peer-review sessions, e-learning and a minimum activity level of consultations (see Section 2.7.2), feedback reports for GPs (see Section 2.7.2), care pathways

for some chronic patients (see Section 5.2), the development of guidelines and of a national evidence-based practice plan (see Section 6.1). The evidence-based practice plan was launched in 2016 to structure and centralise a wide range of guideline initiatives (Vriesacker et al., 2017). It includes a platform (EBpracticenet – <https://www.ebpnet.be/>) with validated evidence-based guidelines, critical article reviews, patient brochures and other relevant information for providers. The NIHDI also publishes guidelines on specific drugs (statins), services (medical imaging and clinical biology) and people (poly-medication in older people) (NIHDI, 2015b).

5.4 Specialised care

Every citizen has access to medical specialists without a referral. In particular for gynaecology, ophthalmology, dermatology, paediatrics and otorhinolaryngology care, patients tend to go directly to the medical specialist instead of their GP.

5.4.1 *Specialised ambulatory care*

Medical specialists can work on an ambulatory basis in hospitals (public or private not-for-profit¹²), in private for-profit clinics (called extramural centres, see Box 5.4) and/or in a private practice.

In hospitals, medical specialists can hold their ambulatory consultations in the polyclinic, which is a space in the hospital separate from inpatients, and can combine this with consulting in their private practice or in extramural centres.

In ambulatory settings, medical specialists are paid on a FFS basis and patient co-payments are higher than for GP consultations. Some specialists did not agree or only partially agreed to the national official tariffs, indicating that they may charge extra-billings (see Section 3.3.4 for more details) (IMA-AIM, 2019a). There is no registered information on the amount of extra-billings charged to patients in ambulatory settings. In the case of hospitalisation, a recent study showed that the amount of extra-billings

12 To be considered as a hospital, the law stipulates that it can either be public or private not-for-profit. For-profit institutions are not considered as hospitals.

BOX 5.4 Private for-profit clinics

- There is neither a legal definition nor licensing for private for-profit clinics. However, Belgian legislation refers to the notion of the extramural environment to indicate the setting being outside and not linked to a hospital (Vinck et al., 2014; BS-MB 16 March 2009). Furthermore, there are no Belgian data on the number of private clinics, nor on their staff.
- These clinics are not considered hospitals because they do not comply with the strict licensing standards and criteria embedded in the Hospital Law (e.g. they often do not guarantee continuity of care themselves) (Vinck et al., 2014); nevertheless, physicians must follow the deontological rules and must guarantee the quality of care for their patients (the Patient Rights Act). The law of 22 April 2019 on the quality of practice in health care will reinforce the regulation of these clinics by providing regulations, such as on when using anaesthesia and on guarantying continuity for the patient (BS-MB 14 May 2019b).
- Most of the treatments in these clinics are not reimbursed (such as aesthetic surgery). Some exceptions prevail, such as for refractive eye surgery or varicose vein surgery, but only if certain criteria are met: the setting can be regarded as a surgical day hospital, the operation is performed with local or topical anaesthesia without sedation, and no postoperative surveillance is required (BS-MB 16 March 2009).

charged to patients in single-bed rooms increased, potentially due to the ban on charging extra-billings for double or multiple-bed rooms (IMA-AIM, 2019c).

5.4.2 *Day care*

In Belgium, the formal description of day care is day hospital and is only reserved for licensed hospitals (BS-MB 5 December 1997; BS-MB 7 March 2008), with established procedures for selection of patients, safety, quality control, continuity, reporting and cooperation with various medico-technical services (NIHDI, 2013). It can be for a surgical intervention (called surgical

day care) or a number of diagnostic tests, therapeutic tests, or oncologic therapies (called medical day care).

Technical acts that are performed in a consultation room or the consultation ward of a polyclinic (such as suturing wounds), as well as care acts performed in a private clinic (such as refractive eye surgery) are considered ambulatory care and not day care. Some acts (such as surgical tooth extraction) can be performed both in ambulatory and day care settings.

The proportion of day care admissions represented 60.6% of all general hospital stays in 2014. In the period 2008–2014, day care admissions showed an average annual growth rate of 4.3%. Most day care admissions were for non-surgical procedures (including intravenous therapy and chemotherapy), representing 78% of the number of day care admissions in 2014 (Van de Voorde et al., 2017).

The shift to day care varies between hospitals and between interventions. Some incentives have been introduced to promote day care. However, the payment rules are complex (some interventions are financed within a closed-end budget and others, on a nominative list, are paid for by lump sums) and lack transparency. As a consequence, they fail to give clear incentives to health care providers. Additional mechanisms are needed to both encourage day surgery and avoid a suction effect on procedures that could easily be performed in the doctor's consultation room; see the KCE report 282 for more details on day care (Leroy et al., 2017).

A trend analysis for planning hospital capacity for 2025 concluded that more beds for day care will be necessary (Van de Voorde et al., 2017).

5.4.3 *Inpatient care*

Inpatient care refers to a patient admitted into a licensed hospital, public or private, who is not discharged on the day of admission. According to the Belgian Hospital Act, several standards and criteria have to be met for a health care establishment to be licensed as a hospital (see Section 2.7.2) (Justel 7 November 2008). A hospital consists of hospital services including medico-technical services (such as imaging and radiotherapy), hospital departments, hospital functions and care programmes. Hospital functions are transverse; that is to say, they are not aimed at a specific patient group and extend across the different services of the hospital (pharmacy, palliative

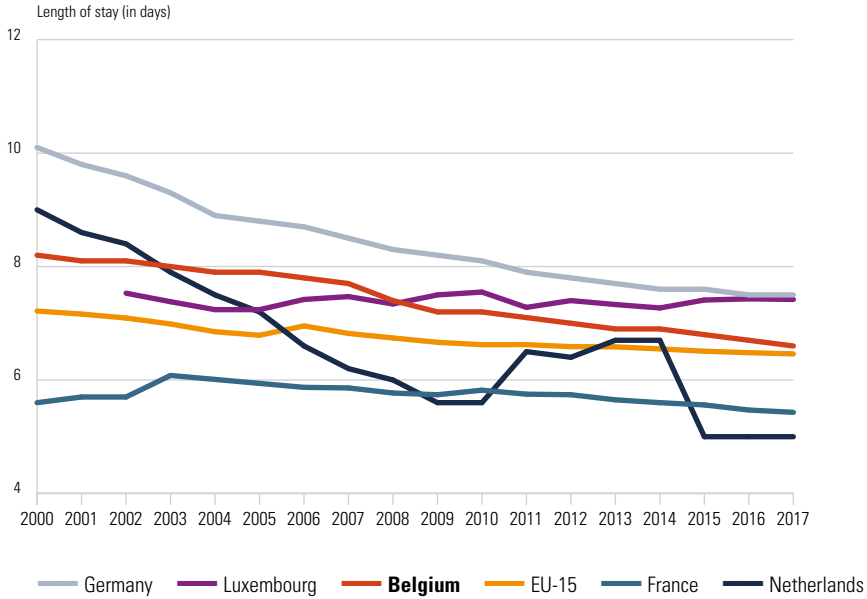
care, blood bank, intensive care, emergency care). A care programme is a coherent set of care services working in a multidisciplinary and transverse way for a well-defined target patient group (such as reproductive medicine, cardiology, oncology, paediatrics and geriatrics). A distinction is made between basic care programmes for regular conditions and specialised care programmes for rarer conditions, which are not available in every hospital (BS-MB 8 August 2014a). Licensing criteria are defined for the different services, departments, functions and care programmes. For several services, functions and care programmes, there are also programming criteria based on a national planning (see Section 2.7.2) (MoH, 2016c).

Length of inpatient stays

Between 2000 and 2017, the average length of stay (ALOS) in inpatient curative care beds decreased from 8.2 days to 6.6 days, which is in line with neighbouring countries (see Fig. 5.2). Multiple factors have contributed to the decrease over time, including financial incentives to increase efficiency and shorten stays, medico-technical progress, the development of home care services and the expansion of day care. A projection study predicted a further reduction of ALOS to 5.94 days¹³ in 2025 (Van de Voorde et al., 2017). Examples of initiatives to decrease length of stay concern the inpatient stays of women with normal deliveries (see also Box 5.5). The ALOS for a normal birth is considered an appropriate indicator for the efficient use of health care services due to the comparable case-mix of patients. In Belgium, the ALOS for a normal birth decreased from 4.96 days in 2010 to 3.11 days in 2016, which is now close to the EU-15 average (2.8 days in 2016, data available for 13 countries).

13 For acute and chronic inpatient care.

FIG. 5.2 Average length of stay in curative care beds in Belgium and neighbouring countries (in days), 2010–2017



Source: Eurostat (2020).

Initiatives on inpatient care

Since 2015, an Action Plan of both the Federal State and Federated entities to reform the current hospital landscape has been drafted (see Chapter 6) (Van de Voorde et al., 2014, 2017). Initiatives on care concentration, including referral agreements, are in progress. For example from January 2020, complex surgery of the pancreas and oesophagus are only reimbursed in a limited number of hospitals with proven experience (NIHDI, 2019c). There are also initiatives to stimulate the integration of care between settings (see Box 5.5).

Quality of inpatient care

Quality criteria are embedded in the licensing criteria specific to hospital services, departments, functions and care programmes. Inspection ensures that hospitals comply with these quality criteria at the levels of structure,

BOX 5.5 Are efforts to improve integration of care working?

Several initiatives have been launched to enhance the integration of care. Most are still in the pilot phase so no evaluations are available. Within hospitals (horizontal integration), the formation of loco-regional hospital networks will increase collaboration and strengthen referrals between hospitals (see Section 6.2) (BS-MB 28 March 2019). Other initiatives aim to strengthen the relationship between and within hospitals and primary care settings (vertical integration), including:

- In 2009: Care pathways (*zorgtraject/trajet de soins*) for patients with chronic conditions, such as diabetes and chronic renal insufficiency (see Section 5.2). The evaluation of these pathways highlighted not only patient satisfaction and improvements of quality in terms of process, but also the lack of information on the existence of these pathways by the public and health professionals (NIHDI, 2014a);
- In 2016: Pilot projects on shortening length of stay when a woman has a normal delivery, including the organisation of transmural care (de Block, 2016b). An evaluation of these pilots showed no negative influence on the health of the child or the mother, an improved collaboration between care settings, and satisfaction of mothers concerning the care delivered. Attention points were the sharing of electronic data between settings, the workload of hospital care providers, and the care of vulnerable pregnant women (MoH, 2019g);
- In 2017: Pilot projects on alternatives to hospitalisation, mainly covering intravenous antibiotics and cancer therapy (de Block, 2017b);
- In 2018: Integrated care projects for the management of chronic patients. Stakeholders (including social care) are incentivised to set up innovative initiatives of care centralised around patients across the different care settings in their geographical area (MoH, 2018e).

A major prerequisite for delivering integrated care efficiently is the ability to share patient information in a secure way, keeping in mind the patient's privacy. An eHealth plan was launched to enhance multidisciplinary information exchange (for more information, see Section 4.1.3 on Information technology and eHealth) (MoH, 2019b)

processes and results. Since the 6th State Reform (1 July 2014), assessing the quality of a hospital is an exclusive competence of the Federated entities. However, if they decide to establish new criteria, they may not impact the Federal competences or impact the Federal budget.

In Flanders, inspections are performed unannounced, whereby a care trajectory of a certain type of patient is followed. In addition, the Flemish Indicators Project for Patients and Professionals (VIP²) measures the quality of care in most Flemish general hospitals. The hospitals choose which indicators they measure. Results appear (if the hospital agrees) on a website www.zorgkwaliteit.be (Flemish Agency for Care and Health). The German-speaking community regularly organises announced quality inspections in hospitals in collaboration with the Flemish organisation. In Brussels and the Walloon region, the organisation *Plateforme pour l'Amélioration continue de la Qualité des soins et de la Sécurité des patients* (PAQS) has set up quality indicators in close collaboration with the sector for benchmarking (each hospital receives his own results compared to the average) (PAQS, 2018). Nevertheless, these data are not yet collected in a systematic way. In the case of hospital accreditation, which is voluntary, an external organisation assesses the extent to which the hospital offers quality and safe care. Since 2008, hospitals can receive accreditation for a limited number of years, with an increasing number of hospitals obtaining accreditation (58% in 2019) or in the process of obtaining accreditation (27% in 2019).

Since 2018, a P4P programme for general hospitals also grants an additional budget to hospitals that score well on an indicator set of four hospital-wide and seven pathology-related indicators (see Section 6.1). Participation is voluntary.

Quality initiatives concerning the measurement of patient experiences are described in Box 5.6. Additional quality initiatives are described in Box 2.4 in Chapter 2.

5.5 Urgent and emergency care

Emergency medical assistance is legally defined as the immediate supply of appropriate assistance to all persons whose medical condition – as a result of an accident, a sudden disorder or a sudden complication of a sickness – requires emergency mediation after a call to the uniform telephone number, resulting in the provision of assistance, transport and relief in an adapted hospital service (BS-MB 25 July 1964). A patient pathway in an emergency care episode is described in Box 5.7. The organisation of emergency medical assistance is a competence of the Federal Government.

BOX 5.6 What do patients think of the care they receive?

The Belgian Health Interview Survey includes information on patient experiences (including questions on waiting times, time spent during consultation, medical explanation and shared decision-making). In 2013, only 3.2% of the population (aged 15 years and older) had a problem with the waiting times to get an appointment with physicians, 97.5% reported that the doctor spent enough time with them, and 97.6% reported that the doctor gave them the opportunity to ask questions or raise concerns about recommended treatment. More recent data are not available.

Other patient-reported experience measure (PREM) initiatives are mostly organised in hospitals, either on a regional level or more localised per hospital, such as the Flemish Indicator Initiative 'VIP² in Flanders (Flemish Agency for Care and Health, 2018) and the *Attentes et Satisfaction des Patients et de leur Entourage* ASPE Project in some hospitals of the Walloon region and Brussels (BSM Management, 2019). The VIP² initiative reports that more than half of the hospitals do not meet the required target for the indicator patient experiences (Flemish Agency for Care and Health, 2018).

Since January 2018, incentives are also given to general hospitals that measure PREMs (see the pay-for-performance (P4P) programme in Section 6.1). In 2017–2018, 94% of hospitals participating in the P4P programme (96 out of 102) organised PREMs (Devos et al., 2019). Concerning patient-reported outcome measures (PROMs), this has not been systematically established. Nevertheless, some initiatives have emerged, such as TARDIS, a registry for rheumatoid arthritis, which contains clinical and PROMs information which is routinely collected. Belgium is also cooperating in the OECD-PaRIS initiative, which will be rolled out starting from 2021 (OECD, 2019d).

In order to organise collaboration between all services and to formalise protocols for emergency care (also in collective emergency situations), a Federal commission with representatives of all emergency caregivers was founded in 1998 (BS-MB 16 September 1994). Ensuring good contact between all actors of the same province is the task of the Provincial Commissions for Emergency Medical Assistance. They meet at least once a year to ensure cooperation and the proper functioning of emergency medical assistance (MoH, 2016j).

BOX 5.7 Patient pathway in an emergency care episode

Patients can access the emergency care system via a self-referral (walk-in patients), a referral by a physician (GP or specialist) or after an emergency call.

In case of a medical emergency:

Pre-hospital care: Call the free emergency number 112 or 100 (Belgian number). Based on the triage in the dispatching centre, it is decided which type of transport will be sent out or whether or not it can be handled by a GP (MoH, 2015):

- Severe to very severe – an apparent life-threatening situation: 112 Ambulance, which can transport the patient, and a Mobile Urgency Group, which transports an emergency doctor, emergency nurse and the necessary equipment to provide care to the patient on site.
- Moderate to severe – a potential life-threatening situation: Paramedical Intervention Team, which consists of an emergency ambulance provider and an emergency nurse in contact with a physician via a secure radio connection. They can deliver first aid defined by standardised protocols (MoH, 2017a).
- Minor but urgent situation – 112 Ambulance for transportation of the patient is staffed by at least two ambulance providers. The ambulance provider is not allowed to deliver medical care other than some defined standardised protocols (BS-MB 8 April 2014; MoH, 2017a).

After medical stabilisation at the scene, the patient is transported to the nearest most adequate hospital with a specialised emergency department (BS-MB 12 May 1965).

Hospital: specialised and non-specialised emergency departments – Most patients are self-referred (walk-in), are registered upon arrival at the reception and seen in the triage room predominantly by a nurse.

5.5.1 Pre-hospital care

As in other European countries, the call and dispatch centres are reformed to move to a uniform 112 system for emergency care. The call-taking/operators and dispatching fall under the responsibility of the Ministry of Home Affairs. In 2019, calls to the old national 100 number were already forwarded to 112 and the national 101 number was still preferred for police assistance. Legislation foresees one 112-centre per province, where the call-takers for both 112 and 101 work together (BS-MB 28 October 2011). A new

telephone triage system for non-urgent medical assistance for out-of-hours (the 1733 number) is being rolled out. Depending on the municipality, a local out-of-hours primary care service or an operator from the 112 service is handling the call.

The Mobile Urgency Group (*Mobiele urgentiegroep/Service mobile d'urgence; MUG-SMUR*) work with hospital personnel (BS-MB 2 September 1998). Similar to other hospital services, there are maxima defined per population (BS-MB 26 September 2002b). In 2018, there were 99 MUG-SMUR spread over 99 hospital sites (MoH, 2018f)

The Paramedical Intervention Team (PIT) ambulances are still in project phase in 2019. These PITs are part of a hospital service and there are 20 PIT ambulances spread over 20 hospital sites (MoH, 2017c).

The 112 Ambulances are vehicles for urgent patient transport equipped for life-threatening emergencies, either accompanying the MUG-SMUR or independently transporting the sick or injured person to a hospital designated by the 112 operator. The objective is that in 90% of all interventions, the average time between call and first team on site may not be greater than 15 minutes. These 112 Ambulance services are licensed and financed by the Federal minister (BS-MB 23 September 2014; MoH, 2017c). They are organised by the government, a hospital, the Red Cross, fire departments, or licensed private ambulance services. Subsidies for the permanence of ambulance services were increased in 2016 and 2018 (BS-MB 21 December 2018a) and some measures were taken for standardisation of the financing system with a fixed patient co-payment (BS-MB 21 December 2018b).

5.5.2 Specialised and non-specialised emergency departments

All acute hospitals must provide emergency capabilities. In Belgium, two types of emergency care services exist: a non-specialised Emergency Department (ED) and a specialised ED. Specific licensing standards and criteria have been defined in terms of staffing, equipment, infrastructure and functional norms as well as in terms of medical permanence. In 2018, almost all acute Belgian hospitals (99%) had at least one site with a specialised ED. Yet several hospitals have multiple specialised EDs (on multiple sites). On 193 acute hospital sites, there were 125 sites with a specialised ED and four with a non-specialised ED. As no maximum programming criteria have been established, and because EDs are an important entry point for hospitals (in

fact, they are vital for hospitals to survive economically) the density of ED services is high, implying a low number of contacts in some EDs.

A study in 2012 showed that, especially during the night, half of the sites had fewer than five arrivals per night on average (Van den Heede et al., 2016). Moreover, the large number of EDs in Belgium and the shortage of trained emergency specialists, has made it very difficult to comply with licensing standards regarding medical permanence 24 hours/day, 7 days/week by a medical specialist in emergency (or in training). Therefore a temporary deviation has been installed allowing other medical specialists and medical specialists in training to take up this permanence. In 2019, work to optimise the distribution of specialised EDs is underway and fits within the broader concept of hospital reform.

The majority of ED visits are self-referrals (72.4% in 2016) (MoH, 2016e). Since 2003 (but not between 2005 and 2007) in an attempt to promote more efficient use of out-of-hours services, hospitals can request an increased co-payment for self-referrals to EDs. However, the impact on ED use is unclear (Van den Heede et al., 2016).

5.5.3 Out-of-hours primary care

Out-of-hours is defined as weeknights from 19 h to 8 h, weekends and holidays. GPs have a legal obligation to ensure 24/7 continuity of care for their patients. Specialists can be consulted after hours via the emergency department of a hospital. Local GP organisations, called GP circles, organise out-of-hours services in a given area using rotation systems. GPs receive extra fees for their participation in out-of-hours services, without increases in out-of-pocket payments for the patient, except in the case of home visits.

With the aim of enhancing working conditions, since 2003, organised duty centres (ODC; *wachtposten/postes de gardes*) were also established. The number of ODCs has gradually increased up to 84 in 2018 (39 in Flanders, 40 in Wallonia, 5 in Brussels). However, as all ODCs were initiated bottom-up without clear national guidance, there is no logic in how they are distributed across the Belgian territory and there is high variability in how they operate (for example, variable opening hours). Moreover, the introduction of ODCs did not result in fewer ED attendances (Van den Heede et al., 2016). Therefore a reform of the ODCs was initiated in 2017 with the aim of covering the entire territory within a 4-year period, to

enhance collaboration between EDs and ODCs (for instance, share the same location), and synchronise opening hours giving more clarity to the patients (de Block, 2017a). The ODCs all have to link to the 1733 telephone triage system for out-of-hours primary care needs (see Section 5.5.1) (MoH, 2016f).

Pharmacists are legally obliged to provide 24-hour services (BS-MB 30 January 2009). A digital platform (*Geowacht Platform*) is responsible for their practical organisation. Using the websites <https://www.apotheek.be> or <https://www.pharmacie.be>, a citizen can locate a near-by pharmacist. In 2019, standard fees for out-of-hours service were established (BS-MB 31 October 2019).

5.5.4 Large-scale emergency situations

Depending on the nature of the incident, emergency assistance is coordinated at municipal, provincial or Federal level (FPS Home Affairs, 2019a). There is a national crisis centre (<https://crisiscentrum.be/nl/openbare-veiligheid>) and every discipline (police, fire department etc.) has to have an emergency plan. The Medical Intervention Plan defines the specific procedures for the medical management of a large-scale collective incident (FPS Home Affairs, 2019a). Every hospital must provide a Hospital Emergency Plan (MASH) defining procedures when there is an internal problem or an external crisis (MoH, 2016i). Additionally, there is a CBRNe plan that focuses on the management of chemical, biological, radiological and nuclear risks (FPS Home Affairs, 2019b).

In case of an international health/sanitary crisis (such as the coronavirus pandemic), Belgium has a risk management system based on two pillars: a Risk Assessment Group which analyses the risk to the population on the basis of epidemiological and scientific data; and a Risk Management Group, which decides what measures are necessary to protect public health based on advice from the Risk Assessment Group. Both exercise on a national level and are connected internationally (due to the WHO requirements of having a focal point in each country) (BS-MB 14 December 2018).

5.6 Pharmaceutical care

Information on the regulation, reimbursement and distribution of pharmaceuticals can be found in Section 2.7.4.

5.6.1 Consumption of pharmaceuticals

In 2017, prescribed medicines represented 12.3% of current health expenditure and an average of € 491.6 per capita (OECD, 2019a). Public expenditure on reimbursed pharmaceuticals in the community pharmacies remained relatively stable, whereas it rose in the hospital sector (see Table 5.1).

In community pharmacies, in 2016, the highest public expenditure was seen for immunosuppressants (€ 321.7 million), antithrombotic agents (€ 198.6 million) and hypolipomedic drugs (€ 152.6 million). In the hospital setting, the top three are antineoplastic drugs (€ 403.5 million), immunosuppressants (€ 276.4 million) and immunoglobulins (€ 80.4 million) (NIHDI, 2018e).

TABLE 5.1 Annual net expenditure of the NIHDI on medicines 2010–2019 (in million €)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Total	4 012.7	4 143.4	4 105.3	4 008.2	4 034.8	4 274.4	4 378.2	4 594.8	4 891.8	5 263.3
Community pharmacy	2 714.3	2 774.5	2 704.8	2 614.7	2 607.2	2 632.2	2 660.1	2 631.3	2 698.5	2 693.7
Hospital pharmacy	1 298.4	1 368.9	1 400.5	1 393.5	1 427.6	1 642.3	1 718.1	1 963.5	2 193.4	2 569.6

Source: Personal communication of M. De Falleur (NIHDI) (note CCP 2020/015).

However, high public expenditure does not equal high consumption. When looking at which prescribed medicines are the most prevalent among patients in the community, non-steroidal anti-inflammatory and anti-rheumatic drugs, antibiotics and drugs for peptic ulcer and reflux are the most prevalent (NIHDI, 2018e).

5.6.2 *Sustaining innovation*

The (bio)-pharmaceutical industry is one of the leading sectors in the Belgian economy. More than 200 companies and approximately 37 000 people worked in the sector in 2018 (Pharma.be, 2019). Belgium is a leading exporter of biopharmaceutical products (more than € 42 billion in 2018), not only for the European market (54% of the export, with a predominance towards Germany, France and the United Kingdom) but worldwide (46% of the export, mainly to the United States of America, Canada and China). Belgium is a big investor in the development of innovative medicine with around € 2.5 billion of investments in 2014 growing to € 3.6 billion in 2018 (Pharma.be, 2019). This leading position is reinforced by an agreement concluded in 2015 between the Minister of Social Affairs and Public Health and the pharmaceutical industry, called the Pact of the Future (de Block, 2015). This Pact includes commitments that aim to strive for greater accessibility to innovative therapies for the patient, better sustaining innovation, providing an ethical framework, and ensuring financial predictability and stability (see also Section 2.7.2).

Research and development is also stimulated through fiscal measures [tax deductions for innovative income¹⁴ and exemptions of a share of the withholding tax on the salary of scientific researchers (VLAIO, 2019)] as well as through fast regulation of clinical trials, with the fastest approval periods for Phase 1 studies in Europe (15 days for monocentric and 28 days for all others) (Pharma.be, 2017).

Moreover, from 2020, the two approval circuits before a clinical trial can start (approval of the Minister, via FAMHP, regarding the quality of the medicine and approval of an Ethics Committee) will be consolidated into one single decision (European Parliament, 2014). The FAMHP will be the national contact point responsible for consolidating the assessments and communicating to the sponsor (within 20 days for mono-national trials) (BS-MB 22 May 2017).

14 Up to July 2016, companies were subject to a tax exemption on a portion of the gross income they receive from their patents (Tax Deduction System for Patent Income). The new deduction system for innovation income introduced in July 2016 is extended to a series of additional intellectual property rights beyond the patent such as orphan drugs or computer software protected by copyright. A transitional period between the two regimens has been implemented up to 30 June 2021 (BS-MB 20 February 2017).

5.6.3 *Strengthening the role of the community pharmacist*

Pharmaceuticals are exclusively distributed through community and hospital pharmacies (see Section 2.7). The accessibility of pharmaceuticals is assured by the dense network of community pharmacies (1 per 2253 persons in 2019) and the obligation to organise continuity 24/7 and to participate in out-of-hours services (see also Section 5.5.3). Pharmacies are staffed by at least one pharmacist, who is responsible for the pharmaceutical acts performed or supervised, including advice on the correct use of medication, providing the necessary information in relation to health promotion and disease prevention, and referral to other health care providers. Each pharmacist is also responsible for the conformity and quality of what is dispensed (BS-MB 31 January 2009).

The financing of the pharmacist consists of three pillars: the economic margin, namely a percentage of the sales price applicable to all medications as a remuneration for distribution costs, an additional fee per package delivered [fixed € 4.27 (VAT not included) for reimbursed medication intended as compensation for the intellectual services] and in some specific cases, a fee for delivering specific pharmaceutical care (such as guidance in the use of inhalation corticosteroids for asthma) (NIHDI, 2019r) (see also Section 2.7.4).

Initiatives were taken to reinforce the role of the pharmacist and to provide care in the vicinity of each citizen (APB, 2017): a stabilisation of their remuneration (less impacted by a decrease in the price of pharmaceuticals), specific fees for the pharmaceutical care for patients with asthma (such as guidance in the use of inhalation corticosteroids) (NIHDI, 2017c) and the possibility for a chronic patient, since October 2017, to appoint a home pharmacist (*Huisapotheker/pharmacien de reference*) (NIHDI, 2017b), with the main task of keeping the patient's medication schedule up to date and making it accessible to other care providers. Multidisciplinary cooperation between doctors and pharmacists is also encouraged through the financing of medico-pharmaceutical consultations (BS-MB 20 April 2015).

Pharmacist substitution rights are described in Box 5.8.

5.6.4 *Accessibility, quality, adequacy and cost-effectiveness*

According to System of Health Accounts data, the share of out-of-pocket payments for pharmaceuticals (prescribed medicines and over-the-counter medicines) was around 30% of current pharmaceutical expenditure. Patients' co-payments depend on the socio-therapeutic importance of the pharmaceutical (for example, no co-insurance for vital pharmaceuticals) and the socioeconomic status of the patient (see Chapter 3). Measures to increase accessibility to innovative medicines are described in Section 2.7 and Chapter 3.

Measures were also taken to improve adequacy and quality of care, such as the financing of medico-pharmaceutical consultations, the development of feedback and good practice guidelines (see also Section 5.3.1), the development of electronic prescription and specific quality projects in homes for older people and nursing homes [see also the NIHDI website for more details (NIHDI, 2019)].

The high public expenditure on pharmaceuticals and its rapid growth has been a constant concern for health policy-makers. However, this financial challenge needs to be balanced against the fundamental task of ensuring timely access to the best available pharmaco-therapeutic treatments. A series of measures have been taken to achieve this. Most of these measures are described in the 2010 HiT report (Gerken and Merkur, 2010); see Box 5.8 for new measures.

BOX 5.8 Is there waste in pharmaceutical care?

To improve the cost-effective use of pharmaceuticals and contain pharmaceutical expenditures, the following measures were taken:

- **Prescribing low-cost pharmaceuticals**

Since 2005, physicians have been encouraged to prescribe a certain percentage/quota of low-cost pharmaceuticals in the ambulatory setting (in 2018, between 38% and 91% according to the specialty). Due to the persistence of strong price differences among low-cost medicines, since 2015, the definition of low-cost medicine changed and now only applies to the three cheapest versions. To identify the group of cheapest medicines, the reimbursable medicines are grouped by active ingredient, identical dosage, comparable

pack sizes and identical route of administration. For each of these groups (also referred to as clusters), there must be at least three different products on the market within a margin of 5% in relation to the lowest unit reimbursable basis available. If this 5% margin is not sufficient to obtain a group of three, a maximum margin of 10% will be used as from April 2019. Information on which pharmaceuticals are considered as lowcost is updated monthly and can be found using different tools of the NIHDI and the Belgian Centre for Pharmacotherapeutic Information (NIHDI, 2018b). On 1 April 2019, the low cost prescription also applies to outpatient pharmaceuticals delivered by the hospital to outpatients (BS-MB 1 April 2019a).

Physicians receive their individual prescription profile with feedback from the NIHDI (NIHDI, 2019e). Physicians who do not reach these minimal quotas could be called to account by the inspection service of the NIHDI. The percentage of low-cost prescriptions issued in ambulatory settings has been consistently increasing: from 49.1% in 2015 to 53.8% in 2017 (see Fig. 5.3). The more recent biosimilar market has also started to show an increase (see Fig. 5.4).

- **Pharmacist substitution right**

Pharmacists must deliver pharmaceuticals according to the prescription (no substitution right), except for International Non-proprietary Name prescriptions (since April 2012) and prescriptions of an antibiotic or antimycotic acute treatment (since May 2012) for which the pharmacist must deliver a medicine from the group of the cheapest medicines (NIHDI, 2018a). Since December 2019, pharmacists have had the right to substitute when the medicine is (temporarily) unavailable.

- **Promoting the use of biosimilars**

In 2016, a convention was concluded with all stakeholders to stimulate the use of biosimilars and consider them in the same way as the original biological medicine (for example, through information campaigns and monitoring) (de Block, 2016a). Since April 2019, a premium is given to accredited physicians prescribing outpatient biosimilars (such as anti-tumour necrosis factor biosimilars) (NIHDI, 2019j) and hospitals can only invoice for biologicals for which a biosimilar is available at 85% of their price (NIHDI, 2019s).

- **Reference pricing system – patent cliff**

When a less expensive pharmaceutical (generic or copy) comes on the market, a reference pricing system is applied, with a reduction in the reimbursement basis of the original product; see the HiT 2010 (Gerkens and Merkur, 2010) and the NIHDI website (NIHDI 2019p) for exceptions. Since March 2016, the price reduction has been simplified and is called the patent cliff. It occurs upon entry into the system, that is, a reduction on the ex-factory price of 43.64% (51.52% for vital pharmaceuticals – category A) (NIHDI, 2019p). It should also be noted

that if price reductions for old pharmaceuticals (see below) are not yet applied, they are applied simultaneously with the patent cliff. Moreover, since March 2016, the legal upper limit on the reference supplement of the original product (i.e. 25% of the reimbursement basis) was reduced to a maximum of € 5 (instead of the € 10.80 previously).

- **Automatic price reductions for old pharmaceuticals – volume cliff – biocliff**

When an active ingredient (or a combination of active ingredients) has been reimbursed for 12 years, an automatic price reduction of 17% is applied (on the ex-factory price). After 15 years, an extra price reduction is applied based on a percentage that varies according to the annual turnover of the product (called the volume cliff) (BS-MB 1 April 2019a). For biological products, a price reduction (15% of the ex-factory price) is applied after 18 years of reimbursement. If a biosimilar becomes reimbursed before this period, extra price reductions (for old biologicals and the arrival of a biosimilar) are applied simultaneously according to the turnover of the product (the biocliff). For more details (for example on exceptions) see the NIHDI website (BS-MB 1 April 2019a; NIHDI, 2019i).

- **Contributions from pharmaceutical companies and the claw-back system**

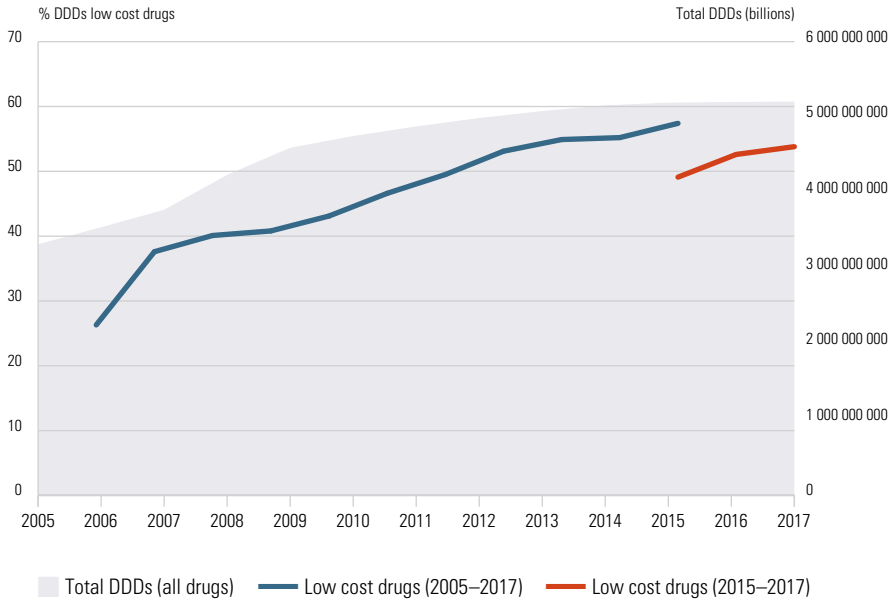
In order to curtail the steep increase of pharmaceutical expenditure (see Section 3.1) and constant budget overruns, the pharmaceutical companies were forced to contribute to the financing of public pharmaceutical expenditure. Companies that profit from the reimbursement status of their medicines have to pay contributions based on the reimbursed pharmaceutical's turnover for the year (with a maximum per company) called the turnover tax. In 2013, contributions were also established for orphan drugs and for marketing expenditure.

Additionally, in the case of a budget overrun of the compulsory health insurance (closed annual budget for pharmaceuticals), the pharmaceutical companies have to pay back 100% of overspending but limited to a maximum of € 105 million in 2019, called the compensatory tax (claw-back); see article 191 of the law (Justel 27 August 1994).

- **Tender process**

Since July 2013, all hospitals must follow a tender process for pharmaceutical procurement (Lepage-Nefkens et al., 2013). On the national level a tender procedure has been in place since 2017 for medical products derived from Belgian plasma (such as human polyvalent immunoglobulins and albumins) (MoH, 2018g).

FIG. 5.3 Proportion of low cost DDD and total DDD prescribed in the ambulatory setting (2005–2017)



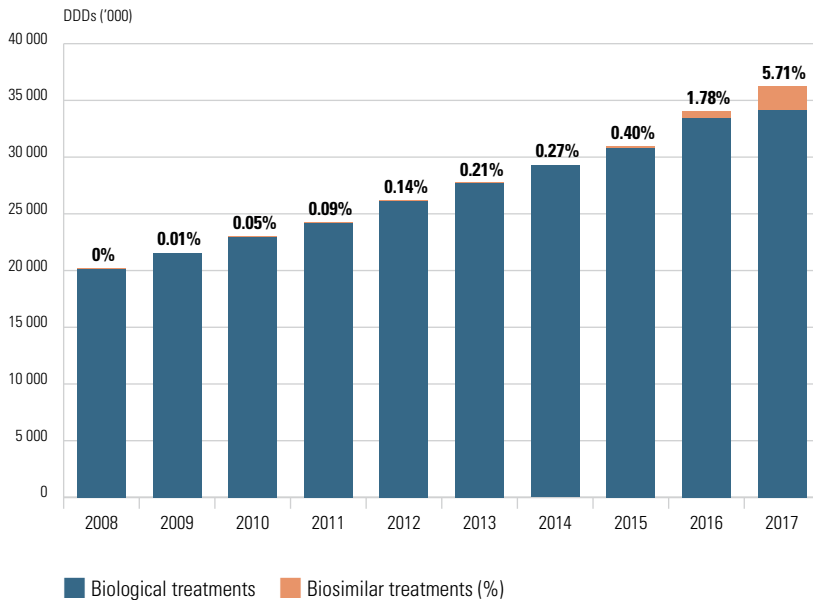
Sources: HSPA report (Pharmanet data); Devos et al. (2019).

Notes: DDD: Defined Daily Dose. The different coloured lines indicate that a different definition of calculating low-cost was used (see also Box 5.8).

5.7 Rehabilitation/intermediate care

Rehabilitation can be supplied in acute hospitals (Department of Physical Medicine and Rehabilitation), usually for less complex rehabilitation with no or reduced remaining residual injury, and in specific rehabilitation institutions for more complex impairments or when specialised knowledge is required (rehabilitation and specialised centres, including reference centres). Rehabilitation and specialised centres (including reference centres) have individually concluded an agreement with the NIHDl defining for instance the target patient group, required human resources, content of care and financial resources for the centre (for example, a lump sum per patient).

FIG. 5.4 Biologicals consumption in Belgium (in DDD, 2008–2017) and share of biosimilars (in %)



Sources: HSPA report 2019 ; Devos et al., (2019).

Note: DDD: Defined Daily Dose.

Since the 6th State Reform, the organisation of rehabilitation care services has undergone significant changes. From 1 July 2014, a number of rehabilitation care services and conventions, such as (neuro)locomotorial disorders and disabilities, mental and neurological impairments, which were formerly funded at the Federal level were transferred to the communities [the list of transferred NIHDI conventions is available in KCE report 299 (Vandenbroeck, 2018)]. However, from the patient perspective, or from the point of view of the rehabilitation sector as a whole, a large part of rehabilitation care remains under Federal competency (for example, all specialised units for rehabilitation in acute hospitals).

From January 2018, each community has chosen a model for the organisation and financing of the rehabilitation services under its own competences. For example, the Flemish community has chosen to set up a Belgian version of an internationally validated patient classification system (BelRAI) in which the care needs of the patient across all care domains are assessed in order not only to facilitate (individual) care planning but also for quality measurement. It should also be noted that the German-speaking

community has set up a simplified system of approval for rehabilitation services abroad because of the lack of German-speaking long-term rehabilitation services.

5.8 Long-term care

For people with a loss of independence, either caused by frailty (related to older age) or by impairments, the Belgian health care system has set up a range of services across ambulatory and residential care settings, i.e. home care, community services and residential care.

5.8.1 Home care and community services

Home care and community services aim to help care-dependent people (such as chronic patients, people with a disability, older people) with daily-life activities, for example, cleaning and laundry services, preparation of meals, personal care (including getting dressed, personal hygiene) or (subsidised) security alarms. Coordination is organised by the Federated entities (see also Section 5.3).

Whereas the medical acts (such as nursing care and physiotherapy) are financed by the NIHDI (Federal level) according to several criteria including the patient's dependency level, other services, such as family aids and community services, are financed by the Federated entities. In order to facilitate the collaboration between these different care providers, a protocol agreement was renewed in 2017 between the Federal State and the Federated entities (MoH, 2018j).

Specific allowances from the Federated entities are available for dependent persons. The Flemish community for example introduced the dependence allowance (*Vlaamse Zorgverzekering*) in 2001 (see Section 5.9). People with disability living in the community can also receive a Personal Assistance Budget based on their needs to employ someone as support in daily living activities. A financial intervention is also possible for accommodation costs, technical aids or other services that enable people with significant functional limitations to live as independently as possible (for example, *aide individuelle à l'intégration* in Wallonia).

5.8.2 *Residential care services for older people*

Long-term residential care for people aged over 60 years includes service-flats, homes for older people and nursing homes.

Older persons also have access to short-term residential care: day care centres and night/day community-care centres. Community care centres can provide more accessible health care to dependent people, whereas day care centres are more focused on strongly physically or mentally dependent people. Short-stay centres offer temporary care (up to 60 days consecutively and for a maximum of 90 days per year).

In acute hospitals, a specific care programme for geriatric patients was developed (BS-MB 7 March 2007).

There is free choice of long-term care residence, but in reality, choice is often limited for reasons of availability and/or proximity. A Walloon resident can therefore freely chose to go to a nursing home in the Flemish community. Financial agreements between communities are foreseen for these cases.

5.8.3 *Impact of the 6th State Reform*

Until the 6th State Reform of 2014, long-term care for older people was embedded in the compulsory health insurance scheme (Federal level). However, following the reform, the Federated entities became responsible for the organisation, programming, licensing, coordination and financing of all types of care services for older people, which allowed the elaboration of a more integrated approach based on the needs of the population, with the aim of ensuring continuity and quality of home care and residential care and allowing people with a loss of autonomy to remain in their living environment (see also Section 2.3).

5.8.4 *Accessibility and quality*

Among the population aged 65 years and over, 13.6% received long-term care, either in a residential setting (8.5%) or at home (5.1%) with a higher proportion of people with preferential reimbursement entitlements (16% compared with 5%) in 2016 (Devos et al., 2019).

The number of beds in residential care settings has steadily increased over time, from 121 024 in 2000 to 144 399 in 2018, for a density that slightly decreased from 71 to 68 per 1 000 population aged 65 years and over (see Table 5.2).

From a sample of 550 long-term residential care settings, the estimated occupancy rate in the residential care settings has decreased (from 96.3% in 2015 to 95% in 2018) and 71.3% of these structures consider that their waiting list has decreased (Probis, 2018).

With the ageing of the Belgian population, the need for long-term care will increase, requiring an increase of care at home and the allocation of available beds in residential care to older people with more intensive care needs. There has been a steady decrease in the proportion of patients with low care dependency needs living in residential facilities (from 32% in 2011 to 25% in 2018). A consequence of the shift towards more home care is the increasing demand for acute care services for older people. In order to compensate for the shortage of geriatricians, actions were undertaken to motivate more medical students to select geriatrics as their specialty.

Indicators related to the safety of residential care (for example, fall incidents) and appropriateness of care (for example, use of anticholinergic drugs) draw attention to the continued need for (preventive) efforts to further increase the safety and appropriateness of care for older people (Devos et al., 2019).

TABLE 5.2 Evolution of the number of long-term beds, selected years

	NURSING HOMES	HOMES FOR OLDER PEOPLE	COMA BEDS	TOTAL BEDS	BEDS/1 000 PERSONS 65 YEARS AND OVER
2000	33 103	87 921	0	121 024	71
2005	47 165	77 898	161	125 224	70
2010	63 064	66 160	157	129 381	70
2015	71 898	64 923	155	136 976	67
2018	74 430	69 814	155	144 399	68

Source: Devos et al. (2019).

5.8.5 *Specificities for people with chronic diseases*

For persons with a chronic disease, a specific statute began in September 2013 to facilitate access to care through a third-party payer system and a specific system of co-payment maximum (a reduction of € 100 in the maximum ceiling applied for the maximum co-payment calculation, see Section 3.4.1). This status is given to patients:

- Having a minimum amount of health expenditure (including official co-payments but not extra-billings), i.e. € 325.35 (in 2019) per quarter for eight consecutive quarters;
- Being the beneficiary of fixed payments for chronically ill patients (see Section 3.4.3 of Gerkens and Merkur, 2010); or
- Being covered by the compulsory health insurance and having a rare or orphan disease.

An observatory for people with chronic diseases was established to monitor, identify problems, and identify areas for improvement (for more details, see the NIHDI website: <https://www.inami.fgov.be/fr/inami/organes/Pages/observatoire-maladies-chroniques.aspx>).

5.9 **Services for informal carers**

The Belgian law of 12 May 2014 recognised the status of the informal carer who helps a highly dependent person. Although the legal recognition of the informal carer status was an important first step, it remains somewhat symbolic because it does not provide access to social rights or financial assistance. It also does not take into account all types of informal carers (for instance, the non-emancipated minors). In 2014, the KCE published a report providing some insights on the complexity of the unintended policy trade-offs of the different support policies for informal carers (Anthierens et al., 2014). The discussion of a new law proposal to entitle carer rights started in July 2018 in the Belgian Parliament and entered into force on 1 October 2019.

In Flanders, a 2016–2020 plan for informal carers (*Vlaams mantelzorgplan*¹⁵) has been implemented for the first time and includes 110 action points that cover four themes (Vandeurzen, 2017). Informal carers are becoming increasingly recognised as full-fledged partners within the care setting and therefore the plan places particular emphasis on the fact that informal carers must be considered as health care partners. Instruments were created to facilitate the collaboration between formal and informal carers (for instance the *Samenspraak Fiche*¹⁶).

According to the last European Social Survey (2014), on average, 34.3% of the population in Europe (EU-20) are informal carers, 7.6% of them provide intensive informal care (minimum 11 hours a week). Belgium has 37.9% of the population as informal carers of which 6.96% provide intensive informal care (Verbakel et al., 2017). A study conducted in 2016 (focusing on disabled older people living at home) estimated that the average amount of assistance provided is 4.2 hours per day and that informal carers are mainly women (71%), spouses (73%) and adult children (23%) (Cès et al., 2017). In 2017 in Brussels and Wallonia, more than 58% of the parents who were informal carers were older than 45 years (La ligue des familles 11 December 2017). There are also many minor informal carers in Belgium (Jeunes aidants proches, 2016). In Flanders, the 2018 informal carers register reported 407 informal carers aged from 0 to 25 years (Vandeurzen, 2019).

Income replacement directly related to the provision of informal care is not currently available in Belgium. However, individuals participating in the labour market are entitled to three types of paid leave to care for an ill person. Leave to care for a person in end of life (*congé pour soins palliatifs/palliatief verlof*) is available to all individuals working full- or part-time; on condition to have worked at least 12 months out of the past 15 months. Labour force participants are entitled to a full month of leave, renewable once. The second type of leave can be used to care for a household or family member with a serious illness (*congé pour assistance medical/verlof voor medische bijstand*). The leave can be taken for up to 12 months. However, it is restricted to a minimum of a week (with the agreement of the employer and only in some sectors) or a month and a maximum of three consecutive

15 Nabije zorg in een warm Vlaanderen. Vlaams Mantelzorgplan 2016–2020: <https://www.vlaanderen.be/publicaties/nabij-zorg-in-een-warm-vlaanderen-vlaams-mantelzorgplan-2016-2020> (last accessed 1 July 2019).

16 The “Samenspraak Fiche”: https://www.kennisplein.be/sites/Vlaams%20Expertisepunt%20Mantelzorg/Documents/samenspraak_fiche_online.pdf (last accessed 5 August 2019).

months at any one time (ONEM, 2019). The third type is the time-credit leave with reason (*crédit-temps avec motif/tijdskrediet met motief*). It allows for a maximum of 12 months in full-time leave; to take care of an ill family or household member. For the three types of leave, the worker could receive up to € 750.33 in 2019 (for a month of full-time leave) (BS-MB 28 November 1998; ONEM, 2018).

Since October 2015, self-employed workers can interrupt or reduce (part-time) their careers for a total of 12 months per career and receive a payment (SSSE, 2019).

Two allowances can be used indirectly to pay for the services of informal carers. The Flemish community introduced the dependence allowance (*Vlaamse Zorgverzekering*) in 2001. A monthly sum (€ 130 per month in 2019) is granted to dependent individuals living in the community who receive informal or formal care (freely used by the care recipient) (BS-MB 18 May 2001). People with disability, living in the community, can also receive the Personal Assistance Budget (PAB) (*Persoonlijke-assistentiebudget/budget d'assistance personnel*). The PAB was first introduced in Flanders (BS-MB 30 January 2001), a few years later in Wallonia (BS-MB 14 May 2009) and then in Brussels as a pilot. It consists of a fixed amount that is granted to a disabled person to employ a home-helper. The PAB cannot be used to pay for services from an informal carer except if a legal work contract is established between the disabled person and the carer. The annual amount of the PAB depends on the person's disabilities and the help used. An allowance for informal carer (*mantelzorgpremie*) is also available in some Flemish local authorities (provinces and municipalities). The amount, rules and access conditions vary. It is seen as a form of recognition for the informal carer's work rather than being a financial compensation at the level of a salary (Anthierens et al., 2014).

One of the major difficulties that informal carers face is to be well-informed about their social rights, the existing financial measures and long-term care services available because of the complex and fragmented structure of the Belgian system, in particular among informal carers from low socioeconomic backgrounds or aged carers (Anthierens et al., 2014). In the same way, there is no centralised policy to provide respite services for informal carers. At home, people in need of assistance for personal care can benefit from nursing care, which is on a free basis under certain conditions. Day-care centres also facilitate the daily support of disabled persons living at home. Short-term residential care facilities may also be

used as a respite solution for informal carers. However, boarding and lodging costs are financed mainly by residents and therefore remain unaffordable for a significant proportion of the population.

5.10 Palliative care

In Belgium, palliative care started to develop in the 1980s with the implementation of the first palliative care organisation and the first in-hospital palliative care unit in Clinique Saint-Jean, Brussels (Institut Européen de Bioéthique, 2017). The decriminalisation of euthanasia in 2002 (BS-MB 22 June 2002) forced palliative care to develop further (Vanden Berghe et al., 2013). Advance care planning, which aims to set a therapeutic objective based on the patient's values and priorities, is the pillar of the palliative care process and encompasses four key communication principles: (i) to discuss the possibility of writing a negative advance statement including therapeutic limitations, (ii) to discuss the possibility of writing a positive advance statement (for example, an advance statement of euthanasia), (iii) to discuss the objectives of care with the patient, and (iv) to discuss the possible appointment of a legal representative or proxy (in case the patient is no longer able to decide for himself) (Fédération Wallonne des Soins Palliatifs, 2019).

Patients with a recognised palliative status have access to various financial benefits (including, a lump sum, the abolition of the patients' co-payments for nursing, GP and physiotherapist visits) (NIHDI, 2019f). In 2018, 18 791 patients requested a lump sum for palliative care, which corresponds to a 33.9% increase from 2008 (NIHDI, 2018g).

More detailed identification criteria are now legally defined in a Royal Decree of 21 October 2018 (but not yet entered into force) (BS-MB 21 October 2018).

There are three palliative federations in Belgium: *Federatie Palliatieve Zorg Vlaanderen* in the Flemish region, *Fédération bruxelloise pluraliste des soins palliatifs et continus* in the Brussels-Capital region and *Fédération wallonne des soins palliatifs* in the Walloon region. They foster cooperation between representatives of front-line social and medical workers, organisations, institutions, associations and services for palliative care. Their mission is to promote communication between members, to organise education sessions, to stimulate the development of knowledge and research, and to be representatives for the authorities (MoH, 2017b).

In addition, 25 palliative care platforms are implemented in Belgium. They are responsible for the promotion of palliative care through raising awareness in the population, coordinating local care, educating caregivers and volunteers, and evaluating the needs for palliative care (Portail des soins palliatifs en Wallonie, 2019)

Various measures have been introduced to support the provision of palliative care at home – financial: abolition of the patients’ co-payments of certain home visits; support for informal carers: the option of taking palliative leave; and specialist care facilities: development of the multidisciplinary support teams to support carers providing home care (MoH, 2016g). Home care is performed by a team of health professionals (GPs, nurses, physiotherapists, psychologists), informal carers and volunteers. An external multidisciplinary counselling team specialised in palliative care can also provide counselling by organising consultations with carers, coordinating palliative care, and supporting carers psychologically and morally. Although there are 28 such teams in Belgium, they are often overloaded because the demand for their intervention is growing and the staff of these teams is only calculated on the basis of the number of inhabitants of a region (Vanden Berghe, personal communication).

Five paediatric liaison teams support patients aged 0 to 18 years who have a heavy chronic pathology, as part of palliative treatment or terminal care (MoH, 2017b; Friedel et al., 2018; BS-MB 15 November 2010).

Palliative day care centres are complementary to home care, offering an adapted and specialised care programme, and organising social activities to increase the social network of a patient receiving palliative care. In 2019, they were only implemented in Flanders (MoH, 2017b).

All nursing homes and some older people’s homes are obliged to offer palliative care. A staff member deals with palliative care, the aim of which is to heighten the caregivers’ awareness and provide them with education on palliative care. Their involvement in palliative care is limited to one third of full-time equivalent for 90 residents.

Respite units welcome children who require palliative care. The goal of such facilities is to relieve the patient’s family for a few days (MoH, 2017b).

In hospitals, there are specialist palliative care units that are mainly dedicated to the control of symptoms, the psychological accompaniment of the patient and the family, and the preparation for and accompaniment during mourning. Here, patients who can no longer stay in an acute hospital or cannot be looked after at home any more, are offered individual total care

by a multidisciplinary team. There are 51 palliative care units in Belgium, which corresponds to 379 palliative beds in 2017 (MoH, 2017b). There is also a mobile team that can be called upon for patients who are not staying in a palliative unit. This team does not take on the palliative care itself but advises the teams of the department to which the palliative patient has been admitted on the palliative care that needs to be provided. It is also tasked with continuous training and awareness-raising about palliative care among hospital staff. All Belgian general hospital departments have a mobile palliative care team (MoH, 2016g).

The evaluation of palliative care in Belgium showed that areas requiring attention are: considering alternative forms of accommodation and the development of competencies regarding the management of palliative care for psychiatric patients and special populations (for example, those resulting from migration) (MoH, 2017b).

In 2018, there was 1.7 palliative care services per 100 000 inhabitants, which is above the European median (0.8/100 000 inhabitants) (Arias-Casais et al., 2019). According to the last HSPA report, the accessibility of palliative care has improved: more than half (53.4%) of all individuals with terminal cancer received palliative care in 2015, which represents an increase compared with 2008 (48.0%); see Devos et al. (2019) for more indicators.

5.11 Dental care

Dental care is provided by general dentists, orthodontists, periodontists and to a lesser extent maxillofacial surgeons (see also Chapter 4.2)(MoH 2016l). In 2018, the title oral hygienist was legally recognised as a profession (BS-MB 30 March 2018), with the first oral hygienists graduating in June 2019.

Oral health services are almost exclusively delivered in private dental practices by private practitioners; there is no organised public oral health service. Dentists are publicly financed through the compulsory health insurance on an FFS basis. The fees for dental care are fixed by the National Commission of Representatives of Dentists and Sickness Funds at the NIHDI. This commission follows the same procedure as for physicians. Every 2 years an agreement is made in which the financial and administrative relations between dentists and sickness funds are stipulated. The most recent version is the agreement for 2020–2021 (NIHDI, 2020a). As with other

health care professionals, dentists can opt to accept the agreed fees or to apply them on a part-time basis or not to apply them at all. In exchange for the full or partial application of the negotiated fees, dentists are rewarded a lump sum by the NIHDI.

Since May 2009, there is full reimbursement for the majority of preventive and restorative procedures for all children up to 18 years of age; but for orthodontic treatment reimbursement remains limited (Van Meenen, 2010; NIHDI, 2019d). For adults, reimbursement of 75–79% of the nationally agreed fees is provided for preventive and restorative care, removable dentures and minor oral surgery (Van Meenen, 2010; NIHDI, 2019d). For budgetary reasons, age limitations have been implemented for the reimbursement of certain treatments (for example, removable dentures for people aged 50 years and over and extractions from 53 years). For individuals with preferential reimbursement status, the reimbursement of oral health care is also increased. For individuals with disabilities, professional debridements (the removal of dental plaque and calculus by a dentist or oral hygienist) are reimbursed four times a year, whereas this is limited to once a year for the general population. Several treatments (such as fixed prosthodontics, most periodontal treatments, dental implants, orthodontics in adults, fluoride applications) are not reimbursed at all. Overall, dental care is the service with the lowest coverage, with only 38.6% of dental expenditures covered by compulsory health insurance in 2017 (see Section 3.3.1). Therefore, several sickness funds and other insurers have developed additional insurance for which monthly contributions have to be paid.

To emphasise the importance of an annual dental visit among adults, oral care routes (*Mondzorgtraject/Trajet de soins bucco-dentaires*) were introduced in July 2016 (in January 2017 for adults with preferential reimbursement) (NIHDI, 2018d). With this measure, the amount of reimbursement for some dental care is made conditional upon a registered dental contact during the previous year. Those who skipped their dental visit in year x , are entitled to a reduced reimbursement for restorative care, removable dentures and dental extractions in year $x + 1$. The reimbursements for preventive care, consultations, orthodontics and periodontal care are not affected by this measure (see Chapter 6, Principal health reforms) (NIHDI, 2018d).

The last report on the performance of the Belgian health system indicated that just over half (54.1%) of the Belgian population had at least two dental visits in two different years in 2014–2016 and that this proportion had

increased with respect to the 2006–2008 period (47%) (Devos et al., 2019). In children and adolescents, the proportion of the population with regular dental contact was highest (66% and 71% for the age groups 5–14 years and 15–17 years in 2016, respectively), which is not surprising because this is the age range in which many children receive orthodontic diagnosis and/or treatment (Devos et al., 2019).

The 2012–2014 National Oral Health Survey described the oral health of the Belgian population, based on information collected from 1 887 people. It revealed that 51.3% of participants had at least one oral complaint during the last 4 weeks and that only 14.7% of the participants were free from caries. It also concluded that oral hygiene significantly increased with level of education (Cellule Interuniversitaire d'Epidémiologie, 2012–2014).

Since the 6th State Reform of 2014, preventive care has been transferred from the Federal level to the communities. To that end, the Flemish Institute of Oral Health, a consortium of the two Flemish professional dental associations and the two Flemish dental schools, was established in 2017. Its main task is undertaking preventive oral care initiatives in Flanders and in Brussels for the Flemish government (Vlaams Instituut Mondgezondheid, 2019).

5.12 Mental health care

Since 2000, there have been several reforms in mental health care. First, a major aim was to focus on specific target groups (children, adolescents, adults, older people, persons with a drug and/or alcohol addiction, persons in forensic psychiatry and disabled persons with severe psychiatric disorders), and second, to bring people back home to develop a community-based approach through, for example, the creation of regional networks involving all actors in a certain region (see Box 5.9 on Art. 107 projects) and the creation of mobile teams (Mistiaen et al., 2019). Several protocol agreements on mental health care were concluded during the 2014–2019 period (see Table 6.1).

BOX 5.9 Creation of regional networks: the so-called Art. 107 projects

The aim of Art. 107 projects is to promote:

- **Deinstitutionalisation:** limit residential treatment by the set-up of ambulatory specialised and intensive psychiatric care;
- **Inclusion:** intensify collaboration between the fields of education, culture, labour, social housing and key players in mental health care;
- **De-categorisation:** realisation of strong care networks and care circuits consisting of adult mental health care bodies, care for the disabled and justice departments;
- **Intensification of in-hospital care:** resulting in short(er) hospital stays, minimising the abruption of the patient–community interplay; and
- **Consolidation:** regulation and coordination of existing pilot projects in an overarching concept of mental health care.

These foundations need to be embedded in the realisation of five functions:

- **Promotion, prevention, early detection and early intervention** in mental health care;
- **Mobile treatment teams** that can move towards the patient (at home or elsewhere in his social environment);
- **Provision of mobile teams** for psychosocial rehabilitation;
- **Intensified specialised (semi-)residential care units** for mental health care; and
- **Provision of specific housing and accommodation** (Mistiaen et al., 2019)

Sources: Mistiaen et al. (2019); MoH (2010).

A protocol agreement in March 2016 on prevention between Federal State and Federated entities also contained some commitments, such as the promotion of an adequate use of antipsychotic medicine and on suicide prevention measures. To reduce the inappropriate use of methylphenidate (related to amphetamine) and sleep medications, national public campaigns were launched and a global approach was implemented for the management of patients with attention deficit hyperactivity disorder, not limited to medication but also including psycho-education and coaching (TDA/H 2019).

In terms of infrastructure, a distinction is made concerning psychiatric beds: namely, beds in a psychiatric hospitals (75% of all beds in psychiatric care) and beds on psychiatric departments in general hospitals (25%) (Mistiaen et al., 2019). Also, a large range of other residential structures are available (Mistiaen et al., 2019), including:

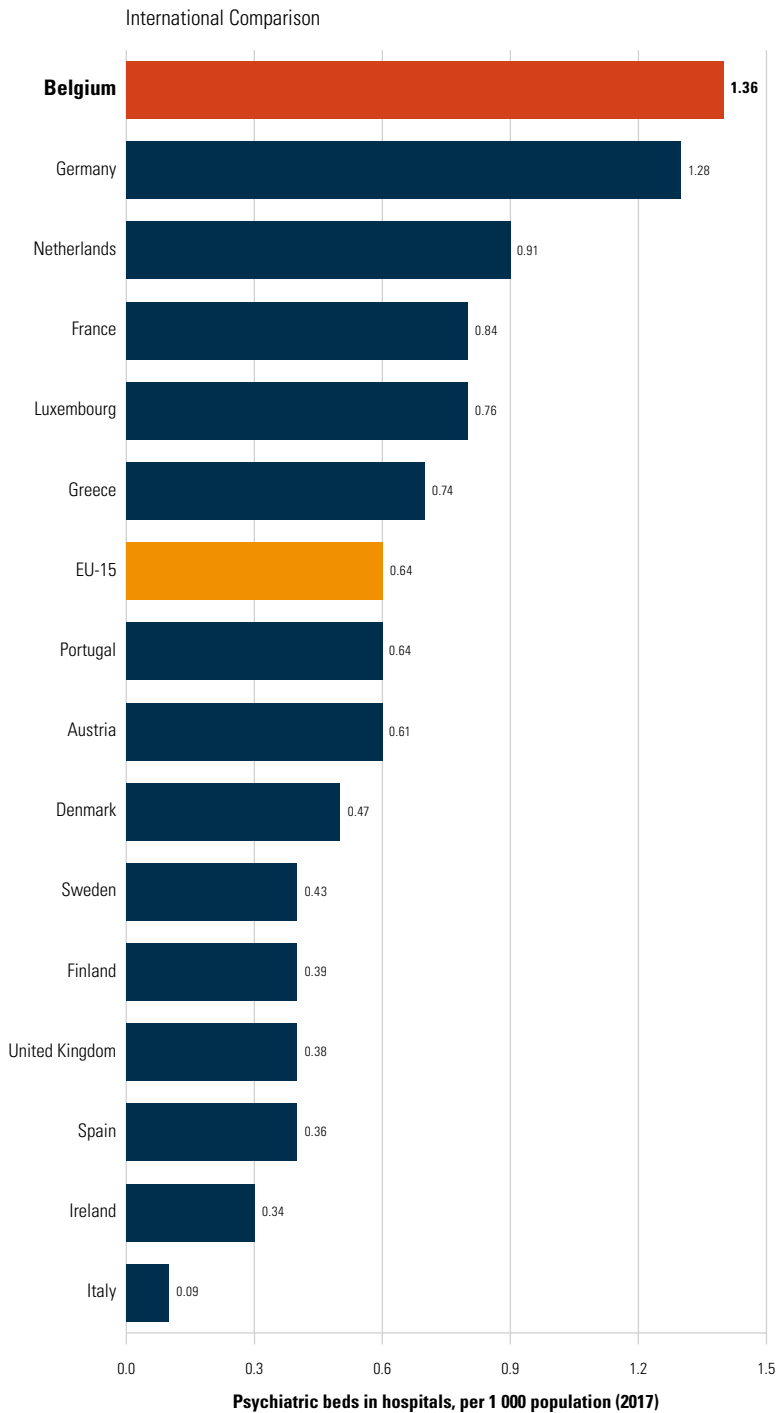
- Psychiatric nursing homes
- Initiatives for sheltered housing
- Rehabilitation centres with a convention related to mental health care.

Community services were also developed such as community mental care centres, day centres, psychiatric mobile teams for specific target populations (including adults, children, internees and people with both intellectual disability and a mental health problem), as well as psychiatric home care teams (with the main task of coaching professionals working in the first line of care, coordinating actors around the patients, and providing direct support to patients in their home), see Mistiaen et al. (2019) for details.

Specific services were also developed for people with an addiction, for migrants, and for individuals with suicidal ideation. A more detailed description of services and structures as well as their financing mechanisms can be found in the KCE report 318 (Mistiaen et al., 2019).

With those de-institutionalisation measures, a decrease in the number of psychiatric beds can be observed, from 1.58 per 1 000 population in 2000 to 1.36 per 1 000 population in 2017 but Belgium still has a high density of beds compared with other EU-15 countries (see Fig. 5.5). It should nevertheless be noted that this number includes psychiatric beds that were frozen for the creation of mobile teams and other Art. 107 projects, and is therefore slightly over-estimated (around 1.20 without these beds); see Mistiaen (2019) for more details.

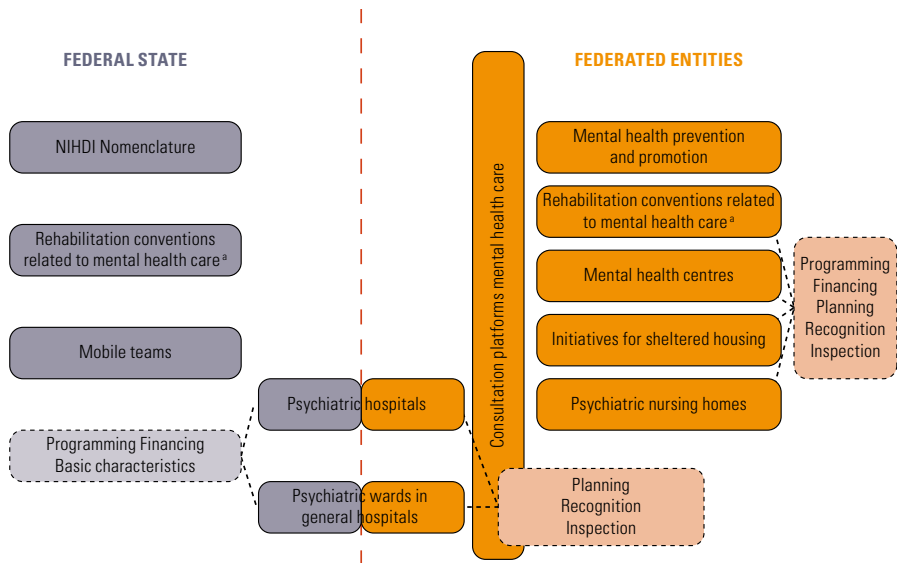
The HSPA report has assessed different aspects related to mental health care in terms of accessibility, appropriateness of care and continuity of care. It also assessed the suicide rate and the number of hospitalisation days in a psychiatric unit. Some progress was noted, such as a decrease in the suicide rate (which is still considered to be too high); however, waiting times for access to mental health centres were found to be long (and getting longer over time) and hospitalisation rates in psychiatric wards as well as the use of antidepressants continue to increase (Devos et al., 2019).

FIG. 5.5 Psychiatric beds in hospitals, per 1 000 population (2017)*Source:* OECD (2019a).

In terms of financial access, reimbursement is more limited than in other sectors. According to System of Health Accounts data, out-of-pocket payments accounted for 31% of current expenditure in mental health hospitals in 2017, compared with 12% in general hospitals (OECD, 2019a). Belgian stakeholders also reported insufficient access to ambulatory mental health care and affordable psychotherapy, which leads to (inappropriate) referrals to other care providers/organisations; see the KCE report 318 (Mistiaen et al., 2019). To improve the accessibility of ambulatory psychological care, visits to a clinical psychologist have been reimbursed since March 2019 for adults aged between 18 and 64 years; who suffer from common mental health disorders (depression, anxiety and alcohol abuse); and who are referred by a GP or psychiatrist. The clinical psychologist must be linked to an Art. 107 network and a maximum of four consultations per year are reimbursed (once renewable by a GP or psychiatrist).

In terms of organisation, the mental health care landscape is complex and fragmented. Moreover, the sharing of competences between the Federal State and Federated entities does not facilitate the development and implementation of a comprehensive and long-term vision on mental health policy; see Fig. 5.6 and the KCE report 318 for more details (Mistiaen et al., 2019).

FIG. 5.6 Overview of responsibilities in mental health care after the 6th State Reform



Sources: KCE report 318 (Mistiaen et al., 2019), based on a report of the Flemish government (Vlaamse Overheid 2016).

Note: Rehabilitation conventions managed by the Federated entities concern themes such as addiction or psychosocial rehabilitations while Federal conventions for example concern neurological disorders associated with psychiatric disorders in children and adolescents.

Principal health reforms¹⁷

Chapter summary

- Accessibility of health care and sustainability of the health system are continuous objectives of the Belgian health care authorities.
- Between 2014 and 2019, quality and efficiency have been additional major objectives. This has resulted in the implementation of several measures aimed at improving the structure and quality of health care. Consequently, multidisciplinary care, expertise concentration, patient care trajectories and evidence-based medicine were promoted.
- The Belgian health care system also evolved to cope with an ageing population, an increase of chronic diseases and the development of new technologies.
- The recent reforms were particularly impacted by the transfer of additional health competences from the Federal State to the Federated entities in 2014.
- Over the next few years, major measures are expected to be introduced in Belgium to continue improving quality of care and efficiency of the health system. Among them are the continuation of the hospital landscape reform, the development of a national

¹⁷ This chapter was written by Céline Pouppez, and Charline Maertens de Noordhout.

health research system, the reform of the national fee schedule, the implantation of a new law on quality practice in health care, and the integration of all prisoners into the compulsory health insurance system.

6.1 Analysis of the recent reforms

This section summarises the major reforms of the last legislature (2014–2019). The previous reforms are described in the previous HiT (Gerkens and Merkur, 2010).

TABLE 6.1 Major health reforms and policies (2014–2020)

YEAR OF APPROVAL	REFORMS AND POLICIES	DESCRIPTION
2014	Health competences	6th State Reform: Transfer of some health competences from the Federal State to the Federated entities (see Chapter 2).
2014	Mental health care	Complementary protocol agreement between the Federal State and Federated entities on networks and care pathways in mental health care for children and young people (following the agreement of December 2012)
2014	Medical imaging	Protocol agreement between the Federal State and Federated entities on a registry and national planning for medical imaging, extending magnetic resonance imaging and positron emission tomography scans (see Section 4.1.2).
2015	Hospital landscape and financing	The Minister of Social Affairs and Public Health launched an Action Plan for a reform of the hospital landscape and payment system (see also Section 5.4.3)
2015	Pharmaceuticals	The Minister of Social Affairs and Public Health concluded a pact with the pharmaceutical industry (see Section 5.6.2).
2015	Care accessibility	Application of a third payment system for primary care delivered to chronic and vulnerable patients.
2015	Chronic diseases	Protocol agreement between the Federal State and Federated entities to develop an integrated and person-centred care system with a focus on people with chronic diseases.
2015	Mental health care	Protocol agreement between the Federal State and Federated entities on guidance for the implementation of a new child and adolescent mental health policy.
2015	Medicines policies	Belgium, the Netherlands, Luxembourg (and later Austria and Ireland) collaborate on pharmaceutical policy, horizon scanning, health technology assessment and pricing and reimbursement decisions (BeNeLuxA agreement).
2016	Sickness funds	Pact on the strengthening of sickness funds (see Box 3.5)
2016	Prevention	Protocol agreement on prevention policies between the Federal State and Federated entities
2016	Evidence-based practice	Online portal containing validated evidence-based practice guidelines is accessible to primary health care professionals

YEAR OF APPROVAL	REFORMS AND POLICIES	DESCRIPTION
2017	Sunshine act	Pharmaceutical and medical devices companies are required to disclose on the platform Betransparent.be the premiums and benefits granted directly or indirectly to health care professionals, health care organisations or patient associations.
2018	eHealth	Patients can access personal health information through an online portal/Personal Health Viewer
2018	Quality and performance of hospital care	Hospitals can voluntarily participate in a pay-for-performance programme that grants them a specific budget on the basis of the quality of the care they deliver.
2018	Mental health care	Protocol agreement between the Federal State and Federated entities on guidance for the implementation of a new mental health policy for older people.
2018	Medical imaging	Addendum to the protocol agreement between the Federal State and Federated entities on medical imaging promoting appropriate practice (see Section 4.1.2)
2019	eHealth	Approval of the 2019–2021 eHealth plan (see Section 4.1.3)
2019	Hospital's cooperation	A new law obliges hospitals to concentrate their expertise in certain fields and cooperate within loco-regional networks and supra-regional networks. This will be implemented before the end of 2020.
2019	Health indicators	Authorities monitor and disclose indicators on the health status of the population, health system performance, variations of medical practice and organisation of the hospital sector on a national website: www.healthybelgium.be .
2019	Specialised services: Stroke	Protocol agreement on the distribution among the Federated entities of 15 specialised care programmes for acute stroke care involving invasive procedures (national planning).
2019	Hospital care financing	A lump sum payment is paid for hospital stays requiring a standard process of low-complexity care, which varies little between patients (57 groups were defined).
2019	Quality	New law on quality in health care practice (will enter into force in 2021).
2020	eHealth	Mandatory electronic prescription

Source: Author's own.

6.1.1 Governance

The last legislature began with an important State Reform resulting in a transfer of additional health care competences to the Federated entities mainly in the field of care for older people, mental health care, preventive care as well as primary and home care. Some specific competences have also been transferred to them regarding hospital licensing and financing (see Section 2.3). This reform resulted in an increased fragmentation of health care competences.

6.1.2 *Health care quality*

Several reforms were made in mental health care, focusing on specific target groups, in order to bring people with mental disorders back to their personal living environment where possible and to develop a community-based approach through for example the creation of regional networks involving all actors and mobile teams (see Section 5.12).

Measures were also taken to promote a more rational use of medical imaging (see Section 4.1.2 and Table 6.1).

With a focus on integrated, multidisciplinary, transmural and patient-centred care and following the transfer of competences in 2014, the Federated entities reorganised primary care (not only GPs, but also home care and palliative services) to offer more effective, accessible and patient-centred care (see Section 5.3). In 2015, Federal State and Federated entities agreed on a joint plan to develop an integrated and person-centred care system with a focus on people with chronic diseases. Since 2018, this plan includes the financing of 14 pilot projects around patient empowerment, carers' support, case management, concentration and coordination. Other pilot projects were also launched on shortening length of hospital stay when a woman has a normal delivery (2016) (MoH, 2019f) and on alternatives for hospitalisation, mainly regarding intravenous antibiotics and cancer therapy (2017) (see Sections 2.8 and 5.2.).

Enacted in 2016, the Evidence-Based Practice plan aims to coordinate all the existing evidence-based practice initiatives and includes an online portal where the primary health care professionals can consult validated evidence-based practice guidelines and supporting materials (ebpracticenet, 2018). Outcomes-based care is also promoted, with a focus on reducing variation of practices and on P4P initiatives.

Since 2018, all general hospitals can voluntarily participate in a P4P programme that grants them a specific budget on the basis of the quality of the care they deliver. Quality is assessed by the authorities on the basis of indicators regarding their structure, process and results (accreditation process, incidents notification, patient experience measurement, clinical processes and outcomes) (MoH, 2018i).

6.1.3 *Health care efficiency*

The eHealth Plan (2013–2018) aimed to (i) develop data exchange between caregivers; (ii) achieve greater engagement and better knowledge of eHealth by patients; (iii) develop reference terminology; (iv) simplify and improve the efficiency of administrative tasks; and (v) establish a flexible and transparent governance structure. The Government considers that 72% of the objectives defined in the 2013–2018 plan have been achieved (eSanté, 2019). Since 2018, patients can access some of their personal health information through an online portal/Personal Health Viewer (see Section 4.1.3). In 2018, a new plan 2019–2021 was established to reinforce ongoing projects and the coordination of eHealth initiatives and since January 2020, electronic prescriptions are mandatory (except for home visits and in case of force majeure or for prescribers older than 64 years). Electronic prescriptions are transferred from the doctor's computer to the pharmacist's computer through the Recip-e server (BS-MB 9 September 2019; NIHDI, 2019n).

Exercising their new competences, the Federated entities adopted in 2018–2019, or are in the process of adopting (in Brussels), their own system to finance hospital infrastructure and heavy medical equipment (see Section 4.1.1).

Since January 2019, a lump sum payment is paid for hospital stays requiring a standard process of low-complexity care that varies little between patients (57 groups were defined). The lump sum is determined prospectively and currently only concerns the fees for medical providers. In the coming years, other resources (such as medicines) will be integrated (BS-MB 26 July 2018).

In 2018, the organisational and financing rules for emergency care were modified and their public funding was increased by € 35 million. Since January 2019, patients are charged € 60 for emergency vehicle interventions. Other reforms, including a quota for emergency services and measures to rationalise the organisation and financing of out-of-hours GP services via a triage system are foreseen. Patients are able to call an on-call GP (phone 1733) in most parts of Belgium.

6.1.4 *Health care access*

Since 2015, in order to promote primary care, patients with preferential reimbursement status (vulnerable classes) or with chronic disease status do not have to pay in advance the part of the GP fee that is reimbursed by the national compulsory health insurance; their GP is required to charge this part directly to the patient's sickness fund and can only charge patients the official co-payments (BS-MB 23 September 2015).

Since 2015, it is prohibited to charge extra-billings on physician fees to patients who are hospitalised in common or double rooms during day hospitalisation. Extra-billings were already prohibited since 2013 during classic hospitalisations, oncology day care and day hospitalisation of patients with preferential reimbursement status or chronic disease (BS-MB 17 August 2015).

6.1.5 *Sustainability*

Since March 2016, the procedure for reducing a medicine's price when a generic or a copy enters the market has been simplified (the so-called patent cliff). A price reduction now occurs upon entry into the reference pricing system, namely a single reduction on the ex-factory price of 43.64% (51.52% for vital pharmaceuticals) (NIHDI, 2019p).

Since 2018, for biological products, a price reduction (15% of the ex-factory price) is applied after 18 years of reimbursement. If a biosimilar becomes reimbursed before this period, extra price reductions (for the old biological and arrival of a biosimilar) are applied simultaneously according to the turnover of the product (the so-called bio cliff) (BS-MB 1 April 2019a).

Since 2019, in addition to other price reduction measures (see Section 5.6.4), price reductions are applied to medicines reimbursed after 15 years (even if no generic is available) based on a percentage that varies according to the annual turnover of the product (the so-called volume cliff) (BS-MB 1 April 2019a).

In April 2015, the Ministers of Public Health in Belgium and the Netherlands signed an agreement to collaborate on pharmaceutical policy, on horizon scanning, health technology assessment, information sharing and policy exchange, and pricing and reimbursement decisions. The focus

is currently on orphan drugs and drugs with a high budget impact or high medical need. Since then, Luxembourg, Austria and Ireland have joined the agreement (known as the BeNeLuxA collaboration) (Beneluxa, 2015).

6.1.6 *Transparency and accountability*

The Sunshine Act was implemented in 2017 such that pharmaceutical and medical device companies, both Belgian and foreign, are required to document and annually disclose on the platform Betransparent.be the premiums and benefits they granted directly or indirectly to health care professionals, health care organisations or patient associations (this does not include grants for scientific research) (BS-MB 27 December 2016).

A Health Care Monitoring Action Plan for 2016–2018 including 30 main actions has been developed by the NIHDI, including the creation of an Appropriate Care Unit to analyse the relevance of care and identify unexplained differences in health care practices (NIHDI, 2016b) (see also Section 7.1).

To provide a transparent view of the health system to the public, the website (www.healthybelgium.be) was created in April 2019, presenting indicators on the health status of the population, health system performance, variations of medical practice, and the organisation of the hospital sector (Devos et al., 2019).

6.1.7 *Health status of the population*

Several measures were taken by the Federal State and Federated entities to improve the population's health status. Since 2016, the Federal State and Federated entities have concluded an agreement concerning the coordination of prevention policies in Belgium. Topics include: nutrition, tobacco, alcohol and illegal drugs, psychotropic drugs, gambling addiction, sexual health, dental health, suicide prevention, vaccinations, infectious diseases (tuberculosis, hepatitis C), newborn screening, cervical cancer screening, breast cancer screening and colorectal cancer screening. With the increase in the number of asylum seekers in Belgium, increased attention has been placed on the surveillance of polio (the only mandatory vaccine in Belgium)

(MoH, 2016m). Since 2019, vaccination against human papillomavirus has been recommended and financed by the Federated entities for young boys (girls were already covered).

Joint measures were taken to reduce tobacco and alcohol consumption. Since 2019, Federal rules prohibit the sale of tobacco products to those under 18 years and from 2020, there is standardised packaging for all tobacco products. Proposals are underway to ban all smoking advertising and to address the regional differences in prohibiting smoking in cars with a minor present (currently applied for minors under 16 years in the Flemish region and for under 18 years in the Walloon region).

Measures were also taken by the Federal authorities to promote better nutrition. In 2016, they concluded a covenant with representatives of the food companies (Healthy Food Agreement) to promote healthy choices for the consumer by changing the composition, labelling or portions of certain food products (Convention alimentation équilibrée, 2019). In 2018, taxes on soft drinks were almost doubled. Furthermore, a legal framework was adopted for a Nutri-Score label on food. This logo aims to better inform the public about the nutritional value of the food. Food producers or distributors who opt for its use must comply with the legislation (BS-MB 1 April 2019b). Then in October 2019, food-based dietary guidelines were published by the Superior Health Council (MoH, 2019h).

6.2 Future developments

In the forthcoming years, several major measures have been planned in Belgium.

Since 2016, a number of measures have already been implemented in the framework of the hospital landscape reform (see Section 6.1). In 2020, a maximum of 25 loco-regional hospital networks grouping all acute hospitals will be created, and care will be assigned to hospitals of each network, with a distinction between general care provided by all hospitals; specialised care not provided in every hospital within the network (implying referral agreements); and supra-regional care provided in a limited number of reference hospitals (BS-MB 28 March 2019). In July 2019, 10 reference centres for oesophageal cancer surgery and 15 for pancreas cancer surgery were implemented (ABSYM-BVAS, 2019).

The results of P4P programmes have been evaluated and more quality indicators will be added (for transmural care, mortality and improvements of previous indicators), modified or deleted in the future. Progress in specific areas may be remunerated and public reports may be introduced.

To improve coordination between health institutions and avoid overlaps in research projects, a health research system is under development. This system will include all individuals and institutions whose main purpose is to generate high-quality knowledge that can be used to promote, restore and/or maintain the health status of the population. The health research system will optimise the functioning within and between institutions and administrations, and will allow them to help achieve the main goals of the health care system (for example, to improve the health status of citizens and reduce health inequalities). The integration of the various health research institutions into the health research system will be achieved gradually.

The NIHDI announced in October 2019 a project of reform of the National Fee Schedule. The aim is to (i) correct unjustified differences in the level of fees between GPs and medical specialists and between medical specialists themselves; (ii) adapt the fee schedule to changes in medical activity and new models of care (such as telemedicine); (iii) improve the logic and transparency of the fee schedule; and (iv) introduce incentives to promote collaboration and quality.

To improve the quality of care in Belgium, the law of 22 April 2019 on the quality of practice in health care was expanded and is expected to come into force in 2021. This law contains a series of measures to help ensure the quality and safety of care for the patient. Among the measures introduced by this law, there is the obligation for health care providers to maintain a dynamic portfolio that proves their perseverance in terms of continuing education (BS-MB 14 May 2019b).

Since 2018, internees (who are people with mental disorders charged with offences but who are deemed lacking criminal responsibility) placed in forensic care centres are included in the compulsory health insurance scheme. In the coming years, the inclusion of all prisoners (including psychiatric patients staying in prisons) is under discussion; they are currently covered by the Ministry of Justice (Mistiaen, 2017; NIHDI, 2018h).

Assessment of the health system¹⁸

Chapter summary

- **Governance:** Efforts have been focused on increasing the transparency of the system, the accountability of all actors, and the involvement of patients and citizens. As in other countries there nevertheless remains a lack of transparency concerning pharmaceuticals (especially concerning pricing).
- **Accessibility:** The compulsory health insurance system covers almost the whole population. The share of out-of-pocket payments in total health care expenditure, which is an indicator of financial protection, has decreased slightly below the European average. However, the share of individuals postponing medical examination because of cost is slightly higher than the European average and vulnerable groups report more unmet needs for medical and dental examinations due to financial reasons.
- **Quality:** Antibiotic consumption, which is an indicator of the quality of primary care, remains high and significantly higher than in neighbouring countries. Initiatives have been undertaken to tackle this issue. The quality of hospital care is improving but the mortality rate after ischaemic stroke is high. Initiatives to

18 This chapter was written by Charline Maertens de Noordhout.

improve quality of care include: the creation of a specialised care programme on stroke, the evidence-based plan, integrated-care pilot projects, the development of patient-reported measures and a new law on the quality of practice in health care.

- **Outcomes:** Avoidable and preventable mortality are decreasing but alcohol consumption and obesity are high and have a significant impact on population health. Furthermore, important socioeconomic inequalities are observed through the whole spectrum of health indicators.
- **Efficiency:** The trend in Belgium is towards the more efficient use of care services with an increase in the use of low-cost medicines and of one-day surgery and a decrease in the length of stay for normal delivery.

7.1 Health system governance

7.1.1 *Transparency of the health system*

In Belgium, the Medical Evaluation and Inspection Department of the NIHDI is responsible for combating fraud in the health sector. They found € 5.2 million in fraud in 2018 (NIHDI, 2018f). Belgium ranked 17th of 180 countries on the corruption perceptions index, which measures perceptions of corruption in the public sector (Transparency International, 2019). Despite this good result, the European Healthcare Fraud & Corruption network concluded that cross-border fraud in health care exists in Belgium (Bobek et al., 2018). For example, some patients travel from Belgium to the Netherlands using the European Health Insurance Card to obtain medicines that they are not entitled to in Belgium (Bobek et al., 2018).

For medicines, the lack of transparency on efficacy and safety is caused by the fact that pharmaceutical companies are not sanctioned by Belgian or European authorities if they do not publish all of their clinical trial results (which is normally mandatory). Lack of transparency on drug prices is linked to the existence of conventions between authorities and pharmaceutical companies for some innovative drugs that may include confidential price

discounts. The price paid by the health insurance for some (expensive) drugs is therefore not known (Gerkens et al., 2017).

To improve transparency in the health sector, the [betransparent.be](https://www.betransparent.be) platform (see <https://www.betransparent.be>) was implemented in 2015, which is a self-regulation initiative aiming to promote transparent relations between the industry and health care professionals and organisations. [Betransparent.be](https://www.betransparent.be) lists remunerations from the industry to health care professionals and organisations, in the interest of the patient. Since June 2017, a Royal Decree (the Sunshine Act) requires that pharmaceutical and medical device companies, both Belgian and international, document and annually disclose on the platform the premiums and benefits that they grant directly or indirectly to health care professionals, organisations and patient associations (BS-MB 23 June 2017).

There is also a lack of transparency with hospital invoices. To overcome this problem, a patient invoice model for hospitals was legally implemented in 2016 (BS-MB 17 June 2015). However, information on the cost of treatment in hospitals remains too complicated for the majority of patients to understand and they do not always know who to contact to receive further explanation. Only 19 Flemish institutions (63%) and one Walloon institution (3%) offer an online cost estimation module. Most institutions also provide online information on room and fee supplements (Claes, 2018).

The main objective of the Belgian HSPA report is to provide a transparent view of health system performance in accordance with the Tallinn Charter. The report is intended to be accessible to the general public and to do so, results of the performance indicators are presented in the form of pictograms. The 2019 HSPA report was accompanied by a website (see <https://www.healthybelgium.be/en/>) to allow even more public access and the majority of the data used are available for download (Devos et al., 2019).

7.1.2 Accountability of the health system

For Health 2020, the WHO Regional Office for Europe explicitly asks Member States to establish a process for target-setting. Generally, health targets are put forward as a multifunctional tool that can be used to guide health policy-making, set priorities, create political and administrative commitments, monitor health system performance and increase public accountability. Internationally, an increasing number of countries are setting

health targets (Devos et al., 2019). Although Flanders has been developing targets for a long time, the Federal level appears to lag behind. Therefore, in 2017 the KCE conducted a study to explore how Belgium could catch up with other countries. The study showed that several Federal actors already formulate targets in a variety of health and health care domains, such as targets on antibiotics, medical imaging and drug prescriptions. However, the target initiatives are scattered and not very visible. They are lacking in leadership and a clear thematic approach. KCE, therefore, recommended the creation of a platform to coordinate and support target-setting and to communicate the targets as a coherent set. Moreover, this platform should bring together representatives of political, administrative, scientific and operational levels from all relevant policy levels and domains (Obyn et al., 2017).

There are also 83 indicators providing information on Belgium's progress towards the 17 Sustainable Development Goals, adopted by the United Nations. These have been implemented (see <https://www.indicators.be/>) and are monitored by the Federal Planning Bureau.

Within the NIHDI, the National Council for Quality Promotion is responsible for health quality promotion for health practitioners and the Department for Medical Evaluation and Inspection (DGEC/SECM) is tasked with tackling the issue of divergence concerning good medical practice; see Gerkens and Merkur (2010) for additional information on health quality promotion and sanction procedure. To make efficient use of financial resources in the health care sector, the NIHDI developed a Health Care Monitoring Action Plan for 2016–2018 including 30 main actions. An important action included in this Plan was the creation of an Appropriate Care Unit within the Research-Development-Quality Department of the NIHDI (NIHDI, 2016b). Among its missions, the Appropriate Care Unit analyses the relevance of care and identifies unexplained differences in health care practice. In 2019, the Appropriate Care Unit developed, together with the National Council for Quality Promotion, an information campaign on 2016 general medical practices. In this process, they provided feedback on the individual activity of GPs with more than 500 patient contacts. GPs received individual feedback on three main topics (medications, clinical biology, and medical imaging and preoperative examinations) presenting the most striking results. Their practice was also compared to the national results. A detailed analysis of their feedback accompanied by evidence-based recommendations concerning the use and prescriptive behaviour

of the indicators was also available through their personal eHealthBox. An anonymised detailed report is also available online. Nursing homes also received feedback and outpatient specialists received feedback on their prescriptions (NIHDI 2019e).

7.1.3 *Population participation and involvement*

In the 2019 HSPA report, two new indirect measures for patient involvement in treatment choice were added. New guidelines recommend actively involving patients in the choice of treatment in the case of prostate or testicular cancer. It implies that for cancer with low risk of progression, active surveillance (instead of chemotherapy/radiotherapy) should be proposed and discussed with the patient. The choice of taking an active surveillance strategy can only be made with the patient's full agreement and total cooperation (Jonckheer et al., 2013). Overall, treatment of prostate and testicular cancers has followed the new guidelines; active surveillance is increasingly chosen as a therapeutic option (Oldenburg et al., 2013; Devos et al., 2019). Additional information on the results of these indicators is available at <https://www.healthybelgium.be/en/>. Other information on patient-centred care can be found in Section 2.8.

In 2014, KCE examined how citizens' preferences can be taken into account in reimbursement decisions (Christiaens et al., 2012). The purpose of this study was to measure the relative importance of the criteria used to assess reimbursement requests for new health interventions from the citizens' perspective. Citizens' preferences about these criteria were determined through a population survey (n = 4810). On this basis, weights were established for each of the decision criteria submitted. It showed that citizens believe that quality of life is the most important criterion to be considered for reimbursement decisions. The weights were integrated into a decision support tool that was proposed to the committees of the NIHDI to be used in reimbursement decisions for health care interventions (Christiaens et al., 2012).

Belgium is also involved in the PREFER initiative, which is a public-private collaborative research project under the Innovative Medicines Initiative. The objective of PREFER is to establish recommendations to support the development of guidelines for industry, regulatory authorities and Health Technology Assessment bodies on how and when to include patient

preferences on the benefits and risks of medical products in their decision-making processes (<http://www.imi-prefer.eu/about/>). Recommendations are expected by October 2021.

7.2 Accessibility

7.2.1 *Population coverage*

Nearly the entire population is covered by the compulsory health insurance system. The approximate 1% that is not covered includes people who do not meet the administrative and/or financial requirements (Devos et al., 2019). The percentage of those not covered is slightly higher in the Brussels region (around 2%). It is important to note that people who are not affiliated with a sickness fund, for example irregular migrants (around 0.8–1.4% of the general population), are not included in the definition of population for the accessibility indicators (see Box 3.2 for additional information on gaps in coverage).

7.2.2 *Benefits package*

The services that are covered by compulsory health insurance are described in the national fee schedule (called the nomenclature) and can be found on the NIHDI website (<https://www.riziv.fgov.be/fr/nomenclature/Pages/default.aspx>). Additional benefits (such as reimbursement for glasses or osteopathy) depend on the sickness fund to which the patient is affiliated and if the patient has taken out additional VHI. Many employees have access, via their employer, to private health insurance that covers care that is not (or only partially) covered by the compulsory health insurance. VHI is mainly taken to cover extra-billings for single-room hospitalisations and dental expenses. Reliable and exhaustive data on the number of people with VHI are currently not available but VHI accounted for 5.1% of health expenditure in 2017. Measures to improve access for vulnerable groups are described in Box 3.7.

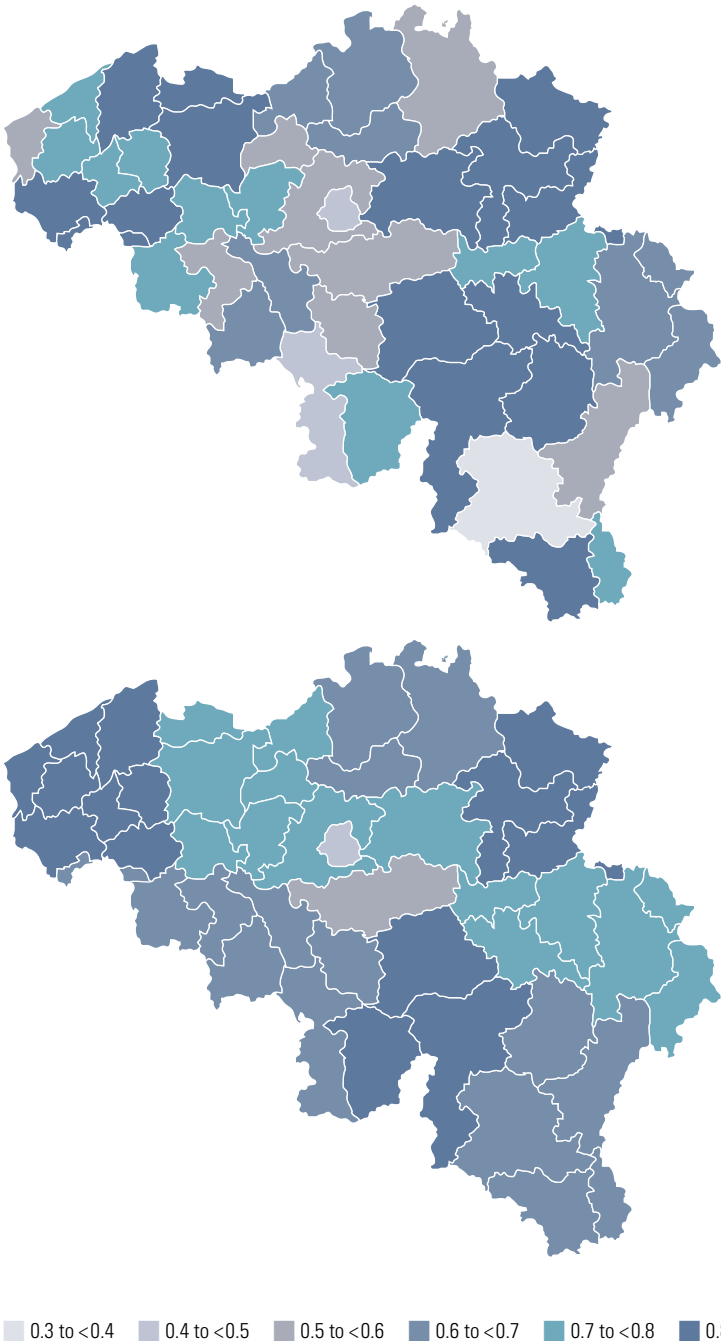
7.2.3 Availability of services

In 2018, 48.4% of patients had to wait two or more weeks to get an appointment with a specialist (compared with 38.4% in 2013). This self-reported indicator is slightly higher in the Walloon region (55.6% compared with 45.6% in the Flemish region and 42.5% in Brussels). About 13.5% of patients considered this waiting time problematic (Sciensano, 2020b). Waiting times for access to mental health centres are long and increasing. In 2017 in Flanders, 44% of the population in contact with an ambulatory mental health centre had to wait longer than 1 month for their first contact (Devos et al., 2019). A KCE report on waiting times in Belgium is expected by the end of 2020.

The geographical distribution of hospital care facilities and the number of beds in each province is in line with the distribution of the population, so there are more beds in Brussels than in Flanders and Wallonia. Additional information about the geographical repartition of hospital care facilities is available in Fig. 4.2 and Box 4.1 of Chapter 4. In 2019, the overall geographical accessibility to maternity wards was excellent (more than 99% of women of reproductive age had access to a maternity ward within 30 minutes) but this was less good in the south of the country in cross-border areas (Lefèvre et al., 2019).

The distribution of conventioned GPs, dentists and medical specialists is also a good indicator of the accessibility of care. Having access to conventioned health professionals ensures that patients benefit from the official fees (defined in the national fee schedule, see Section 3.3.4). Patients can therefore plan in advance how much they will pay for visits and care services, with no extra-billing. In 2016, the number of conventioned GPs was equally distributed between the provinces, except for Brussels and Walloon Brabant where the GPs' FTEs per 1 000 population was lower than in other provinces (Brussels: 0.49 FTEs; Walloon Brabant: 0.57 FTEs) (see Fig. 7.1). Additional information on the number of conventioned medical specialists and dentists can be found in the HSPA report (Devos et al., 2019).

FIG. 7.1 Conventioned GPs (in FTE) density per district and per province, per 1 000 population, 2016



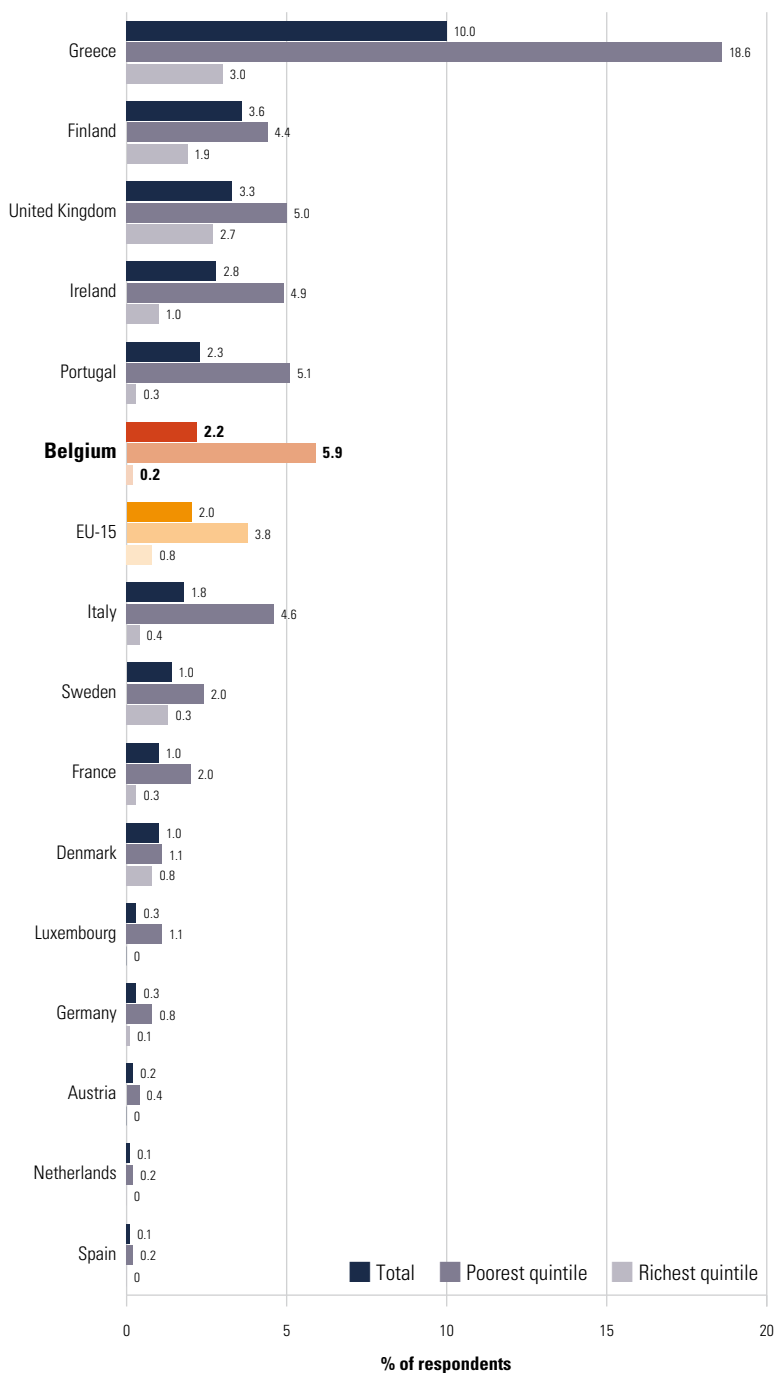
Source: NIHDI (Devos et al., 2019).

7.2.4 *Unmet need*

Based on the Belgian health interview survey, on average 9.1% of Belgian households declared in 2018 that they had to postpone health care for financial reasons. This percentage is in line with results of previous surveys (1997, 2001, 2004 and 2013) and is lower than the 12.4% found in 2008. There are large differences between the three regions (16.1% in the region of Brussels-Capital, 12.8% in the Walloon region, and 5.4% in the Flemish region) (Sciensano, 2020b).

The EU-SILC survey (individuals aged 16 years and over) shows that the share of individuals postponing care because of cost was 3.6% for dental examination and 2.0% for medical examination in 2017. A direct comparison between both surveys is difficult because the health interview survey includes more items (such as eyeglasses and contact lenses) and measures unmet needs at the household level (whereas EU-SILC measures at the individual level). The EU-SILC results show a deteriorating trend between 2011 and 2014 and an improvement in 2017. The share of individuals postponing medical examination because of cost in 2017 is nevertheless higher than the European average (Belgium: 2.0%; EU-15: 1.1%). More disadvantaged groups (low educational attainment, low income or benefiting from increased reimbursement) report more unmet needs for medical and dental examinations due to financial reasons. Despite the measures taken to improve the financial accessibility of health care [including the reform of the preferential reimbursement scheme in 2014 (BS-MB 29 March 2012), see also Box 3.5], important – and growing – socioeconomic inequalities are observed. Unmet needs are over four times more frequent in the population with low educational attainment compared with the high educational attainment cohort and the differences by income quintile are even more pronounced (Devos et al., 2019). The share of individuals reporting unmet needs for financial reasons in the lowest- and highest-income quintiles, respectively, are 5.6% and 0.2% for medical examinations and 8.9% and 0.3% for dental examinations. While cost is the main reason in Belgium, the same conclusions can be made when looking at unmet needs for all investigated reasons (namely cost, waiting time, or travel distance), see Fig. 7.2.

FIG. 7.2 Unmet needs for a medical examination (due to cost, waiting time, or travel distance), by income quintile, 2017



Source: Eurostat (2020).

7.3 Financial protection

Financial protection means ensuring that people do not face financial hardship when they use health services. A health system that works well should remain financially accessible to the largest number of people. Looking at the extent to which different health services are financed through out-of-pocket payments indicates the main gaps in health coverage. The share of out-of-pocket payments in total health care expenditure is stable and reached 17.6% in 2017 (compared with 18.0% in 2013) and is below the EU-15 average (17.8% in 2017). The share of out-of-pocket payments on dental care expenditure is high but similar to the European average (61.3% in 2017, European average of 59.6% based on 10 countries) (Devos et al., 2019).

The Household Budget Survey 2016 showed that, on average, the share of household payments on health in total household consumption is 4.6% (stable among 2012, 2014 and 2016) (STATBEL, 2019a). In 2016, the average yearly health expenditure per household was more than twice as high for the higher-income quartile households (€ 2 154) than for the lower-income quartile households (€ 954) (see also Section 3.4.1 for additional information on out-of-pocket payments) (OECD, 2015; Devos et al., 2019). There is a near consensus that the financial burden of health care use should not disproportionately rest on those who suffer from illness.

7.4 Health care quality

7.4.1 Primary care

Hospital admissions rates for asthma and complication of diabetes can be used as indicators of quality of the primary care because those diseases should usually be managed by the first-line of care. High hospital admission rates for asthma and complication of diabetes can, therefore, reflect poor quality of primary care. In 2017, the number of asthma hospital admissions in adults (older than 15 years) was 29 per 100 000 population, which is similar to the EU-15 average (34 per 100 000) (OECD, 2019b). Asthma-related admissions have decreased since 2000, which was also the case

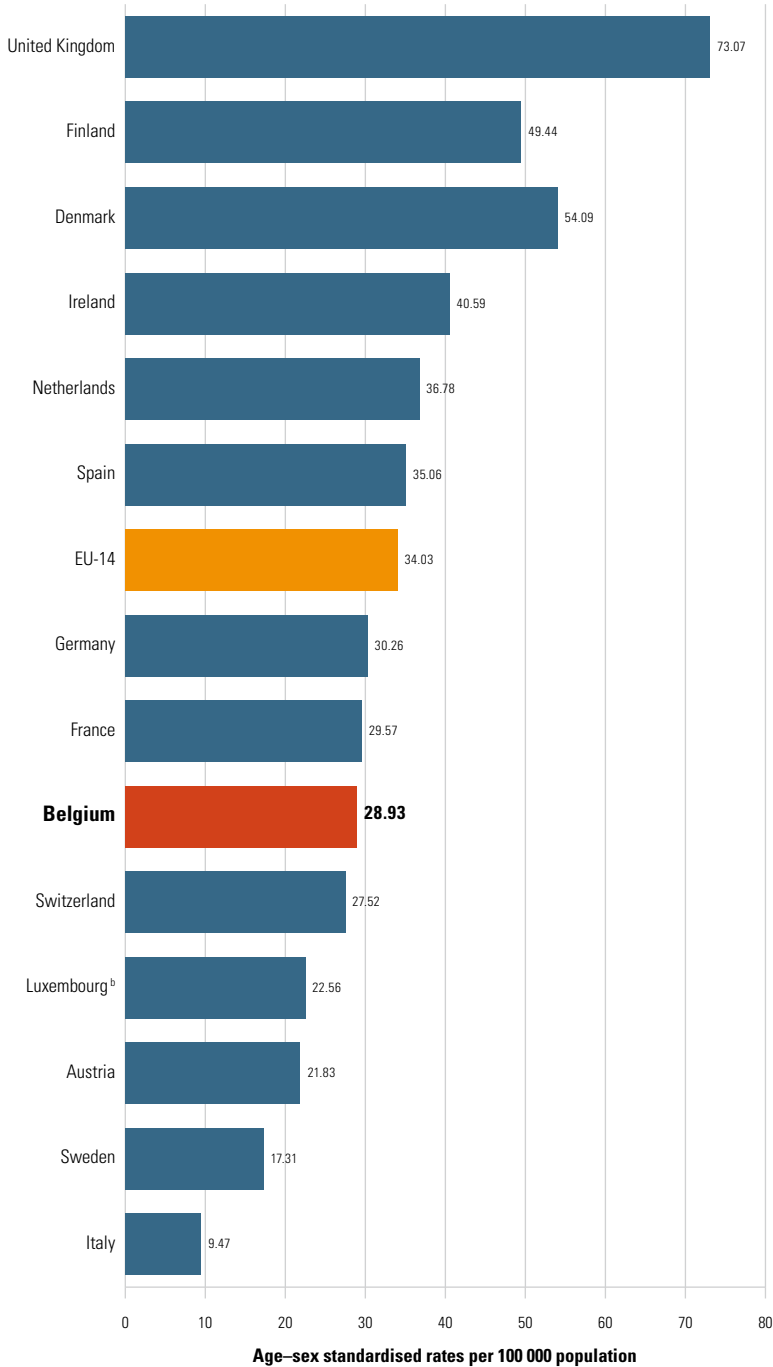
in the EU-15 countries, and have stabilised since 2008. In 2014, rates of asthma admission were similar in Wallonia (29 per 100 000 population) and Flanders (29 per 100 000 population), but higher in Brussels-Capital (39 per 100 000 population) (Devos et al., 2019) (see Fig. 7.3).

The number of complications of diabetes hospital admissions in adults was higher in Belgium than in the EU-15 (Belgium: 139 per 100 000 population; EU-15: 105 per 100 000) in 2017. Admissions for complications of diabetes have been slowly decreasing since 2012 (2012: 160 per 100 000 population; 2017: 139 per 100 000 population); the same trend is observed in other EU-15 countries (see Fig. 7.4) (OECD, 2019b). There is little variation in the rate of admission for diabetes between the regions (in 2014: Flanders: 130; Wallonia: 132; Brussels-Capital: 128) (Devos et al. 2019).

In 2015, at least 632 hospital admissions per 100 000 population could have been avoided; this is almost equal to the EU-15 average (EU-15: 621 per 100 000 population) but lower than in 2012 (660 per 100 000). A large proportion of them were related to admission for chronic obstructive pulmonary disease (248 per 100 000 population; 39%) (see Fig. 7.5).

Avoidable admissions rates for asthma and chronic obstructive pulmonary disease were slightly higher in Belgium than in the EU-15 (Asthma: Belgium: 37.4 per 100 000 population; EU-15: 36 per 100 000. Chronic obstructive pulmonary disease: Belgium: 248 per 100 000 population; EU-15: 194 per 100 000) and have been decreasing since 2012. The number of avoidable admissions for hypertension was lower in Belgium than in the EU-15 (Belgium: 14 per 100 000 population; EU-15: 66 per 100 000 population). The avoidable admissions rate for congestive heart failure was lower in Belgium than in the EU-15 (Belgium: 189 per 100 000 population; EU-15: 248 per 100 000 population) but have slightly increased since 2012 (187 per 100 000 population). The number of admissions for diabetes-related complications were higher in Belgium than in the EU-15 (Belgium: 143 per 100 000 population; EU-15: 121 per 100 000 population) but decreased since 2012 (160 per 100 000 population) (see Fig. 7.5).

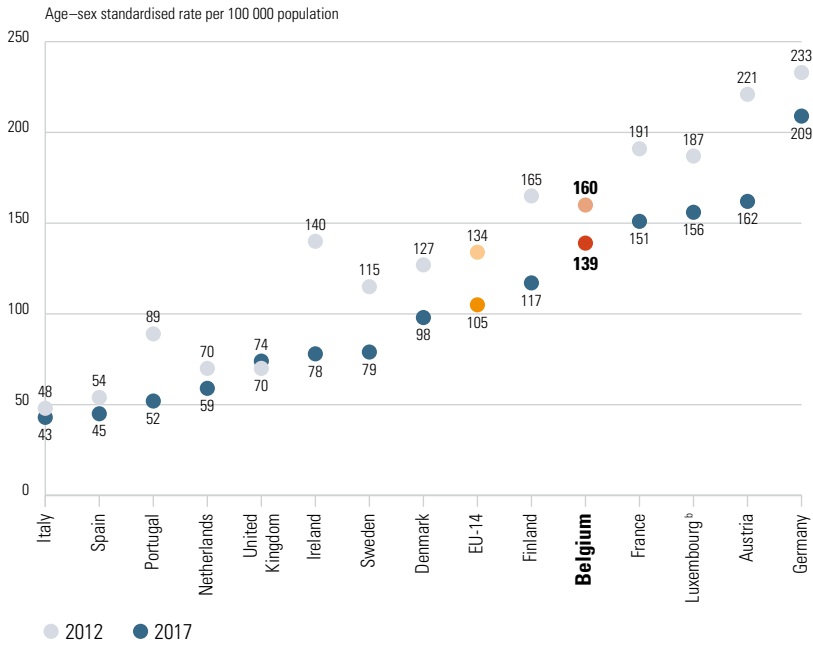
FIG. 7.3 Hospital admission rates for asthma in Belgium in adults and EU-15^a, 2017 (nearest)



Source: OECD (2019b).

Notes: ^a No data available for Greece; ^b 3-year average.

FIG. 7.4 Hospital admission rates for diabetes in Belgium and EU-15^a, 2012 and 2017 (nearest)

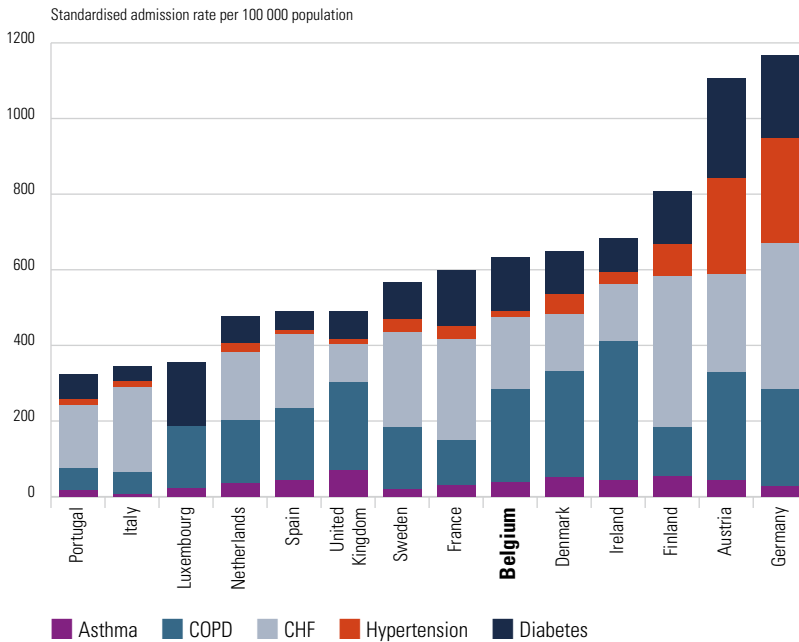


Source: OECD (2019b).

Notes: ^a No data available for Greece; ^b 3-year average.

As antibiotics are mainly prescribed by GPs in Belgium (Leroy et al., 2019), their consumption can be used as a proxy for the quality of primary care. It is also recommended that some powerful antibiotics, such as quinolones and cephalosporins, should be reserved for second-line treatment so that the chances of curing serious and/or resistant infections are not wasted (see also the objectives of the Belgian Antibiotic Policy Coordination Committee, officially established in 1999 to promote the prudent use of antibiotics in humans and animals as well as infection control and hospital hygiene, with the overall aim to reduce antibiotic resistance (BAPCOC, 2020).

FIG. 7.5 Avoidable hospital admission rates for asthma, chronic obstructive pulmonary disease, congestive heart failure, hypertension and diabetes-related complications, 2015 or latest, EU-15^a



Source: OECD (2019a).

Notes: CHF: congestive heart failure; COPD: chronic obstructive pulmonary disease;

^a No data for Luxembourg for CHF and hypertension and no data available for Greece.

In 2016, the total volume of antibiotics prescribed in outpatients was 27.7 Defined Daily Dose (DDD) per 1 000 population per day. This is much more than in some other European countries, such as the Netherlands (9.7 DDD). Wallonia had the highest consumption level (over 30 DDD) whereas Brussels-Capital had the lowest consumption level (23.4 DDD). In 2016, 40% of the population received at least one antibiotic prescription (43.7% in Wallonia, 38.5% in Flanders and 35.3% in Brussels-Capital). Even though it has slightly improved over time, the proportion of second-line antibiotics remains fairly high in Belgium: 52% in 2016 (60% in 2006). This indicator even showed poor results in children (35%) throughout the country and very high when compared with the Netherlands (16%) (Devos et al., 2019) (see also Box 5.3 on the strengths and weakness of primary health care).

7.4.2 Hospital care

Effectiveness of acute hospital care can be evaluated by estimating the mortality rates within 30 days after admission for acute myocardial infarction (AMI), ischaemic stroke and haemorrhagic stroke and the 5-year relative survival rate for breast and colorectal cancer.

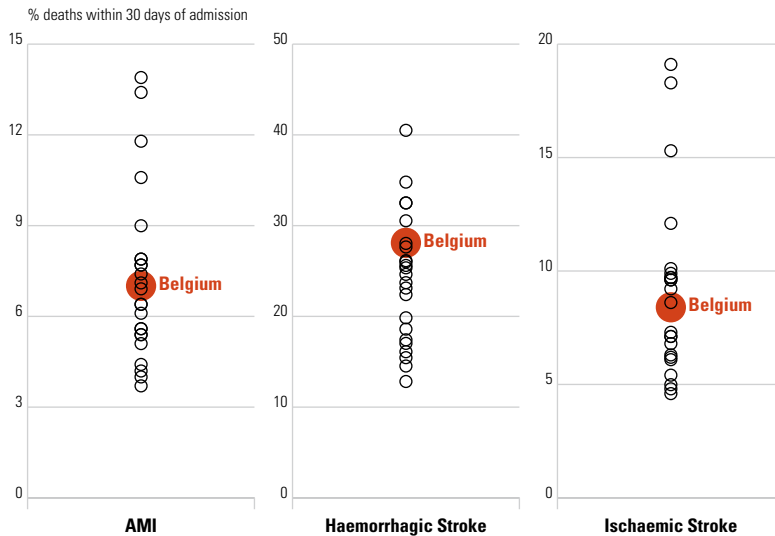
Approximately 19 000 patients are hospitalised each year for an episode of AMI [International Classification of Diseases 9th revision (ICD-9): 410 or 10th revision (ICD-10): I21, I22]. Between 2008 and 2016, the related mortality rate decreased, from 7.8% to 7.1%. The trend over a longer period of time shows a stronger decrease as the mortality rate was halved between 2000 and 2015. The mortality results for post-AMI are better in Flanders (6.7%) than in Wallonia and in Brussels-Capital (both 7.7%), but the gap has been narrowing (Devos et al., 2019). Among the EU-15 countries, Belgium came 8th with the higher post-AMI mortality rate (see Fig. 7.6).

Around 21 000 patients are hospitalised each year for ischaemic stroke (ICD-9: 433, 434, 436 or ICD-10: I63, I64). Between 2000 and 2016, the related mortality rate decreased only slightly. Results are similar between regions (Flanders 9.1%, Wallonia 8.7%, Brussels-Capital 8.9%), but the situation in Wallonia seems to have been deteriorating in recent years (Devos et al., 2019). The mortality rate after ischaemic stroke is worse in Belgium than in most of the EU-15 countries and with 8.4 deaths per 100 patients, Belgium is ranked 5th with the higher mortality rate (see Fig. 7.6).

The mortality rate after haemorrhagic stroke was 28.1 deaths per 100 patients in 2015, which is the highest mortality rate among EU-15 countries (see Fig. 7.6).

To improve the quality of care concerning stroke management, a protocol agreement was concluded in April 2014, determining the licensing criteria for specialised care programmes in acute stroke and in 2019, an agreement on the distribution of 15 specialised care programmes for acute stroke was concluded (protocol agreement of March 2019).

FIG. 7.6 In-hospital mortality rates (deaths within 30 days of admission) for admissions following acute myocardial infarction, haemorrhagic stroke and ischaemic stroke, Belgium, EU-15, 2015 or latest



Source: OECD (2019a).

Note: AMI: acute myocardial infarction.

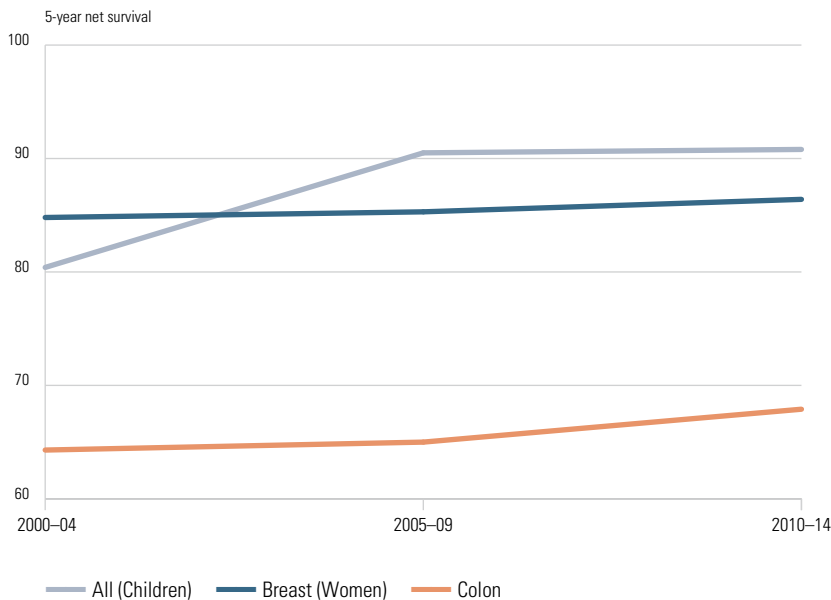
The 5-year relative survival rate after a breast cancer diagnosis was 89.9% for patients who were diagnosed in 2012. This figure has been stable compared with the number of patients diagnosed in 2004. It is, however, important to note that the 5-year survival rate strongly depends on the stage of the breast cancer at the time of diagnosis. Indeed, for stage I and II, the 5-year survival rate is similar to that of the general population (stage I: 100%, stage II: 93.3% in 2012), whereas, in the group of women diagnosed at stage III and IV, the 5-year survival rate was 77.3% and 34.6%, respectively in 2012. Belgium has a 5-year breast cancer survival rate that is slightly better than the average for European countries (Belgium: 86.4% and EU-13: 86.2% for 2010–2014) (Devos et al., 2019).

The 5-year relative survival rate following a colorectal cancer diagnosis is 67.5% for patients diagnosed in 2012, which represents an improvement compared with 2004 (63.7%) (Devos et al., 2019). As with breast cancer, the survival rate following colorectal cancer is strongly influenced by the stage of

the disease at the time of diagnosis (stage I: 95.6%, stage II: 83.4%, stage III: 71.9% and stage IV: 18.4%), but colorectal cancer is often diagnosed at a more advanced stage (II or III), hence the difference in prognosis between these two types of cancer. Five-year relative survival rate for colorectal cancer is significantly higher than the average EU-15 (Belgium: 67.8% and EU-15: 63.3% for 2010–2014) (Devos et al., 2019) (Fig. 7.7).

Recent initiatives (for example, the Evidence-Based Practice plan and a pilot project on integrated care) to improve the quality of care are described in Chapter 6.

FIG. 7.7 Cancer survival rates for colon cancer, breast cancer (among women) and leukaemia (among children), Belgium



Source: Allemani et al. (2018).

Notes: Age-standardised 5-year net survival (%); ALL: acute lymphoblastic leukaemia.

7.5 Health system outcomes

Amenable and preventable mortality are indicators distinguishing deaths that could have been avoided – or the number of which could have been reduced – if either more timely and effective medical procedures or more effective public health interventions had been implemented. Additional information on and definitions of those two concepts are available in the 2019 HSPA report and at <https://www.healthybelgium.be/en/>.

In 2015, the age-standardised amenable mortality was 71 per 100 000 inhabitants, which is lower than the EU-15 average (75 per 100 000 inhabitants) (OECD, 2018b) (see Fig. 7.8). Since 2000, the amenable mortality rate has been decreasing (120 per 100 000 in 2000; 71 per 100 000 in 2015) and the top three causes of amenable death are treatable cancer (36.7% of the total amenable deaths), stroke (19.2%) and ischaemic heart disease (17.8%) (see Fig. 7.9). In 2000, ischaemic heart disease ranked second, whereas treatable cancer ranked first and stroke third as causes of amenable deaths. Amenable mortality is higher in men than in women in Belgium (sex ratio: 1.37) and these differences between sexes are most marked in Wallonia (1.52) compared with Brussels (1.41) and Flanders (1.27) (Renard et al., 2019a).

Although the preventable mortality rate has been decreasing since 2000, Belgium ranks poorly at the European level (14th out of 15), with 56.1 age-standardised preventable death per 100 000 inhabitants in 2015 (see Fig. 7.8). Preventable mortality is much higher for men than for women (sex ratio: 1.8) and this ratio is comparable in all three regions. In men (aged under 75 years), the primary causes of death potentially preventable through health policies are lung cancer, cardiac diseases and suicide. In women (aged under 75 years), the primary causes of preventable mortality are lung cancer, breast cancer and cardiac diseases. Preventable mortality has been slowly decreasing in men, but has remained fairly stable in women; this stagnation may be attributed to increased lung cancer mortality in women (who smoke more than in the past) (Renard et al., 2019a).

Since 2010, several health policies have been initiated in Belgium to improve the health of the Belgian population. These include a ban on smoking in closed public places (BS-MB 29 December 2009), the publication of a Royal Decree to promote the use of Nutri-scores for the food industry (BS-MB 1 April 2019b) and the elaboration of a law proposal on prohibiting alcohol sales (except beer and wine) to people under 18 years old in 2019

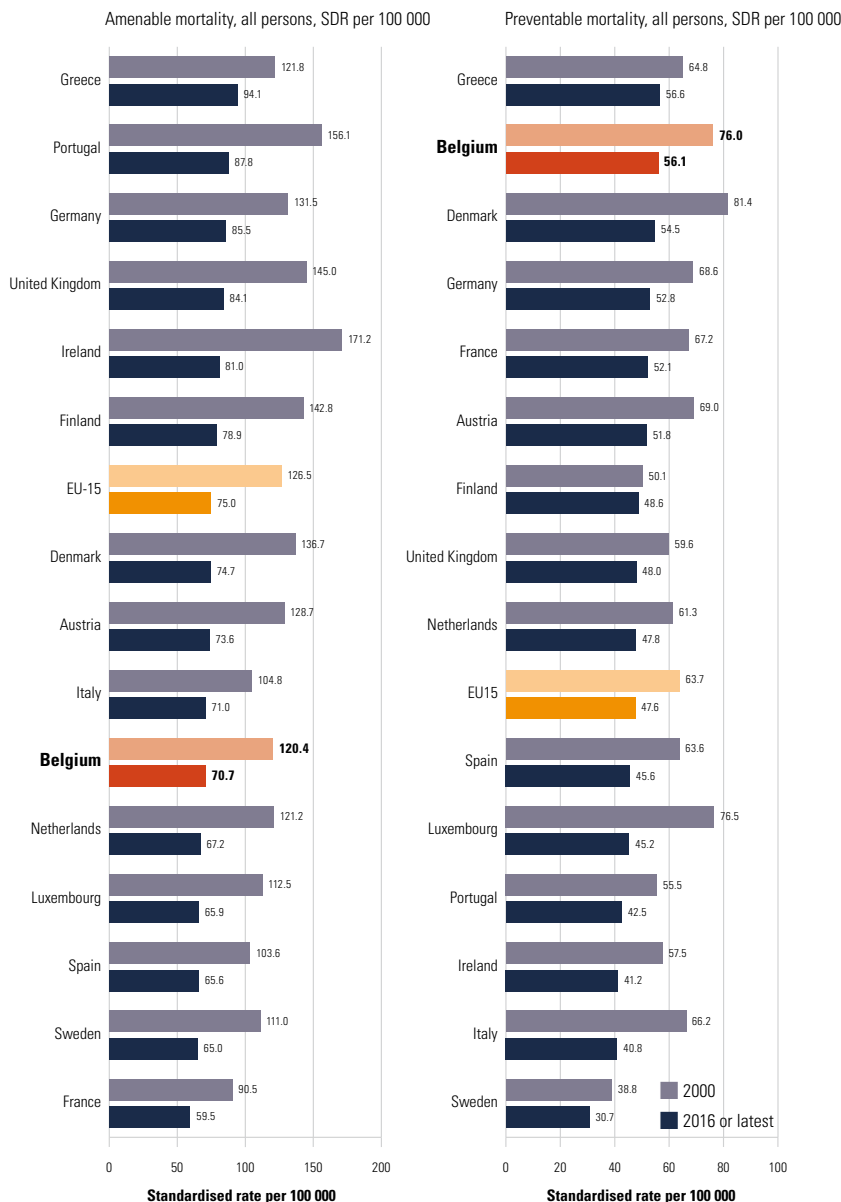
(Dekamer.be 2017) (see also Chapter 6 on principal health reforms). At the same time, some improvements in health determinants have been observed, for instance, a substantial decrease in the percentage of daily smokers over the past 15 years, a slight decrease in the consumption of sugar-sweetened beverages since 2004 and a decrease of the prevalence of alcohol consumption since 2013 (Gisle et al., 2018; Renard et al., 2019a).

However, it is extremely challenging to develop a causal link between the implementation of health policy and an improvement of population health. Multiple other factors may contribute to the improvement or deterioration of population health, for instance, demographic changes, education or the fact that policies are too recent to measure their impact (Maertens de Noordhout et al., 2018). Despite a decrease since 2013, alcohol consumption remains an important issue in Belgium (Gisle et al., 2018). In 2018, 76.6% of the population over 15 years old drank alcohol and 9.7% were daily consumers. The prevalence of weekly Risky Single Occasion Drinking (consumption of at least six glasses of alcohol on a single occasion) was 4.3% among the population over 15 years (Gisle et al., 2018). There is a need for broader policy approaches to tackle harmful drinking in Belgium. Furthermore, addressing the rise in adult obesity (Body Mass Index ≥ 30 kg/m²) in Belgium, which over the past decade grew from 10.8% in 1997 to 15.9% in 2018, should be treated as a public health priority (Drieskens et al., 2018).

7.5.1 *Equity of outcomes*

In Belgium, as in all European countries, important socioeconomic inequalities are observed in the whole spectrum of health indicators, starting from the health determinants to the health/disease status and ultimately mortality (Renard et al., 2019a).

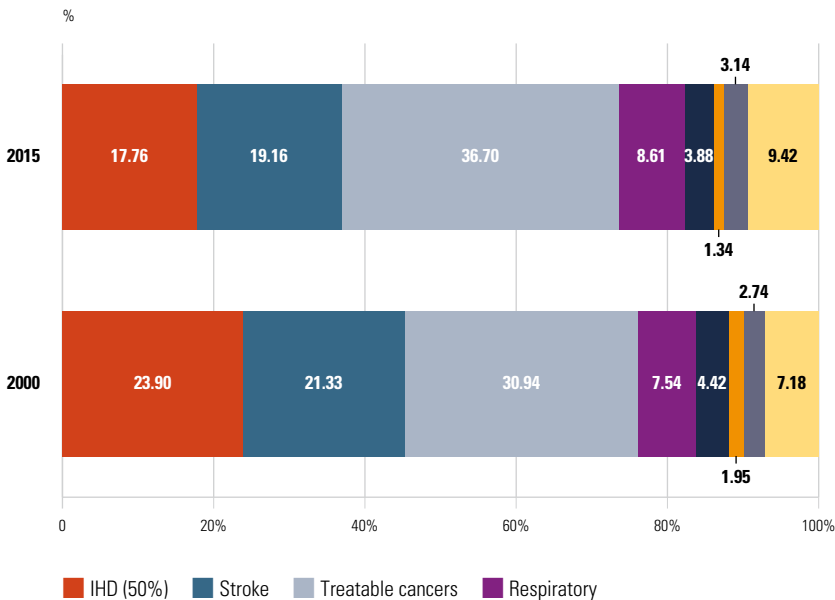
FIG. 7.8 Preventable and amenable mortality in Belgium and EU-15, 2000 and 2016 or the latest available year



Sources: Age-standardised death rates for all persons calculated by European Observatory for Health Systems and Policies; contact: marina.karanikolos@lshtm.ac.uk. Population data from WHO detailed mortality files (released December 2018). Amenable causes as per list by Nolte and McKee (2004).

Notes: 2000 and 2016 unless stated otherwise (2000–2015 for Belgium, Denmark, France, Finland, Germany, Greece, Ireland, Italy, Luxembourg, 2001–2015 for the UK).

FIG. 7.9 Main causes of amenable mortality in Belgium, 2000 and 2015



Sources: WHO detailed mortality files (released December 2018);
Amenable causes as per list by Nolte and McKee (2004).

Note: IHD: ischaemic heart disease.

In Belgium, people with higher socioeconomic status live longer. Based on the most recent census (2011), the gap in life expectancy (at age 25 years) between the highest and lowest educational levels is 6.1 years for men and 4.6 years for women. The Composite Index of Inequality, absolute version (CIIabs) is 3.4 years in men and 2.4 years in women (potential gain for the whole population if there was no inequality). People with higher socioeconomic status also live longer in good health. The gap in life expectancy without disability (healthy life years) between the highest and lowest educational levels is 10.5 years for men and 13.4 years for women and has increased over time (Renard et al., 2019a). People with lower socioeconomic status have a higher premature mortality rate. Men and women in the lowest educational category are, respectively, 1.9 and 1.6 times more likely to die before age 75 years than men and women in the highest educational category (Renard et al., 2019a). Finally, people with a higher socioeconomic status generally report better health and healthier behaviours, such that people in the lowest educational level rate their health as less than

good almost three times more often than the most highly educated people. People in the lowest educational level also report suffering from chronic diseases 1.5 to 2 times more often than people in the highest educational level. They also report a much higher prevalence of smoking and obesity, and poorer nutritional habits, such as insufficient consumption of fruits and vegetables and higher consumption of sugar-sweetened beverages.

Tackling health inequalities is a priority for the WHO (CSDH, 2008), the European Union (European Commission 2007) and for Belgium (Gouvernement Wallon, 2017; BS-MB 8 October 2013; Vlaamse Overheid, 2016). However, it is a challenging task because they are caused by various socioeconomic determinants including education, employment and income. It is, therefore, necessary to adopt an approach involving different sectors of the Federal State and Federated entities, not only the health care sector. In 2013, within the framework of the Interdepartmental Committee on Sustainable Development, a working group on health inequalities was set up to put health care inequalities on the political agenda and bring together people from different sectors to achieve sustainable solutions. The activities of the working group resulted in an action plan that included nine measures. Among others, the implementation of personalised care for at-risk groups such as homeless people and sex workers, the integration of prisoners and beneficiaries of an allowance from the public centres for social assistance (*Openbare Centra voor Maatschappelijk Welzijn/Centres Publics d'Action Sociale*) into the traditional health insurance circuit and the establishment of intercultural mediators to assist GPs in their offices by video-conference. The Inter-ministerial Conference of Public Health and the Ministerial Cabinet did not validate the action plan and decided to discontinue the mission of the working group. However, the measures included in this action plan related to health care accessibility were still implemented by the NIHDI; see the NIHDI white book for additional information (NIHDI, 2015a). In the meantime, the MoH, together with AVIQ and the Flemish Agency for Care and Health, have been involved in the new European Joint Action on Health Inequalities (JAHEE, see <https://jahee.iss.it/>), which aims to improve health and well-being of European citizens and achieve greater equity in health outcomes across all groups in society in all participant countries and in Europe at large. More specifically, the Belgian team is participating in Work Package 9, which focuses on governance and systems of health equity in all policies.

7.6 Health system efficiency

7.6.1 *Allocative efficiency*

Allocative efficiency indicates whether the resources distributed to health care meet the needs of the population. In Belgium, health expenditure has increased from 8.9% of GDP in 2006 to 10.3% in 2017. Since 2009, it has stabilised at around 10% of GDP. The EU-15 average follows the same trend but is slightly below, with a range between 9.5% and 9.8% since 2009. In absolute terms, current health expenditure in Belgium increased from € 29 112 million (€ 2 760 per capita) in 2006 to € 45 405 million (€ 3 992 per capita) in 2017 (OECD, 2019a). Most health expenditure goes to inpatient care (27.8% of current health expenditure), followed by ambulatory care (18.9%) and long-term care (23.0%) (see Table 3.2 on expenditure on health according to the type of services and Box 3.3).

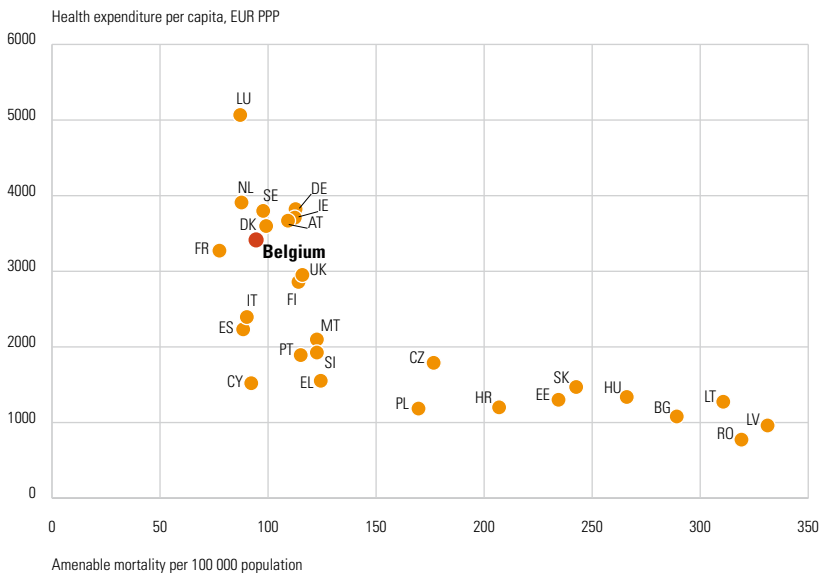
The Belgian system has a lower number of practising physicians than the European average (3.1 per 1 000 population versus 3.6 per 1 000 on average in the EU-19 in 2017) (OECD, 2019a). The number of nurses is higher at 11.0 nurses per 1 000 population versus 8.4 in the EU-22 on average (2016) (OECD, 2019a). Among the EU-19 countries, Belgium is among the five countries with the highest nurse to physician ratio (3.6) (see Section 4.2 on Human resources). The number of physicians is regulated by a system of quotas that are revised regularly (see Section 4.2).

In addition to human resources, health services are also delivered through a dense network of infrastructure and equipment. The number of hospital beds is higher in Belgium than the EU-23 average (5.7 versus 4.8 per 1 000 population in 2017) and decreased from 6.3 per 1 000 population in 2008 to 5.6 per 1 000 population in 2018 (OECD, 2019a). Essential health care services and other physical resources are easy to reach for almost the entire population (see Box 4.2). National planning at the Federal level has translated into defined criteria for the maximum number of beds per hospital service and for the heavy medical equipment required. In 2017, it was decided that the (future) programming of hospitals, hospital services, departments, and care programmes has to take into account the needs of the population (population, age distribution, morbidity and geographical distribution) as well as scientific evidence (BS-MB 28 August 2017) (see Section 4.1.1).

7.6.2 Technical efficiency

Technical efficiency indicates the extent to which a health system is securing the minimum levels of inputs for a given output. One very broad indicator that can be used as an entry point for discussion is the relationship between health expenditure and avoidable mortality, namely deaths that could be avoided with an effective health system (see Section 7.5). When comparing Belgium with countries that have a similar level of amenable mortality (such as Italy, Spain and Cyprus), Belgian per capita health expenditure is comparatively high (see Fig. 7.10) (Renard et al., 2019a). It is also important to note that increasing life expectancy is not just the result of current spending, but also derives from policy in the previous years or decades and sociodemographic changes in the population.

FIG. 7.10 Amenable mortality per 100 000 population versus health expenditure per capita, Belgium and selected other countries, 2018



Source: Renard et al. (2019a).

To study the efficiency with which the health system's output is produced and to ensure that the resources are used to yield maximum benefits, four indicators were measured by the Belgian HSPA report (Devos et al., 2019): the ALOS for a normal delivery, the proportion of one-day surgical admissions, the use of low-cost medication and the proportion of biosimilar treatments. These indicators were selected to examine potential savings in the health system through shorter hospital stay, the use of day surgery, and the use of less expensive treatment alternatives (Devos et al., 2019).

In many countries bordering Belgium, the trend is toward shortening ALOS for low-risk delivery and adding more home care services performed by midwives and/or nurses. According to the OECD, this tendency is accompanied by a reduction in costs, because hospital care is more expensive than home care. In Belgium, policies aim to shorten maternity stays to 72 hours and to promote a shift to postnatal care services at home. The ALOS for a normal delivery has reduced from 5 days in 2000 to 3.1 days in 2016. After having remained far above the EU-15 average for a long time, Belgium came gradually closer to the EU average in 2016 (Belgium: 3.1 days; EU-15: 2.8 days) (Devos et al., 2019).

Compared with standard hospital stays, one-day surgeries are more efficient as the nursing staff is better mobilised and infrastructure is used more intensively. The proportion of surgical procedures performed in one-day hospital stays in Belgium has changed from 34.8% in 2000 to 47.2% in 2016 (Devos et al., 2019). Although few variations of this indicator were observed across the Belgian regions; high variability can be observed according to the type of procedure. Nearly 95% of cataract procedures are performed in a one-day surgery setting, whereas other procedures (such as gallbladder removal by laparoscopy) are much more rarely done as a one-day surgery compared with other countries. This is due to the funding specificities of these procedures, which are in favour of standard hospitalisation (Devos et al., 2019).

Since 2005, physicians have been encouraged to prescribe a certain percentage of low-cost drugs, and their prescription profile is screened by NIHDI. The percentage of low-cost drug prescriptions issued on an outpatient basis (outside hospitals) has been consistently increasing: from 49.1% in 2015 to 53.8% in 2017 (Devos et al., 2019).

The degree of substitution of biological treatments with biosimilar agents is still very low in Belgium, but an upward trend can be observed (0% in 2008 to 5.71% in 2017). The increase has been particularly accelerated since 2015 (0.42%), which is related to the increase of biosimilars available on the market. In 2018, nine biosimilars were available in the Belgian market, representing a combined cost of € 430 million for NIHDI (Devos et al., 2019).

Conclusions¹⁹

Belgium enjoys qualitatively good health care, with most aspects of the quality of acute care similar to the EU-15 average or even better. Some challenges nevertheless remain in terms of appropriateness of care concerning the use of antibiotics, psychotropics and medical imaging. Recent initiatives on evidence-based decisions, monitoring, integrated care, expertise concentration, health in all policies and patient involvement have been initiated to further improve the quality of care in terms of appropriateness, efficacy, safety, continuity and patient-centred care.

In terms of access, nearly the entire population is covered by the compulsory health insurance that includes a broad benefits package. Nevertheless, for the lowest income population, Belgium faces higher unmet medical and dental needs for financial reasons compared with the EU-15 average. Access to mental health care and dental care requires further improvement and the reforms in the mental health care sector must continue.

Given the growth in health expenditure as a share of GDP and the projected increase due to demographic and epidemiological changes, the challenge of ensuring the sustainability and efficiency of the health system remains high. Concerning the availability of a competent workforce, new titles and competences have been created through the restructuring of the regulation of health professionals. Nevertheless, the patient to nurse ratio in hospital is high compared with international targets and the average age of GPs is increasing despite the recent actions to encourage new physicians to become GPs. Efforts to further improve the attractiveness of the GP profession, to increase the number of nurses in hospitals and to strengthen primary care must be enhanced. Moreover, to correct unjustified differences in the level of fees between medical specialties, a restructuring of the national

¹⁹ This chapter was written by Sophie Gerkens, Céline Pouppez, and Charline Maertens de Noordhout.

fee schedule is underway. This will also allow the introduction of new models of care such as telemedicine. The trend towards more efficient use of care services (for example through promoting the use of low-cost medication, day hospital or alternatives to hospitalisation, and redesigning the hospital landscape) must also continue.

For pharmaceuticals, measures have been undertaken to both ensure access to innovative pharmaceuticals and contain costs. Nevertheless, as in other countries, the exponential increase in the price of innovative treatments and the lack of transparency of confidential price agreements threaten the sustainability of the system and new solutions on an international level are needed.

A new division of competences (and budgets) between the Federal State and the Federated entities has been an important occurrence and aims at developing care that is more in line with population needs. However, with the increasing complexity and fragmentation of the system, avoiding duplication of efforts and inefficiencies will be a challenge.

In terms of governance, initiatives to increase public accountability and to monitor performance have occurred through the HSPA framework. A deliberation on the setting of national health targets to guide health policy-makers is also underway.

It should also be noted that, while the health status of the population is generally good, obesity, alcohol and tobacco consumption are high and have a significant impact on population health. Furthermore, important socioeconomic inequalities are observed through the whole spectrum of health indicators. A strengthening of prevention policies is needed, with a focus on the risk factors and diseases that cause most of the burden to health.

Finally, because additional challenges will be highlighted by the current COVID-19 crisis, a focus on the resilience of the system during a health crisis is expected in the future.

Appendices

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9.2 HiT methodology and production process

HiTs are produced by country experts in collaboration with the Observatory's research directors and staff. They are based on a template that, revised periodically, provides detailed guidelines and specific questions, definitions, suggestions for data sources and examples needed to compile reviews. While the template offers a comprehensive set of questions, it is intended to be used in a flexible way to allow authors and editors to adapt it to their particular national context. The latest version of the template (2019) is available on the Observatory website https://www.euro.who.int/__data/assets/pdf_file/0009/393498/HiT-template-for-web-for-authors-2019.pdf.

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

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

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

A typical HiT consists of nine chapters.

1. Introduction: outlines the broader context of the health system, including geography and sociodemography, economic and political context, and population health.

2. Organization and governance: provides an overview of how the health system in the country is organized, governed, planned and regulated, as well as the historical background of the system; outlines the main actors and their decision-making powers; and describes the level of patient empowerment in the areas of information, choice, rights and cross-border health care.

3. Financing: provides information on the level of expenditure and the distribution of health spending across different service areas, sources of revenue, how resources are pooled and allocated, who is covered, what benefits are covered, the extent of user charges and other out-of-pocket payments, voluntary health insurance and how providers and health workers are paid.

4. Physical and human resources: deals with the planning and distribution of capital stock and investments, infrastructure and medical equipment; the context in which IT systems operate; and human resource input into the health system, including information on workforce trends, professional mobility, training and career paths.

5. Provision of services: concentrates on the organization and delivery of services and patient flows, addressing public health, primary care, secondary and tertiary care, day care, emergency care, pharmaceutical care, rehabilitation, long-term care, services for informal carers, palliative care, mental health care and dental care.

6. Principal health reforms: reviews reforms, policies and organizational changes; and provides an overview of future developments.

7. Assessment of the health system: provides an assessment of systems for monitoring health system performance, the impact of the health system on population health, access to health services, financial protection, health system efficiency, health care quality and safety, and transparency and accountability.

8. Conclusions: identifies key findings, highlights the lessons learned from health system changes; and summarizes remaining challenges and future prospects.

9. Appendices: includes references and useful websites.

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

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

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

One of the authors is also a member of the Observatory staff team and they are responsible for supporting the other authors throughout the writing and production process. They consult closely with 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.

9.3 The review process

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

9.4 About the authors

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