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Spain
Health system review

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European Observatory on Health Systems and Policies
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Cristina Hernández-Quevedo (Editor) and Josep Figueras and Bernd Rechel (Series Editors) were responsible for this HiT

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CONTENTS

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 web site (http://www.healthobservatory.eu).

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The HiT on Spain was co-produced by the European Observatory on Health Systems and Policies and the Spanish Association of Public Health and Health Care Administration (SESPAS), 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 area 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.

The Spanish Association of Public Health and Health Care Administration (*Sociedad Española de Salud Pública y Administración Sanitaria*, SESPAS) is a confederation of 12 scientific and professionals' associations, with legal status. It is made up of seven national thematic associations (Spanish Association of Epidemiology, SEE; Health Economics Association, AES; Health Jurists Association, AJS; Spanish Environmental Health Association, SESA; Spanish Primary Care Network, REAP; Spanish Association of Psychiatric Epidemiology, SEEP; Community Nursing Association, AEC) and four regional associations (Catalonia and Baleares Public Health Association, SSPCiB; Andalusian Public Health Association, HIPATIA; Canary Public Health Association, SCSP; Public Health and Health Care Administration Association of Madrid, AMAS and the Association of Public Health from Madrid, AMASAP). Through its associations, SESPAS encompasses 3800 public health professionals from a variety of backgrounds, experiences, institutions and geographical areas. SESPAS issues biennial public health reports and hosts several thematic working groups or sections: Ethics; Training; Municipal Public Health; Vaccines; Prevention of addictions, iatrogenesis; Health planning; Gender and health and Health services research.

The Institute for Health Sciences in Aragon (IACS) is a public institution linked to the regional Department of Health in Aragon. IACS aims to link health knowledge and policy-making at regional and national levels. IACS fosters and develops biomedical research production, clinical and organizational innovation and knowledge transfer to decision-makers. IACS is a member of the national network of agencies for Health Technologies Assessment and acts as the secretariat of the National Clinical Guidelines Clearinghouse.

This edition was written by Enrique Bernal-Delgado, Sandra García-Armesto (*Instituto Aragonés de Ciencias de la Salud*), Juan Oliva (*Universidad Castilla-La Mancha*), Fernando Sánchez Martínez (*Universidad de Murcia*), José Ramón Repullo (*Instituto de Salud Carlos III*), Luz María Peña-Longobardo (*Universidad de Castilla-La Mancha*) and Manuel Ridao-López (*Instituto Aragonés de Ciencias de la Salud*). It was edited by Cristina Hernández-Quevedo, working with the support of Ellen Nolte, London Hub Coordinator of the European Observatory of Health Systems and Policies. The basis for this edition was the previous HiT on Spain, which was published in 2010, written by Sandra García-Armesto, María Begoña Abadía-Taira, Antonio Durán and Enrique Bernal-Delgado (*Instituto Aragonés de Ciencias de la Salud*) and edited by Cristina Hernández-Quevedo.

The authors would like to thank José María Abellán, Joan Gené Badía, Beatriz González López-Valcárcel, Vicente Ortún and Carmen Vives for their comments on a previous version of the report. Thanks are also due to the Ministry of Health for providing comments on an earlier version of the report, in particular, to Dr Elena Andradas Aragonés, Public Health, Quality and Innovation Director-General and her team, for their detailed review of the report and for facilitating the latest data. Thanks are also extended to the WHO Regional Office for Europe for their European Health for All database from which data on health services were extracted; to the OECD for the data on health services in western Europe; and to the World Bank for the data on health expenditure in central and eastern European countries, and the European Commission for the Eurostat database. The HiT uses data available on 31 December 2017, unless otherwise indicated. The HiT reflects the organization of the health system and the data availability, unless otherwise indicated, as it was in December 2017.

The Observatory is a partnership that includes the Governments of Austria, Belgium, Finland, Ireland, Norway, Slovenia, Sweden, Switzerland

and the United Kingdom; the Veneto Region of Italy; the French National Union of Health Insurance Funds (UNCAM); the World Health Organization; 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 Technical University of Berlin. The Observatory team working on HiTs is led by Josep Figueras, Director; Elias Mossialos, Martin McKee, Reinhard Busse (Co-directors); Richard Saltman, Ellen Nolte, Ewout van Ginneken and Suszy Lessof. The Country Monitoring Programme of the Observatory and the HiT series are coordinated by Anna Maresso. The production and copy-editing process of this HiT was coordinated by Jonathan North, with the support of Caroline White, Lesley Simon (copy-editing) and Nick Gorman (design and layout).

LIST OF ABBREVIATIONS

AC	Autonomous Community
AIDS	Acquired immune deficiency syndrome
AMI	Acute myocardial infarction
AP-DRG	All-patient diagnosis-related groups
Atlas VPM	Atlas of Variations in Medical Practice in the National Health System (*Atlas de Variación de la Práctica Médica en el Sistema nacional de salud español*)
BDCAP	Primary care clinical database
BIFAP	Database for pharmaco-epidemiological research in primary care
CHF	Chronic heart failure
CIS	Centre for Sociological Research
CISNS	Inter-Territorial Council for the SNS
CNMC	National Commission for Markets and Competition
CT	Computerized tomography
DALY	Disability-adjusted life year
DDD	Defined daily dose
DL	Decree-Law
EC	European Commission
EDADES	Survey on Alcohol and Drugs in Spain
EEA	European Economic Agreement
EMR	Electronic medical record
EU	European Union
FFS	Fee-For-Service
FLA	Liquidity Fund
GD	General direction
GDP	Gross domestic product
GP	General practitioner
HIV	Human immunodeficiency virus
HTBA	Health Technology and Benefit Assessment

INCLASNS	Key Indicators for the Spanish National Health System
INE	National Institute of Statistics
INGESA	Institute for Health Care Management
ISCIII	Institute for Health Carlos III
ISFAS	Social Institute for the Armed Forces
IS-SNS	Information System of the National Health System
LHO	Local Health Office
MCSS	Collaborating Mutualities with the Social Security
MF	Mutualism for Civil Servants
MRI	Magnetic resonance imaging
MSSSI	Ministry of Health, Social Services and Equality
MUFACE	Mutual Fund for State Civil Servants
MUGEJU	General Justice Mutual Fund
OECD	Organisation for Economic Co-operation and Development
OOP	Out-of-pocket
P4P	Pay for performance
PCC	Primary Care Centre
PCI	Percutaenous coronary intervention
PFI	Private Finance Initiative
P-PP	Public-Private Partnership
RD	Royal Decree
RDL	Royal Decree-Law
SAAD	National System for the assistance of dependent people
SNS	Spanish National Health System
USD	US Dollars
VAT	Value Added Tax
WHO	World Health Organization
XHUP	Network of Hospitals for Public Utilization

LIST OF TABLES, FIGURES AND BOXES

Tables

Figures

Boxes

ABSTRACT

This analysis of the Spanish health system reviews recent developments in organization and governance, health financing, health care provision, health reforms and health system performance.

Overall health status continues to improve in Spain, and life expectancy is the highest in the European Union. Inequalities in self-reported health have also declined in the last decade, although long-standing disability and chronic conditions are increasing due to an ageing population.

The macroeconomic context in the last decade in the country has been characterized by the global economic recession, which resulted in the implementation of health system-specific measures addressed to maintain the sustainability of the system. New legislation was issued to regulate coverage conditions, the benefits package and the participation of patients in the National Health System funding. Despite the budget constraints linked to the economic downturn, the health system remains almost universal, covering 99.1% of the population.

Public expenditure in health prevails, with public sources accounting for over 71.1% of total health financing. General taxes are the main source of public funds, with regions (known as Autonomous Communities) managing most of those public health resources. Private spending, mainly related to out-of-pocket payments, has increased over time, and it is now above the EU average.

Health care provision continues to be characterized by the strength of primary care, which is the core element of the health system; however, the increasing financing gap as compared with secondary care may challenge primary care in the long-term. Public health efforts over the last decade have focused on increasing health system coordination and providing guidance on addressing chronic conditions and lifestyle factors such as obesity.

The underlying principles and goals of the national health system continue to focus on universality, free access, equity and fairness of financing. The evolution of performance measures over the last decade shows the resilience

of the health system in the aftermath of the economic crisis, although some structural reforms may be required to improve chronic care management and the reallocation of resources to high-value interventions.

EXECUTIVE SUMMARY

Introduction

Spain is the third largest country in western Europe, bordered by France, Portugal and Morocco. Its population increased 12% in the period 1995 to 2005 due to a strong immigration flow, but it has experienced a slight decline since 2011 related to a negative migration balance as a consequence of the economic downturn and a growing number of Spanish people leaving the country since 2009.

The macroeconomic context in the last decade in the country has been characterized by the global economic recession. While gross domestic product (GDP) per capita in Spain decreased in the period 2009–2015 by 20%, the trend has reversed since then, with GDP per capita reaching US$ 26 529 (purchasing power parity) in 2016. The poverty rate has been increasing over time, reaching 28.6% in 2015; high unemployment rates and a reduction in household incomes were also seen in the last decade. However, the deterioration of socioeconomic conditions related to the economic downturn has not seemingly had any short-term impact on the health status of the population.

Life expectancy at birth has increased in the last decade, and at 83.2 years in 2014, is the highest among European Union countries. Overall health status has improved in the last decade, inequalities in self-reported health related to income or educational attainment have decreased over the last 10 years and cardiovascular risk factors have stabilized. Long-standing disability and chronic conditions, however, are increasing due to an ageing population, and inequalities in lifestyle factors have increased over time.

The organization of the health system reflects its core principles of universality, free access, equity and financial fairness

The Spanish health system is characterized by three statutory subsystems that coexist: the universal national health system (*Sistema Nacional de Salud*, SNS); Mutual Funds catering for civil servants, the Armed Forces and the judiciary (MUFACE, MUGEJU and ISFAS); and the Mutualities focused on assistance for Accidents and Occupational Diseases, known as "Collaborating Mutualities with the Social Security".

The SNS is a national health system based in the principles of universality, free access, equity and fairness of financing, and is mainly funded by taxes. It is organized at two levels – national and regional – mirroring the administrative division of the country. Health competences are transferred to the 17 Autonomous Communities (ACs), with the national level being responsible, under the governance of the Interterritorial Council for the SNS, for certain strategic areas as well as for the overall coordination of the health system, and the national monitoring of health system performance.

Main actors in the ACs are the Departments of Health, playing the role of a Health Authority (that is, regulation, planning, budgeting and third-party payer) backed by specialized agencies, including a health technology assessment agency in some regions. Planning and regulation responsibilities lie essentially with the Ministry of Health when it comes to nationwide laws and plans, and with the Departments of Health of the 17 ACs when it comes to the local implementation of national regulation, or the development of regional regulation and policies.

Public health care spending has decreased over the period, with a change in trend in 2015

In Spain, health spending followed the upward trend of other Western EU countries until the onset of the economic crisis, which resulted in budgeting cutbacks in 2010. The current health expenditure per capita has reached US$ 3182.50 (purchasing power parity) and 9.2% as a share of GDP in 2015.

The macroeconomic context since 2010 in the country has been characterized by the global economic recession, which resulted in policies aimed at

reducing public expenditure. Between 2009 and 2015, government expenditure on health decreased 0.9 points of GDP, equivalent to a reduction of 5.3% – €68 870 million in 2009 to €65 199 million in 2015, although an increasing trend has been seen from 2015. Private expenditure on health increased up to 28.9% of total health expenditure in the period 2009–2015 (compared with the EU average of 23.8%), with out-of-pocket payments representing 23.9% of total health expenditure in 2015 (above the EU average of 16.7%). Out-of-pocket payments are mainly due to co-payments for outpatient prescribed pharmaceuticals and to specific medical aids.

In 2012, new legislation was issued to regulate coverage conditions, the benefits package and the participation of patients in the SNS funding. Despite the budget constraints linked to the economic downturn, the health system remains almost universal, covering 99.1% of the population.

The benefits package is categorized into two types of services: the common package with three subcategories – core package, supplementary package and accessory services – common to the 17 regional services composing the SNS; and the complementary package, decided by ACs once financial viability is proven.

Human capital and resources have experienced minimal reshape

The number of hospital beds has decreased by one-fifth over the years, from 368 beds per 100 000 inhabitants in 2000 to 298 beds per 100 000 inhabitants in 2015 (in comparison with an EU average of 340). Nevertheless, the share of public beds has remained stable, at 79.5% in 2015. Capital investment fell sharply after the financial crisis, decreasing from 3.1% in 2010 to 1.3% in 2014. In spite of the cutbacks in investment, the stock of major medical equipment such as computed tomography and positron emission tomography scanners has increased slightly since 2010.

Compared to other OECD European countries, the Spanish health system is well advanced in the meaningful adoption of information technologies among practitioners, ranking second after Denmark, and seventh in the adoption of information technologies in hospitals (2013 data).

The gender composition of health sector personnel has remained rather stable since 2010, with the percentage of female doctors reaching 55.7% in

primary care and 49.5% in hospital settings in 2015. Budgetary and personnel reduction policies in the last decade have translated into an increasing, although self-limited, outflow of doctors and nurses seeking employment abroad. The rate of doctors per 100 000 population in 2015 was 380, slightly above the EU average of 350 for that year; in that year there were 534 nurses per 100 000, below the EU average of 864, with a ratio of nurses to doctors of 1.4. In addition, the rate of formal long-term care workers (4.2 workers per 100 people aged 65 and over) remains below the OECD average of 6.1 (2013).

The provision of services is characterized by the strength of primary care

The organization and delivery of health services have not essentially changed in the SNS since 2010. Although some of the previous reforms (for example, developing day-case care, expanding integrated care) have developed over the last 5–8 years, progress slowed down in recent years.

One area that has seen significant developments over the last decade is Public Health policies. Some advances include the General Law (33/2011) on Public Health and new taxes on tobacco and alcohol – introduced in 2013. In addition, the introduction of population-based screening for colorectal cancer is notably increasing overall coverage, while also slowly reducing regional inequalities in uptake.

Primary care remains a core element of the health system, with primary health care teams forming the basis of the SNS. Primary care is essentially provided by public providers, specialized family doctors and staff nurses, who provide preventive services to children, women and elderly patients, and acute and chronic care. Primary care doctors are the first contact point for the system and they are the gatekeepers of the system. Public expenditure on primary care (including pharmaceutical expenditure), however, has decreased, from 38% in 2002 to 31% in 2014, while public expenditure on secondary care has increased from 53.3% in 2002 to 62.4% in 2015.

Secondary care takes the form of outpatient specialized care, inpatient care, day-case care or emergency care. High rates of low-value procedures in hospitals, the large differences in elective surgery across health care areas, and the geographic differences in access to some evidence-based interventions,

raise important concerns about the effectiveness and allocative efficiency within the SNS, although these are unlikely to be specific to Spain.

Pharmaceutical care is one of the most regulated sectors in the Spanish economy. Efforts over the last decade have focused on increasing evidence-based prescription, either looking for the best therapeutic options or avoiding inappropriate prescribing. The large variation in both volumes and spending of prescriptions across regions, along with their uneven growth, suggest potential for improvement.

In the last decade, a national system for the assistance of dependent people (including older people) has been developed, currently assisting almost 900 000 people. The relatively low coverage (29% of those entitled to obtain benefits are not yet covered) and concerns about the sustainability of the current financing system highlight the need to address the system's long-term development.

Recent reforms have focused on the sustainability of the system

The reform agenda in the health system in recent years has been strongly influenced by the austerity measures agreed in the EU stability programmes for Spain, whose major goal in the health sector was the reduction of the public share of health expenditure, from 6.5% of GDP in 2010 to 5.1% in 2015.

Reforms since 2010 have tackled the governance of the SNS, the breadth of coverage (regulating entitlement conditions), the depth of coverage (categorizing the benefits package), cost-sharing (reformulating the financial participation of patients), drug pricing procedures and the reduction of production costs (for example, decreasing health workforce salaries or prices, reductions in health workforce numbers, centralizing purchasing).

Other initiatives worth mentioning are the widening of anti-tobacco measures issued in previous reforms; reforms aimed at dealing with the epidemiological transition (for example the National Strategy on Chronic Conditions and some notable developments by ACs); and the launch of nationwide value-based care initiatives, such as the joint action on health technologies and benefits assessment and the *"do-not-do"* recommendations

to reduce the use of obsolete techniques and increase the uptake of high-value interventions and technologies.

The health system has been resilient despite the economic crisis

Despite the impact of the economic crisis on Spanish society, the underlying principles and goals of the Spanish national health system have remained unchanged in practice. Reforms implemented since 2010, such as budget reductions and new regulations on the scope, breadth and depth of coverage, have not seemingly shown any substantial short-term impacts on health outcomes.

The achievements of the national health system over the last decade include: the improvement of amenable and preventable outcomes; small inequities in access across socioeconomic groups for preventive services and medical examinations; the good level of financial protection that limits individuals' financial hardship due to ill-health; productivity improvements within the health system; fairly good results in overall patient satisfaction with the health system; and solid progress in consolidating patients' rights.

However, several challenges remain, including trends in behavioural risk factors such as the rising obesity rates for both adults and children. There is also some uncertainty regarding the long-term impact of current socioeconomic conditions in the health and welfare of the Spanish population. Moreover, waiting times for surgery, diagnostic procedures and specialized visits remain high.

The evolution of performance measures over the last decade show the resilience of the health system in the aftermath of the economic crisis, although some structural reforms may be required to improve chronic care management and the reallocation of resources to high-value interventions.

1

Introduction

Chapter summary

- The Spanish population has experienced a slight decline since 2011, related to a negative migration balance as a consequence of the economic downturn, with both Spanish people and foreign population leaving the country.
- Macroeconomic conditions have led to an upturn of public debt and to continuous budgetary deficit, high unemployment rates and a reduction of household incomes.
- Health status has generally improved since 2010, although long-standing disability and chronic conditions are increasing due to a rapidly ageing population.
- Cardiovascular risk factors have either stabilized or improved, although obesity in women has stagnated.
- The increasing inequality gap due to the mix of unemployment, lower household incomes and new fiscal regulations increasing indirect taxation, have not impacted population health in the short-term.

- Inequalities in self-reported health status related to income or educational attainment have decreased in the last 10 years, while inequalities in lifestyle factors have increased over time.

1.1 Geography and sociodemography

Spain is the third largest country in western Europe with an extent of 505 955 km^2 and a population of 46 528 966 in 2017 (INE, 2017a). The Spanish territory also includes the Canary Islands, located in the Atlantic Ocean in front of the south-eastern coast of Morocco, the Balearic Islands, in the Mediterranean Sea, and two Autonomous Cities, Ceuta and Melilla, placed at the very north of the Morocco border. Administratively speaking, the Spanish territory is organized in 17 Autonomous Communities (*Comunidades Autónomas*, ACs) (Andalusia, Aragon, Asturias, Balearic Islands, Basque Country, Canary Islands, Cantabria, Castile-La Mancha, Castile-Leon, Catalonia, Extremadura, Galicia, La Rioja, Madrid, Murcia, Navarre, Valencia) and two Autonomous Cities (Ceuta and Melilla) (Fig. 1.1). The Spanish population tends to concentrate in urban and coastal areas.

FIG. 1.1 Map of Spain

Source: Reproduced from MSSSI (2017a).

The Spanish population has increased 12% between 1995 and 2005, mainly due to a strong immigration flow, stagnated between 2005 and

2010, experiencing a slight decline until 2016. Fertility rates remained low throughout the period, with a slight increase between 2000 and 2005, still well below the replacement rate of the population. Further, population aged 65 and above has steadily increased over time, reaching 19.2% in 2016 (Table 1.1). Notably, in 2015 there were more deaths than births, a phenomenon only seen before during the 1918 flu pandemic and the 1936–39 Spanish Civil War.

TABLE 1.1 Trends in population/demographic indicators, 1995–2016 (selected years)

	1995	2000	2005	2010	2015	2016
Total population (millions)	39.4	40.3	43.7	46.6	46.4	46.3
Population aged 0–14 (% of total)	16.7	14.8	14.3	14.6	14.9	14.8
Population aged 65 and above (% of total)	15.1	16.6	16.6	17.2	18.9	19.2
Population growth (average annual growth rate)	0.2	0.8	1.7	0.5	–0.1	–0.01
Population density (people per km^2)	78.9	80.7	87.5	93.2	92.9	92.9
Fertility rate, total (births per woman)	1.2	1.2	1.3	1.4	1.3[a]	–
Distribution of population (urban/total)	75.9	76.3	77.3	78.4	79.6	79.8

Source: World Bank (2017).

Note: [a]2014 data.

The economic and financial downturn resulted in a decrease of the foreign population, activating a migratory outflow of Spanish people, which has led to a negative migratory balance since 2011 until 2015. The sharpest emigration flow occurred in 2009, with a relative reduction of 34.4% in a year when almost 200 000 people left the country. Concurrently, the emigration flow increased until 2013, with 532 303 individuals leaving the country in 2013. Notably, the flow of Spanish people leaving the country has steadily grown until 2016, with more than 556 000 people leaving since 2009. The year 2016 witnessed a net reduction of 23 540 Spanish people, whereas the foreign population increased by 112 666 individuals (INE, 2017b).

The official language is Spanish, also called Castilian, which coexists with other official languages at regional level, including Basque, Catalan and Galician.

1.2 Economic context

The economic crisis prevails as the most notable feature in the description of the current Spanish economic context. Spain has endured a sustained impact of the recession, with an unprecedented upturn of the public debt and continuous budgetary deficit, high unemployment rates and a sharp reduction in household incomes.

In macroeconomic terms, the last 20 years exhibit a clear contrast between an expansionary cycle until 2007 and a deep downturn in 2009, which has recovered since 2014. In 2009, gross domestic product (GDP) growth rate fell dramatically to –3.5%, with negative figures until 2014 (Table 1.2).

Notably, government revenues plummeted between 2007 and 2009 (up to 6 points of the GDP) while public spending still increased from 38.9% of GDP in 2007 to 45.8% in 2009, to cope with unemployment subsidies and other social expenditures. As a consequence of this dynamic, the deficit in 2009 reached 11% of GDP. Since 2011, the public deficit has reduced as a consequence of public expenditure constraints and, to a lesser extent, to the increasing government revenues (Ministry of Finance, 2014). However, this new dynamic is unable to cope with the cumulative public debt, which in 2016 was almost equivalent to the Spanish GDP (Eurostat, 2017a).

Unemployment has become a major economic and social problem since the inception of the crisis. The Labour Force Survey (*Encuesta de Población Activa*) showed a dramatic increase of unemployment, from 1.8 million unemployed workers in 2007 (about 8% of active population) to more than 6 million jobless people (26.09% unemployment overall rate) in 2013. Since then, figures have been slowly reducing with an unemployment rate of 18.9% (4.32 million people) in the third quarter of 2016 (INE, 2017c). Although unemployment has affected all labour groups, young people showed the worst figures; so, since 2007 their unemployment rate has been growing until 2015, from 21.7% to 48.0%. Latest 2016 figures show a slight decrease with 44.9% unemployment rate. When it comes to gender, unemployment is slightly higher for women and the difference has widened slightly over the years – that is, in 2009 the difference was 17.9% for men versus 18.1% for women and in 2016 the difference was 19.6% versus 21.4%, respectively (Eurostat, 2017b).

The current improvement in the overall unemployment toll is partly associated with a National Labour Reform (Royal Decree-Law (RDL) 3/2012)[1] whose main effect has been the generalization of part-time jobs, in most cases of poor quality (UGT, 2017), yielding the so-called "wages devaluation", which actually implies economic insufficiency to cover household expenditures still burdened with private debt.

TABLE 1.2 Macroeconomic indicators, 1995–2016 (selected years)

	1995	2000	2005	2009	2010	2015	2016
GDP per capita (current US$)	15 562	14 677	26 511	32 333	30 736	25 685	26 529
GDP per capita, purchasing power parity (current international US$)	16 418	21 517	27 703	32 423	31 984	34 696	36 310
GDP annual growth rate	2.8	5.3	3.7	-3.5	0.0	3.2	3.2
Public expenditure (Government Expenditure as % of GDP) [a]	44.30	39.10	38.30	45.8	45.60	43.8	42.2
Government deficit/surplus (% of GDP) [a]	–7	–1	+1.2	–11.0	–9.4	–5.3	–4.5
General government gross debt (% of GDP) [a]	61.7	58.0	42.3	52.8	60.1	99.4	99.0
Unemployment, total (% of labour force) [b]	20.7	11.9	9.2	17.9	19.9	22.1	19.6
Poverty rate (People at risk of poverty or social exclusion by age and sex as % total population) [b]	–	–	24.3	24.7	26.1	28.6	27.9
Income inequality (Gini coefficient of disposable income) [c]	34	32	32.2	32.9	33.5	34.6	34.5

Sources: World Bank (2017).

Note: [a]Eurostat (2017a); [b]Eurostat (2017b); [c]Eurostat (2017c).

1.3 Political context

The 1978 Spanish Constitution established a new political organization moving from a highly centralized country to a quasi-federal organization, where the 17 ACs were created to play an essential role in the provision of the welfare state services (see Section 2.2, *Decentralization and centralization*).

1 Royal Decree-Law 3/2012, of 10 February, on urgent measures for the reform of the labour market.

Since their inception almost 40 years ago, the role of the ACs has expanded. The ACs' financing mechanisms issued in 2001 and 2009, and most importantly, the development of the different statutes of autonomy[2] have resulted in further decentralization for the ACs as well as greater capacity for the planning, financing and provision of health care, education and social protection services. In 2009, the highest figures in the series, the public expenditure managed by the ACs reached €184.2 billion, the equivalent of 17.1% of the Spanish GDP (excluding transfers to the central government and corresponding interests). Since 2009, the ACs' political context has been determined by the tension between the need to cover welfare state services and the reduction of public expenditure. The adjustment process implied the reduction of €36.6 billion between 2009 and 2012 (20% less than public expenditure in 2009), equivalent to 0.32% of GDP (Bandrés & González, 2015).

This tension, along with the uneven contribution of the ACs to the reduction of the public debt, has led to strained interterritorial relations and major criticisms of the current financing system (see Section 3.3.3, *Pooling and allocation of funds*), which is arguably insufficient to cope with the provision of welfare state services and public debt at the same time. Currently, the debate on a new financing system has been officially opened by the Ministry of Finance (Ministry of Finance, 2017a).

1.4 **Health status**

Life expectancy

Life expectancy has been increasing since the 1990s. In 2014, life expectancy reached 83.2 years, being the highest at European Union (EU) level and over the EU average of 80.9 years (MSSSI, 2017b), with 86.1 years for women and 80.4 years for men (see Table 1.3). The increasing trend in life expectancy between 2010 and 2014 has been similar both in Spain and the EU,

2 The statutes of autonomy have the character of bilateral agreements on the division of competences between the central and the regional governments, endorsed by both the national and the regional parliaments, within the general constitutional framework.

with similar figures for men (1% increase) and slightly smaller for women (0.2% increase in Spain versus 0.5% increase in the EU) (Eurostat, 2017d).

In the last decade, healthy life-years have slightly improved from 64.5 in 2010 to 65 years free of disease in 2014. Figures are notably higher than in the EU, with 61.4 healthy life-years in 2010 and 61.8 healthy life-years in 2014. Women, in Spain, have experienced a greater increase than men, from 63.8 healthy life-years in 2010 to 65 healthy life-years in 2014. In terms of disability-adjusted life-years (DALYs), Spain exhibited an improvement from 69.2 DALYs in 2000 to 72.4 DALYs in 2015. The improvement was slightly larger for men (from 66.7 DALYs to 70.6 DALYs), while women improved from 71.6 DALYs to 74.1 DALYs (WHO Regional Office for Europe, 2017).

Mortality

When it comes to mortality, overall standardized mortality rate in Spain in 2014 was 447.7 per 100 000 inhabitants (583.3 for men and 336.6 for women), far below the 752.2 overall rate observed in the EU (1001.9 for men and 561.03 for women). In terms of potential years of life lost, Spain accounted for 3.3 years in 2014 contrasting with the 5.7 years lost as the EU average (WHO Regional Office for Europe, 2017).

Looking at specific mortality causes, it is worth noting that excepting suicide, and pneumonia and influenza, which have shown a slight increase between 2010 and 2014 (1.3% and 0.5% in absolute terms, respectively), all the other causes of death have reduced over the last decade (MSSSI, 2017b). Cardiovascular diseases represented 36.4 deaths per 100 000 inhabitants in 2014 due to ischaemic coronary events and 27.2 deaths per 100 000 inhabitants due to cerebrovascular events. In the case of cancer, the death toll in 2014 reached 143.1 cases per 100 000 inhabitants. In both cases, the death burden has decreased since 2005.

With regard to maternal and infant mortality, Spain experienced a sustained improvement in the last decade, a 0.6% reduction in maternal mortality and a 0.3% reduction in infant mortality. This trend affected both perinatal mortality (from 2.4 in 2005 to 2.1 in 2014 per 1000 births) and neonatal mortality (from 4.9 in 2005 to 4.6 in 2014 per 1000 live births) (INE, 2017d). Although the relative reduction has been lower than in the

TABLE 1.3 Age-adjusted mortality and health indicators, 1995–2014 (selected years)

	1995	2000	2005	2010	2014
LIFE EXPECTANCY (YEARS)					
Life expectancy at birth, total	78.1	79.3	80.2	82.3	83.2
Life expectancy at birth, male	74.5	75.9	76.8	79.2	80.3
Life expectancy at birth, female	81.7	82.7	83.5	85.4	86.1
MORTALITY (PER 100 000 INH.)					
All-cause mortality	668.9	616.02	575.5	482.7	447.7
Ischaemic coronary disease	71.1	65.9	57.01	43.3	36.4
Cerebrovascular disease	70.9	56.7	46.6	33.4	27.2
Malignant neoplasms	178.7	170.8	160.2	151.01	143.1
Suicide	7.1	7.2	6.6	5.7	7.02
External causes (unintentional accidents)	28.1	26.4	23.3	15.7	14
Pneumonia and influenza	13.4	12.9	13.1	8.2	8.7
Infant mortality rate (per 1 000 live births)[a]	5.5	4.4	3.8	3.2	2.9
Maternal mortality rate (per 100 000 live births)[a]	4.4	3.8	3.9	4.1	3.5

Source: MSSSI (2017b).

Note: [a]WHO Regional Office for Europe (2017).

EU (Spain started from a basis of fairly lower rates), both maternal and infant mortality in 2014 remain quite below the EU average (3.5 versus 5.9 in maternal mortality rate, and 2.9 versus 5.1 in infant mortality rates) (WHO Regional Office for Europe, 2017).

Morbidity

Regarding noncommunicable conditions, self-reported hypertension, hypercholesterolaemia and diabetes have been observed to either remain stable (diabetes and hypertension) or slightly increase (hypercholesterolaemia) since 2006. Cardiovascular diseases (myocardial infarction and cerebrovascular diseases) proxied via acute hospitalizations have slightly reduced from 2010 to 2014; specifically, from 8.7 to 8.2 per 10 000 inhabitants in myocardial infarction and from 15.6 to 14.7 per 10 000 inhabitants in cerebrovascular disease. Finally, self-reported mental health disorders in the adult population

exhibited a U-shaped evolution since 2005, with the lowest percentage in 2011. The evolution was slightly different between male and female. While 2014 figures in men were similar to those in 2006 (6.7% of men reporting mental suffering in 2014 versus 6.6% in 2006), women enjoyed a slight improvement (14.4% reporting mental suffering in 2014 versus 16.3% in 2006) (MSSSI, 2017b). These figures contrast with research findings showing an increase of mental health suffering as a consequence of the economic crisis (González López-Valcárcel & Barber, 2017).

According to the National Surveillance System 2016 report, the incidence of HIV has reduced from 11.2 new cases per 100 000 inhabitants in 2009 to 7.4 new cases per 100 000 inhabitants in 2015. In turn, the incidence of AIDS reduced dramatically, from 4.4 cases per 100 000 inhabitants in 2009 to 1.1 in 2015 (MSSSI, 2016l). The reduction in the EU was much less, although the figures came from a lower level – from 1.7 to 0.8 per 100 000 inhabitants. Sexually transmitted infections increased by up to 80% for cases in 2014 (by 54% in male homosexuals and 26% as a consequence of heterosexual intercourse). For tuberculosis, the incidence decreased from 17.7 per 100 000 individuals in 2006 to 10.4 in 2014, an improvement compared with the EU figures (16.7 and 11.4, respectively) (WHO Regional Office for Europe, 2017).

Self-reported health status

Self-reported health status has improved in the last decade, from 67.7% of people reporting good or very good health in 2006 to 72.6% in 2014 (5% higher than in the EU27; the 27 EU Member States as of June 2013). Men self-reported an improvement of 6% (70.3% to 76.3%) and women experienced a 5.6% improvement (63.5% to 69.2%) in that period. EU27 improvement was lower than the Spanish self-reported health improvement (4.9% absolute increase for Spain versus a 2.8% for EU27) on figures well below those self-reported by Spaniards: 64.7% in 2006 and 67.5% in 2014 (Eurostat, 2017d).

The percentage of people reporting long-standing health problems increased from 23.7% in 2006 to 29.8% in 2014 (from 21.6% to 27.5% in men, and from 25.6% to 32.0% in women). The same trend was observed in

the EU27, although the overall growth was smaller, from 30.9% in 2006 to 32.6% in 2014 (Eurostat, 2017d).

Finally, people aged 65 and over reporting some limitation in their daily-life activities reached 23.7% in EU27 countries but 20.3% in Spain in 2014. For severe limitations, figures were 5.4% in Spain, below the EU27 average of 8%. Notably, between 2011 and 2014 individuals with some activity limitation who also endured severe material deprivation increased, from 5.8% to 9.1% (Eurostat, 2017d).

BOX 1.1 Health inequalities

The mix of unemployment and lower household incomes, along with new fiscal regulations increasing indirect taxation (OECD, 2015a; Eurostat, 2015) has impacted on the poverty level of the country. With an increase of almost 5 points between 2005 and 2015, the population at risk of poverty or social exclusion has reached 28.6%. Moreover, impoverishment has impacted more on the poorest households, increasing the inequality gap by 2.4 points of the Gini coefficient since 2005.[3] Nevertheless, these facts have not necessarily translated into increasing inequalities in the average health status of the Spanish population (Regidor et al., 2016).

Differences in self-reported good or very good health persist across income or educational level quintiles, although figures have tended to converge since 2005; self-perceived good health was 22.9 points higher in 2005 in the most affluent individuals (78.7% versus 55.8%) whereas in 2015 the difference was 8.8 points (81.6 versus 72.8%). Self-reported morbidity was 14 points higher in less affluent people in 2005, reducing to 3.4 points difference in 2015 (30.8% versus 27.4%). For self-perceived limitations, although less affluent individuals self-reported more severe limitations (12.3% versus 5.7%) in 2005, in a decade, the difference has notably reduced, from 5.6% to 3.4% (Eurostat, 2017e).

With regard to lifestyles, the latest data show that obesity for the worse-off has doubled the burden compared with those who are better-off. However, the trend is favourable to the less affluent as the obesity percentage has reduced from 22.6% in 2008 to 20.3% in 2014, while it slightly increased for the better-off (from 9.8% in 2008 to 10.8% in 2014). With regard to daily tobacco consumption, the trend favours those most affluent (reducing from 24.3% in 2008 to 20.9% in 2014) while for the worse-off consumption has increased, from 22.3% in 2008 to 28.0% in 2014. Finally, daily alcohol consumption, usually higher in the poorly educated individuals, also increased in highly educated people since 2008; from 15.7% to 17.0%, and from 10.6% to 13.6% in the more poorly educated people (Eurostat, 2017d).

With regard to minorities, the self-reported health status in the Spanish gypsy community is good on average, although with worse results than the rest of the Spanish population. Nonetheless, there is a socioeconomic gradient within the gypsy population, with better-off individuals reporting better health outcomes (MSSSI, 2016a). In turn, the immigrant population living in Spain is healthier – among those visiting health care premises, the burden of morbidity is more than half the burden of native Spaniards (Gimeno-Feliu et al., 2016). However, the healthier status of immigrants appears to have faded away between 2006 and 2012, as self-reported health status has worsened, very probably as a consequence of the differential impact of the economic crisis (Gotsens et al., 2015).

3 Nonetheless, when considering the in-kind contribution of the SNS (health expenditure not covered by household' pockets), families' income is estimated to increase 15%, impacting more on the lowest income quintiles reducing the Gini coefficient (since 2003, between 3.3 and 4.2 percentage points) (Goerlich-Gisbert, 2016) (see Section 7.4, *Financial protection*).

Maternal and child health

The approval of over-the-counter access to the so called "day-after pill" and the new 2010 legislation to decriminalize abortion in the first 14 weeks of pregnancy, were the most notable policies on reproductive health in the last decade. Notably, the rate of abortions among women aged 15 to 45 years experienced a notable reduction since 2011, from 12.5 abortions per 1000 women to 10.4 abortions per 1000 women in 2015. In turn, abortion rates for women aged 20 or below decreased since 2006, from 12.5 to 9.4 per 1000 women in 2015. Interestingly, the abortions performed in public hospitals are observed to increase, whereas private centres assist the vast majority of abortions (88.3% in 2015) (MSSSI, 2016b).

In child health, vaccination figures remain stable, slightly increasing over the period, and similar to the EU average. Prime-dose vaccinations are well above 95% coverage, with stable figures since 2005. In turn, booster doses (except for meningitis type C which has coverage above 95%) of poliomyelitis, diphtheria tetanus pertussis, *Haemophilus influenzae* type B and measles-rubella-mumps exhibited a coverage between 90% and 95%. Although the human papillomavirus vaccine has experienced a slight improvement in coverage since its inclusion in the vaccine calendar in 2009, it barely reached 79% of girls between 11 and 14 years old in 2015 (MSSSI, 2017c).

Lifestyle factors

Tobacco

The 2010 anti-tobacco law (Law 42/2010) established a much stricter regulation than the one in 2005 (see Section 5.1, *Public health*) and daily smokers have decreased since 2006. Smoking cessation in men has shown a 4% absolute decrease (slightly lower for young men, with a 3.4% absolute increase). In the case of women, with an overall 2.9% reduction in daily smokers, with young people aged 15–24 experiencing a notable 13.4% absolute reduction of daily smokers (MSSSI, 2017b) (see Table 1.4). Nevertheless, prevalence of daily smoking in 2014 remains higher than in 21 OECD countries (OECD/EU, 2016).

Alcohol

Alcohol consumption, measured as litres of pure alcohol per capita in population over 15 years, has experienced a reduction in Spain of 17.5% between 2006 and 2010, from 11.86 to 9.79 L, slightly below the EU average (10.05 L) (WHO Regional Office for Europe, 2017). Alcohol consumption by gender showed a greater decrease for men than women between 2006 and 2014 (see Table 1.4). The survey of alcohol and drugs of the National Plan against Drugs confirms that in the years of the economic crisis (2009–2013), the tendency to a slight reduction in regular consumption remained, but there was an increase in specific episodes of excessive consumption (for instance, binge drinking) (MSSSI, 2016c).

Illegal drugs use

Since 2007, the Survey on Alcohol and Drugs in Spain (EDADES) has recorded a slight reduction in cannabis consumption (from 10% in 2007 to 9.2% in 2013) and cocaine (from 3.1% in 2007 to 2.2% in 2013) (MSSSI, 2015a).

TABLE 1.4 Morbidity and factors affecting health status, 1995–2014 (selected years)

	1995	2001	2006	2011	2014
OBESITY AND OVERWEIGHT PREVALENCE (%)					
Obesity male	10.4	12.4	15.5	18	17.1
Obesity + Overweight male	53.7	57.6	60.2	63.2	60.7
Obesity female	11.4	14.1	15.2	16	16.7
Obesity + Overweight female	39.2	42.8	44.6	44.2	44.7
DAILY SMOKERS (%)					
Male	43.6	39.2	31.6	27.9	27.6
Male 15–24 years	39	36.5	25	22.5	21.6
Female	24.5	24.7	21.5	20.2	18.6
Female 15–24 years	40.5	36.9	28.9	21	15.5
ALCOHOL CONSUMPTION [a] (%)					
Male	–	–	6.8	2.1	1.9
Female	–	–	2.7	1.4	1.2
SEDENTARY LIFESTYLE [b] (%)					
Male	40.6	41.2	–	38.8	31.1
Female	52.7	52.2	–	49.8	42
DAILY CONSUMPTION OF FRESH FRUIT AND VEGETABLES (%)					
Male, Fresh Fruits	–	58.6	62.5	60.3	58.2
Male, Vegetables	–	27.2	36.2	41.9	39.1
Female, Fresh Fruits	–	69.6	72	67.6	67.1
Female, Vegetables	–	38.5	47.8	52	50
CHRONIC HEALTH PROBLEMS (%)					
Hypertension	11.9	14.4	18.4	18.5	18.4
Hypercholesterolaemia	9.5	10.9	14	16.4	16.5
Diabetes	4.7	5.6	6	7	6.8

Sources: Time series include data from the Spanish National Health Survey (1995, 2001, 2006, and 2011/ 2012), and the European Health Interview Survey (2009 and 2014), available at http://www.msssi.gob.es/estadEstudios/estadisticas/encuestaNacional/encuesta2011.htm and http://ec.europa.eu/eurostat/web/microdata/european-health-interview-survey, respectively.

Note: Population is > 16 years until 2009, and 15 years since 2011, except in obesity where population is 18 and over throughout the period; [a]Alcohol consumption potentially of risk for health; [b]No physical activity in leisure time.

Obesity

Obesity and overweight have increased steadily since the late 1990s, for both genders, with higher rates for men than women across time (see Table 1.4). Greater concern exists with regards to childhood obesity. The Aladino Study in 2013 found overweight and obesity in, respectively, 24.6% and 18.4% of children aged 7–8 years (MSSSI, 2014a).

2

Organization and governance

Chapter summary

- The Spanish National Health System (SNS) is based in the principles of universality, free access, equity and fairness of financing, and is mainly funded by taxes.

- Health competences are transferred to the 17 Autonomous Communities, with the national level being responsible, under the governance of the Interterritorial Council for the SNS, for certain strategic areas as well as for the overall coordination of the health system, and the national monitoring of health system performance.

- Priority setting mechanisms have been subordinated to macroeconomic conditions in the last decade, and the usual decision-making mechanisms have responded to the requirements of the 2010 Stability Programme (that is, deficit and debt reduction).

- New legislation has focused on the sustainability of the health system since 2010. Additionally, other major legislative texts include: Law 42/2010, expanding the provisions of the "anti-tobacco" 2005 Law (Law 28/2005); Law 33/2011 on Public Health, a general provision that has not been fully developed yet; and, the transposition of the Directive on cross-border care, with limited impact on Spanish citizens since 2009.

- The SNS is improving information at all levels; notably, the expansion of an Abridged Electronic Medical Record with relevant clinical information among Autonomous Communities, together with the development of the electronic prescription, the registry of professionals (not yet fully operative) and the improvement in the health care information system (specialized care, primary care).

2.1 Organization

In the statutory Spanish National Health System (SNS), coverage is virtually universal, mainly funded from taxes, and care is predominantly provided within the public sector. Provision is free of charge at the point of delivery, with the exception of outpatient pharmaceutical prescriptions and specific orthesis and orthopaedic prosthesis (see Sections 3.3.1, *Coverage* and 6.1, *Analysis of recent reforms*).

Since January 2002, all the 17 ACs and the Institute for Health Care Management (INGESA) have organized and managed public health care services with an ample degree of self-government, particularly before 2010, when the first stability measures were implemented (Ministry of Finance, 2010a). Financing is not earmarked for health care, and it is regulated by an agreement by which the Government of Spain devolves taxes and sets levelling subsidies according to need-wise formulas established in the 2001 and 2009 Finance Framework laws (see below).

Legal framework

The process of health care decentralization to ACs was completed in 2001, and three laws were enacted in 2003 looking for better institutional integration, coordination and cohesion of the SNS (Law 16/2013), updating and homogenizing legislation for statutory personnel (Law 55/2003), and regulating the different types, roles, training and careers of health professions and specializations (Law 44/2003) (see García-Armesto et al., 2010 for more information).

From 2004 to 2010, the SNS decentralization process deepened, in the context of the economic expansion cycle and the implementation of the ACs' Funding Regulation Framework issued in laws 21/2001 and 22/2009. Both laws allowed ACs to spend more funds on welfare services and increase revenues, partially ceding regulation capacity on taxation and devolving, to a certain extent, a number of indirect taxes. On the other hand, the reforms in the statutes of autonomy came to shield the competencies of ACs, strengthening their regulatory capacity in the organization and management of public health care (see Section 1.3, *Political control*). As a consequence, ACs were able to expand their care network, the supply of services and the workforce (which improved the global payroll), diminishing the coordination capacity of the central planning authorities.

Late in the 2000s, a wide-ranging debate took place on the role of *public action* with regard to health determinants. The debate turned into the General Law 33/2011 on Public Health that sets up the principles and actions to be taken to include *"Health in All Policies"* in the institutional action on health. The General Law also sought to update and upgrade the coordination mechanisms among the 17 health authorities in the country and INGESA, fairly developed in terms of epidemics surveillance and monitoring, but clearly dysfunctional in terms of a common strategy for noncommunicable disease prevention or the development of health promotion and disease prevention interventions. Hence, the new regulation has enhanced the coordination mechanisms in terms of epidemic surveillance and control, and through the Order SSI/2065/2014, has enacted a common package of public health benefits for the whole country (for example, a single vaccination calendar or a common offer of population-based screening programmes) (see Section 5.1, *Public health*).

Since 2011, the regulatory framework was reformed as a consequence of the economic and fiscal crisis, implying the implementation of strong fiscal and consolidation policies; as a result, there have been changes affecting the overall welfare system (for example, decrease of public resources or reduction of public workforce and salaries) and health system-specific measures addressed to reduce the breadth, scope and depth of the system, as well as its central control mechanisms (see Sections 3.3.1, *Coverage* and 6.1, *Analysis of recent reforms*).

After December 2012, with a new government in office and an absolute majority in the parliament, the pace of regulatory changes and austerity measures sped up through the use of "Royal Decree-Laws" – executive decrees that only require ratification in the parliament (a review of legal changes can be found in Repullo (2014)). Main reforms affecting the health system were implemented after the publication of RDL 16/2012, later developed by RD 1192/2012, specifying the condition of SNS beneficiary, and RD 576/2013, establishing the procedure and tariffs for non-entitled individuals who wanted to purchase SNS public coverage (see Sections 3.3.1, *Coverage* and 6.1, *Analysis of recent reforms*).

Statutory systems framework

Three statutory subsystems coexist: (a) the general one composed by the 17 ACs' health systems with full responsibility for planning and the provision of public health and health care services (Fig. 2.1); (b) Mutual Funds (MFs) catering for civil servants, the Armed Forces and the judiciary [Mutual Fund for State Civil Servants (MUFACE), General Justice Mutual Fund (MUGEJU) and Social Institute for the Armed Forces (ISFAS)]; and (c) the Mutualities focused on assistance for Accidents and Occupational Diseases, renamed "Collaborating Mutualities with the Social Security" (*Mutuas Colaboradoras con la Seguridad Social*, MCSS) by Law 35/2014, of 26 December.[1]

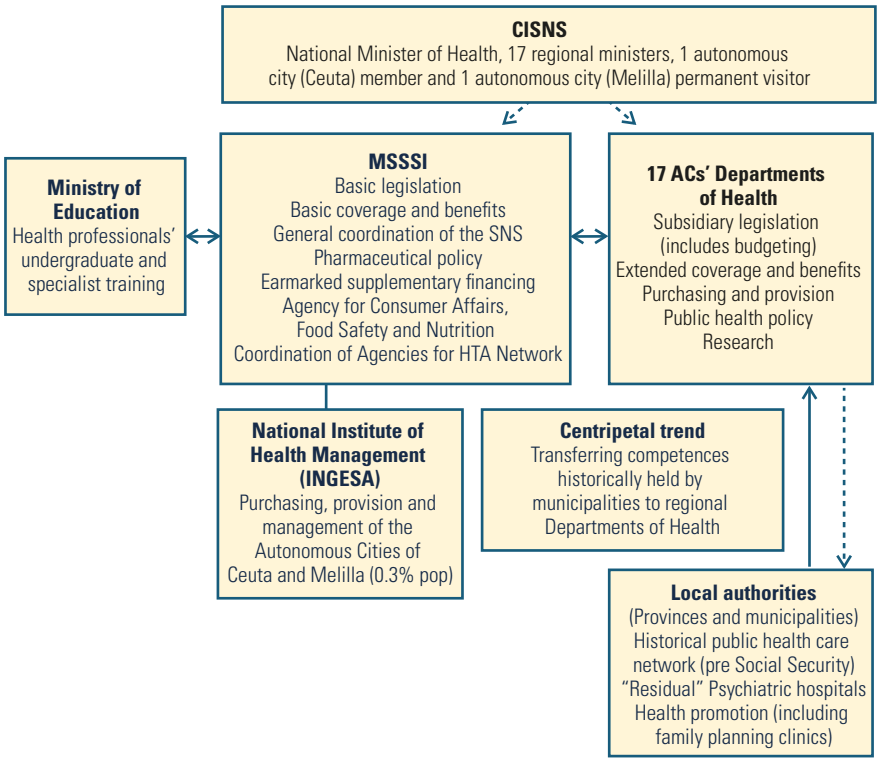
1 According to the 1986 General Health Act, the term *"Sistema Nacional de Salud"* is applied for both subsystems (and other health services of central and ACs' administration); the General Law 33/2011 emphasized this SNS affiliation. Nevertheless, and for the sake of clarity, both systems are distinguished throughout the text as ACs' system when referring to the SNS governed by the ACs, and as MF when referring to the Public Mutualism.

The MFs represent 3.4% of the public expenditure in health, covering 2.2 million insurees in 2014. The basis for affiliation is being a member of one of the bodies of civil servants, either working for the central government or for the ACs. Members of MFs are entitled, once a year and according to a predefined premium, to opt for either the public or the private sector – a substantial 80% of public servants opt for the private sector although 20% double-coverage has been estimated (for example, part-time civil servants who also have a private employment). Unlike the general system, the funding scheme is composed of a budgetary contribution from the central government as employer (up to 85%) and at least 15% of employees' contribution (see Section 3.3, *Overview of the statutory financing system*).

The third statutory subsystem is specific for accidents and occupational diseases, and is directly run by the Social Security system, which collects contributions from companies and channels the funds to a number of associated entities known as "Collaborating Mutualities with the Social Security" or MCSSs; these are actually not-for-profit organizations under the regulatory supervision of the Social Security. The share of total public expenditure on MCSSs reaches 2.4% (see Section 3.1, *Health expenditure*).

Beyond their core role in preventing and managing accidents and occupational diseases, a Royal Decree (RD 1993/95) established a regulation that allowed MCSSs to assume the collection of premiums and payment of subsidies on behalf of the Social Security, and partially to perform the medical control of sickness absences. In the late 2000s, concerns about fraud and absenteeism, and the alleged lack of interest of health services to take over the control of sickness leave benefits, led to the giving of greater responsibilities to MCSSs in that respect. This new role is performed under the supervision of the Social Security and the inspection bodies of the ACs.

FIG. 2.1 Overview of the general statutory health system



Source: Authors' own elaboration.

Actors in the health system

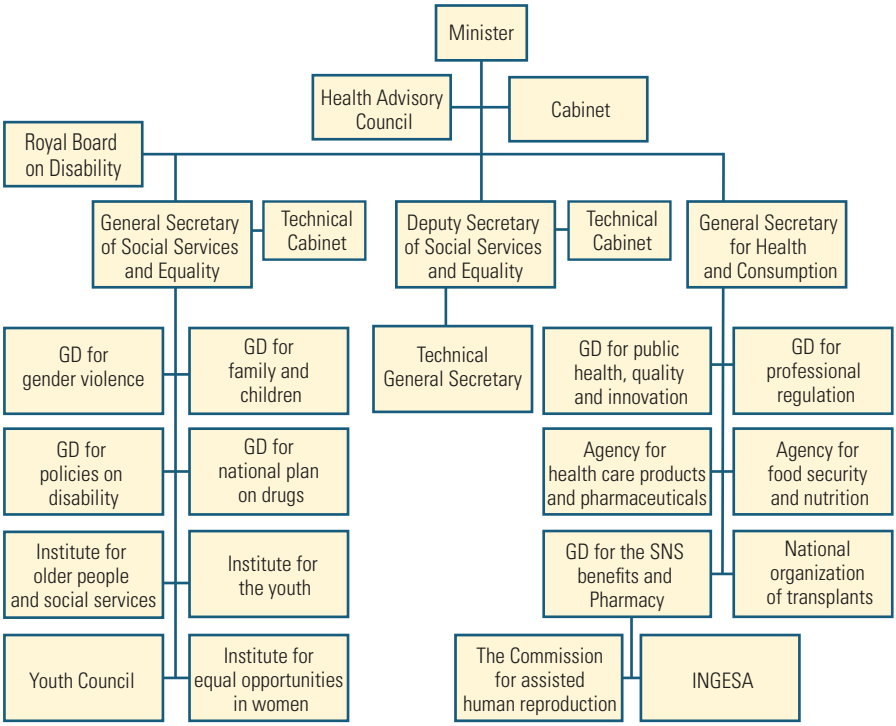
The roles and performance dynamics of the major players have experienced significant changes in the last years, particularly after 2011, when the economic and fiscal authorities were called to play a more prominent role. Hereinafter, a brief description of actors and roles is provided.

Two main actors in the SNS are the Ministry of Health (Fig. 2.2) and the Departments of Health (namely, regional health ministries) in the 17 ACs composing the state.

The Spanish Ministry of Health (MSSSI) mainly plays the role[2] of stewardship and coordination with the assistance of the Interterritorial Council for the SNS (*Consejo Interterritorial del Sistema Nacional de Salud*, CISNS). The CISNS is a collegiate governance body composed of the 17 regional

2 MSSSI also holds social services, consumer affairs and equality policies.

FIG. 2.2 Ministry of Health, Social Services and Equality, 2018



Source: Authors' own elaboration based on MSSSI (2018a).

Note: GD: General Direction.

Ministries of Health and the National Ministry of Health represented by the highest level of hierarchy – Health Minister of Spain and Health Regional Ministers, also called counsellors.

The MSSSI receives support from four specialized agencies: (a) the Agency for Medicines and Medical Devices, (b) the National Transplants Organization; (c) the Agency for Consumer Affairs, Food Safety and Nutrition, and (d) the Institute for Health Carlos III (*Instituto de Salud Carlos III*, ISCIII) (Ministry of Science and Competitiveness), that combines health technology assessment, research centres, public health services and biomedical research coordination and financing.[3]

3 ISCIII had a double dependency after 2008. Between 2008 and 2011, ISCIII was part of the Ministries of Health and, Science and Innovation. From 2011 to the time of writing, ISCIII is part of the Ministries of Health and Economy and Competitiveness (currently, Economy, Industry and Competitiveness).

Lastly, the MSSSI finances and governs the health care for the Autonomous Cities of Ceuta and Melilla through a centrally managed institution called the Institute for Health Care Management (*Instituto de Gestión Sanitaria*, INGESA). Since 2013, INGESA has been commissioned to organize central purchase and public auctions for certain goods and services (including some medicines), on behalf of those ACs that formally signed up for this common service.

Other actors in the central government playing a certain role in the health system are: (a) the Ministry of Labour which, through the Social Security Agency, deals with part of the funding of the aforementioned MFs and the MCSSs subsystem; (b) the Ministry of Public Administration, Justice and Defence, which oversees the health insurance subsystem for civil servants, and the network of health care services provided to the military and prison inmates; (c) the Ministries of Economy and Finance, the former throughout the Inter-ministerial Commission for Medicines Pricing and, the latter, increasingly influencing, coordinating the ACs' financing system and, supervising debt payment and the inclusion of new benefits.[4]

Since the decentralization process came to an end, decentralization has deepened and ACs have gained influence in the development of the SNS. The main actors in the ACs are the Departments of Health, playing the role of a Health Authority (regulation, planning, budgeting and third-payer) backed by specialized agencies, usually, one aimed at managing health services provision, and another one devoted to public health action (epidemiological surveillance, health protection and health promotion). Some ACs also benefit from the existence of a health technology assessment body, organized in a national network (see Section 6.1.8, *A new status for health technologies and benefits assessment*).

Greater complexity is observed in the regional "agencies" that provide health services, where the two main actors are the Primary Health Care and the Specialized Care divisions. Both are implemented across the territory by way of an administrative distribution of the population in the, so-called, health care areas. Interestingly, within a health care area, the population is allocated around primary care centres (PCCs), in the primary care areas. The

4 Names of cited Ministries (December 2017) are: Finance and Civil Service (*Hacienda y Función Pública*); Economy, Industry and Competitiveness (*Economía, Industria y Competitividad*); Employment and Social Security (*Empleo y Seguridad Social*).

primary care areas are perfectly nested into the hospital care areas, facilitating continuity across care levels by design.

Primary care settings, the current gatekeepers of the health system, provide care through primary care teams mainly composed of specialized doctors and staff nurses (see Section 5.3, *Primary/ambulatory care*). When it comes to specialized care, and in particular to hospital care, although the model of care is quite homogeneous all over the country (that is, outpatient specialized care is linked to hospital departments; each hospital department has a number of beds; small hospitals with fewer services are clustered to bigger hospitals that provide high-tech services or take over the most complex cases), there is a greater variety with respect to ownership and organizational models (see Section 5.4, *Specialized ambulatory care/inpatient care*).

The private sector

The private sector is an important player in the Spanish health system. The private sector provides voluntary health insurance schemes to individuals. It constitutes the alternative network for 80% of the civil servants insured within the MF; it provides dental care and optical care not covered by the national health system, and as observed, it is closely intertwined with the public sector, specifically, in hospital and pharmaceutical care (see Section 3.5, *Voluntary health insurance*).

Social and professional actors

Since 2010, there have not been significant changes in the representative structure of social and professional actors, nor in their usual roles (Ministry of Labour, 2017; MSSSI, 2017d).

However, it is worth mentioning that, as a reaction to the austerity measures, public expenditure constraints, wage cuts and the worsening of working conditions (see Section 1.2, *Economic context*), both the classical actors, such as the General Council of Physicians and the General Council of Nursing, and new actors, such as the so-called "White Tide" movement (alluding to the doctors and nurses' white gowns, although composed of health professionals and civil society), played a significant role beyond unions and professional

associations, acting either as think tanks for the sustainability of the SNS or leading protests against budgetary cutbacks and policy reforms affecting the SNS; in some cases, promoting judicial actions against specific reforms.[5]

5 Some media references can be found here: https://elpais.com/ccaa/2013/01/07/madrid/1357546107_270961.html; https://mesaendefensasanidadpublica.wordpress.com/

BOX 2.1 Historical background

Over the last decades,[6] the SNS expanded its legal framework towards an effective universal coverage. As a consequence of the economic and financial crisis, Spain had to face some deep reforms aiming to ensure the viability and sustainability of the SNS. Those measures came to affect the coverage entitlement, the regulation of the package of benefits and the financing mechanisms. As for the coverage entitlement, the SNS, which used to base the entitlement rights on the condition of the citizen, has moved to a system whose regular basis for entitlement is mainly linked to the social security working status (either active, pensioner, subsidized unemployees or unemployees having exhausted the unemployment dole) and their beneficiaries. In practice, except for the case of undocumented immigrants (with the exception of emergency care, and obstetric and paediatric care), the system offers universal coverage. When it comes to the package of benefits, the SNS holds a comprehensive list of benefits; however, the new regulation (RDL 16/2012) has differentiated between the common basic package of benefits and other benefits, with a view to long-term rationalization (see Sections 3.3.1, *Coverage* and 6.1.3, *Changes in the depths of coverage*). Finally, when it comes to financing, RDL 16/2012 provisioned what benefits would hold the usual financing mechanism based on taxation (those basic benefits) and what would be cost-shared by patients; in that sense, the new regulation allows expansion of the cost-sharing schemes. In practice, co-payments are currently limited to outpatient pharmaceutical prescriptions and specific orthesis and orthopaedic prosthesis (see Section 3.4, *Out-of-pocket payments* and Section 6.1.4, *Changes in the cost-sharing mechanisms*).

In the aftermath of the crisis, Spain was mandated to agree a series of measures collected in the so-called Stability Programme for the Kingdom of Spain (Ministry of Finance, 2010b); some of those measures affected the whole public system while some were specific to the health system. Among those measures aimed at the whole public system, a controversial Constitutional Reform of article 135 meant to prioritize (although with limitations) debt payments before any other public expenditure. Among those measures targeting the health system, restrictions to ACs' spending capacity, public health budget reductions and prioritization of debt payments to health care third-party subcontractors.

The National System for the assistance of dependent people (SAAD) (created by Law 39/2006), considered the fourth pillar of the Spanish welfare state, whose target population comprises those highly dependent individuals, has also endured notable budget reductions. Although with some fluctuation in the series, effective coverage still remains far below acceptable figures. According to official SAAD statistics, by the end of 2016, 71% of the 1.23 million Spaniards entitled to receive coverage actually had access to the corresponding services (IMSERSO, 2016a).

Likewise, the intersectoral strategy for Health in All Policies enacted in the Law 33/2011 on Public Health has not been fully implemented yet; so, critical elements as the development of a common Public Health Strategy, the creation of the different advisory bodies, and the foundation of a Nationwide 'Agency' of Public Health, have been delayed as a collateral effect of the austerity measures.

[6] Please, see García-Armesto et al. (2010) for information on earlier developments.

2.2 Decentralization and centralization

The decentralization of health and health care services was completed in 2002 with the decentralization of public and social security health care centres, services and competencies to the ACs (see more detailed information in García-Armesto et al., 2010). Over the last decade, the decentralization process was consolidated and ACs enjoyed greater capacity for regulation, planning and, above all, financial autonomy. As an unintended consequence, decentralization turned into an uneven and disproportionate growth on health expenditure that made the system unviable once tax revenues decreased rapidly after the onset of the crisis.

The legal provisions approved in the Spanish Parliament, as the amendment of Article 135 of the Constitution (through the Organic Law 2/2012 of Budgetary Stability and Financial Sustainability), or RDL 16/2012 on measures to assure the sustainability of the health care system implied, as a matter of fact, the recentralization of decisions. So, the restrictions on ACs' spending capacity, the reduction of health budgets and the prioritization of debt payment to health care providers through dedicated funds were controlled by the Ministry of Finance; and, decisions on the new limits for insurance entitlement, the reconfiguration of the package of benefits, or the enactment of new cost-sharing measures were made by the Ministry of Health, without the participation of the SNS Interterritorial Council.

2.3 Intersectorality

Between 2010 and 2011, three new laws with an intersectoral approach to health were enacted. Chronologically, a new law on tobacco consumption (Law 42/2010) was enacted, that regulated retailing, distribution and advertising, and upgraded some provisions issued in the so-called 'anti-tobacco 2006 Law', in general, expanding the free-of-smoke locations to any place for collective use, and prompting health institutions, particularly primary health care, to implement smoking cessation programmes. The intersectoral approach on health culminated with the enactment of the General Law 33/2011 on Public Health, which exhibited an unequivocal commitment to 'health in all policies' and the use of health impact assessment as a tool for the evaluation of laws and policies in those interested sectors. Similarly, Law 17/2011 on food safety and nutrition, which besides enacting new regulation aimed at protecting health, also had a clear commitment to healthy lifestyles and obesity reduction, building upon the Strategy on Nutrition, Physical Activity and Obesity (*Estrategia NAOS*) (MSSSI, 2017e). Among the measures, we can highlight the prohibition of vending machines with salty appetizers, sugary beverages and saturated-fat products in schools, as well as the reduction of salt, sugar and saturated fat in the manufacture of food products.

Since 2010, the Ministry of Finance has implemented two reforms on taxation affecting alcohol and tobacco products. The first reform in 2013 increased taxation by 10% on alcohol and 3% on a pack of cigarettes; the latest reform set up in 2017 (Law 5/2017), will mean an increase of 5% on alcoholic beverages, of 2.5% on a pack of cigarettes and of 6.8% on rolling tobacco. Interestingly, both reforms have been set up to merely increase government revenues with no specific commitment to increase health protection. Recently, the Ministry of Health announced a public debate on taxation of sugary beverages that translated into the parliamentary debate on the General Budget Law Proposal for 2017. The lack of agreement across parties impeded its implementation for the whole country. Nevertheless, the AC of Catalonia chartered the Law 5/2017 as a means to regulate sugary beverage taxation at regional level.

Lastly, although the traffic safety policies implemented in the early 2000s have been continued throughout this period, the positive impact has slowed down or even experienced a change in trend in the last 5 years: for example, urban accidents with victims have increased since 2011 and inter-urban road

accidents with fatalities have slightly increased since 2013. Nevertheless, the number of accidents involving severe injuries has reduced since the early 2000s (General Directorate of Traffic, 2017).

2.4 Regulation and planning

In general terms, the locus for planning and regulation resides essentially in the Ministry of Health when it comes to nationwide laws and plans, and lays on the Departments of Health of the 17 ACs when it comes to the local implementation of national laws or plans, or the development of regional regulation and policies, within their legally bound attributions. Since 2001, health system financing has been regulated under the general legal frame for the financing of the ACs, that is, under the responsibility of the Council for Fiscal Policy and Finance (*Consejo de Política Fiscal y Financiera*), a collegiate body composed of the Spanish and ACs' ministers of finance, whose decisions turn into law under the responsibility of the Ministry of Finance.

BOX 2.2 Evaluating priority-setting and planning

In the aftermath of the economic and financial crisis, the usual mechanisms for priority-setting, rather implicit although the legislation provided some indication on the method, have endured a disruptive modification. The consensus mechanism used by the Interterritorial Council for the SNS to decide who should be entitled to get public insurance, what services should be covered and which would be the funding mechanism was frequently substituted by the use of executive regulation as the aforementioned RDL 16/2012, where decisions were directly made by the Spanish Government, with practically no debate (as the party supporting the government enjoyed absolute majority in the national Parliament) and, with no concourse of the voice of the ACs' ministers in the Interterritorial Council, reducing transparency in the decisions, and moving the accountability focus from those who govern and manage the health services to those who finance them. In the end, the priority-setting mechanism turned into an exercise aimed at accomplishing with the Financial Stability Programme (2010–2015) a reduction in the public expenditure in health from 6.5% of GDP in 2010 to 5.1% in 2015 – with a reduction of €6.8 billion in 2013 and €12.7 billion in 2014.

As a consequence, ministries of finance in the ACs transposed national provisions into regional obligations (that is, budget restrictions in health) and

confining ACs' priority-setting mechanisms to decisions on the provision of services (including covering those more essential, reducing supply capacity, increasing administrative barriers like waiting lists, reducing private provider subcontracting, looking for private finance initiative (PFI) alternatives). In turn, health plans, a regional mechanism of an implicit prioritization, finished up being inspirational documents rather than truly priority-setting mechanisms. Since 2010, all the 17 ACs have designed and published their health plans.

Nevertheless, the health system has held some priority setting mechanisms worth highlighting. First, the SNS 2006 Plan for Quality, revised in 2010 and led by the Ministry of Health in coordination with the 17 ACs, has been developing and implementing a number of "Health Strategies" aimed at increasing a more homogeneous response of the health system across the country; so, the strategies on chronic diseases (MSSSI, 2012a), cancer (MSSSI, 2012b), ischaemic heart disease (MSSSI, 2009a), stroke (MSSSI, 2009b), diabetes (MSSSI, 2012c), chronic obstructive pulmonary disease (MSSSI, 2014b), palliative care (MSSSI, 2012d), rare diseases (MSSSI, 2009c), mental health (MSSSI, 2012e), sexual and reproductive health (MSSSI, 2012f), health promotion and prevention (MSSSI, 2014c) and patient safety (MSSSI, 2016d).

A second priority-setting mechanism is the Annual Joint Work Plan for the Network of Agencies for Health Technologies Assessment where a series of technologies (emergent, new or existing) are analysed in terms of their added value, and recommendations are reported to inform policies on investment or reinvestment. Unfortunately, RDL 16/2012 kept the advisory role of the Health Technology Assessment Network, which implies that, none of its reports and recommendations are legally binding (see Chapter 6, *Principal health reforms*, for more details). The priority setting method is the price-setting negotiation mechanism for drugs deemed to be financed by the public system, ruled by the Ministry of Health. Pricing procedures have frequently been subject to criticism. The National Commission for Markets and Competition (CNMC, in Spanish), in a 2015 report, praised many aspects of the new pricing system but also raised concerns on the lack of transparency and predictability of the pricing mechanisms, and criticized that neither the reports backing the decisions nor the actual decisions were made public (CNMC, 2015). Seemingly, the Court of Auditors in a devoted report, pointed to an excessive discretion of the MSSSI in the procedures and criteria used in drugs pricing (Court of Auditors, 2017).

2.4.1 *Regulation and governance of third-party payers*

The role of third-party payers in the SNS is mainly assumed by the Health Departments in the 17 ACs (Fig. 2.1), although MFs for civil servants and

mutualities for occupational diseases and accidents would also play a similar role (see Section 2.1, *Organization*). Focusing on the Health Departments, they act, both, as public insurers (that is, warranting the access to the package of benefits covered by the public system) and services' funders (that is, allocating the share of the regional public budget devoted to health, contracting services to public and private providers).

In the last decade, the ACs' Health Departments have preserved both responsibilities. However, their insurance role has been nuanced by the legal provisions in RDL 16/2012 with regard to decisions on the complementary and supplementary packages of benefits (see Section 3.3.1, *Coverage*), and their funding role has been limited by the general economic and financial restrictions imposed by the Stability Programme. Since 2010, the budgetary discipline towards cost-containment on personnel, current expenditures and investment has framed the action of Health Departments – between 2009 and 2015, government expenditure on health reduced 0.9 points of the GDP, equivalent to a 5.3% reduction – €68 870 million in 2009 to €65 199 million in 2015 (MSSSI, 2015b) (see Section 3.1, *Health expenditure*). As a consequence, the usual negotiation of contracts has turned into a simplistic cost-containment strategy, affecting both public and private contracts.

2.4.2 *Regulation and governance of provision*

No major changes have been observed when it comes to regulation and governance of provision in the last decade. Table 2.1 exhibits, at a glance, what are the main providers in place, the aspects that require regulation and what institution exerts governance or stewardship – central government or ACs. In general terms, care services – except pharmaceutical care – are fully governed by the ACs – planning, accreditation, quality assurance, financing and pricing. Legislation is shared by the central and ACs' governments. In this case, the national regulation (basic legislation common to all the ACs) frames the ACs' legislation. In the case of pharmaceutical care, except in the case of licensing and pricing, both of which are the full responsibility of the central government, the remaining roles are regulated by ACs taking into consideration the national regulatory frameworks. Lastly, the legislation and accreditation of health workforce higher education is the full responsibility of the central government (namely, the Ministry of Education).

When it comes to the formal relationship with care providers, ACs Health Authorities contract with both public and private providers, in terms of number of services, quality and cost. In the case of public providers, although not legally bound, the contract is monitored and the performance results are taken into account in future negotiations. In the case of private providers, usually hospitals whose activity is subsidiary to public system needs (for example, waiting list programmes, beds for palliative care), a number of services are purchased and providers are paid according to public predefined tariffs and contract accomplishment. When it comes to pharmaceutical care, ACs reimburse pharmacies for drugs dispensation according to the pricing and co-payment mechanisms regulated by the corresponding central government bodies (see Section 5.6, *Pharmaceutical care*).

Unlike this general scheme, the PFIs and the Private–Public Partnerships (P-PPs) provision schemes whose most internationally known example is the P-PP so called Alzira Model (focus initially on the provision of hospital care expanding later on to primary care), were observed to deepen until 2011, particularly after the 2007 regional elections. Arguably, PFIs and P-PPs were seen as an eventual solution to the lack of efficiency of public providers and later, to the increasing budget cutbacks, particularly on investments. Two ACs, Valencia and Madrid, championed the use of P-PPs in five and three hospitals, respectively. When it comes to PFIs, 13 hospitals were built and equipped in five ACs, seven of them in the AC of Madrid. The negative evolution of the crisis, and the strong public debate on PFIs and P-PPs as subterfuge for "public services privatization" exhausted their momentum. The current ACs' governments of Madrid and Valencia, have decided to directly run the PFI hospitals (Madrid) and to reverse the Alzira Model in April 2018, when the P-PP contract comes to an end (Valencia).

In the context of a growing external intervention of the financial authorities, public health care provision remains widely anchored in the inflexibility of bureaucratic models both at national and regional levels. Along with these constraints, the increasing partisan interference in the management decisions, and a widespread claim for transparency and accountability, have led to a public debate on the good governance of health services. In some ACs, the debate has translated into specific actions; as outstanding examples, the recommendations by the Basque Country Advisory Council for Public Health Services Good Governance (Osakidetza, 2011), or the most recent legal initiative approved in the Regional Parliament of Madrid (BOAM, 2017)

TABLE 2.1 Regulation of health care providers and competence distribution

	LEGISLATION	PLANNING	LICENSING ACCREDI-TATION	PRICING TARIFF SETTING	QUALITY ASSURANCE	PURCHASING FINANCING
Public health services	ACs (*)	ACs	ACs	ACs	ACs	ACs
Primary health care (and dental care)	ACs (*)	ACs	ACs	ACs	ACs	ACs
Hospital and specialized ambulatory centres	ACs (*)	ACs	ACs	ACs	ACs	ACs
Pharma-ceuticals (ambulatory)	ACs (*)	ACs +CG	CG	CG	ACs (*)	ACs (*)
Long-term care	ACs (*)	ACs	ACs	ACs	ACs	ACs
University education of personnel	CG	ACs + CG	CG	ACs (*)	ACs	ACs

Source: Authors' own elaboration.

Note: ACs: Competence of the Autonomous Communities; ACs (*): ACs role is mediated and framed by a national framework regulation common to all ACs; CG: Competence of the central government.

aimed at creating collegiate governing bodies, encouraging professionalism in management, and fostering accountability, transparency and participation.

2.4.3 *Regulation of services and goods*

Main innovations in services and goods' regulation are enacted in the aforementioned RDL 16/2012. Until 2012, the Spanish SNS had a comprehensive common package of benefits, free of co-payment, except the flat 40% for retail price in prescribed drugs (exemption made for pensioners and certain chronic conditions), and some specific products and prostheses. ACs were able to complement the SNS common package within their territory with additional services. The new 2012 regulation categorized the SNS common package in three different benefit packages: (a) the basic package for all those insured and their dependents, which includes "essential" activities, including medical visits and hospitalizations; (b) a "supplementary" package, cost-shared by the patients, including pharmaceutical benefits (in practice, co-payment

affects mainly outpatient pharmaceutical prescriptions and specific orthesis and orthopaedic prosthesis) (see Section 3.3.1, *Coverage* and Section 6.1, *Analysis of recent reforms*); and, (c) an "accessory" package, which includes "non-essential" activities, still vaguely defined (see Section 3.3.1, *Coverage* and Section 6.1, *Analysis of recent reforms*).

In this context, RDL 16/2012 stressed the need for evaluation, paving the way for the reinforcement and empowerment of the network of Health Technology Assessment agencies (that is, agencies in Catalonia, Basque Country, Galicia, Aragon, Andalusia, Canary Islands and Madrid). Within their current mandate, Health Technology Assessment agencies review subsets of existing benefits, coordinate and design *ad hoc* evaluative studies for the adoption of new technologies and standardize methodologies for evaluation (REDETS, 2017) (see Section 6.1, *Analysis of recent reforms*).

2.4.4 *Registration and planning of human resources*

The statutory Spanish SNS is a strongly regulated system, affecting both goods and prices. When it comes to human resources, the SNS is populated by civil servants and, except partially in the case of emergency care and temporary positions, which were rather infrequent in the aftermath of the crisis, the traditional supply and demand levers do not generally operate. The main workforce planning drivers for the SNS are the *"numerus clausus"* that limit the entrance to undergraduate education, and the access barriers to the residency (doctors) and specialization (nurses) programmes. Noticeably, these two planning measures are rarely aligned, as the former is run by the education system and the latter by the health system, each with different contextual and institutional incentives.

The SNS workforce-planning concerns, such as the forecasted shortage of professionals due to numerous retirements in 15 years attributable to the demographic changes, have usually been present in the discussions of the Interterritorial Council, particularly after the start of the crisis. In the plenary meeting of the Interterritorial Council of 18 March 2010, an agreement was reached with regard to the need to "establish a common planning mechanism for all health professions, and for the whole SNS, according to need" (MSSSI, 2010). Upon this agreement, and the conclusions of some technical reports, notably the White Report for the SNS Human Resources (MSSSI, 2013),

the main action implemented so far has been the development of a National Registry of Health Care Professions (RD 640/2014).

The Registry, managed by the Ministry of Health, aims to collect relevant information from health professionals (in the public and private sectors) coordinating in a single registry the different workforce registries developed by the ACs. Besides its potential use in human resources planning and policy-making, the Registry has been designed to also respond to the provision on patients' information rights prescribed in the Law 3/2014 and to the requirements of the Cross-Border Directive (RD 81/2014). The Registry will contain information on professionals' qualification, specialization, additional training, current position, and administrative or legal circumstances worth knowing (for example, disciplinary measures). In the Interterritorial Council plenary session of 21 June 2017, the Ministry of Health presented for consultation the executive order that regulates the implementation of the Registry.

2.4.5 *Regulation and governance of pharmaceuticals*

The Spanish pharmaceutical sector is one of the most regulated sectors of the Spanish economy. In addition to the centralized approval mechanism provided by the European Medicines Agency, the Spanish Agency for Medicines has to approve the effective commercialization of any drug, as well as the regulation for drugs pricing and public reimbursement. Once commercialization is approved, companies might seek public reimbursement. This decision will be made by the Inter-ministerial Commission on Prices of Medicines, an administrative advisory body of the Ministry of Health, according to a number of criteria:

- severity, duration and consequences of the disease for which the drug is indicated;
- specific needs of certain groups;
- therapeutic and social value and incremental clinical benefit in terms of cost-effectiveness;
- budgetary impact;
- existence of drugs or other therapeutic alternatives at a lower price or lower cost of treatment; and,

- the degree of innovation of the drug under evaluation.

The regulation scheme issued in the Act for Guarantees and Rational Use of Pharmaceuticals and Health Products (Law 29/2006) has not significantly changed in terms of actors and responsibilities (see table 6.9 in García-Armesto et al., 2010). The new regulation issued since 2010 by the central government, has aimed at deepening the regulation issued in the aforementioned law, in a new context of fiscal revenues reduction and growing public debt. Thus,

- RDL 4/2010 ruled among other elements, the reduction of drug prices in both, drugs already under the reference pricing scheme and those not included yet;
- RDL 9/2011, among other measures, deepened the reference pricing policy guaranteeing homogeneity across the country, prompted generic prescription through the prohibition of brand-name prescription, and created the Committee on the Cost-Effectiveness of Pharmaceuticals and Health Products, who will report on the price policies developed by the Inter-ministerial Commission on Drugs Pricing;
- RD 177/2014, developed in the context of RDL 16/2012, that deepened in the regulation of reference prices and groups of homogeneous drugs, also aimed at regulating the information system required for drugs pricing and ACs financing; and
- Law 10/2013, modifying technical aspects of Law 29/2006; among the measures the text emphasized the need for the ACs to avoid policies that could lead to differences in pharmaceutical benefits and prices, distorting the in-country 'single market' principle and increasing inequalities.

Notably, the secular tension between the Ministry of Health and the ACs' Health Authorities with regard to drugs approval and pricing (decisions on drugs approval and pricing lay on the Ministry of Health while pharmaceutical care expenditure is entirely assumed by the ACs) has been seen during this period. The epitome of this tension was the negotiation of the funding method for *direct acting antiviral drugs* for hepatitis C, where an unprecedented earmarked fund was set up according to a price–volume

scheme, to be charged to ACs and paid back in 10 years – without interests and with a 2-year grace period (Campillo-Artero, García-Armesto & Bernal-Delgado, 2016; MSSSI, 2016e).

2.4.6 *Regulation of medical equipment, devices and aids*

Since RD 1030/2006, legislation that defined the common package of benefits and the updating procedure (see García-Armesto et al., 2010 for more information), the first substantial reform was issued in RD 16/2012 (and subsequent legislation), which aimed at implementing urgent measures to guarantee the SNS sustainability. It is worth highlighting the Ministerial Executive Order SSI/1356/2015 that regulated the authorization and inclusion of "medical devices and aids" as part of the common package of benefits, as well as the methodology for its evaluation.[7] Order SSI/1356/2015 specifically updated the list of orthoprosthesis and medical aids to be included in the common package, with a view to be the basis for a coherent and homogeneous set up of co-financing caps.

In turn, the procedure of inclusion of new medical devices and aids follows the same path as any other benefit; hence, the decision is made by the Interterritorial Council upon the proposals submitted by the Commission on Benefits, Insurance and Financing and the (mandatory) technical advice of the Spanish Network of Agencies for the Evaluation of Health Technologies and Benefits (see Section 6.1.8, *A new status for health technologies and benefits assessment*).

2.5 Patient empowerment

The regulation framework for patients has experienced some changes since 2009. Interestingly, some of the measures have been enacted within the context of regulation aimed at responding to the crisis.

[7] Previous to this one, a specific Ministerial Executive Order (Orden SSI/1640/2012), had updated breast prostheses and devices to prevent pressure ulcers.

2.5.1 *Patient information*

With regard to patient information, Law 19/2013 on transparency, access to public information and good governance, and its general application to public institutions, clarified and improved access rights to public information (updating existing regulation), facilitating ulterior developments, for example in the case of data sharing. On the other hand, specific to the health sector, RDL 9/2011 aiming at increasing coordination and cohesion across the SNS, as well as improving quality, defined the timeline for the implementation of an interoperable Health Identity Card throughout the territory, the data-sharing mechanisms for electronic medical records (EMRs), and the widespread use of electronic prescriptions. Currently at an advanced stage of implementation, the so-called patients' Abridged EMR is accessible in 15 of the 17 ACs (MSSSI, 2016f).

Details on what type of information patients have access to and how accessible the information is are summarized in Table 2.2. Usually, the information is placed in accessible institutional websites, using static documents and interactive tools. Lastly, information to foreign patients who do not speak any of the official languages in Spain (see Section 1.1, *Geography and sociodemography*) may benefit from the mediation and interpretation services provided by third parties (for example, not-for-profit organizations, nongovernmental organizations or municipalities).

Lastly, since 2005, the level of satisfaction exhibited by Spaniards with regard to the information received in their contacts with health care professionals has tended to improve, although it has stagnated since 2010. With regard to general practitioners (GPs) and primary care paediatricians, the level of satisfaction has increased from 5.3 to 7.5 (out of 10), with a slight increase since 2010. In turn, satisfaction with the information received from specialists increased two points (from 5.1 to 7.1), with no variation since 2010.

TABLE 2.2 Patient information

TYPE OF INFORMATION	IS IT EASILY AVAILABLE?	COMMENTS
Information about statutory benefits	Yes	Both the Ministry of Health and the Departments of Health provide information in their institutional websites (e.g., http://www.msssi.gob.es/profesionales/prestacionesSanitarias/CarteraDeServicios/home.htm)

TYPE OF INFORMATION	IS IT EASILY AVAILABLE?	COMMENTS
Information on hospital clinical outcomes	Partial	The Ministry of Health provides information at AC level throughout the INCLASNS[a] for a number of selected performance indicators on access, effectiveness, use, pertinence and safety (see http://inclasns.msssi.es/main.html). The Ministry of Health also provides the Model of Indicators for the anlysis of hospitalization (iCMBD) (http://icmbd.es/). Some ACs' observatories provide disaggregated information on a number of indicators (e.g., Observatory for Health in Catalonia http://observatorisalut.gencat.cat/es/central_de_resultats/; Outcomes Observatory in Madrid http://www.madrid.org/cs/Satellite?cid=1354183538063&language=es&pagename=PortalSalud%2FPage%2FPTSA_servicioPrincipal&vest=1354183538063; Observatory for Health in Asturias http://www.obsaludasturias.com/obsa/).
Information on hospital waiting times	Yes	The regulation on waiting lists information (RD 605/2003) as well as the self-imposing requirement for a timely response to patients' needs (RD 1039/2011) have prompted the development of information systems and public reporting. As a consequence, the Ministry of Health publishes biannual statistical reports at country level and, since February 2017, at regional level with all the available information for the series since 2012 (https://www.msssi.gob.es/estadEstudios/estadisticas/inforRecopilaciones/listaEspera.htm) and ACs display information (i.e., surgical, diagnostic, outpatient specialist visits) in terms of patient rights, responsiveness and statistics. Within an AC, patients can, either on-line or by phone, consult their status in the waiting list.
Comparative information about the quality of other providers (e.g. GPs)	Partial	The Ministry of Health provides benchmarks by type and size of hospital of different results indicators through the Model of Indicators for the anlysis of hospitalization (iCMBD) (http://icmbd.es/). The aforementioned ACs observatories provide information in a way that makes comparison and benchmarking possible. Only in a few cases, information on primary care or social care is included.
Patient access to own medical record	Yes	A general procedure has been implemented to access parts of the personal medical records in 15 out of the 17 ACs. For full access it is necessary to activate a specific administrative procedure.
Interactive web or 24/7 telephone information	Yes	Usually, citizens and patients have access to web-based services where they can get information of their interest, appoint visits, process paperwork or apply for documents. Besides, throughout the call centre for emergencies (112 or 061), ACs facilitate any 24/7 contact.
Information on patient satisfaction collected	Yes	Since 1995, a population-based survey, representative at AC level, is performed. The so-called 'Healthcare Barometer' is annually published and a number of selected indicators are reported as part of the INCLASNS[a] information system. http://www.msssi.gob.es/estadEstudios/estadisticas/BarometroSanitario/home_BS.htm
Information on safety events	Partial	As part of the National Strategy on Patient Safety (updated in https://www.seguridaddelpaciente.es/resources/documentos/2015/Estrategia%20Seguridad%20del%20Paciente%202015-2020.pdf?cdnv=2), INCLASNS[a] included a number of indicators that are annually reported at AC level. The Ministry of Health also includes a range of indicators on safety events through the the Model of Indicators for the anlysis of hospitalization (iCMBD) (http://icmbd.es/). In turn, the existing ACs observatories provide information at provider level, usually at hospital level, as primary care safety events are not routinely studied.

Source: Authors' own elaboration.

Note: [a]INCLASNS is the Spanish acronym of Key Indicators for the Spanish National Health System, and includes comparable information from the 17 ACs and the overall SNS (see MSSSI, 2017b).

2.5.2 Patient choice

There have been no major regulatory changes concerning patient choice since 2010. Law 41/2002 on Patient Autonomy, Rights and Duties on Information and Clinical Documentation had already framed the regional regulation on patients' rights, as for example, information rights, second medical opinion or maximum acceptable waiting times. In general, patient's choice has been well developed in the case of GPs, although in practice, choice is usually confined to the doctors practicing in the same primary care team and restricted by the fact that primary health care doctors may only register a limited number of patients. In the case of outpatient visits to specialists (as these require referral from the GP) or in the case of hospitals (where the population is allocated to administrative areas usually set up around a single hospital), the implementation of patient choice has *de facto* limitations. A particular case of insurees' choice capacity applies to civil servants insured in MFs (see Section 2.1 *Organization*) as they are entitled, once a year, to opt for either the public or the private sector. More nuanced information is provided in Table 2.3.

TABLE 2.3 Patient choice

TYPE OF CHOICE	IS IT AVAILABLE?	DO PEOPLE EXERCISE CHOICE? ARE THERE ANY CONSTRAINTS (E.G. CHOICE IN THE REGION BUT NOT COUNTRY-WIDE)? OTHER COMMENTS?
CHOICES AROUND COVERAGE		
Choice of being covered or not	Partial	Until summer 2012, any citizen living in Spain (irrespective of his/her legal situation) was covered, as universal public insurance was mandatory. RDL 16/2012 issued that undocumented immigrants (although emergency care and obstetric and paediatric care were still covered), and legal residents earning more than €100 000 per year, had to purchase private insurance (RDL 16/2012 and RD 573/2013). However, in 2013, the Ministry of Health proposed to harmonize migrants' access to health care benefits for those living in Spain for at least 6 months, those with a situation of economic deprivation, and those without any other alternative insurance coverage in Spain or in their home country (MSSSI, 2013). The Constitutional Court declared the provision of a high-income threshold voided (TC 139/2016). At the time of writing (June 2018), the new Spanish Government has started a dialogue process with the regions and the civil society to re-establish the universality of the Spanish National Health System (MSSSI, 2018b) (see Section 3.3.1).
Choice of purchasing organization	Partial	Choices on third-payer organizations are confined to MF insurees and to those services partially covered by the public insurance "premium".

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?
Choice of public or private coverage	Partial	The only genuine choice corresponds to public employees insured in MFs, currently 80% choose private coverage. On the other hand, in those services partially covered within the public sector (e.g., dental and optical care, orthoprostheses, long-term care, home care, pharmaceutical care) individuals might want to opt for the benefits covered or pay out-of-pocket, or buy a private premium to cover those needs. Voluntary Private Insurance has been observed to increase in Spain (estimates from the General Directorate of Insurance and Pensions showed that insurance companies steadily increased their overall income in healthcare and reimbursement premiums by 13.9% between 2009 and 2014) (General Directorate of Insurance and Pension, 2014).
CHOICE OF PROVIDER		
Choice of primary care practitioner	Yes	In practice, choice is usually confined to GPs within the same primary care team and restricted by the fact that primary health care doctors may only register a limited number of patients.
Direct access to specialists	No	GPs act as gatekeepers deciding on the need for a patient to visit a specialist, although there might be some exceptions according to ACs' specific operational regulations (e.g., individuals participating in population-based screening programmes that result in a positive test will be directed to the corresponding specialized service).
Choice of hospital	Partial	Hospital choice for elective conditions, although regulated as a right, is not generally used. Nevertheless, in some ACs choice is linked to second opinion (e.g., https://www.saludinforma.es/portalsi/web/salud/bioetica-salud/atencion-sanitaria/segunda-opinion-medica#decreto_35_2010) or programmes on maximum waiting times (e.g., https://www.saludinforma.es/portalsi/web/salud/bioetica-salud/plazos-prestacion-asistencial/derecho-a-ser-atendido-tiempo-maximo). Patients with urgent conditions might access any emergency department at any hospital in the network.
Choice to have treatment abroad	Partial	If a specific treatment cannot be provided within the public sector, patients are allowed to obtain treatment abroad, fully covered by the SNS. Otherwise, choice is confined to the provisions in RD 81/2014 on cross-border health care (Directive 2011/24/EU) (see Section 2.5.4, *Patients on cross-border health care*).
CHOICE OF TREATMENT		
Participation in treatment decisions	Yes	This item was regulated in Law 41/2002 on patient autonomy and rights and obligations regarding clinical information and documentation.
Right to informed consent	Yes	This item was regulated in Law 41/2002 on patient autonomy and rights and obligations regarding clinical information and documentation and subsequent executive decrees by the ACs.
Right to request a second opinion	Partial	Only regulated, as such, in some ACs but widely recognized as referral procedure requested by the patient. In those ACs where this right is not effective, individual patients tend to look for second opinions in the private sector.
Right to information about alternative treatment options	Partial	Not regulated specifically, is intended to be part of bioethical principles and good clinical practice.

Source: Authors' own elaboration.

2.5.3 *Patient rights*

Human rights, information, consent, confidentiality and privacy are well recognized in the Spanish legislation on patient rights since the General Act on Health 14/1986, where patients' rights and duties were defined for the first time. Since then, several laws have developed in-depth new rights on personal data protection (Law 15/1999), or patient's autonomy (Law 41/2002). Upon those principles, ACs have developed regional norms and executive decrees.

Since 2010, three new national norms were enacted: (a) Law 26/2011 adapting Spanish legislation to the International Convention on the Rights of Disabled Persons widening some of the provisions in the General Act on Health 14/1986 with regard to nondiscrimination; (b) RDL 1/2013 approving the Consolidated Text of the General Law on the Rights of Persons with Disability and Social inclusion; and (c) the only genuinely new national legislation in the period, General Law on Public Health 33/2011, that refers to the respect for patient's dignity and personal privacy in relation to their participation in public health actions. Table 2.4 provides further details on how patients might exert their rights in the context of rights protection, complaints, liability and compensation.

TABLE 2.4 Patient rights

	Y/N	COMMENTS
PROTECTION OF PATIENT RIGHTS		
Does a formal definition of patient rights exist at national level?	Y	Several national laws include legal provisions specific to that respect. Law 14/1986, Law 15/1999, Law 41/2002, Law 26/2011, Law 33/2011 and RLD 1/2013.
Are patient rights included in specific legislation or in more than one law?	Y	There are several acts, although the most specific legislation might be found in Law 41/2002 basic regulation (i.e., mandatory all over the country) of the patient's autonomy, and rights and duties on clinical information.
Does the legislation conform with WHO's patient rights framework?	Y	All dimensions of the WHO's patient rights framework can be extensively found in the Spanish legislation.

	Y/N	COMMENTS
PATIENT COMPLAINTS AVENUES		
Are hospitals required to have a designated desk responsible for collecting and resolving patient complaints?	Y	All health care providers (primary care centres, outpatient specialists' centres, hospitals) have admission services that include a help desk where patients and relatives are assisted and eventual suggestions or complaints are collected. Besides physical desks, on-line help desks are available in the institutional websites. Complaints are channeled towards the management team. Usually, ACs specific executive rules regulate how to operationalize the response and the information that has to be collected.
Is a health-specific Ombudsman responsible for investigating and resolving patient complaints about health services?	Y	No health-specific Ombudsman exists at the national or AC level, but a nonspecific one. Interestingly, a great deal of this non-health-specific Ombudsman activity, at national or AC level, is related to health and social care issues.
Other complaint avenues?	Y	The different ACs health councils, collegiate bodies composed of stakeholders including patients and civil society, among others, hold the responsibility of promoting patients' and individuals' rights. On the other hand, patient and consumer associations usually act as external controllers.
LIABILITY/COMPENSATION		
Is liability insurance required for physicians and/or other medical professionals?	Y	In general terms, ACs' health authorities ensure liability of their professionals contracting with private insurance companies (up to a limit). In turn, medical and nurse colleges also channel insurance plans for their members. Worth noting that, besides liability, the public insurer (i.e., ACs' health authority) has a body of inspectors who, among other responsibilities, analyses any eventual violation of patients' rights and acts accordingly within its legal attributions.
Can legal redress be sought through the courts in the case of medical error?	Y	The judiciary, as an independent body, is in any case available for the citizens. Usually, courts of justice wait for the internal audit that the ACs health authorities' inspectors perform *ex officio*.
Is there a basis for no-fault compensation?	Y	The no-fault compensation is regulated in the Article 141 of Law 30/1992 (modified in Law 4/1999). In the latter, regulation states that no-fault compensation is not applicable in unpredictable or unavoidable events, according to the current state of knowledge.
If a tort system exists, can patients obtain damage awards for economic and non-economic losses?	Y	Indemnities compensate both types of damage. Interestingly, the lack of indemnity scales (still pending regulation on civil and criminal liability) leads to the judiciary to discretionarily determine the amounts during the litigation process.
Can class action suites be taken against health care providers, pharmaceutical companies, etc.?	Y	Collective actions are possible through individual or class action; in the class action, claimants have to bear the legal costs.

Source: Authors' own elaboration.

2.5.4 *Patients and cross-border health care*

Individuals who belong to EU Member States and enjoy membership rights to their public health systems, carry on these rights throughout the Social Security regulations, in particular Regulation EC 987/2009 of the European Parliament and the Council (complemented in 2010) laying down the procedure for the implementation of Regulation EC 883/2004 on the coordination of Social Security systems. The latest Spanish regulation in this respect is RD 81/2014, transposing the EU cross-border health care Directive 2011/24/EU (MSSSI, 2017f).

A recent follow-up report of cross-border health care in Spain shed light on the limited impact of the implementation of this new regulation on Spanish insurees during this period. In 2015, (a) the number of information requests to the national contact points was just 106 requests; (b) 24 previous authorization requests were submitted and 15 were authorized; and (c) the number of requests for reimbursement was 22 and only 50% of them were finally granted (European Commission, 2015).

3

Financing

Chapter summary

- Until the onset of the economic crisis, which translated into budget cutbacks in 2010, the trend in health spending in Spain was in line with other EU western countries.

- The economic crisis turned into a steady growth of the Spanish public deficit and public debt that led to policies aimed at reducing public expenditure, with government expenditure in health decreasing by 0.6 points of the GDP, between 2009 and 2015, although a change in trend can be seen from 2015.

- Private expenditure in health has increased up to 28.9% of the total expenditure in health, with out-of-pocket payments playing a significant role, representing 23.9% of the whole cost in 2015.

- As a consequence of the 2010 Stability Programme, new legislation was issued in the last decade to regulate the coverage conditions, the package of benefits and the participation of patients in its funding.

- A major reform was implemented on cost-sharing mechanisms affecting pharmaceutical prescriptions in 2012; its effect has faded despite its short-term notable impact on pharmaceutical expenditure.

- Collection and pooling mechanisms, purchasing and provision relationships, providers' finance and workforce payments have not experienced significant differences after 2010.

- Some interesting experiences aimed at improving integrated care and funding allocation have been implemented since 2010 in some ACs.

3.1 Health expenditure

Health expenditure in Spain followed the international upward trend until 2009. Since then, the trend has reversed, both in terms of expenditure per capita and as a share of GDP (Table 3.1). Indeed, between 2009 and 2015, government expenditure on health decreased by 0.9 points of the GDP, equivalent to a reduction of 5.3% – €68 870 million in 2009 to €65 199 million in 2015 – although an increasing trend has been seen from 2015. Most of the 2015 public expenditure went to the statutory SNS run by ACs (92.4%), whereas MFs (for civil servants and, accident and occupational diseases) spent 5.6% of the public expenditure, services linked to municipalities paid out 1%, and remaining central government services expended 0.9% of the overall public expenditure (MSSSI, 2017g).

Public expenditure represents 71.1% of total health expenditure; this percentage decreased from 1995 to 2005 (from 72.2% to 70.6%), increased between 2005 and 2010 (up to 74.4%) and dropped again until 2015 (71.1%). In turn, private expenditure on health (as a percentage of total health expenditure) followed a U-shaped progression over the period, with a strong change in trend in 2010. Since then, this share increased to 28.9% in 2015. Voluntary health insurance, as part of private expenditure on health, grew from 1995 to 2005 (12.1% to 18.9%), decreasing thereafter and reaching 14.9% in 2015. Out-of-pocket (OOP) spending as a percentage of total health expenditure

decreased until 2010 (from 23.5% to 22.1%), increasing again thereafter (to 23.9% in 2015) (MSSSI, 2017g).

TABLE 3.1 Trends in health expenditure in Spain, 1995–2015 (selected years)

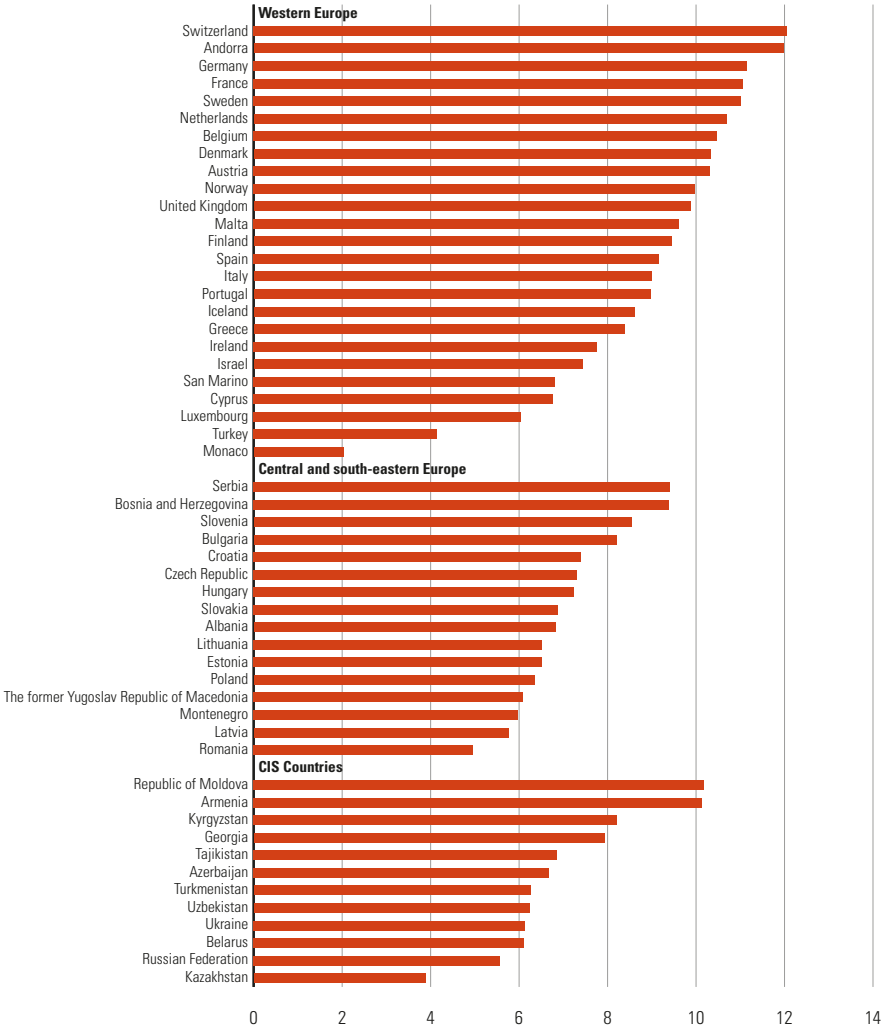
EXPENDITURE	1995	2000	2005	2010	2014	2015[d]
THE per capita in Int USD (Purchasing Power Parity)[a]	1 193	1 536	2 267	3 025	2 966	3 183[b]
THE as % of GDP[a]	7.4	7.2	8.3	9.6	9.0	9.3[d]
General government expenditure on health as % of THE[b]	72.2	71.6	70.6	74.4	70.1	71.1[d]
Private expenditure on health as % of THE[b]	27.8	28.4	29.1	25.6	29.1	28.9[d]
General government expenditure on health as % of general government expenditure[b]	12.1	13.2	15.3	15.5	14.5	15[d]
Government health spending as % of GDP[a]	5.4	5.2	5.9	7.2	6.4	6.6[d]
OOP payments as % of total expenditure on health[a]	23.5	23.6	22.1	19.9	24	23.9[d]
OOP payments as % of private expenditure on health[a]	84.6	83.1	76	77.8	82.4	82.5[d]
Private insurance as % of private expenditure on health[b, c]	12.1	13.7	18.9	16.1	15	14.9[d]

Sources: WHO (2017a).

Note: OOP: out-of-pocket; THE: total health expenditure; [a] World Bank (2017); [b] WHO (2017b), current health expenditure per capita Int USD (purchasing power parity); [c] Private insurance as % of private expenditure on health captured as private prepaid plans as a percentage of private expenditure on health; [d] Health Systems Account 2015.

In 2015, Spain invested 9.3% of its GDP in health (Fig. 3.1). This level is similar to other NHS countries such as the United Kingdom (9.9%) and Italy (9%), although far from the levels of Sweden (11%), and from countries with social security-based models such as France or Germany, with higher percentages of GDP devoted to health (11.1% and 11.2%, respectively) (Figs. 3.1 and 3.2). In turn, per capita expenditure in Spain, at US$ 3183 purchasing power parity in 2015, is just below the United Kingdom and Italy and above Greece and Portugal (Fig. 3.3) (WHO, 2017b).

FIG. 3.1 Current health expenditure[a] as a share (%) of GDP in the WHO European Region, 2015



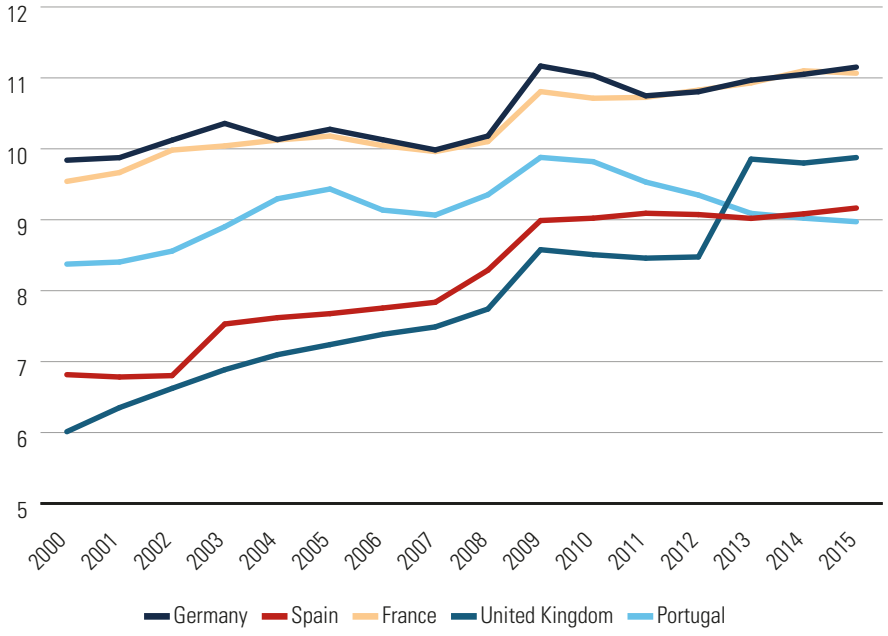
Source: WHO (2017b).

Note: [a]Current health expenditure does not include capital investment.

The share of the public sector in current health expenditure in 2015 (71%) is lower than in Sweden, the United Kingdom and Italy (84%, 80% and 75%, respectively) in that year. France and Germany also showed higher values (79% and 84%, respectively) (Fig. 3.4). Public health expenditure as a share of general government expenditure was 15% in 2015. This figure is below figures for Germany, Sweden, the United Kingdom and France (21.4%, 18.4%, 18.3% and 15.3%, respectively). Percentages in Italy and

Portugal are lower than in Spain (13.4% and 12.3%, respectively) (Fig. 3.5) (WHO, 2017b).

FIG. 3.2 Trends in current health expenditure[a] as a share (%) of GDP in Spain and selected countries, 2000–2015

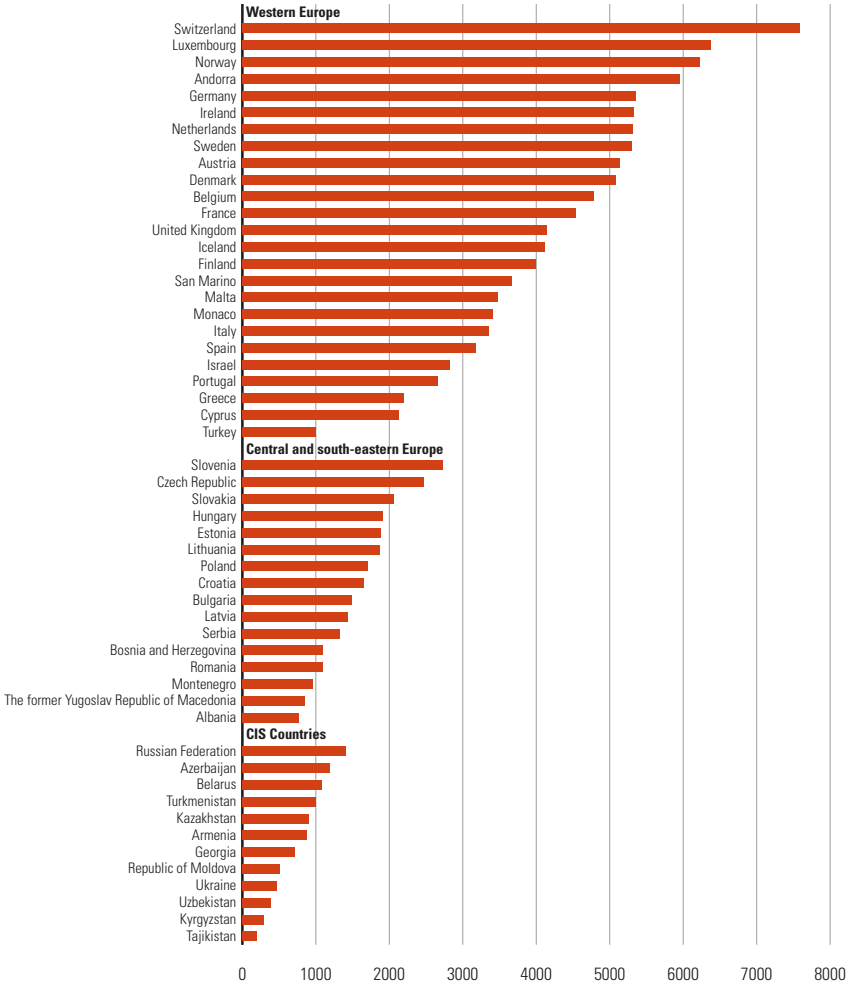


Source: WHO (2017b).

Note: [a]Current health expenditure does not include capital investment.

When public health expenditure is broken down, the highest single item is inpatient care, which in 2015 amounted to 54.5% of total health expenditure (in fact, this share has increased over the years, reaching the maximum level in 2015). Outpatient care represents the second highest item in expenditure, being 15.4% in 2015, and pharmaceuticals are in third place at 14.1%. With regard to who is funding each service, while inpatient care and public health are mainly funded by the government budgets (92.4% and 96.1%, respectively), funding for other services is mainly shared by government budgets and OOP funding; 42.6% of governmental funds versus 43.2% OOP, in outpatient care; 76% versus 21.7% in long-term care; and, 56.3% versus 40.7% in pharmaceutical care. Other prosthetic devices are essentially funded with OOP payments (94.8%) (see Table 3.2).

FIG. 3.3 Current health expenditure[a] in US$ purchasing power parity per capita in the WHO European Region, 2015



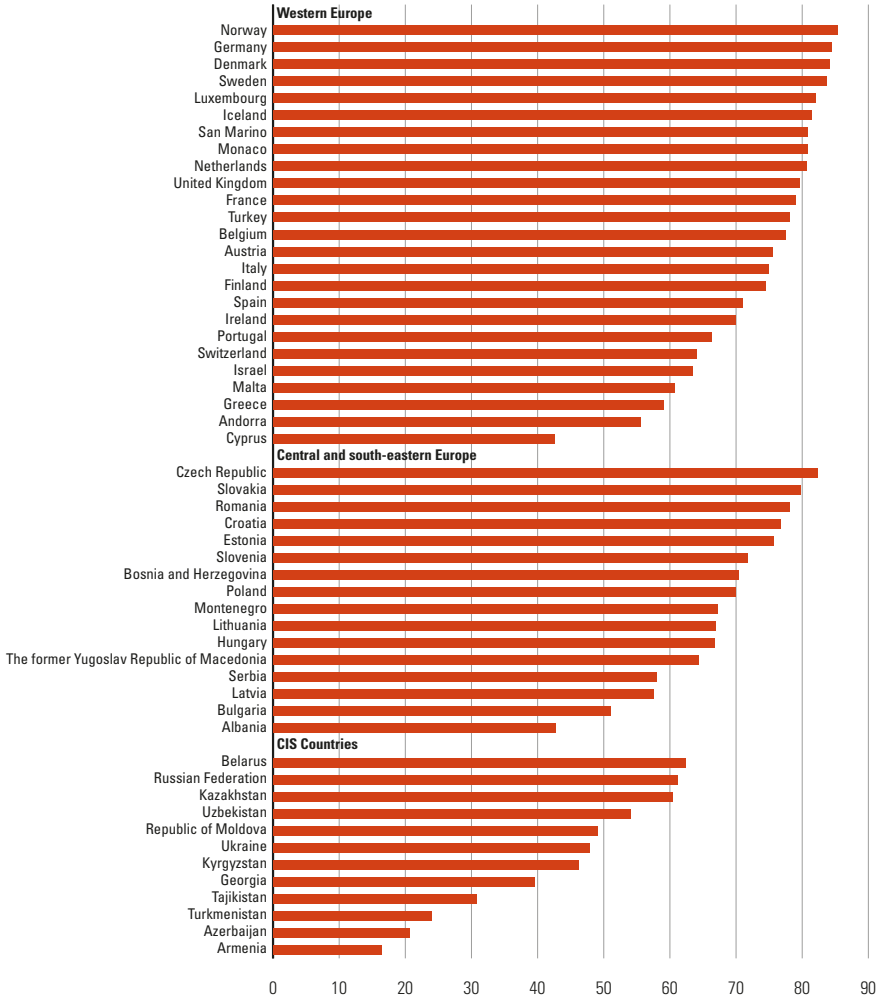
Source: WHO (2017b).

Note: [a]Current health expenditure does not include capital investment.

According to the Public Health Care Spending Statistics, there has been a 12.2% reduction in public health care expenditure between 2009 and 2015 (approximately €3671 million in market prices), equivalent to 0.6 GDP points reduction since 2009 (MSSSI, 2015c; MSSSI, 2017h). Official data suggest that the reduction is attributable to a decrease in personnel, pharmaceuticals and investment expenditure. Personnel expenditures endured a €2433 million reduction (8.0%) between 2009 and 2015, reflecting the decrease in salaries and workforce. Outpatient pharmaceutical expenditure experienced a €2890 million (21.5%) reduction between 2009 and 2015,

a reflection of the 4.3% decrease in the volume of prescriptions (almost 4.4 million claims less) and 19.2% decrease in the average price per claim (MSSSI, 2017i). Comparing pharmaceutical expenditure before and after 2012 (when the pharmaceutical benefits were modified by RDL 16/2012), there was a more than 18.7% decline (around €1944 million less in 2014 compared with 2011) that has now diminished (González López-Varcárcel & Barber, 2017). Finally, capital spending endured a 60% reduction, decreasing €1 532 million in the same period.

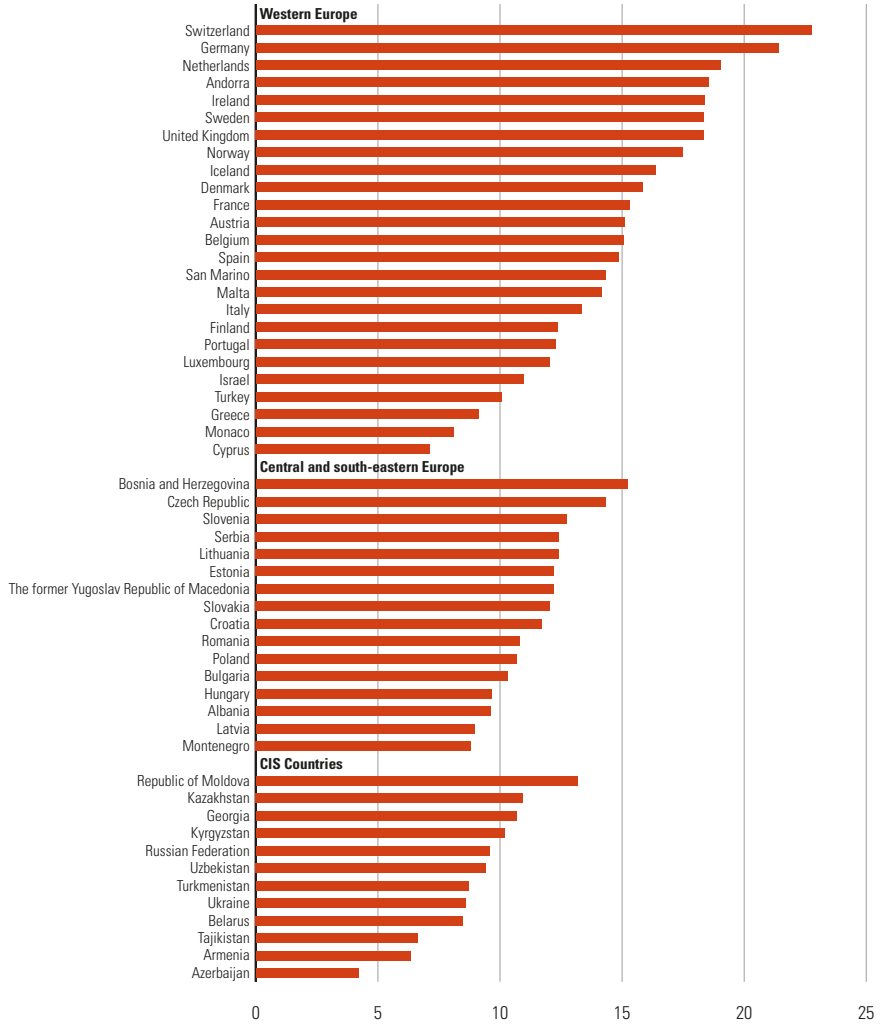
FIG. 3.4 Public sector health expenditure as a share (%) of current health expenditure[a] in the WHO European Region, 2015



Source: WHO (2017b).

Note: [a]Current health expenditure does not include capital investment.

FIG. 3.5 General government health expenditure as a share (%) of general government expenditure in the WHO European Region, 2015



Source: WHO (2017b).

3.2 **Sources of revenue and financial flows**

Public expenditure is the primary source of funding for health in Spain (69.8% of total health expenditure). Public funds come mostly from general taxes and the ACs manage most of the public health resources (92.2% of public health expenditure and 64% of total health expenditure).

TABLE 3.2 Expenditure on health (as % of total health expenditure) according to function and type of financing, 2015

	INPATIENT CARE	OUTPATIENT CARE	LONG-TERM CARE	PHARMA-CEUTICALS[a]	OTHER DEVICES	PUBLIC HEALTH	ADMIN.	OTHER SERVICES[b]
General government	92.4	42.6	76	56.3	3.5	96.1	44.2	18.2
Mandatory health insurance	3	6.4	2,2	3	0.6	0	8	81.8
Private out-of-pocket	0.8	43.2	21,7	40.7	94.8	0	0	0
Private insurance	2.3	7.3	0	0	1	0	47.8	0
Other (e.g. non-profit institutions serving households)	1.4	0.4	0	0	0	3.9	0	0
Total expenditure (m€)	41 928	25 789	5 562	17 740	4 248	695	3 003	1 078

Source: MSSSI (2017g).

Note: [a]Includes outpatient prescriptions, as pharmaceutical expenditure in hospitals is included in inpatient care; [b]Social Security services provided in the household and other services provided by public institutions (not social security).

Within the statutory national health service, the provision of health care in the ACs is funded through general taxation, up to 94.5% of public resources. In turn, MFs catering for civil servants, the Armed Forces and the judiciary (MUFACE, MUGEJU and ISFAS) deal with 3.4% of the resources, financed from a mix of payroll contributions and taxation. On the other hand, payroll and employers' contributions that cover work injuries and professional diseases mutuality schemes amount to 2.1% of health funds. Finally, outpatient drugs prescriptions and some supplementary services within the package of benefits are the only health services whose costs are shared by patients. In practice, co-payments currently affect outpatient pharmaceutical prescriptions and specific orthesis and orthopaedic prosthesis. When it comes to private funding, payments come from a combination of OOP payments (co-payments and direct payments) and private medical insurance. Fig. 3.6 provides graphic detail on the SNS financial flows as well as pooling agencies.

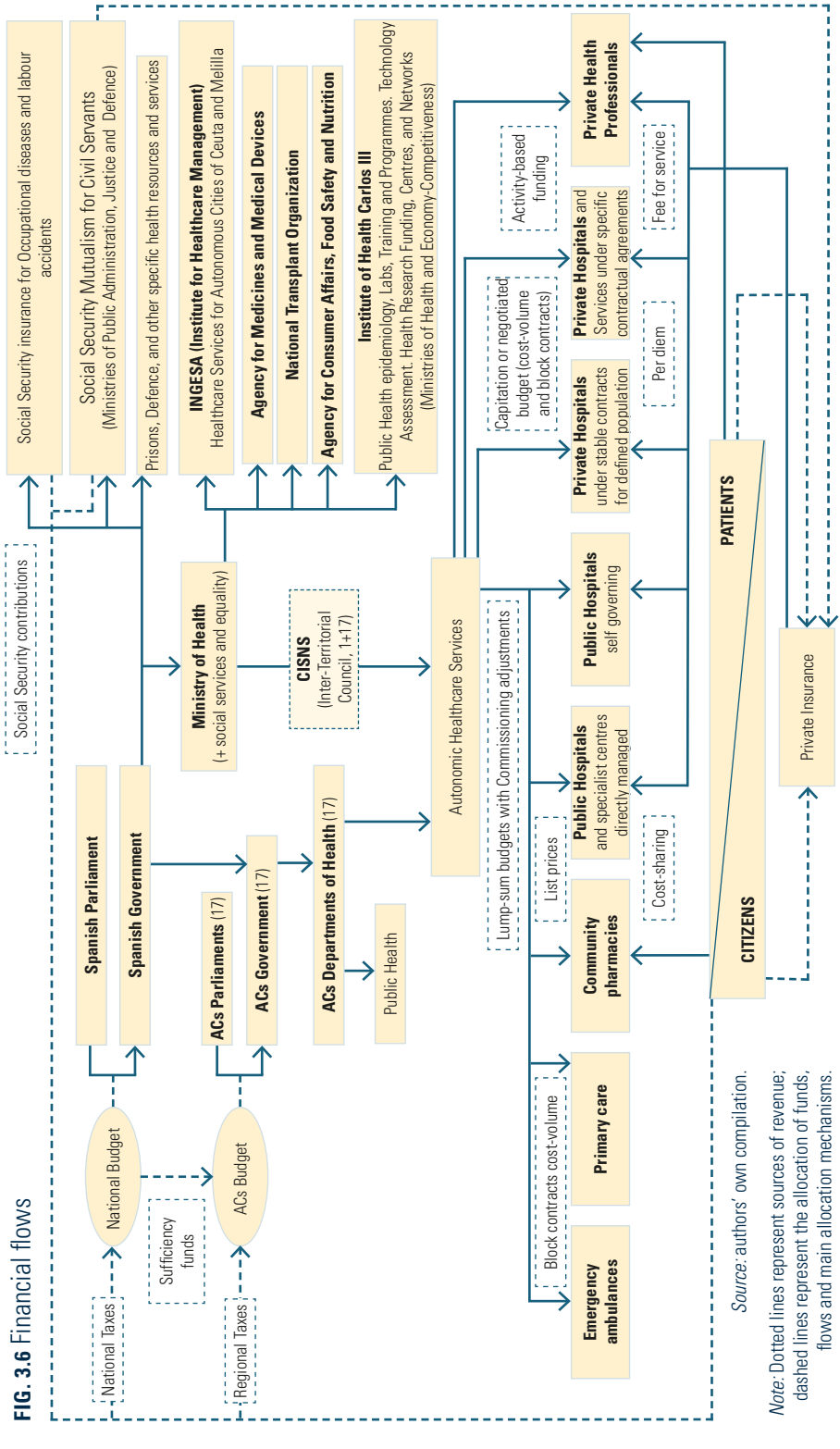


FIG. 3.6 Financial flows

Source: authors' own compilation.

Note: Dotted lines represent sources of revenue; dashed lines represent the allocation of funds, flows and main allocation mechanisms.

BOX 3.1 Assessing allocative efficiency

According to Law 22/2009 for the Financing of Autonomous Communities, health care (as well as education and social services) delivered by regional authorities is mainly funded with resources from the Fund for Basic Public Services. This Fund represents 75% of ACs' aggregated fiscal resources and seeks to evenly provide sufficient funds to the regions reallocating funds according to a formula of 'weighted need' (see details in Section 3.3.3, *Pooling and allocation of funds*). Unfortunately, this fund has not been able to achieve the final objective of reducing financing inequalities across ACs as the Fund for Basic Public Services is complemented with a general fund (namely, the Fund for Global Sufficiency) that largely guaranteed the financial *status quo* of the ACs (the relative level of expenditure at the moment of the decentralization process), so perpetuating the financial imbalances across ACs.

With regard to the use of evidence about effectiveness and cost-effectiveness in resource allocation, RDL 16/2012 established that new techniques, technologies and procedures should be compulsorily evaluated before their introduction in the SNS. Despite the considerable number of assessment reports delivered by the Spanish Network of Agencies for Health Technologies and Benefits Assessment (see Section 6.1.8, *A new status for health technologies and benefits assessment*) in the past few years, their impact on resource allocation is unknown.

In the SNS, priority setting is made explicit in strategic plans at national and regional level. However, these plans, that aim for a coordinated action in strategic health domains, usually do not translate into funding allocation decisions. Nevertheless, it is worth mentioning that one of the actions within the National Strategy for Chronic Diseases looks to stratify the population according to need with a view to identifying complex and high-cost patients. A substantial number of ACs are currently stratifying their populations. Whether this process will turn into resource reallocation is uncertain; at the time of writing, no formal evaluation has been made.

With regard to health care financing, health funds allocation has progressively widened the gap between hospital/specialized care and primary care. The share for hospital and specialized services increased 4.3% between 2009 and 2015 (from €39 251 million to €40 942 million), whereas the financing of primary health care services has reduced 13.3% in the period (from €10 775 million to €9 336 million). This different evolution increased the gap up to €3 130 million in 2015 (MSSSI, 2015c; MSSSI, 2017h).

3.3 Overview of the statutory financing system

RDL 16/2012, a legal text that aimed at guaranteeing the sustainability of the SNS (and subsequent legislative developments in RD 1192/2012, specifying the condition of the SNS beneficiary, and RD 576/2013, establishing the procedure and tariffs for non-entitled individuals who wanted to purchase SNS public coverage) and was issued in the context of the 2010 Stability Programme for the Kingdom of Spain (Ministry of Finance, 2010b), has implied a change in the scope, depth and breadth of the SNS benefits.

3.3.1 *Coverage*

Who is covered?

Until 2012, the SNS coverage was almost universal (99.5%) and guaranteed quite a comprehensive package of benefits to all citizens. Entitlement used to be independent of the labour status and personal wealth and only a negligible 0.5% of the population remained out of coverage.

On the other hand, coverage of foreign residents was regulated by Law 4/2000 (and subsidiary legislation), on *rights and freedoms for foreigners in Spain and their social integration*. Hence, non-Spanish citizens residing in Spain could follow different entitlement paths, depending on their citizenship and administrative legal status. According to this Law: (a) people residing and working permanently in Spain received the same entitlement enjoyed by Spaniards; (b) EU citizens and people from countries with bilateral agreements, were entitled to receive the benefits although remained insured according to their national insurance schemes; and (c) only registered undocumented immigrants with annual incomes equal to or lower than the minimum interprofessional wage enjoyed full entitlement.

RDL 16/2012 changed the basis for entitlement, linking the right to the legal and working status of the individuals. Hence, publicly funded health care was assured for (a) employees contributing to the social security system and their dependents (that is, spouse, dependent former spouse, descendants under 26 or with a significant disability), (b) retirees, (c) those receiving unemployment subsidies, and (d) unemployed who had exhausted

the unemployment dole. Nonetheless, Spanish people not included in the aforementioned criteria and foreigners with legal residence in Spain remained entitled to public insurance. In practical terms, only undocumented immigrants ended up excluded from the coverage.

This new regulation implied the modification of entitlement of non-Spanish citizens. So, people from countries other than EU Member States or nationals from countries with bilateral agreements, were only entitled to emergency care for serious illness or accidents until discharge (regardless of the cause), and to obstetric and child care (for people younger than 18 years).

At the time of writing (June 2018), the recently elected Spanish Government has started a dialogue process with the regions and the civil society to re-establish the universality of the Spanish National Health System (MSSSI, 2018b). A new Royal Decree-Law repealing RDL 16/2012 is expected in approximately 6 weeks (La Moncloa, 2018). The new Ministry of Health, Carmen Montón, has summoned the ACs on 28th June for an Interterritorial Council, focused on Universal Coverage (Redacción Médica, 2018).

What is covered and how much of the cost is covered?

RDL 16/2012 also aimed at regulating the package of benefits provided by the statutory health system with a view to define what benefits should be co-financed by patients. The regulation did not explicitly exclude any benefit (those already out of coverage remain excluded: psychoanalysis and hypnosis, spa treatments, plastic surgery not related to accidents, or some pharmaceutical products) but established what benefits are subject to patients' cost-sharing.

Hence, the new regulation has defined two categories of services: the common package with three subcategories – core package, supplementary package and accessory services – common to the 17 regional services composing the SNS; and, the complementary package, decided under the rule of the ACs (see Section 2.4.2, *Regulation and governance of provision*).

The common core package of health care services of the SNS includes all health care prevention, diagnosis, treatment and rehabilitation services, as well as emergency medical transportation. Hence, the core package includes a comprehensive package of primary health care benefits (for example, acute

and chronic care, health promotion and prevention activities, physiotherapy, mother and child care, mental health care, palliative care, medical counselling, basic dental health services), and specialized health care benefits (for example, any diagnostic and therapeutic procedure to be provided as outpatient specialized care, inpatient acute or long-term care, day-care surgical or medical care, palliative care, acute or long-term mental health care, home care, organ transplants, emergency care). These core benefits are not subject to any patients' cost-sharing.

In turn, pharmaceutical prescriptions and orthoprosthetic devices under the supplementary common package are subject to users' cost-sharing. RDL 16/2012 indicates that co-payments must be set on the final product price, and be fixed according to the annual household income and a maximum ceiling of monthly payment.

Finally, the accessory services, also subject to the same cost-sharing scheme, have been vaguely described as all activities, services or techniques, without character of benefit, that are not considered essential and/or are used as aid-devices for chronic care improvement. This third package has not yet been regulated.

In the case of the complementary package of services, ACs may incorporate into their own package of benefits any technique, technology or procedure not covered by the common core package of the SNS, if they provide the resources needed for their financing.

The content of the common benefits package is defined by the highest governing body of the SNS (namely, the Interterritorial Council), upon the proposals submitted by the Commission on Benefits, Insurance and Financing and the technical advice of the Spanish Network of Agencies for Health Technology Assessment and Benefits. The decision of any inclusion should be reported in advance to the Governing Body of the SNS, and is conditioned on the AC's financial sufficiency.[1]

1 Financial sufficiency is defined according to the objectives of stability included in the Stability Programme for the Kingdom of Spain (Ministry of Finance, 2010a).

BOX 3.2 Assessing coverage

RDL 16/2012 reform has been largely criticised. On the one hand, the entitlement modification that, *de facto*, implied a model change stepping back in time to the early 1980s' system rules, was approved without the erstwhile required agreement of the governing body for the SNS (namely, the Interterritorial Council) and the desirable consensus of the Spanish Parliament – the RDL, a legal formula issued by the government that just requires parliamentary validation, was used as a reform mechanism given the absolute majority of the party ruling the government. On the other hand, it was also argued that the reform was targeted at the undocumented immigrant population. The lack of a rationale backing the decision (that is, this population group is younger than the native population, with lower utilization rates and still contributing via indirect taxes), the risk of widening health inequalities, and the potential negative consequences on the health of the population, led some ACs to simply not implement the new regulation.

The impact of the policies implemented since 2010 is equivocal as institutional surveys and *ad hoc* research provide inconclusive evidence. According to a systematic review of papers examining the impact of the austerity measures the access barriers (for example, the exclusion of undocumented people, growing waiting lists) has not turned into systematic effects on health. The cost-sharing policy translated into a short-term expenditure reduction that faded after 12–18 months; however, in terms of treatment consumption, the 2015 Health Barometer by the Centre for Sociological Research found that 4% of the surveyed population declared having stopped taking some medication prescribed by a physician of the public sector for economic reasons (MSSSI, 2015g), although the unmet needs rate is one of the lowest among EU countries (see Fig. 7.2). An *ad hoc* study on adherence to drugs prescribed to patients with acute coronary syndrome found that "[co-payment] changes may lead to decreased adherence to proven effective therapies, especially for higher priced agents with higher patients' cost-share" (González López-Valcárcel, Puig-Junoy & Rodríguez-Feijoo, 2017).

The share of private expenditure on health has been observed to increase from 25.6% in 2010 to 28.9% in 2015 (MSSSI, 2017g). The vast majority of this growth is attributable to OOP payments, representing 23.9% of total health expenditure in 2015. Increases in waiting lists due to budgetary and supply cutbacks (more than the reduction in the coverage breadth) might have been behind the increase of the observed private cost-sharing rise.

3.3.2 *Collection*

General government budget

The vast majority of public health expenditure in Spain is funded through general taxation (see Section 3.2, *Sources of revenue and financial flows*).

The Spanish tax system is highly decentralized. The current regional financial scheme was agreed in July 2009 by the Economic and Fiscal Policy Council (in Spanish, *Consejo de Política Fiscal y Financiera*), a public body composed of representatives of the central and regional governments that is responsible for the fiscal and financial coordination between ACs and the central government. The corresponding legislation (Organic Law 3/2009 and Law 22/2009) was passed in December 2009, although the system was not enforced until the 2011 Spain's General Budget Law was approved. Leaving aside social security contributions (which are earmarked for pensions and other monetary benefits), tax revenues can be grouped into two main categories: taxes linked to production and imports ("indirect taxes", such as Value Added Tax, VAT); and "direct taxes" (that is, taxes on income and wealth). More than half of tax revenues (52.2% in 2015) come from indirect taxes, VAT being the main source of funds within this category (28.7% of total resources). Taxes on income and wealth provide 45.2%, with capital taxes adding the remaining 2.6% (direct taxes amount to 47.8%) (Ministry of Finance, 2017b). The aforementioned figures only applied to the so-called "common regimen of ACs" (that is, all the regions but Navarre and the Basque Country[2]), where the responsibility on tax collection is shared by the regional authorities and the Spanish Fiscal Revenue Agency (*Agencia Estatal de Administración Tributaria*). ACs are also responsible for the collection of those taxes assigned to the regional level (inheritance taxes, wealth transfer taxes) and share tax collection for VAT, personal income tax and excise taxes.

As a consequence of this joint responsibility for revenue collection, regional governments (ACs) have 50% of the personal income tax available

2 In turn, the Basque Country and Navarre enjoy a special financial regimen based on a particular legislation (namely, *derechos forales*), acknowledged in the Spanish Constitution. By virtue of this specific legislation, regional authorities collect all the taxes levied in their corresponding territories, and then transfer a certain amount of revenues to the central government for the services that the latter provides to the citizens of those regions (i.e., non-devolved services, as for example, national defence).

(with limited tax-raising ability), as well as 50% of the revenues generated within their territories by VAT and 58% of those yielded by selected excise taxes (on alcohol, tobacco and hydrocarbons). These sources, together with the revenues obtained by means of other fiscal instruments with less revenue-raising capacity (for example, wealth and inheritance taxes, car registration taxes) give ACs a significant fiscal autonomy. However, none of those taxes is earmarked for health expenditure but for the financing of all the welfare services in the ACs.[3]

Taxes, contributions or premiums pooled by a separate agency

The second statutory system (the mutual funds MUFACE, MUGEJU and ISFAS) aims to provide services for a group of civil servants and public servants that include healthcare services as part of the benefits granted in exchange for the contributions paid by their members (see Section 2.1, *Organization*). The contribution rates are set by the central government in the general budget law each year. Currently, public employees belonging to the aforementioned mutual funds pay a monthly premium between €20 and €50, according to their professional category (a total of six groups or levels exist among the civil servants) that covers up to 15% of the overall insurees' expenditure in health care services; the remaining 85% is covered from the budget of the Ministry of Finance (through income tax revenues, essentially).

3 The only exception in this regard is a specific tax on hydrocarbon sales levied by ACs from 2002 to 2012, when the Court of Justice of the EU passed judgement that the tax was against EU legislation (92/12/CEE Directive). The tax was deemed null and void.

BOX 3.3 Assessing progressivity and equity of health financing

The SNS funding, with the exception of co-payment on medicines prescribed in primary care, is covered through general taxes. Therefore, the greater the progressiveness of the fiscal system as a whole, the more progressive will be the financing of the health system (principle of vertical equity). Evidence on the progressivity of the Spanish tax system in recent years is limited, although the tax system has a limited and decreasing incidence on income distribution (Ruiz-Huerta, 2014). Progressivity seems to rest more on the redistributive effects of public expenditure (in-kind and in cash benefits) rather than in the tax system design.

According to the National Accounts, between 2007 and 2009, Spain faced a 26% drop in its tax revenues (Ministry of Finance, 2017b). Between 2012 and 2015, reforms were introduced in personal income tax and VAT and a new environmental tax was created to increase tax collection. Despite these reforms and the economic growth in 2014 and 2015, tax revenues in 2015 are still 9.2% lower than the amount collected in 2007. Throughout these years, direct taxes have lost weight in the total taxes collected, from 51.4% in 2007 to 44.9% in 2015. This fall is mainly due to the loss of corporate income tax collection (from a relative level of 18.7% in 2007 to 10.7% in 2015). The indirect taxes have clearly gained importance in the Spanish tax distribution, going from 46.6% to 52.5% VAT, after falling heavily between 2007 and 2009 (from 23.9% to 21.1%) has recovered, representing 28.8% of total tax revenues in 2015. Excise taxes have also fallen during this period (from 18.3% in 2007 to 15.1% in 2015) (Ministry of Finance, 2017b). Under this heading, alcohol tax revenues have diminished while tobacco tax revenues increased during the first part of the period to fall afterwards, as a result of the fall in consumption. As the relative weight of indirect taxation has increased (compared with more progressive taxes, such as income taxes), the main funding mechanism of the SNS has observed a decrease of progressivity between 2007 and 2015 (Romero-Jordán, Sanz-Sanz & Castañer-Carrasco, 2013).

On the other hand, it should be noted that private financing has not followed the same path as public financing during the years of the crisis. The percentage of the population covered by private insurance has remained stable; however, OOP payments have experienced a strong increase. The health expenditure share for OOP payments has risen from 20.3% in 2008 to 20.7% in 2011 and to 23.9% in 2015. As a result, public–private financing ratios in 2010 (75% to 25%) have evolved from 71% to 29% in 2015 (see Table 3.1).

3.3.3 *Pooling and allocation of funds*

Allocation from collection agencies to pooling agencies[4]

Although the Spanish tax system is highly decentralized (see Section 2.2, *Decentralization and centralization*), there is a complex system of "compensation funds" that aims at reducing funding imbalance across ACs. Hence, upon the ACs own fiscal revenues and the so-called Fund for Basic Public Services, health services are also funded by the Fund for Global Sufficiency, the Healthcare Guarantee Fund and various "convergence" funds (namely, Competitiveness, Cooperation and Interterritorial Compensation funds).

The Fund for Basic Public Services represents 75% of the aggregate fiscal capacity. This pooled fund is distributed to the ACs in accordance with a needs-based weighted formula. This formula includes the magnitude of the population to be served (weighting 30% in the formula), the population actually covered by the SNS (38%), the population aged 16 and younger (20.5%), the population aged 65 and over (8.5%), the geographical extension (1.8%), the population density (1.6%) and the insularity (0.6%). The purpose of this Fund is to allow regions with similar needs to provide similar levels of welfare services (that is, health, education and social services).

It might be the case that health care expenditure needs are not fully covered with the ACs' own fiscal revenues[5] and the Fund for Basic Public Services. This potential contingency is addressed with the Fund for Global Sufficiency. The Fund for Global Sufficiency is calculated according to the actual health expenditure and may be negative for certain ACs (typically, high-income regions) if tax revenues and the amount of the Fund for Basic Public Services exceed the financial needs for the AC. Finally, the allocation of funds through the Fund for Global Sufficiency also depends on the

4 Note that this allocation to pooling agencies section refers to the "common regimen of the ACs", which includes all ACs except the Basque Country and Navarre, as they enjoy a different financial regimen in which they collect all the taxes levied in their corresponding territory and make their allocation decisions in the corresponding regional parliament. This section also does not address the MFs for civil servants, for which funding is allocated as part of the central government budgeting decisions.

5 According to the still current 2009 agreement for the funding of the ACs, the regional governments retain 25% of their fiscal capacity via 50% of income taxes, 58% of VAT and excise taxes collected in their territories, and 100% of taxes on inheritances, car registration, wealth transfers and stamps.

financing that the ACs receive from another fund, the Health care Guarantee Fund, which aims to cover the assistance provided in a particular AC to an insuree with residence in a different AC. This Health care Guarantee Fund has been regulated in the aforementioned RDL 16/2012.[6]

In addition to these funding mechanisms, there are three "convergence" funds aimed at providing additional funding to the regions with a low level of per capita resources – the Competitiveness Fund, and those worse-off in terms of households incomes – the Cooperation Fund. Upon these two health-care-specific funds, ACs have access to the Interterritorial Compensating Fund, which aims to finance investment costs in those low-income ACs.

Funding priorities have focused on addressing the financial constraints (cash flow tensions) that regional governments suffered as a direct consequence of the economic crisis. Hence, the central government has devoted additional funding through: (a) the Liquidity Fund (in Spanish, FLA) created as a temporary and voluntary mechanism to support ACs' debt maturities, through RDL 21/2012; and (b) the Fund for the Financing of Provider Payments (created through RDL 7/2012), which allows ACs to cancel outstanding liabilities to suppliers, many of them serving the ACs' healthcare premises. The access to this funding scheme is conditioned on the accomplishment of fiscal and expenditure AC liabilities, and the approval of the Ministry of Finance and Public Administrations.

Since 2015, the access to additional credit allowances has been linked to the measures adopted by the ACs to control health care expenditure, in particular, pharmaceutical expenditure growth (Organic Law 6/2015). Although adherence to this measure is voluntary, ACs have powerful incentives to join the programme as those compliant are eligible for additional funding.

Allocating resources to purchasers

Previous paragraphs have already provided an overview on how funding is collected and allocated to the ACs (that is, regional departments of finance and treasury who are responsible for budget allocation across regional

6 The Healthcare Guarantee Fund plays a similar role to the one played by the Health Cohesion Fund, which was intended as a tool for the Ministry of Health to implement policies guaranteeing cohesion and equity in the SNS. The resources assigned to this fund in the central general budget have been progressively reduced over the years, to the point of disappearing in 2016.

government departments), or to the Ministry of Public Administration, in the case of the statutory system for civil servants.

In the case of ACs, once the regional budget allocation is endorsed by the regional parliament, the third-party budget-setting and split-purchasing role is played by the health departments in the 17 ACs (and INGESA for the Autonomous Cities of Ceuta and Melilla) which "purchase" services from either public or private providers for all the insurees living in the AC. In the case of civil servants, the MF, which receive the corresponding share of the budget (as well as the beneficiaries' contributions), purchase services for their beneficiaries. MFs are expected to purchase both private and public providers depending on the decision of their beneficiaries, who in a yearly basis opt for either type of providers.

3.3.4 *Purchasing and purchaser–provider relations*

Public provision in the SNS plays a prominent role and, in general, the public bodies in charge of the purchasing (for example, the ACs' health departments) purchase the services from another public body, closely linked to the former, so called regional health service. The latter is the administrative structure organically linked to the AC health department that runs all inpatient and outpatient health care centres. Generally, the health department contracts (and budgets) annually the services with the regional service which, in turn, negotiates global annual contracts with its providers. Additionally, either the ACs' health departments or the regional health services contract services from private providers, usually hospitals.

There are some specificities worth mentioning. Unlike the general scheme in which private providers play a subsidiary role, in Catalonia, the regional health service contracts out with a collection of not-for-profit private providers integrated within the network of public providers, composing the so-called Hospital Network for Public Utilization (see Section 5.4, *Specialized ambluatory care/inpatient care*). It is also worth highlighting a particular experience in Valencia, where the department of health moved in 1999 out of the general scheme by purchasing integrated health care services from private providers, based on an annual capitation payment. This singular P-PP started with the Hospital de La Ribera, in Alzira, and the model has

been extended to four more health care areas within the AC – 18.7% of the overall population.

Within the general scheme, regional health services contract hospital care, primary care, preventive activities and long-term services with public and private providers. Hospital services by public providers are financed prospectively according to volume and quality. The regional health service monitors contracts at intervals agreed between the signing parties (usually on an annual basis). Although some improvement has been made in terms of setting budgets in a prospective way, the method still has certain deficiencies, as the economic incentives for the accomplishment of the annual contract are too weak, the transfer of risk to professionals is not credible and the monitoring is rather loose. A flaw in the design of these contracts is the lack of incentives for coordination with primary care or linkage with existing public health activities.

In addition to public providers, a certain amount of activity is contracted out to private providers, typically aimed at reducing waiting lists for surgical procedures or high-technology diagnostic tests, but also to complement long-term care services and palliative care. These are generally prospective volume contracts with some *ex-post* correction clauses. Depending on the nature of the specific activity, the contractor determines the basis for payment; hence, long-term care activity is usually measured in terms of stays, whereas surgical interventions and diagnostic tests follow a fee-for-service scheme. Contracts with private providers have tended to increase since the mid-1990s, and in 2014 amounted to 12% of total public health expenditure (González López-Valcárcel, Puig-Junoy & Rodríguez-Feijoo, 2017).

Finally, primary health care services are contracted, with very few exceptions, with public providers. Hence, the dominant practice entails a contract of acute, chronic and preventive care services, funded according to block grants normally nuanced by population demographics. The contract reflects specific objectives prioritizing certain care or preventive programmes, and also some incentives linked to the achievement of certain prescription targets aimed at increasing the rational and appropriate use of drugs. Among the few exceptions are: the externalization of primary care by way of the so-called *Entidades de Base Asociativa* in Catalonia, which are 'limited partnerships' of primary care practitioners that provide care to a defined population according to a contract with the Health Department (resembling to a certain extent

Clinical Commissioning Groups in the UK); and primary health care as part of the aforementioned P-PP in Valencia.

3.4 Out-of-pocket payments

OOP payments play a significant role in Spain. They represented 23.9% of total health expenditure in 2015 with a growing trend since 2008.

3.4.1 *Cost-sharing (user charges) and direct payments*

According to the latest data from the General Household Budget Survey conducted by the National Institute of Statistics, annual household expenditure on health rose from €14 179 million in 2006 to €18 203 million in 2015 (INE, 2017e). The average expenditure on health by household increased from €876 in 2006 to €1010 in 2008, decreasing to €895 in 2011 and increasing again to €991 in 2015. Throughout the period, the percentage of household expenditure on health increased from 2.9% to 3.6% (Table 3.3). Specifically, spending on drugs and medical appliances increased both in terms of share of the family budget (1.21% in 2006 compared with 1.56% in 2015) and average expenditure, rising from €365 in 2006 to €427 in 2015 (Table 3.4). The most plausible reason for this growth is the 2012 reform on pharmaceuticals cost-sharing (González López-Valcárcel & Barber, 2017).

Table 3.4 represents the scheme for co-payments regulated in the 2012 reform (RDL 16/2012). Basically, before 2012, outpatient drugs prescription was the only service in the statutory SNS subject to cost-sharing – 40% of the price for active workers and beneficiaries, with no caps or corrections according to income; in specific chronic disease the maximum contribution was 10%. In any case, pensioners were excluded from co-payments. The remaining services (outpatient and inpatient care, including hospital drugs dispensing) were exempted from cost-sharing. In aggregate terms, the actual contribution of co-payments to the total health expenditure fell from 15% in 1985 to 6% in 2011.[7]

7 In the MFs statutory system, civil servants pay 30% of the drug price, irrespective of whether they are active workers or pensioners.

TABLE 3.3 Household out-of-pocket expenditure related to health care and expenditure on pharmaceuticals

	2006	2008	2011	2014	2015[a]
Household expenditure on health items (million €)	14 179	17 229	16 013	17 475	18 204
Percentage of household total expenditure	2.90	3.18	3.07	3.53	3.62
Average expenditure by household (€)	876	1 010	895	955	991
Household expenditure on drugs and medical devices (million €)	5 909	6 996	6 554	7 324	7 841
Percentage of household total expenditure	1.21	1.29	1.26	1.48	1.56
Average expenditure by household (€)	365	410	366	400	427

Source: INE (2017e).

Note: [a]The 2015 Household Budget Survey did not include the expenditure on private hospitalizations.

The reform issued in 2012 (RDL 16/2012) changed the cost-sharing system. First, the system foresees cost-sharing for drug prescriptions and other benefits that are in the common supplementary and accessory package – the common basic package remains exempted. However, cost-sharing in services other than outpatient pharmaceutical prescriptions has not yet been implemented and it is not expected to be developed in the near future. Second, pensioners are not excluded from cost-sharing, albeit with a monthly payment cap. Third, the level of co-payment is linked to household income. In detail, for pensioners: (a) annual income lower than €18 000, 10% co-payment with a monthly maximum ceiling of €8.23; (b) annual income between €18 000 and €100 000, 10% co-payment, with a monthly maximum ceiling of €18.52; and (c) annual income above €100 000, 60% co-payment, with a monthly maximum ceiling of €61.70. With regard to active workers (this category includes unemployed covered by unemployment benefits) these divisions are: (a) those with an annual income lower than €18 000, assume 40% co-payment; (b) those with annual income between €18 000 and €100 000, bear 50% co-payment; and, (c) those with annual income above €100 000, assume 60% co-payment. No ceilings are applicable to this group. Any drugs prescribed to AIDS patients and dispensed in retail pharmacies, as well as most chronic disease treatments are subject to a 10% co-payment capped at €4.26 per prescription, irrespective of whether the patients are active workers.

When it comes to direct payments, in 2015, with an average of €990.80 spent by families, payments for dental care represented 45.9% of household

expenditure on health, pharmaceuticals (drug prescription co-payments and over-the-counter payments) accounted for 22% and prosthetic and medical devices (corrective lenses, orthopaedic material, etc.) reached 21% of the households budget for health (INE, 2015).

TABLE 3.4 User charges for health services, 2017

HEALTH SERVICE	TYPE OF USER CHARGE IN PLACE	EXEMPTIONS AND/ OR REDUCED RATES	CAP ON OOP SPENDING	OTHER PROTECTION MECHANISMS
GP visit	No		No	–
Primary care	No		No	–
Outpatient specialist visit	No		No	–
Outpatient prescription drugs	Co-payment	Exempt: Long-term unemployees and noncontributory pensioners / Rest of pensioners (reduced rates)	Yes (monthly-basis; only pensioners)	Reimbursement premiums (exceptional)
Inpatient stay	No		No	
Emergency visit	No		No	
Dental care	OOP	Basic preventive services	No	Health care premiums
Medical devices[a]	OOP Co-payment		Yes	

Source: Own elaboration.

Note: [a]Currently, only specific orthesis and orthopaedic prosthesis are subject to user charges.

3.5 Voluntary health insurance

One in five Spanish people owns a voluntary health insurance plan in addition to the universal obligatory public insurance.[8] Voluntary health insurance in Spain is supplementary and independent of the statutory SNS and may provide the same goods and services as those offered by the public sector. The purchase of voluntary health insurance plans is mainly driven by faster access to some services. Fiscal advantages for those who purchase a voluntary health insurance plan have been present over the years, although with

8 Excluding mutual insurance schemes for civil servants (20% of the private market), individual insurance policies represent two-thirds of the total market; the remaining third correspond to insurance policies offered by companies to their workers, a share currently increasing.

numerous changes and differences across ACs. For example, self-employed workers have been entitled to deduct insurance premiums from their income tax returns, as could companies purchasing premiums for their employees.

The insurance market in Spain is gaining momentum.[9] Table 3.5 indicates an upward trend since 2011, both in terms of number of insured people (in total number and in percentage of population) and premium revenues for the companies. Still its contribution to the overall health expenditure was minor – 4.3% in 2015. Notably, the health insurance sector is highly concentrated. According to the General Directorate of Insurance and Pension Funds, 95 companies operated in this market in 2015, with an unequal distribution of premiums (only five of them accumulated 72% of total premiums) (Ministry of Economy, 2016).

TABLE 3.5 Main indicators of the private health insurance in Spain

	PREMIUM HOLDERS (THOUSANDS)[a]	INSURED PEOPLE OVER TOTAL POPULATION (%)[a]	TOTAL VOLUME IN PREMIUMS (MILLION €)[b]
2008	10 424	22.6%	5 580
2011	10 377	22.0%	6 557
2014	10 534	22.5%	7 215
2015	10 709	22.9%	7 437

Source: [a] UNESPA (2015), [b] Ministry of Economy (2016).

Compared with the health sector, the private insurance market for long-term care and home care is underdeveloped in Spain. Only seven companies operated in the sector in 2015 and only 37 225 people (0.09% of the Spanish population aged 18 and over) hold private insurance plans, usually complementary to the health insurance package. Compared with the €7437 million billed by the health insurance market, the dependence insurance only billed €5.35 million in the same year.

9 Details on the insurance market in Spain are difficult to ascertain as information systems and commercial interests linked to data make it difficult to access meaningful information. Nevertheless, there are some public statistics elaborated by the General Directorate of Insurance and Pension Funds at the Ministry of Economy (Ministry of Economy, 2016), and the UNESPA Annual Report (UNESPA, 2017).

3.6 Other financing

In addition to the aforementioned sources, the Ministry of Economy and Competitiveness has promoted in recent years various initiatives aimed at financing investment costs, among those, Innovative Public Procurement programmes and Pre-Commercial Procurement. Several ACs have initiated programmes but there are no official figures to understand the actual impact.

With regard to long-term care and home care (that is, those services included in SAAD (the so-called National System for the assistance of dependent people) (see Section 5.7, *Rehabilitation/intermediate care*)), the theoretical contribution established in the economic memorandum of Law 39/2006 regulated that, in 2015, the financing share assumed by the ACs should be 42.6%, 23.7% assumed by the Ministry of Social Affairs, and 33.7% attributed to beneficiaries' contributions. The onset of the economic crisis strongly affected the development and financial viability of the SAAD. According to the estimations of the National Association of Directors and Managers of Social Services, in 2015 expenditure stood at figures close to €7000 million: ACs assumed a higher share (up to 62%), the Ministry of Social Affairs reduced to 18.1% while beneficiaries only represented 19.9% (Directors of Social Services, 2016).

Lastly, nongovernmental organizations represent an additional (but modest) source of private financing. Their contributions have steadily fallen since the beginning of the economic crisis, from €589 million in 2005 to €387 million in 2015.

3.7 Payment mechanisms

This section provides an overview of payment mechanisms as per the financial flows shown in Fig. 3.6; a distinction is made between the health services and personnel payments, which is summarized in Table 3.6.

3.7.1 *Paying for health services*

Paying for health services combines several mechanisms depending on the type of service. Those mechanisms may vary across ACs depending on the degree of separation between purchasing and providing functions.

Most of the publicly funded health services use global budgets as the funding mechanism. The system builds on a contractual agreement between the Regional Health Service and the provider (that is, hospitals, primary care settings) namely, *contratos-programa*, *contratos de gestión* or *contratos clínicos*. These agreements regulate the quantity of services and the overall cost, but also introduce quality-oriented elements aligned with the objectives of the regional strategies on quality and safety; typically, waiting list reduction programmes, extension of day-case surgery, reduction of safety events. In addition, part of the compensation to providers might be based on outcomes set upon territorial objectives such as accessibility, responsiveness and attention to chronic patients.

Interestingly, since 2010 there are some examples where health departments have aimed at contracting integrated services – services that were usually separately provided by primary care or hospital providers with a weak coordination among levels. Notably the case of the Basque Country where, since 2011, Integrated Health Care Organizations have been developed and financial agreements now affect the whole continuum of care; or Catalonia where, since 2014, it is possible for a provider to be commissioned to provide all services for a defined population (hospital care, primary care, mental health, long-term care). In both cases, the compensation mechanism follows a population-based payment model. In these cases, payment takes into account the size of the population, some specific characteristics of the population (burden of disease, socioeconomic deprivation), and the actuarial rate for the whole population.

Specialized care: payment to hospitals

With some exceptions (see below) public hospitals are normally funded through global budgets, set against the aforementioned agreed spending headings. The main part of the budget is fixed by means of a formula that accounts for the number of discharges, the case-mix weight (generally

episode-based all-patient diagnosis-related groups (AP-DRGs)) and a structure-related tariff. Some procedures are excluded from this financing formula and are paid following a fee-for-service mechanism. Although, from a budgetary perspective, contractual agreements were implemented to shift from retrospective global budgeting to a prospective payment mechanism, the method is not properly acting in this way, as the financial body usually ends up assuming budgetary deviations through "operating grants" and risks are not truly transferred to the public providers. On the other hand, the degree of sophistication of the contract design itself and the extent to which the budget depends on performance is uneven across ACs. Two particular cases are described below.

In Catalonia, the Regional Health Service purchases hospital services from the Network of Hospitals for Public Utilization (XHUP). As provisioned by the regional Decree 118/2014 on contracting and provision of health care services (DOGC, 2014) , the basic payment mechanism takes the hospital discharge as the unit of payment although weighted according to the complexity of the case-mix and the structure of the hospital. Unlike the general scheme, the case-mix of a hospital is calculated using the "relative resource intensity" (a ratio between average relative weight based on AP-DRGs of the hospital and the average weight for the whole XHUP), a factor linked to the accomplishment of objectives and a structural factor that relies on the type of hospital – from centres that complement the activity of acute hospitals to highly complex hospitals. In summary, the economic compensation to a hospital is a function of the discharge-related activity measured as the sum of the weighted case-mix and the weighted structural components. In turn, outpatient activity developed in a hospital (for example, outpatient consultations with specialists, activity in the emergency departments, day care) is compensated separately using public tariffs.

Another singularity within the SNS is the P-PPs that have been operating in five "healthcare areas" in the AC of Valencia. The more known example is the Alzira P-PP (see Section 2.4.2, *Regulation and governance of provision*). Under the P-PP scheme, the health department sets a standard payment per capita that is supposed to cover all the population needs in a particular "healthcare area", including hospital costs (see Section 3.3.4, *Purchasing and purchaser–provider relations*). The contractual agreement (and subsequent payment mechanism) aims to avoid patient selection as well as volume or

quality reduction. The concession holder's profit rate is purposely limited in the contract and the level of quality is monitored *ex ante* and *ex post*.

Finally, all regional health services, besides the public network of providers, use private hospitals to deliver certain services, usually surgical procedures, specific diagnostic tests, and long-term and palliative care (see Section 2.4.2, *Regulation and governance of provision*). Contracts with private providers are usually set in the context of waiting lists reduction or early discharge programmes. Bundled payment is the usual payment mechanism for provision of surgical or diagnostic tests – the fee being based on annually updated public tariffs that differ across ACs. In the case of long-term or palliative care, per diem fees are the most common payment scheme and the unit price depends on the condition of the patient, the therapeutic complexity and the characteristics of the hospital.

Primary care

Primary care is mainly delivered by public health care centres. As in the case of hospitals, contractual agreements are set following a similar benefits package-based approach. Typically, the primary care management structure of the health care area signs an annual contract-programme with the regional health service, based on capitation criteria (with some ingredient of demographic structure and population dispersion), including some specification linked to the priorities of the health department. This contract's specifications cascade down, translating into contracts with each primary care team (that is, the group of specialized doctors and nurses in charge of the primary care in each basic health zone). It is a negotiated process, setting objectives and standards of care; for example, it has been the main vehicle in implementing rational drugs use programmes and in fostering generic drugs prescription. There are marginal exceptions to this rule. In Catalonia or the Basque Country, for example, the basic compensation to primary health care centres is enriched using the burden of morbidity of the population as set by the use of population stratification tools; or, in the Valencian P-PPs, where the health care provision has been contracted out as part of the concession, primary care funding is part of the capitation payment system previously described.

Pharmaceutical care

Pharmaceutical outpatient prescriptions and pharmaceutical care provided in hospitals follow completely different payment schemes. While in the former, there is a mixture of public budget reimbursement to retail pharmacies and patient cost-sharing, in the latter, pharmaceuticals are funded as part of the hospital payment system.

With regard to outpatient prescribed medicines (that is, medicines prescribed in a primary care setting or by an outpatient specialist), the SNS reimburse the retail pharmacies for those drugs included in the package of benefits. Maximum reimbursement rates (that is, reference prices) are set as the average of the price of the three cheapest products. As there is cost-sharing, retailers directly collect user charges from patients at the time of purchase, and the regional health service is invoiced monthly for the rest of the cost. According to RD 823/2008, the retailer's margin is set at 27.9% of the consumers' price (capped when ex-factory prices are over €91.63). Additionally, progressive deductions based on total amount of sales are applied on the pharmacies' monthly bill by way of contributions to the SNS. The scale of discounts ranges from 7.8% (total sales between €37 501 and €45 000) to 20.0% (sales amount over €600 000), according to RD 823/2008.

When it comes to public expenditure on pharmaceuticals provided in a hospital, payment is part of the aforementioned economic compensation for hospitals. However, the actual cost is hospital-specific in most cases because hospitals purchase drugs directly from the industry. Interestingly, a few hospitals in at least three ACs (Andalusia, Catalonia and Valencia) have implemented shared-risk agreements with pharmaceutical companies to guarantee patients' access to therapeutic innovations without assuming the whole financial risk associated with uncertainty over effectiveness.[10]

The fiscal constraints suffered by ACs' authorities as a consequence of the economic crisis have led to considerable delays in reimbursement to retail pharmacies in some ACs. For that reason, the ACs were allowed to use the aforementioned Liquidity Fund (FLA) and the Fund for the Financing of Providers Payments – both aimed at alleviating the budgetary cash flow tensions in the health departments and subsequently, in the retailer

10 It should also be noted that hospitals are responsible for an increasing portion of retail distribution of medicines (over 33%) since high-cost pharmaceuticals for chronic diseases, which were previously delivered at retail pharmacies, are now dispensed by hospitals.

pharmacies. Interestingly, Andalusia, in the context of these budgetary constraints, and taking advantage of its role of monopsony, implemented a selection procedure for outpatient medicines based on public auctions aimed at reducing the average price of the medicines funded by the health department (DL 3/2011).[11] Although there have been seven public auctions to date, this procedure is currently seen in the Spanish Constitutional Court as possibly invading the exclusive jurisdiction of the central government in drugs price-setting. It has been a matter of debate whether, in order to access the aforementioned Liquidity Fund (FLA), the ACs should follow specific rules stated by the Ministry of Finance, including a commitment related to spending in pharmaceuticals (El Diario, 2017).

Public health services

Individual-oriented health promotion and preventive medicine services are mostly integrated as part of the primary care package of benefits; for example, medical counselling, tobacco and alcohol control, hypertension or diabetes control, secondary prevention where applicable. Those services are funded as part of the primary care payment mechanisms. In turn, population-oriented services such as vaccination campaigns or population screening programmes (breast, colorectal or cervical cancer) are funded via earmarked budgets. As a consequence of those programmes, for example, surgical or medical treatments are again funded as part of the corresponding payment mechanisms, depending on whether follow up is performed in primary, specialized or hospital care.

Lastly, ACs' health departments award grants to municipalities and not-for-profit organizations (foundations, associations or charities) to complement public health programmes on drug abuse, health education in schools, secondary prevention in mental health, occupational risks, health promotion on population minorities, etc.

11 Decreto ley 3/2011, de 13 de diciembre, de Medidas Urgentes sobre Prestación Farmacéutica del Sistema Sanitario Público de Andalucía, que modifica la Ley 22/2007, de 18 de diciembre de Farmacia de Andalucía (Decree Law 3/2011, of 13 December, on urgent measures on pharmaceutical provision at the Andalusian Public Health System, which modifies Law 22/2007, of 18 December, on Pharmacy in Andalusia).

TABLE 3.6 Provider payment mechanisms (in the statutory systems)

PROVIDERS \ PAYERS	CENTRAL GOVERNMENT (INGESA)	ACS HEALTH DEPARTMENT / REGIONAL HEALTH SERVICE	MUTUAL FUNDS (TO PRIVATE COMPANIES SERVING THEIR BENEFICIARIES)	PATIENTS (OOP)
HEALTH SERVICES				
Hospital Inpatient acute care	GB / EP	GB / EP		–
Hospital day-case care	GB	GB		–
Hospital outpatient visits	GB	GB	C / P4P	–
Hospital inpatient non-acute care	GB	GB		–
Primary care	GB / C / P4P	GB / C / P4P		–
Medicines	Reimbursement (on retailer margin prices)	Reimbursement (on retailer margin prices)	Reimbursement (on retailer margin prices)	Co-payment
Public health services (population-oriented)	GB	GB	–	–
Private hospitals acute care (supplementary)	BP	BP	–	–
Private hospitals non-acute care (supplementary)	PD	PD	–	–
HEALTH WORKERS				
GPs	S / C / P4P	S / C / P4P	Mutual funds do not directly pay health workers but the entities in charge of the provision.	–
Hospital physicians	S / P4P /FFS	S / P4P/ FFS		–
Ambulatory specialists	S / P4P	S / P4P		–
Nurses in hospitals	S	S		–
Nurses in primary care	S	S		–
Other providers (dentists, physical therapists, etc.)	S / FFS in outsourced dental prevention programmes	S / FFS in outsourced dental prevention programmes		

Source: Own elaboration.

Note: GB: global budget; EP: episode-based payment; S: salary; C: capitation; PD: *Per Diem*; P4P: pay for performance (e.g., quality, uptake of programmes); BP: bundled payment; FFS: fee-for-service. Local experiences are not included.

3.7.2 *Paying health workers*

Rates and methods of payment are determined by the payer, upon agreement with the Trade Unions and sometimes supplemented by bilateral negotiation.

All health professionals in the SNS are salaried workers with the vast majority of them being civil servants. In general terms, remunerations of SNS workers are composed of "basic" on-duty payments, and "supplementary" stipends. The former includes the actual salary and an amount linked to length-of-service bonuses (*trienios*). On-duty payments are fixed according to the number of on-duty services provided in a month. In turn, supplementary remunerations are set according to post characteristics, performance (notional budgets set upon some organizational goals) and professional career (bonuses associated with personal features such as, for example, seniority or scientific achievements). Finally, in the case of family practitioners, the salary includes a capitation component (amounting to about 10% or 15% of the total salary), which takes into account the size and demographic structure of the population allocated to them.

In addition to this general scheme, the SNS also contracts part-time positions to usually cover emergency care, long-term sick leaves or transient personnel shortages. Part-time positions have been observed to increase in the last few years as a regular contract modality, particularly in the case of nursing positions.

Finally, there are a number of SNS hospitals where the legal framework of application for workers is not the civil servants contracting framework but the labour legislation for the private sector. The workers' salary in these hospitals includes supplementary remunerations linked to productivity.

In 2015, the overall public expenditure on personnel costs reached €28 908 million, 44.1% of the public expenditure on health. The overall payroll has been decreasing between 2010 and 2014, but increasing again thereafter (MSSSI, 2017h). Although health professionals' average salaries are not regularly reported, there are some estimated data available from different sources. Table 3.8 shows the annual average salary for physicians in primary care and hospital settings, as well as for hospital nurses from 2011 to 2015. Other categories of health care professionals are also paid by salary. This applies to physiotherapists, social workers and public health professionals (both specialists in public health trained as doctors and other public health professionals), but no updated figures of their income are

TABLE 3.7 Remuneration of health professionals in Spain (annual income in €), 2011–2015

	2011	2012	2013	2014	2015
General practitioners	59 367	54 482	54 632	55 619	56 496
Specialists	66 433	62 704	64 425	64 339	64 832
Hospital nurses	35 256	33 097	34 071	34 888	36 359

Source: OECD (2017a).

available. As observed in Table 3.7, salaries declined until 2014, with some improvement in 2015, particularly in the case of nursing wages.

To provide context to these figures, in 2014 the average gross annual income of Spanish workers with a similar education level was €35 494. That means that physicians' salaries are 1.6 to 1.8 times the average annual salary of highly educated workers in Spain, whereas nurses' annual income is slightly lower than the average (INE, 2017f), although it is above the average for the OECD countries (OECD, 2017f).

However, there is considerable variation among ACs, both in full-time equivalents and type and amount of salary supplements. Although the Ministry of Public Administrations regulates the basic salary and working conditions for civil servants throughout the SNS, AC health departments have the capacity to vary some of the salary components that make up the total remuneration. For example, depending on the AC, hospital doctors' salaries with non-exclusive dedication to the public sector[12] might differ by 60%; this gap might be as high as 1.85-fold in the case of primary care physicians. Another example of these differences across ACs affects more experienced doctors; a hospital physician with 30 years of experience and exclusive dedication might earn either €56 076 or €77 625 a year depending on the AC; for primary care physicians, the gap between those best and worst paid reaches 44.4% difference (CSM, 2014; Martin, 2015). This geographical diversity in salaries is not explained in terms of differences in productivity, quality standards or purchasing power. Data regarding other health professionals' salaries are limited. According to a study by a regional college of nursing, differences among ACs in supplementary remunerations of nurses follow similar patterns to those in physicians (CECOVA, 2012).

12 Doctors voluntarily apply to exclusive or non-exclusive dedication to the public sector, which implies differences in the basic stipends.

4

Physical and human resources

Chapter summary

- Hospital beds have decreased over the years, from 368 beds per 100 000 inhabitants in 2000 to 298 per 100 000 inhabitants in 2015, while the share of public beds has remained stable, at 79.5% in 2015.
- Capital investments decreased since 2010 from 3.1% of total public health expenditure, to 1.3% in 2014.
- In spite of the cutbacks in investment, the provision of medical equipment has slightly increased since 2010.
- Compared to other OECD European countries, the SNS in Spain occupies a notable position in the meaningful use of e-health (that is, meaningful use of electronic health records, health information exchange, tele-health and personal health records utilization); in 2013 (latest available year), Spain occupied the second position in primary care settings, and was seventh regarding hospital premises.
- Health personnel have remained rather stable since 2010, with the percentage of female doctors reaching 55.7% in primary care and 49.5% in hospital settings.

- Budgetary and personnel reduction policies have translated into an increasing outflow of doctors and nurses seeking employment abroad and in a reduction of the doctors coming to Spain from other countries, particularly Latin America.

- The rate of nurses remains below the EU average, with a ratio of nurses to doctors below the OECD countries' average ratio (1. 4 versus 2.5).

- The rate of formal long-term care workers with 4.2 workers per 100 people aged 65 and over is below the OECD average (6.1).

4.1 Physical resources

4.1.1 *Capital stock and investments*

Current capital stock

The number of hospitals in Spain has fallen in 15 years, from 19.2 hospitals in 2000 to 16.5 in 2015 per 1 million inhabitants. This figure is far below the OECD average, with a rate of 29.4 hospitals per 1 million inhabitants in 2015 (OECD, 2016a). In terms of size, 72% of hospitals have fewer than 200 beds and just 18 hospitals, all of them in the public sector, have more than 1 000 beds. In terms of ownership, around 45% of the 765 hospitals in Spain belong to the public sector (MSSSI, 2015d). When it comes to the private sector, most of the private hospitals in Spain are for-profit, and there is a clear trend towards industrial concentration in hospital networks.

With regard to primary health care resources, there are two different types of premises: (a) primary care centres (PCCs), which are health centres where the primary health care team (family physicians, staffed nurses and auxiliary personnel) provide extensive primary care services; and (b) local health offices (LHOs), attached to the former in isolated areas, where professionals provide basic assistance. According to the Information System for Primary Care, Spain had 3 048 PCCs and 10 111 LHOs in 2016, with 96%

and 98%, respectively, owned by the public sector. The number of PCCs and LHOs has remained stable over the years (MSSSI, 2016g).

Regulation of capital investment and investment funding

Capital investments in Spain have experienced a significant decrease from 2010 to 2014. In 2010, capital investments represented 3.1% of total public health expenditure, whereas in 2014 they hardly reached 1.3%. In real terms, capital expenditure plummeted from €2205 million in 2010 to €862 million in 2014 (MSSSI, 2015e). Across regions, the reduction has been dramatically uneven, from 93.6% reduction in Extremadura, to 14.5% in Castile-Leon (Bandrés & González, 2015).

The Spanish public sector has usually resorted to PFIs to tackle restrictions on public investment. The sharp reduction in capital investments in the aftermath of the economic crisis has led to a more frequent use of PFI. In the last decade, PFI has been applied in the Community of Madrid (seven hospitals) as well as in the regions of Castile-Leon, Balearic Islands, Galicia and Cantabria. Other ACs (such as Asturias and Murcia) have used dedicated public companies whose legal framework enhances the public sector capacity in subcontracting and allows returns out of the commercial exploitation of nonclinical services.

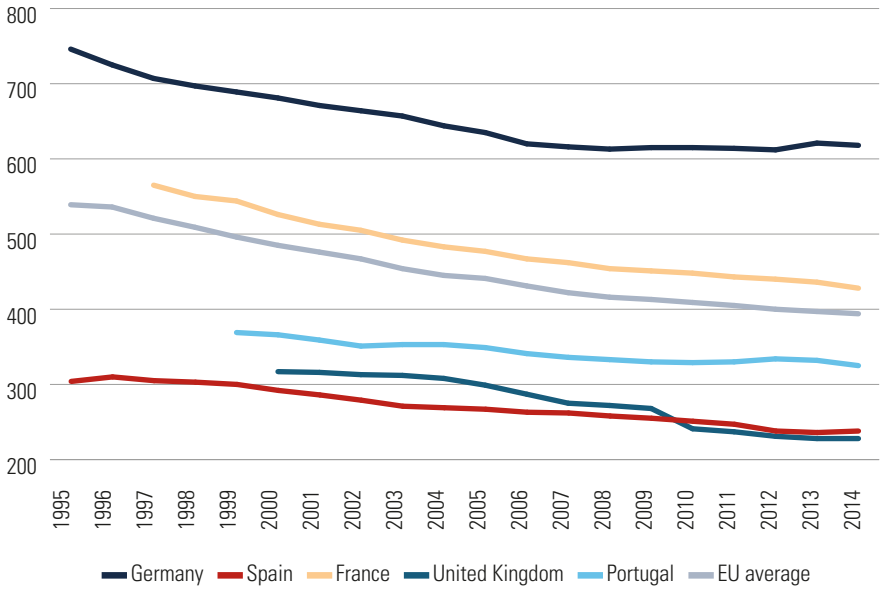
4.1.2 *Infrastructure*

Hospital beds have decreased over the years, from 315 beds per 100 000 inhabitants in 2010 to 298 per 100 000 inhabitants in 2015 (MSSSI, 2017b); nevertheless, the share of public beds has remained stable in 79.5% of SNS hospitals in 2015 (92 264 beds in SNS hospitals) (MSSSI, 2016h). The evolution of hospital beds in Spain is consistent with similar trends in other European countries (Fig. 4.1); Spain, which departed from lower figures, exhibits a similar relative decrease over the years.

Unlike this overall decrease observed in medical, surgical and psychiatric beds (currently 90% of the existing resources) (MSSSI, 2016h), the number of nursing and home beds for older people has sharply increased – from 150 in 2005 to 763 beds per 100 000 inhabitants in 2015 (WHO Regional

Office for Europe, 2017). Indeed, since 2005, the annual growth of public expenditure on long-term care has reached 3.9%, with an annual growth of 3.5% on institutionalized care services and 5.4% on home long-term care (OECD, 2015b).

FIG. 4.1 Number of acute care hospital beds per 100 000 population in Spain and selected countries, 1995–2014



Source: WHO Regional Office for Europe (2017).

4.1.3 *Medical equipment*

Equipment infrastructure

The vast majority of high-tech resources and units in the SNS are placed in inpatient settings. The remaining high-tech units are installed in specialized outpatient premises run by the hospital to which they are hierarchically linked. According to a 2017 report, the equipment in Spain is too old and does not meet the optimum criterion of age distribution (COCIR, 2017).

In spite of the post-crisis investment cutbacks, medical equipment has slightly increased since 2010: positron emission tomography scanners increased

BOX 4.1 Assessing the geographic distribution of health resources

According to the most recent data provided by the MSSSI, the distribution of hospital beds (any type) per 1000 inhabitants across ACs is somewhat uneven; in the case of PCCs and LHOs per 1000 inhabitants the distribution across ACs is even more unequal. Looking at the distribution of resources across the 205 health care areas composing the SNS, sharper inequalities can be found: (a) the number of public beds per 1000 inhabitants varied 1.42-fold across health care areas; (b) beds in social care institutions showed a four-fold difference; and (c) distribution of PCCs varied 3.3-fold (Angulo-Pueyo et al., 2017).

Whether this unequal distribution of resources has impacted population health seems unlikely: the differences in resource allocation should not be seen as a deficit in the planning or as a potential source of access inequities but as a reflection of how the resources have been planned to address the markedly uneven distribution of the population across the territory – the population density across ACs varies between 25 and 795 inhabitants per km^2.

from 1.3 to 1.6 machines per 1 million inhabitants; gamma cameras, from 6.01 to 6.4 devices per 1 million inhabitants; digital subtraction angiography units, from 5.1 to 5.8 per 1 million individuals; mammography machines, from 14.6 to 16.2 per 1 million people; computed tomography (CT) scanners, from 15.9 to 18 machines per 1 million inhabitants; magnetic resonance imaging (MRI) devices, from 14.9 to 15.9 per 1 million inhabitants; and, radiotherapy units, from 0.19 to 0.22 per 1 million inhabitants (OECD, 2016c).

Compared with other OECD countries (out of 28 countries), the SNS occupies an average position for mammography machines, ranks 21st for radiotherapy equipment, is slightly over the median rate for CT scanners, and lies ninth for MRI units (OECD, 2017b). In terms of high-tech imaging

TABLE 4.1 Magnetic resonance imaging and computed tomography examinations per 1 000 population in latest available year, 2014

	SPAIN (PER 1 000 INHABITANTS)	EU (PER 1 000 INHABITANTS)
MRI examinations	76.8	67.5
CT scans	101.3	118.1

Source: OECD (2016b).

Note: CT: computed tomography; MRI: magnetic resonance imaging.

examinations (a measure of the utilization intensity of those infrastructures), the SNS yields 101.3 CT scans per 1000 individuals (16% less than the EU average) and 76.8 MRI examinations per 1000 inhabitants (14% more than the EU average) (OECD, 2016b) (Table 4.1). Higher (or lower) population rates of equipment or examinations do not necessarily imply better (or worse) care.

4.1.4 *Information technology and eHealth*

The SNS eHealth strategy had its inception in the early 2000s. Law 16/2003 on the cohesion and quality of the health system provided the development and implementation of three eHealth projects: (a) the so-called "Insurance ID card" project (on the basis of which the following has been developed); (b) the "Electronic Medical Records" (EMRs) project (MSSSI, 2017j); and (c) the "Interoperable Electronic Prescription" (IEP) project. The development and implementation of these projects has involved continuous coordination between the Ministry of Health and the ACs.

The "insurance ID card" project, fully implemented in 2010, entailed the provision of a unique e-identifier to any insuree allowing the secured exchange and management of personal data. Building on the ID card project, the EMR project aimed to exchange relevant clinical information across the 17 ACs with a view to guarantee access to patients and doctors irrespective of the AC of residence or treatment. Starting in 2006, the first piloting phase was implemented in 2009 and currently 36.2 million people (78.3% of the Spanish population) are covered, with 15 ACs regularly updating the "patient's abridged EMR" information with the ability of being consulted upon request. The abridged EMR includes a subset of data for each patient on contacts in primary care, hospital care and outpatient specialized care, and nursing contacts, as well as emergency events and, laboratory and imaging tests (MSSSI, 2017j). Finally, the "Interoperable Electronic Prescription" project has aimed at allowing doctors to use electronic prescription with a view to allowing any retailing pharmacy in the SNS to dispense drugs to patients irrespective of the place where they were prescribed (MSSSI, 2017k). Building upon the wide development of the electronic prescription in the ACs (currently 100% of PCCs and 100% of retailing pharmacies are

able to prescribe and dispense drugs following electronic mechanisms),[1] the project is being currently implemented, with nine ACs fully certified (and fully functioning), and eight ACs accomplishing the piloting phase (testing interoperability).

Compared with other OECD European countries, the SNS in Spain occupies a notable position in the meaningful use of e-health. Using as a reference the OECD composite indicator (that is, meaningful use of electronic health records, health information exchange, tele-health and personal health records), Spain ranked second, after Denmark, on eHealth adoption among general practitioners and seventh in e-health adoption in hospitals in 2013 (latest available year) (OECD/EU, 2016).

Despite the extraordinary and successful efforts in the implementation of eHealth in Spain, the secondary use of EMRs for health care quality monitoring is seen as uncertain in the future, given the intrinsic complexity of making interoperable the uneven development of the 17 ACs (OECD, 2015c). Nevertheless, some interesting developments are being explored in some ACs. For example, Catalonia (PADRIS) and Aragon (BIGAN) are aiming at the routine use of real life data in medical and policy decision-making, at regional level.

4.2 Human resources

4.2.1 *Trends in the health workforce*

According to the latest figures, the primary health care workforce has remained stable since 2010. Regarding primary health care physicians and nurses, figures in 2014 slightly exceeded those in 2010 – from 75 to 76 physicians per 100 000 assigned insurees and from 62 to 65 staff nurses per 100 000 assigned insurees. The same observation is applicable to other specialist physicians working in hospitals and outpatient specialized settings; specialist physicians have increased from 176 per 100 000 inhabitants in 2010 to 189 per 100 000 inhabitants in 2014. In turn, staff nurses working

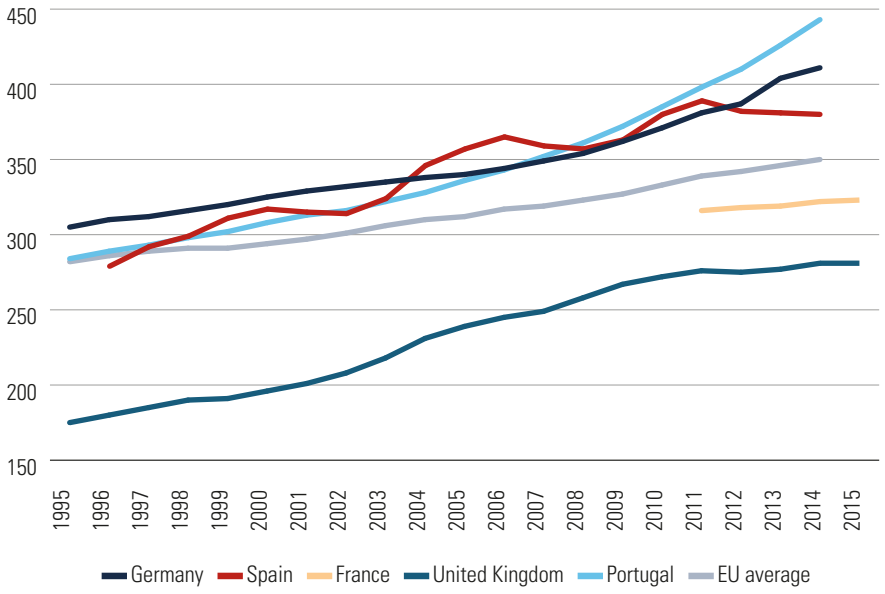
1 In the case of LHOs, the percentage, unevenly distributed across ACs, is 66%; in the case of drugs prescribed in hospital settings, the coverage is 76%.

in hospitals and specialized outpatient premises have remained stable at 320 staff nurses per 100 000 inhabitants (MSSSI, 2017b).

Interestingly, the number of women accessing staff positions as doctors has clearly increased since 2010: in 2015, the proportion of women reached 55.7% (5% points more) in primary health care and 49.5% in hospital settings (6.2% points more). The percentage of women in the case of staff nurses has remained stable in the same period, with 80% in primary care and 90% in specialized care (MSSSI, 2017b).

In comparison with other countries, the number of physicians in Spain follows the same growing trend as other EU countries, but far above the EU average (Fig. 4.2).

FIG. 4.2 Number of physicians per 100 000 population in Spain and selected countries, 1995–2015

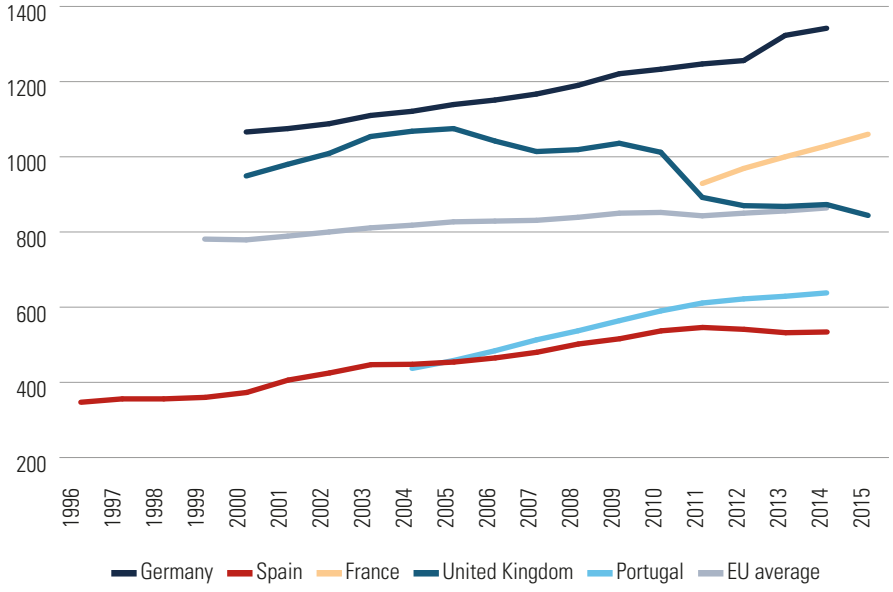


Source: WHO Regional Office for Europe (2017).

In the case of nurses, however, the rate remains far below the EU average (Fig. 4.3). According to OECD data, the ratio of nurses to doctors in 2014 is one of the lowest among the OECD countries (1.4) (OECD/EU, 2016). However, it is worthwhile highlighting that OECD data do not include nurse assistants, which in Spain have similar tasks to those attributed to associate professional nurses in other countries.

For dental care, the SNS has converged with the EU rate of dentists per 100 000 inhabitants over the past 25 years (Fig. 4.4), surpassing the EU average rate in 2013 with 70 dentists per 100 000 people.

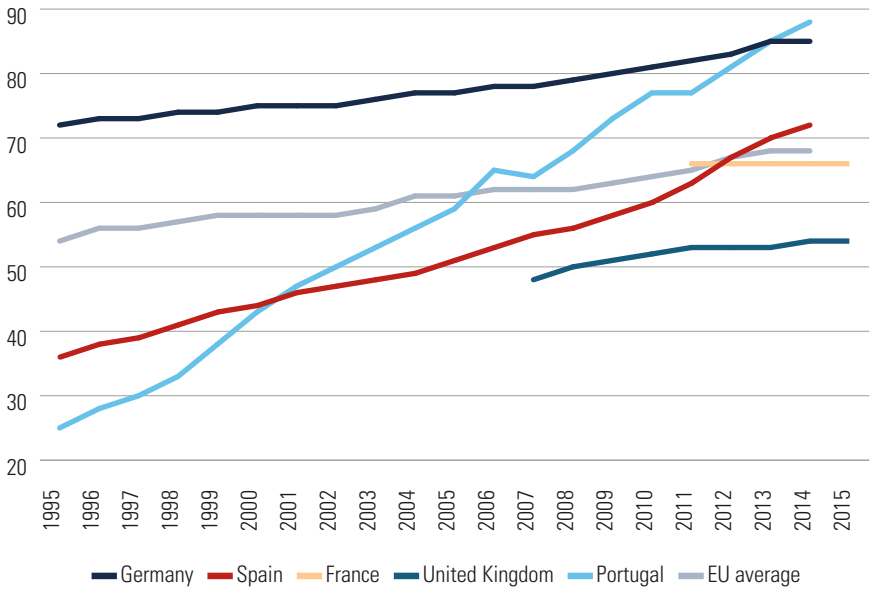
FIG. 4.3 Number of nurses per 100 000 population in Spain and selected countries, 1996–2015



Source: WHO Regional Office for Europe (2017).

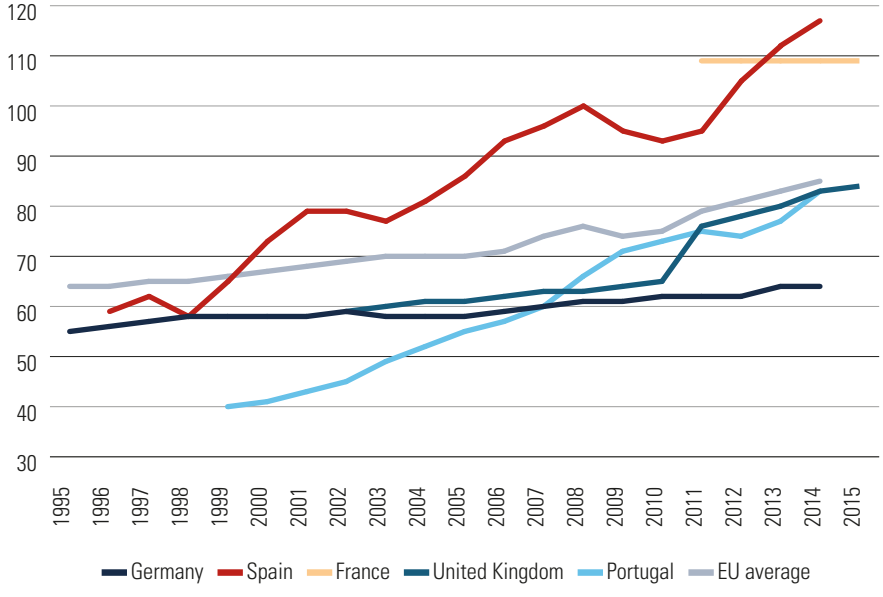
Although one of the highest rates in the EU, the rate of pharmacists in Spain has increased substantially since 2010 (20%), reaching 112 pharmacists per 100 000 inhabitants in 2013, far above the EU average (82.8 pharmacists per 100 000 inhabitants) (Fig. 4.5).

FIG. 4.4 Number of dentists per 100 000 population in Spain and selected countries, 1995–2015



Source: WHO Regional Office for Europe (2017).

FIG. 4.5 Number of pharmacists per 100 000 population in Spain and selected countries, 1995–2015



Source: WHO Regional Office for Europe (2017).

BOX 4.2 Evaluating the geographic distribution of health workers

The vast majority of human resources in primary care and 92% of doctors and 90% of staff nurses in specialized care work for the SNS. The distribution of physicians and nurses in 2015 showed a fairly low variation across ACs; lower in the case of primary care workers (ranging from 63 to 110 in doctors, and from 50 to 88 nurses per 100 000 assigned insurees) than in the case of specialized care workers (ranging from 125 to 233 doctors, and from 231 to 437 nurses per 100 000 inhabitants) (MSSSI, 2017b).

In the case of pharmacists, although there is a salaried workforce working in public hospitals, the vast majority are working as private providers owning their own retailing pharmacy. Those pharmacists, besides their private business, are committed with the public sector dispensing drugs and implementing the rationalization measures designed by the public sector (including e-prescription, generic-drugs policies, reference-price policies). The variation across ACs in the rate of pharmacists is higher than for doctors and nurses, ranging from 91.1 to 225.9 per 100 000 inhabitants (General Council of the Official College of Pharmacists, 2015).

Finally, in the case of dentists, although there are dentists working as salaried staff in primary care settings, the vast majority of them are private providers that work generally in solo or small practices; increasingly, as salaried workers in franchising companies. Besides the private practice, in some ACs, dentists are subcontracted by the public sector to expand prevention programmes for children. The ACs rates showed the highest variation, ranging from 41.9 to 120.1 dentists per 100 000 inhabitants, compared with pharmacists, nurses and physicians (College Organization of Dentists, 2016).

The observed differences are consistent with the different levels of regulation; physicians and nurses are distributed according to health authorities' planning and redistributive policies (the smallest variation across ACs), pharmacists experience a mix of public and corporate regulation, health authorities and colleges of pharmacists (a mild variation across ACs), and dentists' distribution basically depends on market forces, showing the highest variation in the distribution of workers across ACs.

Finally, the rate of formal long-term care workers of 4.2 workers per 100 people aged 65 and over in 2013, is below the OECD average (6.1 per 100 people aged 65 and over) and far below that of Sweden (12.3 per 100 people aged 65 and over), the OECD country with the highest rate (OECD, 2015b).

4.2.2 *Professional mobility of health workers*

The most recent data on the mobility of health workers reflects the situation in 2011. At that time, 9.4% (of the 207 042 doctors) had been trained in foreign countries, most of them in Latin America, Germany and Italy. With regard to nurses, 2.1% (of 250 277) had been trained abroad, basically, Latin America, Portugal and Romania (OECD, 2017c).

In the aftermath of the economic crisis, the budgetary and personnel reduction policies translated into an increasing outflow of doctors and nurses seeking employment abroad. The SNS as a single employer was not able to absorb the number of health workers trained in the country, and the rate of unemployment rose in the health sector. As indirect evidence from the Medical Council, the number of physicians requesting a "competence certificate", which is required to work in other EU countries, has increased up to 2016: 1 380 physicians in 2011; 2 405 in 2012, 3279 in 2013; 3 300 in 2014; 2 917 in 2015 and 3 500 in 2016 (Medical Council Organization, 2017). However, many doctors ask for their competence certificate but do not then move so the exact number of migrant physicians is unknown. As countries of destination, physicians looked for employment in the United Kingdom, France, Germany, Ireland and Belgium (Medical Council Organization, 2017). Similar behaviour was observed in the case of nurses; between 2010 and 2013, 4 580 nurses requested their "competence certificate" from the Ministry of Education; in 2014, 8 000 nurses were working abroad. In this case, main destinations were the United Kingdom, France, Italy, Portugal and Belgium (Galbany-Estragués & Nelson, 2016).

4.2.3 Training of health personnel

Since 2010, a significant change of health personnel training was debated and has materialized in the RD 639/2014, affecting postgraduate medical internship programmes and regulating nurses' specialization. Unlike the current system, with 46 medical specialties having separate medical internship programmes, the reform sought to establish a common 2-year training programme for postgraduate trainees before splitting into subspecialties for most of the medical specialties. This reform aimed to provide a common holistic base of knowledge for all health professionals in a way that improves

their response to their patients' complexity, mitigating care fragmentation and overcoming the current silo mentality that impedes flexibility in human resources management. The reform raised much controversy as some medical specialties were strongly opposed to entering the core modules of the medical or surgical specialties. The reform process has ended up in the courts of justice with a Supreme Court ruling declaring the RD 639/2014 void, leaving the current previous legislation in place (see section 5.2 in García-Armesto et al., 2010).

4.2.4 *Health workers' career paths*

Very minor changes have been observed with regard to health workers' career paths in the last 10 years. Notably, the upgrading mechanisms foreseen in Law 44/2003 on Regulation of Health Professions that implied salary complements endured strong restrictions as a consequence of austerity policies, although unevenly across ACs.

Meanwhile, it is worth noting that new regulation on the role of nurses in prescribing was issued in 2015 through RD 954/2015, which has not yet been implemented.

5

Provision of Services

Chapter summary

- Some of the reforms implemented before 2010 and some of the strategies developed in the late 2000s have been observed to deepen in the last 5 years, although with the inexorable hindrance of the economic downturn.

- New 2013 taxes on tobacco and alcohol have been implemented and the population-based screening for colorectal cancer is notably increasing coverage, while slowly reducing regional inequalities in its application.

- Primary care remains a consolidated core element of the SNS; the increasing financial gap compared with secondary care, and some workforce structural flaws, may challenge its central role in the long-term.

- There are important concerns regarding secondary care, particularly hospital care, including high rates of low-value procedures, large differences in elective surgery across health care areas, and systematic differences in access to some evidence-based interventions.

- The large variation in prescriptions across ACs, along with their uneven growth, raise concerns on the impact on the overall efficiency of SNS allocation. Nonetheless, efforts since 2010 to increase evidence-based prescription, either looking for the best therapeutic options or avoiding inappropriate indications, have been developed.

- The National System for the assistance of dependent people (namely, SAAD) has been developed in the last decade, currently assisting almost 900 000 people. The relatively low coverage (29% of those entitled to receive benefits are not yet covered) and concerns on the sustainability of the current financing system cast shadows on its long-term development.

5.1 Public health

Although there have been new developments in the national regulation of public health (see below), no major novelties in the provision of public health services have been experienced in Spain since 2010. Competences on public health local planning and provision were transferred to all 17 ACs between 1979 and 1981. Although with some variation, public health within ACs has a dedicated structure where a health authority, usually a general directorate, ensures the enforcement of the regulations passed to support public health policies, throughout the workforce of public health inspectors, and holds the executive planning role for public health services and the provision of public health surveillance and monitoring activities (health status, health determinants and health risks). The health authority also acts as the regional hub of the national network for epidemics surveillance and those care settings that provide population-based screening programmes. Finally, the health authority supports non-health-care providers in the development of prevention and health promotion programmes mediated by schools or nongovernmental organizations. In coordination with the regional health authorities, municipalities are critical public health agents in sanitation and environmental issues and, in larger villages, in food safety control, slaughter of animals, and in local health promotion programmes.

Interestingly, core public health agents in the SNS are primary care doctors and nurses. The bulk of preventive medicine and health promotion

activities (for example, infant and older people vaccination programmes, primary and secondary prevention of noncommunicable diseases, opportunistic screening activities, health education activities) are integrated as part of their normal activity.

Besides the public health activities developed at regional level, the Spanish Ministry of Health (MSSSI), through the General Directorate of Public Health, has responsibility for certain public health tasks, such as international health activities (for instance, control and surveillance of risks derived from international movement of commodities and passengers), food safety regulation, the system of alerts for health emergencies and, notably, the coordination of the 17 public health regional Departments of Health and INGESA. As in many SNS instances, public health policies are coordinated in the context of the Interterritorial Council, and particularly, throughout the working groups that compose the Commission for Public Health, including: (a) the committee on environmental health; (b) the working group on epidemiological surveillance; (c) the working group on occupational health; (d) the working group on health promotion; and (e) the committee on vaccination programmes.

Nationwide, public health efforts since 2010 have been on developing regulatory provisions (see Section 6.1.6, *Reforms on public health*) and providing guidance aimed at addressing health determinants. Some notable actions include:

- the Ministry of Health issued Law 42/2010 on tobacco consumption and market regulation, expanding the provisions of the previous "anti-tobacco" 2005 Law (Law 28/2005), increasing the protection of minors and nonsmokers and prompting health institutions, particularly primary health care, to implement smoking cessation programmes (see Section 1.4, *Health status* and Section 6.1.6, *Reforms on public health*);
- the working group on the NAOS strategy (AECOSAN, 2017) (in Spanish, Strategy on nutrition, physical activity and obesity prevention), consolidated by Law 17/2011, has been working on the elaboration of indicators for the assessment of the NAOS strategy (AECOSAN, 2011), the monitoring of child obesity (AECOSAN, 2016) and the development of accreditation criteria for those schools interested in the implementation of health

promotion activities on nutrition, physical activity and obesity prevention (AECOSAN, 2015);

- in the context of the local development of the strategy for health promotion and prevention approved in 2013 (MSSSI, 2014c), the SNS Interterritorial Council approved in January 2015 the Guide for the local implementation of the SNS Strategy on Health Promotion and Prevention (MSSSI, 2015f) whose main pillars are the leadership of municipalities and their intersectoral action;
- the Ministry of Health also chartered a new regulation (RD 843/2011) to define requirements and quality criteria for the providers of preventive services in the context of occupational health;
- the Ministry of Finance has implemented two reforms on taxation affecting alcohol and tobacco products – through the first reform in 2013, taxation increased 10% for alcohol (with the exception of wine and beer) and 3% for a pack of cigarettes; the second wave, implemented in 2017, implies 5% increase in alcoholic beverages, 2.5% increase for a pack of cigarettes and 6.8% increase in rolling tobacco;
- finally, Law 33/2011 on Public Health issued the principles and actions to include "Health in All Policies" in the institutional action on health, and sought to update and upgrade the coordination mechanisms among the 17 health authorities and INGESA, essentially in terms of epidemic surveillance and control, and the provision of common benefits (for example, common vaccination calendar, common neonatal screening tests or colorectal cancer screening).

BOX 5.1 Assessing the effectiveness of public health interventions

Except for the case of smoking cessation, no formal impact evaluations have been carried out in Spain with regard to public health interventions.

The percentage of daily smokers in the population over 15 years old has decreased during the period 2006–2014, for both men and women, particularly in young people (see Table 1.4). The more restrictive new "anti-smoking" Law (Law 42/2010) together with the new 2013 taxation policies are deemed to be the underlying factors of this reduction (Pinilla, 2017). In terms of population outcomes, a recent report shows at most a promising effect; although the evidence on the reduction of cardiovascular morbidity is inconclusive, readmissions for chronic obstructive pulmonary disease and asthma, and low birth weight and prematurity have reduced. When it comes to the economic impact, the inception of the law has not impacted negatively on the revenues of bars and restaurants (Spanish Society of Epidemiology, 2017).

Alcohol consumption, which is potentially a risk for health, has fallen slightly in the population aged 16 and over, from 1.69% in 2011 to 1.59% in 2014 (MSSSI, 2017u). More concerning is the exposure of 14- to 18-year-old adolescents to alcohol consumption (MSSSI, 2016i). In this age group, although the latest figures in 2014 have improved from the 2012 maximum, consumption has increased since 2010, with 76.8% of interviewees having consumed in the last 12 months (75.3% for men and 78.2% for women) and 68.2% declaring alcohol intakes in the last 30 days (66.9% for men and 69.5% for women). No assessment has been performed to understand whether the reduction between 2012 and 2014 is a consequence of the new taxation system, the information campaigns or the increasing societal awareness.

The 2011 and 2015 Aladino reports (AECOSAN, 2013, 2016) showed that being overweight in children had slightly decreased by 3% in that period, from 26.2% to 23.2%, with a steeper decrease in the case of boys. In turn, the obesity toll had almost remained, with 18.1% affected children, not even half a point less than in 2011, with a negligible up-turn in girls. Whether this slight reduction in overweight is a consequence of the NAOS Strategy (strategy on nutrition, physical activity and obesity) developments (such as health promotion activities and reformulation of manufactured products, specifically on the amount of salt, saturated fat and added sugars) is not known.

Vaccination coverage in children has increased slightly since 2011, with 2016 coverage values for the first dose up to 97.2% in poliomyelitis, hepatitis B, diphtheria, tetanus and pertussis (DTPa) and 98% in meningitis type C (the booster dose reaches figures over 95%). With regard to the measles-mumps-rubella vaccination, first dose coverage has remained at 96.7% of the eligible children covered since 2011, but the booster dose has increased to 94.7% of children. In

the case of human papillomavirus vaccination, coverage has clearly increased, from 65.5% of female adolescents covered in 2011 to 94.7% covered in 2016. The high coverage level might be associated with the fact that childhood vaccination is mostly provided in primary health care centres, where virtually all the population is referred for outpatient perinatal and paediatric care.

It is of interest that, although flu vaccination for elderly high-risk patients is offered as part of the benefits provided at primary health care level and the communication campaigns have been widespread and persistent over the years, the population covered has remained constant since 2011, with barely 55.5% of the eligible individuals covered in the 2016–2017 campaign (MSSSI, 2017c). There are no studies on the underlying reasons and whether this rather low coverage leads to premature deaths.

Health departments of ACs hold the executive coordination for population-based screening programmes. The inception of breast cancer screening programmes goes back to the late 1990s, with high coverage values in the mid-2000s; since 2010, coverage has remained stable – in 2012 coverage was as high as 74.01%, increasing to 75.2% in 2015. In turn, the population-oriented screening programme for colorectal cancer, currently regulated by Order SSI/2065/2014, was preceded by a high-risk patients approach for years. Currently, the programme is in expansion with a sharp coverage increase – in 2015 the coverage had reached 19%, and it doubled in 2016. However, the variation across ACs is substantial (Network of Cancer Screening Programmes, 2017). There are no complete evaluations on the actual impact of the different screening strategies in terms of their effectiveness at population level (that is, whether the programme has an independent positive effect on the mortality and survival in health, or whether the programmes' benefits supersede their harms) and their impact on the SNS allocative efficiency.

5.2 **Patient pathways**

Despite the existence of 17 health systems plus INGESA within the SNS, patient pathways are quite homogeneous across the country. Notably, GPs play the gatekeeper role in the SNS, being the first point of contact with the system (see Section 5.3, *Primary/ambulatory care*), except for emergencies (see Section 5.5, *Emergency care*). A typical patient pathway is shown in Box 5.2.

BOX 5.2 A typical patient pathway in Spain

In general, upon the onset of symptoms, individuals will visit the primary health care doctor with whom they are registered. The episode can be resolved by direct prescription or recommendation, follow up in the same premises, or will require further diagnostic procedures. In this case, the patient will be given an appointment for testing (including a wide range of laboratory and X-ray tests) and another one to return to the GP office where the results will be available in a few days. The GP's clinical judgement will determine whether referral to specialized care is required – GPs in Spain are trained and equipped to deal with a wide range of conditions; so patients will mostly have their problem solved at this care level.

When referral is necessary, the patient will be provided with an appointment for the corresponding specialist, usually based in outpatient premises. Based on the GP's referral report and their clinical assessment, the specialists will decide on the need for further testing or inpatient procedures, or will prescribe the treatment and either send the patient back to the GP or arrange follow-up visits. Once the specialist discharges the patient, a report is sent to the referring GP.

If the decision involves inpatient care, the patient will be admitted to the corresponding hospital service, the timing depending on the waiting time for the corresponding procedures (diagnostic or surgical). Doctors have the right to prioritize the patient according to their clinical judgement in order to accelerate the process. Once discharged from the hospital, the patient is given an appointment for ambulatory follow up, either at the specialized ambulatory services hierarchically linked to the hospital department, or at primary health care level, where primary care physicians and nurses will take over upon the prescriptions recorded in the clinical report at discharge. Should the patient's condition be considered chronic at any of the previous stages, or at the time of their discharge from specialized care, the GP would require the intervention of the primary care nurse for support and coordination of continuous follow up and, depending on the social situation, for assessment by social services. If required, patients can be referred to rehabilitation services either by the specialist or by the GP.

Besides this regular pathway, two emergency mechanisms are available for patients to freely walk in: primary health care centres (the PCCs) and hospital emergency wards. The former vary according to supply organization and expected demand: in rural areas, where the population is dispersed, there is a 24-hour service, whereas in urban highly populated areas, primary health care services are complementary to hospital emergency wards, with a timetable covering 15:00 to 20:00. In turn, hospital emergency departments offer 24/7 services. In addition, if the patient's condition does not allow for walking in, patients can demand a home visit by the primary health care service, or use the emergencies call centre to request a mobile emergency team. Patients are advised to use primary health

care emergency services over hospital emergency wards for non-life-threatening conditions. Waiting times are shorter and staff are normally equipped to deal with most of the common urgent conditions; should it be necessary in the end, patients referred to the hospital emergency departments from primary health care have priority in terms of emergency admission.

BOX 5.3 Integration of care

The SNS primary care reform, developed since the mid-1980s and completed in the late 1990s, was oriented towards continuity of care. The pivotal gatekeeping role using highly qualified specialists in family and community medicine to solve most of the health problems and give continuity to specialized care prescriptions, particularly in patients with chronic illness, has enabled a type of natural (although insufficient) integration, well rooted in the SNS culture. On the other hand, the inclusion of specialized nurses as part of the primary health care team has eased the follow up of those patients that require closer surveillance. Third, although pharmacists are private retailers, they are also committed to SNS policies, for example, implementing e-dispensing SNS policies, which will assist the follow up of treatment adherence. Finally, although underdeveloped, there are staff social workers in PCCs that, at the request of the GP, take over cases where the social and economic conditions might jeopardize care continuation.

Far from being a fragmented system, the SNS has a well-equipped professional and organizational culture, sensitive to the development of reforms aimed at better care integration, in particular in chronic multimorbid and more fragile patients. Along those lines, the 2007 Strategic Framework for the Improvement of Primary Care in Spain and, more recently, the 2012 National Strategy on Chronic Conditions were set up as main priorities: paying particular attention to multimorbid and fragile individuals; easing transition by tailoring vertical and horizontal continuity according to individuals' needs across care levels, including home care and social care; the development of new professional capacities and roles; and the importance of using EMRs to improve processes and outcomes (MSSSI, 2007, 2012g).

Aligned with these priorities, some ACs have already developed structural and organizational changes aiming to enhance integrated care. For instance, the Basque Country has developed administrative areas, the so-called Integrated Healthcare Organizations, to create a common organization for both hospitals and PCCs (Osakidetza, 2009). In Andalusia, 14 health care management areas (not covering the whole territory) jointly manage both primary and hospital care services (Andalusian Health Service, 2017). In Catalonia, health care integration areas aim to provide comprehensive care to the whole population in a particular territory (Government of Catalonia, 2017).

5.3 Primary/ambulatory care

Although with some local exceptions,[1] primary health care is essentially provided by public providers,[2] specialized family doctors and nurses composing the, so-called, primary health care teams. Primary health care teams are the basic care structure of the SNS. Depending on planning criteria, they might be complemented with paediatricians and specialized paediatric nurses, physiotherapists, dentists, psychologists and social workers. This model, designed in the 1986 General Health Act, remains fairly homogeneous across the country. However, the way those primary care services are managed has varied over the years. Today, three different models coexist; so, (a) the classical managerial structure set in the 1990s where, in the same health care area, primary care services with a hierarchical dependency on the regional service are run independently of specialized care; (b) integrated management, an evolution towards the real integration of services at any level, with a single manager running the continuum; and, (c) the externalization of primary care services by way of different mechanisms such as public consortia, P-PPs or "for-profit limited partnerships" (known as *Entidades de Base Asociativa*, and based in Catalonia).

Primary health care professionals provide a comprehensive range of services, either at the health centre or at a patient's home when the condition prevents them from walking in; in both cases, there are three possible modalities: appointment demanded by the patient, planned visit to any of the professionals and emergency visits. In 2016, public primary health care providers received 239.2 million visits to primary care doctors and 132.4 million visits to primary care nurses, on average, 5.2 visits per registered individual in the case of family doctors, 2.9 in the case of nurses, and five visits per registered child in the case of paediatricians (MSSSI, 2017b).

Quite evenly across ACs, planned visits are developed according to the prescriptions and recommendations contained in a number of protocols and guidelines clustered in three overarching programmes: child care, women's health and care of adults and older people. Child care includes vaccination

1 A few local exceptions can be found in Valencia where some P-PP modalities are used to allow private agents to provide health care (including primary care) to a defined population, or some "limited partnerships" of primary care doctors in Catalonia that provide primary care services according to a contract with the health authority (see Section 2.1, *Organization*).

2 In Spain, except in dental and optical care, the number of private practices providing ambulatory care is negligible, and confined to a very limited package of benefits.

programmes, early detection of health problems, caries prevention and health education. Women's health includes rubella vaccination, pregnancy and postpartum follow up, counselling on contraceptive methods, menopause counselling and opportunistic detection of cancer. When it comes to care of adults and older people, the programme includes care for people with chronic conditions, with particular emphasis on diabetes, heart failure and chronic obstructive pulmonary disease, vaccination of high-risk patients (influenza, hepatitis B and tetanus), prevention of cardiovascular disease, follow up of HIV/AIDS patients, early detection of frailty, counselling on alcohol and tobacco consumption, counselling for chronic conditions, minor surgical procedures, detection of and assistance for those in situations of domestic violence and child abuse, and community outreach actions, rather limited and mostly focused on health education at schools.

In addition to these activities, there are other services such as rehabilitation in those centres with a physiotherapist or basic dental care in those centres with a dentist. Notably, some services are provided in close coordination with other specialized services, for example, the early detection and treatment of mental health conditions (such as addictive behaviour, anorexia, depressive disorders), and follow up of terminally ill patients. Moreover, as an effort to increase care continuity and coordination between levels, some ACs are enhancing the role of primary health care in the implementation of pathways of care for specific conditions (for example, acute treatment of ischaemic stroke or acute coronary disease), as well as in the implementation of case-management programmes meant to deal with more fragile patients.

As the first contact point for the system and hence the current gatekeepers of the system, primary health care doctors are a privileged source of information for the assessment of community health and, in particular, for epidemiological surveillance; so, according to the prescriptions of the Public Health Authority, they play the role of key informants for the notification of communicable diseases and are members of sentinel networks for the monitoring of concrete public health problems (such as influenza epidemics follow up, monitoring adverse events associated with drug use). Notably, the wide use of e-health in primary health care has facilitated the increasing exchange of information with any of the health care actors in the system.

BOX 5.4 Assessing the strength of primary care

According to international evidence, the strength of primary care in the SNS is based on the existence of a structured system (involving good governance, small access barriers, and adequate financing and workforce development) as well as a comprehensive package of benefits and an effective continuity of care across levels (Kringos et al., 2015). Indirect evidence in favour of this statement are the relatively low rates of avoidable admissions for chronic conditions compared with many other EU Member States (OECD/EU, 2016), or the general satisfaction of Spaniards with regard to primary health care services – 86% of Spaniards declare having received good or very good assistance in primary health care (MSSSI, 2016k) (see Section 7.6, *Health care quality and safety*). However, there are still some flaws that might jeopardize the achievement of good outcomes in the long run as discussed below.

Public expenditure on hospital and specialized services has continued to grow as a share of the overall public spending on health care – since 2002, in aggregated values, from 53.3% in 2002 to 62.4% in 2015 (MSSSI, 2017g) (see Section 3.2, *Sources of revenue and financial flows*). Meanwhile, public expenditure on primary care (including pharmaceutical expenditure) has decreased, from 38% in 2002 to 31% in 2014, widening the gap between both types of services – from a 1.4-fold difference in 2002 to a two-fold difference in 2014. However, more money would not necessarily translate into better care, as there is evidence of inappropriate use of resources in primary health care. In the particular case of prescriptions, Spain holds an average position in the EU27 with regard to the inadequate use of second-line antibiotics (OECD/EU, 2016).

With regard to access to primary health care services, although the distribution of resources enables easy access for the Spanish population overall, only 36% of people demanding care are being assisted the same day. This might be translating into an increasing proportion of patients visiting hospital emergencies; indeed, Spain stands slightly below the EU26 average for this indicator (OECD/EU, 2016). Additionally, despite the aforementioned general satisfaction with primary health care services, 31% of users also declare that, if they had to choose, they would prefer a private provider (MSSSI, 2016k). This result might have to do with the increasing waiting times endured when a primary physician requires additional testing.

Finally, with regard to the primary health care workforce, two main flaws have been detected. First, in 2014, the proportion of nurses in Spain remained at the bottom of the EU countries with a ratio of nurses to doctors of 1.4, far below the OECD countries' average ratio (OECD/EU, 2014, 2016) (see Section 4.2.1, *Trends in the health workforce*). In the case of primary care, where nurses have a major role in health promotion and prevention as well as in the continuity of care for chronic

patients, the ratio is even lower with just 0.85 nurses per doctor (MSSSI, 2017b). Second, primary health care as a medical specialty does not enjoy a good reputation; it is not a choice of preference among those candidates applying for medical residency programmes but is a last resort when they do not get a better option.

3 Eighteen EU Member States; countries excluded are Bulgaria, Cyprus, Croatia, Estonia, Greece, Latvia, Lithuania, Luxembourg, Malta and Romania.
4 Countries not included in EU26 are Croatia and Luxembourg.

5.4 Specialized ambulatory care/inpatient care

Secondary care in the SNS can take the form of outpatient specialized care, inpatient care, day-case care or emergency care, depending on the patient's condition and particular needs.

Inpatient care and outpatient specialized care accounted in 2015 for 114.5 hospital admissions per 1 000 inhabitants (between 91.6 and 153.8 depending on the AC of residence), with 109.1 surgical interventions per 1 000 inhabitants (between 68.4 and 139.5 interventions), and 2086.3 outpatient specialized visits per 1 000 inhabitants (between 1 582.1 and 2 762.3 visits across ACs) (MSSSI, 2017b).

Notably, SNS hospitalizations have increased since 2003, from 4.01 million discharges to almost 5 million in 2014. The growth can be attributed to the increase of surgical admissions: while medical admissions increased 4%, surgical interventions did so by 8%. Most likely, the reason for that increase has been the larger reduction in length of surgical stays – up to 16% – from 7.4 to 6.5 days (Comendeiro-Mälloe et al., 2017).

Unlike primary care, private hospitals have a substantial contribution in the provision of secondary care – in 2015, 30% of the discharges (between 9% and 47% depending on the AC), 29% of surgical interventions (between 15% and 49%), and 17% of outpatient specialized visits (between 2% and 21%) (MSSSI, 2017b). Private centres may actually act as:

- subsidiary services usually contracted to reduce surgical waiting lists;
- complementary network as in the case of the not-for-profit network of hospitals for public utilization that yields a great deal of the activity in Catalonia (namely, XHUP); or

- substitute providers, as in the case of some few P-PPs (confined to the AC of Valencia and currently under revision to set back the public ownership), or in the case of long-term care beds (usually not-for-profit) used in palliative care or early-discharge programmes in chronic patients (see Section 2.4.2, *Regulation and governance of provision*).

Notably, Spanish public hospitals have set territories and cover any type of demand coming from the reference population. Depending on the severity of the condition (and the actual capabilities), smaller hospitals, usually in rural areas, will refer patients to a bigger hospital (typically, acute myocardial infarction in younger patients is urgently discharged under close medical supervision to a hospital where primary percutaneous coronary intervention is available). All ACs have at least one general hospital with the full range of specialties available.

Bigger hospitals might also play the role of a "tertiary" hospital for a broader area of reference, usually within the AC, although in some specific interventions they may provide nationwide services (such as transplants, paediatric cardiac surgery or treatment for rare diseases). The latter receive recognition as "national reference service" after being authorized by the Ministry of Health (MSSSI, 2017l). In addition, there have been mergers of hospitals in almost all ACs, either as "hospital consortia" where neighbouring hospitals (usually owned by different public administrations) provide complementary services, or as "hospital networks", with the largest acting as the central hub, providing common ancillary services.

When it comes to specialized care, and in particular to hospital care, although the model of care is quite homogeneous all over the country (such that outpatient specialized care is linked to hospital departments; each hospital department has a number of beds; small hospitals with a lesser number of services are clustered to bigger hospitals that provide high-tech services or take over the most complex cases) there is a greater variety with respect to ownership and organizational models. At least five models currently coexist:

- Public hospitals owned and managed directly by the public system, bound by the Public Administration legal framework, whose personnel is composed of salaried civil servants.

- Public self-managed hospitals owned by the public system, but set upon the legal structure of a Foundation or a Public Company. This model, for example, implies that the personnel is hired according to private legal frameworks. Some of these hospitals, generally of smaller size, are the newest in the country and have been built following a PFI, in which the construction and equipment are outsourced to a company that will run the non-health care services, for a certain period of time.
- Hospitals owned by companies, usually within the health sector, that enjoy a stable contractual relation with the ACs' health authorities. These are under the framework of a P-PP, where the health authority pays *a per capita adjusted premium* for the company to take over the health care (covering all services included in the package of benefits) of the population living in a health care area. These initiatives are new and confined to the ACs of Valencia, Murcia and Madrid.
- Private hospitals and services owned by private foundations, workers' mutualities, or religious charities that enjoy a stable contractual relationship and are complementary to the public provision. Although not exclusively, this case is notably observed in Catalonia, as part of the Hospital Network for Public Utilization (XHUP, in Catalan).
- Privately owned hospitals and clinics that provide specific services to the public system that usually act as a supplementary network covering some diagnostic tests and procedures, elective surgery in the context of waiting list reduction programmes, palliative care, long-term care and non-acute mental health care.

When it comes to the package of services, the common package for the whole SNS covers specialized treatment and diagnosis (see Section 3.3.1, *Coverage*). Interestingly, although very few, there are some single-specialty hospitals in the network. They focus on a *single specialty*, usually obstetrics and neonatology (maternity hospitals), geriatrics, psychiatry, orthopaedics, ophthalmology or cardiology. The trend, though, has been to integrate them into more complex managerial structures associated with big general hospitals.

Finally, 64% of public general hospitals in Spain are (or can become, after due accreditation) teaching hospitals, authorized to teach undergraduate

students (medical schools are usually associated with high-tech hospitals) or medical residency programmes (MSSSI, 2017q).

BOX 5.5 Assessing the appropriateness of care

In a broader sense, inappropriate care would include underuse of effective and efficient interventions as well as the overuse of ineffective or inefficient interventions. On average, evidence-based interventions are performed at a fairly good level. Some examples from international comparisons may underpin this statement: (a) coverage for breast cancer screening reached 79.8% of eligible women in 2014, far above the EU23 average (62.8%); in turn, coverage for cervical cancer screening reached 68.7%, above the EU23[5] average of 63%; (b) child vaccination was close to full coverage in 2014 for diphtheria, tetanus and pertussis (97%), measles (95%) and hepatitis B (96%), slightly above the EU average; and (c) in 2014, 88% of coronary revascularization procedures yielded in the SNS were angioplasties, one of the top positions among the EU Member States.

However, looking at within-country differences, the widespread utilization of low-value procedures (García-Armesto et al., 2016) and the extreme variation of elective surgery rates point to a great deal of inappropriate care. For example: (a) in the case of low-value procedures, tonsillectomy rates in children varied as much as 4.8-fold across health care areas; hysterectomy rates for benign conditions varied 3.2-fold, and prostatectomy rates in benign prostate conditions varied 6.7-fold; and, (b) in the case of elective surgery rates, caesarean sections varied by a factor of 2.5, back surgery differences were as much as 3.4-fold, and hip and knee arthroplasty exhibited a 3.9-fold difference.

Finally, although in Spain the use of percutaneous angioplasty as first choice for revascularization procedures occupies a top position in Europe (ECHO, 2014), the variation of standardized rates across health care areas in Spain is as large as four times. Possible reasons include: the varied utilization of coronary bypass (with very specific evidence-based indication), and the existence of access barriers (systematically, people in rural areas are less likely to receive percutaneous coronary intervention in the acute treatment of myocardial infarction).

5 Countries not included in EU23 are Croatia, Cyprus, Luxembourg, Malta and Romania.

BOX 5.6 Patient evaluations of the care they receive

Measures of patient reported outcomes are not systematically registered in the electronic health records nor reported as a means to evaluate treatment effectiveness from the patients' perspective. In primary health care, quite unevenly across ACs and inconsistently across PCCs, patients might be asked about their capabilities with regard to daily life activities, or about their cognitive or mental health abilities, as part of opportunistic screening programmes, and not as a means to evaluate health care interventions.

The annual Health Barometer provides patients' assessment of the health system according to a number of items referred, for example overall satisfaction, information received, waiting lists or interaction with professionals (MSSSI, 2016k).

According to the latest Health Barometer, in the case of primary health care, 86% of patients surveyed declared having received good or very good care, although 20.7% admitted that they could not participate in the decisions on their treatment as much as they had wished; 11.5% of patients asserted that they did not even have the opportunity to ask questions or pose concerns; 21.2% of patients expressed that primary health care had worsened (compared with the previous year). On average, patients scored with more than 7 points (out of 10 possible) the following items: whether doctors convey confidence, having received respectful treatment, an exhaustive knowledge of their health problem, the information provided on their problem, whether they had been counselled on how to behave with regard to their health problem, and the time devoted to their health problem. Less than 7 points were given for the time-lag between the need to see a doctor and the visit (6.7 points) and the waiting time for further testing (5.6 points) (MSSSI, 2016k).

In the case of hospital care, 85.8% of patients surveyed declared having received good or very good care, although 34.5% admitted that they could not participate in the decisions as much as they had wished. In turn, 18.1% of surveyed patients asserted that they did not even have the opportunity to ask questions or pose concerns. Just over a quarter (27.3%) of patients believed that hospital care had worsened compared with the last 5 years. Patients scored with more than 7 points (out of 10 possible) equipment and technology, nursing care, doctors care, the information provided on their problem and whether they had been counselled on how to behave after discharge. With less than 7 points, patients scored: sharing the room with more patients (5.9 points) and the time lag between the need for an elective hospital admission and the actual admission (4.8 points).

In the case of outpatient specialized visits, 79.5% of patients surveyed declared having received good or very good care, although 27.6% admitted that they could not participate in the decisions as much as they had wished. In turn, 13.7% of

interviewed patients asserted they did not even have the opportunity to ask questions or pose concerns; and 28.7% of patients believed that outpatient visits had worsened as compared to the last five years. Patients scored with more than 7 points (out of 10 possible) whether doctors convey confidence, having received respectful treatment, and the information provided on their problem. Patients scored with less than 7 points: whether they were counselled on how to behave with regard to their health problem (6.9 points), the time devoted to their health problem (6.73 points), the time-lag between the need to see a doctor and the admission (5.02 points) and the waiting time for further testing (5 points) (MSSSI, 2016k).

According to public satisfaction (users and non-users), the general assessment is slightly improved since 2003 (6.1 out of 10), with an overall score in 2016 of 6.6, although 30.5% of women and 25.3% of men declare that the SNS requires in-depth reforms. Primary health care received the highest overall score (7.3 out of 10), and emergency care the lowest value (6.04), with both hospital care and outpatient specialized care getting 6.7. If the surveyed individual had to use a primary care service, 69.6% would choose the public system; in the case of hospital care, 68.1% would do so, 57% in the case of outpatient specialized care, and 66.4% in the case of emergency care (MSSSI, 2016k).

5.4.3 *Day care*

Being part of the SNS package of benefits, RD 1277/2003 defined day-care units as services provided in the context of hospital care, but limited to a certain number of hours and so not requiring admission to an inpatient regimen. The aim of this care includes diagnosis, clinical studies or multiple investigations, as well as medical and surgical treatments that cannot be provided in outpatient visits. Emergency care is excluded from this definition.

Since 2010, the number of sessions in day-care hospitals has increased from 23% out of 4.8 million admissions in 2010 to 29% out of 5.2 million admissions in 2015. The greatest increase, though, has been observed in surgical cases. The number of procedures provided in day-care schemes has more than doubled since 2003 – from 0.6 million surgeries in 2003 to 1.5 million in 2015 (Comendeiro-Mäloe et al., 2017). Notably, day-care surgery is unevenly used across ACs (with values ranging from 36% to 58% in 2015) and the evolution over time has varied substantially, from ACs that actually have slightly reduced the share of day-care surgery to ACs increasing 20%

since 2010 (7.1% increase in Aragon, 8.6% increase in Canary Islands, or 21.9% increase in Galicia) (MSSSI, 2017b).

5.5 Emergency care

The SNS common benefits package defines emergency care as care provided to patients whose clinical condition requires immediate clinical action.

The emergency services package includes:

- 24/7 phone assistance coordinating emergency centres, sorting demand, matching it to adequate resources according to need, activating the proper resources, and providing information and medical advice;
- immediate initial patient evaluation, classification and, if needed, transport to the health care centre for investigations or specific diagnostic tests, determining immediate actions required to determine the nature and scope of the condition in each emergency case;
- the implementation of the required diagnostic or therapeutic medical and surgical procedures;
- monitoring, wait and watch or re-assessment of patients whenever the situation so requires;
- emergency earth, air and sea transport, medicalized or not (depending on patient's clinical status) whenever evacuation to a health care centre is required;
- information for patients and relatives about the care provided and measures to be adopted following the relevant legislation (in cases of accidents, violence, etc.); and
- report to competent authorities of cases suspected to involve situations of domestic violence, and child, older or disabled people abuse. The regular emergency patient care pathway, provided the patient's condition allows for it, is described in Box 5.7.

BOX 5.7 A typical pathway in emergency care

In Spain, patients with an acute illness will most often walk into hospital emergency wards or primary health care emergency centres (66% of cases); when this is not the case, they would either call the PCC directly to request a home visit (which is the regular procedure for bedridden patients already on a home visits regimen for mild exacerbations of their condition outside the normal appointment schedule), or the emergency call centre. The operator in the call centre will conduct a short interview to determine the nature of the emergency and decide on the resources to be mobilized. In some simple cases, they will provide advice on how to proceed, assessing whether the person on the other end of the line can cope with the situation. They may either send an emergency mobile team immediately or switch the person to the medical team for further enquiry or specific clinical advice. If the mobile team is called upon, they will arrive at the location. Depending on the assessment of the patient's condition made by the coordination centre, the mobile team could consist of emergency doctor and nurse with basic equipment or an intensive care mobile unit. The patient will be assessed to determine the course of action: either treatment will be provided *in situ*, leaving a copy of the emergency report detailing diagnosis, procedures and prescriptions, or the patient will be stabilized and evacuated to the hospital emergency ward. Of patients that are seen in a hospital emergency ward, 71% will be discharged or admitted into the hospital in less than 3 hours.

As access to hospital emergency wards is unrestricted, patients can inappropriately choose (and often do so) to walk in for other conditions requiring procedures subject to waiting lists in an attempt to "jump the queue", or may use emergency services to obtain a quick set of examinations that their family doctor has not judged necessary. The SNS has responded to this reality quite homogeneously across the country; in primary care, expanding the time schedule so that emergencies are assisted until the evening and releasing information campaigns raising awareness on the importance of the proper use of emergency services; and, in hospital settings, setting up triage systems aimed at prioritizing patients at admission or implementing intermediate services to place patients under observation for a number of hours, before deciding how to proceed.

5.6 **Pharmaceutical care**

The Spanish pharmaceutical sector is one of the most regulated sectors of the Spanish economy (see Section 2.4.5, *Regulation and governance of pharmaceuticals*).

With regard to the distribution of medicines (irrespective of liability for SNS reimbursement), the system is organized around 52 wholesalers, chiefly made up of cooperatives of pharmacists. In 2015, six out of the 52 companies held a 75.5% share of the distribution market in Spain (FEDIFAR, 2016), comprising 21 937 pharmacy retailers (independent authorized agents that enjoy protective regulation that limits competition at the level of distribution) (Official General Council of Professional Colleges of Pharmacists, 2015). This regulation restricts to pharmacists the dispensation of prescription drugs, includes rules to prevent geographic concentration of pharmacies, regulates opening hours and, especially, the need for a 5-year university degree – not only to dispense, but also to own a pharmacy – plus compulsory enrolment in the College of Pharmacists. The authorization to open a pharmacy entails an automatic agreement with the regional Health Authorities for the dispensation of medicines prescribed in the SNS. In the case of drugs eligible for public reimbursement, the reimbursement of retail pharmacists and wholesalers relies on fixed and price-proportional mark-ups of the consumer price before tax.

Pharmaceutical care, as part of the SNS common benefits package, covers all those medicines and health products approved, registered and eligible for reimbursement as well as actions aiming to ensure that patients receive medicines as required, at the correct dosage, for the right amount of time and at the lowest possible cost to them and to the community. The package does not include cosmetic formulae, dietary products, mineral water, elixirs, toothpaste and other health products, over-the-counter medicines, homeopathic remedies, or any item or accessory advertised targeting the general population. Pharmaceutical care is provided by: (a) doctors, as prescribers and overall supervisors of treatment; (b) nurses, particularly in primary care, in their role of supervisors of adherence and side-effects: and (c) pharmacists, as dispensers and health community agents, supervising treatment adherence and early detection of side-effects.

5.7 Rehabilitation/intermediate care

The provision of rehabilitation has not experienced any noticeable change since 2010. Rehabilitation care is usually provided by dedicated hospital outpatient and inpatient departments. Between 2010 and 2015, the number

BOX 5.8 Evaluating efficiency in pharmaceutical care

In terms of the overall budgetary impact of pharmaceuticals, and subsequent implications for allocative efficiency, in 2016 the number of pharmaceutical prescriptions (not including hospital prescriptions) increased by 2.2%, reaching an overall expenditure of €9.9 billion, €377.8 million more than in 2015. This growth was very much due to an increase in the volume of existing drugs (accounting for nearly 4% of growth) and to a lesser extent to new market drugs (up to 2.5%). These figures maintain the trend that started in 2013 when the effect of the cost-containment measures, in particular RDL 16/2012 in which new co-payment mechanisms were issued, faded away.

In spite of strong cost-containment policies, the variation across Spanish ACs is remarkable. In fact, the growth in prescriptions differed as much as 11.5 times between the region of Valencia with the largest increase (5.3%) and Catalonia, which experienced only 0.46% growth. In terms of expenditure, the region of Valencia showed the highest increase (6.7%) and Galicia the smallest (1.6%). Finally, the average reimbursement price (€10.99) was observed to vary from €12.87 in the Basque Country to €10.10 in Andalusia (MSSSI, 2017p).

In comparative terms, in 2014, overall per capita expenditure was €391, slightly lower than the EU27 average (€402); out of them, 68.8% (€269) was expenditure due to drugs 'under prescription'. As compared with other health services, where public contribution is 76% of total health expenditure, public share on pharmaceuticals spending was 61%; in EU27, the average was 64% compared with 83% of public contribution to other health services.

When it comes to technical efficiency in pharmaceutical care, the SNS policies are based on three intertwined pillars: reference-price setting, prescription by active ingredient and dispensation of generic drugs. Since 2011, the use of generics has been observed to grow from 34.2% to 48% in 2014, shaping the increasing trend observed since 2000. However, the introduction of generic drugs has not been the same throughout the Spanish territory, ranging from 30% to more than 45% of the total volume. In terms of their overall impact, in 2014, generic drugs accounted, on average, for 39% of the whole market volume and 20% of pharmaceutical expenditure. Nonetheless, the actual effectiveness of this three-headed policy on the reduction of drugs price is not straightforward, partly because the specific conditions of the reference-price regulation in the SNS has not translated into a sensible reduction of the prices of generic drugs (Puig-Junoy & Moreno-Torres, 2010). As an example, statins have been the most consumed lipid-lowering group and the one that has shown the largest growth, up to 91.6 Defined Daily Doses (DDD) per inhabitant in 2012 (a 522% increase since 2002). Interestingly, except for Simvastatin, which represents a third of statin prescriptions with a retail price of approximately €2, the remaining drugs

have higher selling prices, no matter whether it is under patent (AEMPS, 2014a). Taking overall numbers, in the years following the new 2014 regulation (see Section 6.1.5, *A new regulation for drugs reimbursement*), the cost per prescription has paradoxically increased 0.31% in 2015 and 1.71% in 2016 (MSSSI, 2017p).

In turn, appropriate utilization remains the big challenge of pharmaceutical care in the SNS. Indeed, the large variation observed in DDD prescriptions suggests profound inefficiencies. For example, in 2014, antidepressants varied almost three times across ACs, from 34.9 to 97.9 DDD; hypnotic drugs varied as much as 3.3 times, from 14.1 to 46.2 DDD, depending on the AC; and, variation in antibiotics varied almost twice as much, from 14.9 to 26.8 DDD (MSSSI, 2017b), with the prescription of second-line antibiotics in Spain (4 DDD), slightly above the EU average (3.8 DDD) (OECD/EU, 2016).

Since the early 1990s, substantial efforts have been made to improve evidence-based prescription in primary health care. Programmes for the "rational use of pharmaceuticals" have been set at health care area level in all ACs. Noticeably, although small, a part of the primary health care physicians' salary is linked to good performance in a number of quality of prescription indicators: for example, overuse of anti-osteoporosis drugs in women aged 40–65 years, use of inappropriate medications in older people, underuse of statins in secondary prevention, use of non-steroidal anti-inflammatory drugs in patients with a cardiovascular condition. Enhancing this programme, currently in the design phase, a number of *"do-not-do"* recommendations are being included to reduce the use of evidence-based inadequate prescriptions, for example, use of corticoids in patients with multiple sclerosis, use of glitazones in patients with congestive heart failure, or the concomitant use of two or more non-steroidal anti-inflammatory drugs (MSSSI, 2017o).

of rehabilitation sessions (including inpatient and outpatient secondary care services) increased 22%, from 6.9 million sessions in 2010 to 8.5 million sessions in 2015. Interestingly, some primary care centres provide continuity of care through physiotherapists, either staff primary health care physiotherapists or as an outreach service provided by hospital rehabilitation professionals (MSSSI, 2017m).

When it comes to intermediate care, since 2010 the number of "at home" hospitalizations has increased. In 2015, the number of patients included in these "early-discharge" programmes reached 21.6 per 10 000 inhabitants for an average of 10 visits per patient. Unfortunately, the implementation is largely uneven across ACs, both in the number of patients benefiting

(21.4-fold difference) and in the visit intensity per patient (6.9-fold difference) (MSSSI, 2017q).

5.8 Long-term care

Long-term care can take the form of inpatient care in dedicated long-term hospital beds or "single-specialty" geriatric hospitals, or as part of the services provided in the context of Law 39/2006 for the Promotion of Personal Autonomy and Assistance for Persons in a Situation of Dependency, namely SAAD.

When it comes to dedicated long-term hospital beds, the SNS has 10 899 long-term care beds that represent 9% of public beds, and 77% of long-term care beds in the country, according to 2015 data (MSSSI, 2017m). Additionally, private hospitals (usually, not-for-profit) hold 3102 beds that might be used to complement public supply (MSSSI, 2017m). Typically, hospital long-term beds cover palliative care needs, either in chronic patients or patients with cancer.

When it comes to SAAD, services are provided through a network of social centres and services available in the ACs, including regional public institutions, services provided by the municipalities, national reference centres for support of specific causes of disability, as well as accredited partner private centres. ACs have total freedom to set up this network of providers where nongovernmental organizations and not-for-profit institutions are considered as priority partners (compared with for-profit providers). Priority in access to services is determined by the assessment of the applicants' degree of dependency and financial assets. Services are co-paid according to the type of service required and the ability to pay.

The package of benefits comprises the following services: (a) promotion of personal autonomy and prevention of dependency; (b) tele-assistance; (c) home aids (house-keeping, personal care, day-centre and specialized day-care services); and, (d) residential services (nursing home for dependent older people or residential stays for dependent persons, adapted to the type of disability).

In addition to care benefits, there might also be financial benefits, based on the degree of dependency and financial status. Financial benefits are mainly linked to supporting the provision of services outside the SAAD

network, as follows: (a) financial benefits linked to service purchase outside the network when there is no public or private partner centre available to provide the benefits; (b) financial benefit for care provision within the family when a relative is acting as principal carer; it would only apply when the applicant is being nursed at home, provided that physical and living conditions for care are met; and, (c) financial benefit for paid personal assistance, intended to support the hiring of professional services.

According to consolidated figures from December 2016, SAAD has recognized benefits for 1 217 355 individuals, 79.9% of those applying for SAAD. Although an increasing number of applicants joined in the last 5 years (77% of beneficiaries have entered since 2012), only 865 564 individuals of those (71.3%) have received the services or benefits they were entitled to. As for the composition of services, 66.2% of benefits have been personal services and 36.8% have been financial benefits, resulting in 1.23 benefits per beneficiary. The total cost of the system at the end of 2016 reached €7986 million (MSSSI, 2017n).

One positive return from the development of SAAD, since 2012, when unemployment rates started decreasing, the number of workers in the social sector joining SAAD has increased slightly but steadily, with 391 589 employees currently working in the sector, 13% more than in 2012 (MSSSI, 2017n).

Despite the extraordinary efforts in the implementation of SAAD, there are issues that require improvement; so a dedicated Commission composed of representatives of the central government and seven ACs (Catalonia, Galicia, Andalusia, Asturias, Aragon, Canary Islands and Castile-Leon) have raised the need to reconsider the current financing mechanism to guarantee the coverage of all beneficiaries as well as the sustainability of the system – currently long-term care represents 1% of the Spanish GDP, 60% less than the EU average (OECD/EU, 2016).

5.9 Services for informal carers

Services provided by informal carers are one of the benefits included in the SAAD. Although exceptional, regulations foresee that this type of provision should be only considered under specific circumstances, it entails economic aid (for example, monetary benefit) paid to a family member in charge of the beneficiary, or to an external informal carer who looks after the dependent

individual for a limited time every day. Informal carers have to enter an agreement with the IMSERSO (the Institute for older people and social services, a public body of the MSSSI). In December 2016, out of the 1 068 967 services provided to 865 564 individuals entitled as SAAD beneficiaries, 366 988 (34%) corresponded to informal care services (IMSERSO, 2016b).

With regard to international comparisons, a recent report on 18 OECD countries using 2015 data found that, on average, 13% of people aged 50 and over reported having informal care at least weekly; in Spain this figure reached 11%. In turn, 60% of those providing daily informal care were women, reaching 61.8% in Spain (OECD, 2017d).

5.10 **Palliative care**

Palliative care in Spain may take the form of dedicated beds in acute hospitals, outreach services provided by specialists in palliative care with (or without) the involvement of primary health care professionals, nonspecialized services directly provided by primary health care professionals, beds in not-for-profit or for-profit hospitals, purchased or not by the public system, out-of-pocket services or services provided in the context of the SAAD. Depending on the place of residence and the centre of treatment, the pathway followed by a patient with palliative care needs varies substantially and the treatment might involve a variety of providers. According to the latest report of the Spanish Society for Palliative Care, only 49% of patients requiring palliative care have access to the services covered by the SNS (SECPAL, 2016).

There are no recent official reports on the state-of-the-art of palliative care in Spain. A recent report by the not-for-profit Spanish Cancer Association points out that there were 458 teams, 383 of them specialized in palliative care, in 2013. According to them "200 more specialized teams will be needed to reach international standards", which implies that 15 ACs (out of the 17) should increase their current supply (AECC, 2014).

Since 2010, efforts have been oriented to implement the 2010–2014 National Strategy for Palliative Care (MSSSI, 2012d) and the design of the National Strategy for Paediatric Palliative Care, whose main goals are: (a) defining the actual care needs for this population subgroup as well as the organizational model for the provision of palliative care for children; (b) promoting patients' and families' autonomy; (c) developing specific

training programmes for professionals and relatives; and (d) developing specific research lines on the topic (MSSSI, 2014d). Both strategies have been implemented but they have not been assessed yet; nonetheless, there are concerns with their uneven adoption across ACs.

5.11 Mental health care

Mental health care in the SNS is provided in primary health care (early detection of mental disorders and symptomatic treatment and follow up of patients treated at specialized level), outpatient specialized settings (some specific for child disorders), and hospital beds (for acute episodes). Over the years, a clear trend of deinstitutionalization has been expanded all over the country with day-care or night-care services, complementary to acute hospital services, as well as reintegration activities led by nongovernmental organizations, not-for-profit associations and small private companies, in close coordination with the SNS. SAAD resources are also part of the mental health care pathways. The SNS common package of benefits covers diagnosis and follow up of mental disorders, psycho-pharmacotherapy, and individual, group or family psychotherapy (excluding hypnosis and psychoanalysis).

There are no recent official reports on the state-of-the-art of mental health care in Spain. The latest was published in 2014 (with data from 2011 and 2012) in the context of the evaluation of the 2009–2013 National Strategy on Mental Health (MSSSI, 2014e). According to the latest evidence, between 2010 and 2013 the number of psychiatrists experienced a 3% increase (from 3356 to 3465 doctors) whereas the number of beds for psychiatry services fell by 8% (from 18 455 to 16 931 beds); the amount of visits increased 25% (from 3 997 991 to 4 993 458 consultations) and the sessions in day-care settings increased 39% (from 615 912 to 858 254 stays). When it comes to pharmaceuticals, there has been an increase in the prescription of hypnotics and sedative drugs (from 27.6 DDD in 2012 to 29.4 DDD in 2014) and antidepressants (from 60.7 DDD in 2012 to 65.6 DDD in 2014), with a large variation across ACs (MSSSI, 2017b).

5.12 **Dental care**

Dental care in Spain is predominantly provided by private solo or group practices, with negligible participation of public providers and no major changes in recent years. Dental care for the adult population in the public sector is generally provided by GPs, although in some urban centres the primary health care team includes dentists. The package of publicly paid services is rather limited: teeth extraction (if there is a dentist), treatment of infections or inflammatory processes, caries prevention (application of topical fluoride, dental fillings, fissure sealings), preventive measures in pregnant women (as part of the protocol for a healthy pregnancy) and, for children, caries prevention and counselling on hygiene measures, as part of the services provided by primary health care paediatricians and nurses.

Early in the 2000s, some ACs opted for the distribution of vouchers covering basic children's dental care in the private sector (previously, this had to be paid for), which does not include repair of temporary dentition, orthodontic treatments, exodontics of healthy parts, treatments with an aesthetic purpose, dental implants or complementary tests for purposes other than the benefits contemplated as being eligible. Hence, the basic funding mechanism for dental care services, other than the aforementioned, is mainly out-of-pocket with some exceptions since 2015 (dental implants for certain patients undergoing oncological treatments leading to lost teeth and for patients with congenital malformations with anodontics), although it is possible to find voluntary health insurance policies that include the service.

Consequently, unmet dental care needs for economic reasons are substantial in Spain, and have increased in the last decade. Indeed, in 2010, an 8.8-fold difference in the percentage of unmet needs was observed between those in the lowest incomes quintile and those in the highest, reaching 11.6 times greater in 2015 (more than double the EU27 average figures). Differences according to educational attainment are lower than the EU average, although significant: in 2010, people with less than secondary education were 2.3 times less likely to have their needs met, but three times less likely in 2015 (similar figures to EU27) (Eurostat, 2017e).

6

Principal health reforms

Chapter summary

- The reform agenda of the SNS in recent years has been strongly influenced by the austerity measures agreed in the Stability Programme for Spain, whose major goal in the health sector was the reduction of the public share of health expenditure.

- Reforms since 2010 have tackled: the governance of the SNS, the breadth of coverage (regulating entitlement conditions), the depth of coverage (categorizing the common benefits package), cost-sharing (new co-payment mechanism) and drugs pricing procedures.

- Major instruments in this finance-oriented agenda have been the Organic Law 2/2012 on budgetary stability and financial sustainability and RDL 16/2012 on measures to assure the sustainability of the health system and subsequent legislation.

- It is worth mentioning a widening of the anti-tobacco measures issued in previous reforms and initiatives aimed at dealing with the epidemiological transition (for example, the National Strategy on Chronic Conditions and subsequent ACs' developments).

- Nationwide initiatives to improve the effectiveness of health interventions have been implemented, such as the joint action on health technologies and benefits assessment and the *"do-not-do"* recommendations to reduce low-value care.

6.1 Analysis of recent reforms

6.1.1 *Governance recentralization*

The decentralization of health and health care services was completed in 2002 (see Section 2.2, *Decentralization and centralization*). Over the last decade, the decentralization process consolidated and ACs enjoyed greater capacity for regulation, planning and, above all, financial autonomy. As an unintended consequence, decentralization resulted in an uneven and disproportionate growth of health expenditure that became unsustainable once tax revenues plummeted during the economic crisis (see Section 3.1, *Health expenditure*). As a consequence of this imbalance, the Government adopted the Stability Programme for the Kingdom of Spain (Ministry of Finance, 2010b), whose major objective in the health sector was the reduction of the public share of health expenditure – from 6.5% of GDP in 2010 to 5.1% in 2015 (Ministry of Finance, 2010b), and the Parliament of Spain approved the Organic Law 2/2012 on Budgetary Stability and Financial Sustainability and the RDL 16/2012 on measures to assure health system sustainability (see Section 3.3, *Overview of the statutory financing system*). Both legal provisions translated into a recentralization of ACs' decisions on expenditure – entitling the Ministry of Finance to *de facto* take over financial control (and consequently the purchasing and provision decisions) – and on decisions on the complementary package of benefits (see below).

The epitome of this recentralization process is the access mechanism for the ACs to obtain additional funding aimed at alleviating cash flow tensions due to the public debt crisis – currently close to 100% of the Spanish GDP (see Section 1.2, *Economic context*). The Ministry of Finance designed two funds to cover the expenditure needs of ACs: (a) the Liquidity Fund (in Spanish, FLA), created as a temporary and voluntary mechanism to support ACs' debt maturities (RDL 21/2012); and (b) the Fund for the Financing

of Providers Payments that allows ACs to cancel outstanding obligations to suppliers, many of them serving the ACs' health care premises (RDL 7/2012) (see Section 3.3.3, *Pooling and allocation of funds*). Access to this funding scheme is nonetheless conditional on the accomplishment of the fiscal and expenditure liabilities of the ACs (for example, public debt should be lower than the 60% of the estimated GDP for Spain), and the approval of the Ministry of Finance. Moreover, since 2015, access to additional credit allowances is linked to the measures adopted by the ACs to control health care expenditure, in particular pharmaceutical expenditure growth that should be lower than the reference growth for the GDP (Law 6/2015). Although adherence to this measure is voluntary, ACs have powerful incentives to join the programme because those compliant are eligible for additional funding, conceding sovereignty to the central government on decisions previously made by the ACs.

6.1.2 *Changes in the breadth of coverage*

The aforementioned RDL 16/2012, aiming to guarantee the sustainability of the SNS, later developed by RD 1192/2012, specifying SNS beneficiaries, and RD 576/2013, establishing the procedure and tariffs for non-entitled individuals who wanted to purchase SNS public coverage, has implied a change in the existing entitlement rules.

The new RDL 16/2012 changed the basis for entitlement from a scheme where the right was linked to the condition of resident (citizen and non-citizen) to a system where it was linked to the working status of the individuals. Hence, publicly funded health care was warranted to (a) employees contributing to the social security system, (b) retirees, (c) those receiving unemployment subsidies, and (d) unemployed who had exhausted the unemployment dole. The first-grade relatives of the insured were also considered as beneficiaries. Those not included in the above conditions would still be able to be entitled if they held EU nationality or an authorised resident card (see Section 3.3, *Overview of the statutory financing system*). In practical terms, only undocumented migrants ended up excluded from coverage, making the SNS coverage almost universal.

Only undocumented individuals residing in Spain at the time lost full access. Regulation, however, provided entitlement to emergency care for

serious illness or accident, and specialized care until discharge; and obstetric and child care (for people younger than 18 years). For those excluded, the regulation foresaw annual premiums covering the basic package of benefits to be €710 per year for those younger than 65 years, and €1900 per year for those 65 and older (see Section 3.1, *Health expenditure*).

At the time of writing (June 2018), the new Spanish Government started a dialogue process with the regions and the civil society to re-establish the universality of the Spanish National Health System (MSSSI, 2018b) (see Section 3.3.1). The new Ministry of Health, Carmen Montón, has summoned the ACs on 28th June 2018 for an Interterritorial Council focused on Universal Coverage (Redacción Médica, 2018).

6.1.3 *Changes in the depth of coverage*

RDL 16/2012 also regulated the package of benefits provided by the SNS. It defined two categories of services: the common package with three subcategories – basic package, supplementary package and accessory services – common to the 17 regional services composing the SNS; and the complementary package, decided under the rule of the ACs.

Within the common package are: (a) the "core services" include any prevention, diagnostic, treatment and rehabilitation services provided either in primary care or specialized care settings, as well as emergency medical transportation. These basic services are fully funded with public funds with no cost-sharing by patients. (b) The "common supplementary package" includes outpatient pharmaceutical prescription, orthoprosthesis provision, dietary products and non-emergency medical transport. This second package is subject to users' cost-sharing, although in practice, cost-sharing is only applied to pharmaceuticals and to specific orthesis and orthopaedic prosthesis (see Section 3.3.1, *Coverage*). Finally, (c) the "accessory services package", which includes non-essential activities, services or techniques. These types of services have not yet been specified; nevertheless, as in the case of the supplementary package, they are also subject to users' cost-sharing.

The content of the "common package" is determined by the highest governing body of the SNS, the Interterritorial Council, upon the proposals submitted by the Commission on Benefits, Insurance and Financing, and the

technical advice of the Spanish Network of Agencies for Health Technologies and Benefits Assessment (see below).

When it comes to the "complementary package", the ACs' Health Authorities may decide to include further benefits upon the common package if they provide the additional resources needed for funding. However, the inclusion is conditioned on: (a) the justification of the need for a new inclusion and the report to the Interterritorial Council; (b) the allocation of sufficient financial resources to the common core package of services; and (c) the demonstration and approval of financial sufficiency according to the budgetary stability criteria established by the Ministry of Finance.

6.1.4 *Changes in the cost-sharing mechanisms*

The SNS cost-sharing system remained almost unchanged from 1980 to 2012. Basically, outpatient drugs prescription was the only health service co-funded by users. The scheme was simple: cost-sharing affected active workers – regardless of their purchase power, it was set up on a fixed 40% of the retail price of the drug, and there were no caps or co-payment ceilings. In 1993, a co-payment reduction of a fixed 10% was established for specific treatments prescribed for some chronic diseases. In aggregated terms, the actual patients' cost-sharing burden fell from 15% in 1985 to 6% in 2011 (González López-Valcárcel, Puig-Junoy & Rodríguez-Feijoo, 2016).

RDL 16/2012 established a change in cost-sharing conditions. Under the new regulation, cost-sharing was foreseen for the common supplementary package and accessory services and the co-payment scheme has taken into consideration users' household income. However, in practice, only outpatient pharmaceutical prescriptions and specific orthesis and orthopaedic prosthesis are subject to co-payments.

6.1.5 *A new regulation for drugs reimbursement*

The Spanish pharmaceutical market is one of the most regulated sectors of the Spanish economy. In addition to the centralized approval mechanism by the European Medicines Agency, the Spanish Agency for Medicines has to approve the effective commercialization of any drug. Once commercialization

is approved, companies can seek public reimbursement – given the conditions of the Spanish market, an innovative drug not receiving public funding is not likely to be profitable.

RDL 9/2011 and RDL 16/2012 included some structural changes in the rules for drugs pricing and public reimbursement. The new regulation set up the concept of "selective funding", establishing a set of criteria for the Interministerial Commission on Prices of Medicines (the administrative advisory body of the Ministry of Health that decides whether a drug should achieve public funding). These criteria are: (a) severity, duration and consequences of the disease for which the drug is indicated; (b) specific needs of certain groups; (c) therapeutic and social value and incremental clinical benefit in terms of cost-effectiveness; (d) budgetary impact; (e) existence of drugs or other therapeutic alternatives at a lower price or lower cost of treatment; and (f) degree of innovation of the drug.

However, there are some imperfections in the new regulation. A recent report by the National Commission for Markets and Competition, although highlighting some valuable aspects of this legal reform, also points out ambiguities in the decision-making procedure, in particular its vagueness and the lack of an explicit formal weighting mechanism for the application of the aforementioned criteria. The report also stresses the lack of transparency (the pricing reports are not made public) and the unpredictability of the decisions (CNMC, 2015).

6.1.6 *Reforms on public health*

Since 2010, the Ministry of Health has issued two legal texts with implications for public health: Law 42/2010 on tobacco consumption and market regulation, expanding the provisions of the previous "anti-tobacco" 2005 Law (Law 28/2005); and Law 33/2011 on Public Health.

Law 42/2010 mainly aimed at regulating retailing, distribution and advertising, upgrading the provisions issued in the so-called "anti-tobacco 2005 Law" (Law 28/2005), has increased the protection of minors and nonsmokers, (a) expanding smoke-free locations to any public place, and (b) prompting health institutions, particularly primary care, to implement smoking cessation programmes (see Section 5.1, *Public health*). The 2011 Public Health Law outlined principles and actions to include 'Health in

All Policies' in government action on health; it also sought to update and upgrade the coordination mechanisms among the 17 Health Authorities in the country and INGESA, fairly developed in terms of epidemic surveillance and monitoring, but clearly dysfunctional in terms of a common strategy for noncommunicable disease prevention or the development of health promotion and prevention interventions. So, the new regulation has enhanced the coordination mechanisms in terms of epidemic surveillance and control, but above all, through Order SSI/2065/2014, has enacted a common package of public health benefits for the whole country (such as, a single vaccination calendar or a common strategy for neonatal screening, and colorectal cancer screening). Besides, since 2013, the Strategy of Health Promotion and Prevention aims to be the base for the National Strategy on Public Health. Some further developments are pending, such as the implementation of the intersectoral strategy for Health in All Policies and the establishment of a nationwide "Agency" of Public Health.

Lastly, the Ministry of Finance has issued two reforms on taxation affecting alcohol and tobacco products. With the first reform, in 2013, taxation increased by 10% on alcohol and by 3% for a pack of cigarettes; the second wave, to be implemented in 2017, implies a 5% price increase on alcoholic beverages, 2.5% for a pack of cigarettes and 6.8% for rolling tobacco (see Section 3.3.2, *Collection*).

6.1.7 *Progress towards a new care model for chronic patients*

Two nationwide strategic documents coordinated by the Ministry of Health illustrate the priority given to improving care for chronic conditions: the 2011 White Paper on Health and Social Care Coordination in Spain (MSSSI, 2011) and the 2012 Strategy for Chronic Conditions in the National Health System (MSSSI, 2012g). The 2011 White Paper identified practices of health and social care coordination in Spain, noting that existing experiences were rich enough to inspire a real transition; at the same time, it pointed out the lack of a common body of knowledge about successful experiences of integrated care, hampering the design and implementation of effective, equitable and efficient interventions. In turn, the 2012 National Strategy for Chronic Conditions in the SNS provided a conceptual and strategic framework on which to build local implementation. The main domains in this strategy are:

(a) health promotion; (b) primary, secondary and tertiary prevention; (c) continuity of care; (d) reorientation of the care paradigm; (e) how to reach equity; and (f) research and innovation.

Beyond these inspirational and strategic documents, some ACs have initiated the transition towards a new care model for chronic care patients.[1] The most notable implementation experience at AC level has taken place in the Basque Country (Osakidetza, 2010). This strategy entails the following core elements of its care model:

- a population-oriented strategy implying the stratification and subsequent targeting of remedies;
- an expanded vision for prevention of chronic illnesses;
- the need to foster patient empowerment strategies;
- services designed towards continuity of care (that is, development of subacute providers, implementation of integrated budgets, developing changes in professional roles, collaboration with the social sector);
- implementation of interventions aimed at gaining efficiency (such as, e-prescription, telemedicine, on-line advice); and
- the routine use of electronic health records to evaluate and inform the whole strategy. The strategy has been translated into local implementation initiatives: from 2010 to 2013, more than 150 bottom-up initiatives were carried out.[2]

6.1.8 *A new status for Health Technologies and Benefits Assessment*

In February 2012, the SNS Interterritorial Council decided to formally create the Spanish Network of Agencies for the Evaluation of Health Technologies and Benefits (HTBA) with the mandate of evaluation of technologies to support the decisions on inclusion, exclusion and modification of the package

1 According to reports published by the *Observatorio de Modelos Integrados en Salud-OMIS* (http://www.omis-nh.org/), the regions that have most actively developed experiences on integrated care in Spain in the years 2014 and 2015 are the Basque Country, Catalonia and Andalusia. However, in other regions there is no information on experiences of integrated social care and health services.

2 Some results on the evaluation of the Strategy (in terms of citizen's satisfaction, reduction in hospital and emergency department (re)admissions can be consulted in Toro Polanco et al. (2015).

of benefits. Unlike what had happened in the past, the new regulation enacts that the reports by the Network of HTBA are mandatory and required to make any decision on the inclusion, exclusion or modification of benefits.

The Network was formally created by RDL 16/2012, setting up the governing body and functioning procedures in October 2013 through the Order SSI/1833/2013. The network coordinates the work of seven regional entities (in Andalusia, Aragon, Basque Country, Canary Islands, Catalonia, Galicia and Madrid) and a national Agency (*Instituto de Salud Carlos III*, ISCIII), and seeks to prioritize studies, coordinate projects and standardize methodologies. The work of the network is based on the Annual Plan approved by the SNS Interterritorial Council. Since 2013, the HTBA Network had produced 210 assessment reports and 15 clinical guidelines (REDETS, 2017).

In addition, new legislation has been issued to regulate monitoring studies aimed at informing decisions of continuation of technologies currently in the package of benefits (Order SSI/1356/2015). The Ministry of Health, the ACs, the MF for civil servants or any other third party may ask for the monitoring of a specific technology or procedure. The Commission on Benefits, Insurance and Financing, which is attached to the SNS Interterritorial Council, assesses the applications and the Ministry of Health decides what technologies or procedures are being monitored by the Network of HTBA. There are four technologies under monitoring: (a) oesophageal biodegradable stent in benign conditions; (b) endobronchial valve in the treatment of persistent air leaks; (c) mitral clip percutaneous insertion in patients with severe mitral insufficiency refractory to usual treatment; and, (d) left atrial occlusion in patients with atrial fibrillation.

6.1.9 *"Do-not-do" recommendations to tackle low value care*

The number of voices for a value-based health system has increased over the last decade, very likely prompted by the economic and financial crisis. Although some regional agencies for health technology assessment had already provided a methodological insight on how to foster disinvestment (such as the Methodological guide for the identification, prioritisation and assessment of obsolete health technologies (Ruano Raviña et al., 2007), or Guide for technologies disinvestment (Ibargoyen-Roteta, Gutiérrez-Ibarluzea & Asua, 2009)), in 2013 the first nationwide initiative was put in

place. The MSSSI, with the methodological advice of GuíaSalud (a national programme for the development and implementation of clinical guidelines), invited each of the medical scientific societies in the country to provide five *"do-not-do"* recommendations (MSSSI, 2017o), replicating the well-known "Choosing Wisely" initiative (ABIM Foundation, 2017). As a consequence of this initiative, the ACs' Departments of Health are operationalizing the monitoring of a number of those low-value services.

Concurrent with this *"do-not-do"* strategy, an atlas of variations in low-value procedures has been recently published, raising awareness on the vast and unwarranted differences in value across health care areas and hospitals all over the country (García-Armesto et al., 2016).

6.2 Future developments

The political situation since 2016 has moved the political scenario from an absolute majority where major decisions were made through Royal Decree-Laws (executive legislation) to a fragmented parliament, the consequence of two consecutive electoral processes, in which the public debate on the health system remained marginal. Nevertheless, topics that will very probably be on the political agenda in the near future will be: (a) a return to the legislation previous to RDL 16/2012 when it comes to insurance entitlement; (b) the reform of the current co-payment system as current thresholds are just barely progressive and, according to recent evidence, may have a negative short-term impact on patients' adherence to chronic care treatments (González López-Valcárcel, Puig-Junoy & Rodríguez-Feijoo, 2017); (c) the expansion of some regional initiatives on good governance in public health systems (Basque Country and Madrid have pioneered this debate at local level); and (d) a public debate on taxation of sugary beverages (already initiated in Catalonia).

The aforementioned initiatives on value-based care, in particular the monitoring of the *"do-not-do"* recommendations, will materialize in local disinvestment projects that will very likely fuel public debate. Lastly, over the years some first steps have been taken to include patients' voices in the development and implementation of clinical guidelines; once the raising awareness cycle has come to an end, the National Programme of Clinical Guidelines, GuíaSalud, has initiated a new project on patient participation that is supposed to yield outcomes in the next few years.

Finally, although the annual growth of public expenditure in long-term care has clearly increased, the development of the National System for the assistance of dependent people (SAAD) is the target of continuous controversy (see Section 4.1.2, *Infrastructure*). A recent report by a dedicated commission composed of representatives of the central government and seven ACs (Catalonia, Galicia, Andalusia, Asturias, Aragon, Canary Islands and Castile-Leon) has highlighted the need for a major revision of the SAAD to guarantee its sustainability as well as the need to reconsider the current financing mechanism to assure the coverage of all beneficiaries (MSSSI, 2017r).

7

Assessment of the Health System

Chapter summary

- The underlying principles and goals of the SNS have not changed in the last decade, despite the vast impact of the financial and economic crisis on Spanish society and the austerity measures imposed by the 2010 Stability Programme for Spain.
- The SNS response, for instance, budgetary cutbacks and new regulations on the scope, breadth and depth of coverage, have not had any substantial short-term impact on health outcomes.
- The mix of unemployment or precarious employment, lower household incomes, and an increasing indirect taxation has increased the poverty level of the country, resulting in an increase of the inequality gap and a reduction of the degree of intergenerational mobility.
- The intersectoral strategy for Health in All Policies has not been fully implemented.

- Some achievements have been reached in the SNS in the last years, including: the improvement of amenable and preventable outcomes; the strong effect of the SNS in household income redistribution; the negligible difference across socioeconomic groups in access to preventive services and medical examinations; the level of financial protection that limits individual financial hardship; the improvement in hospital productivity; overall patient satisfaction with the SNS; and, the level of patients' rights.

- Several challenges remain in the SNS: increasing obesity, persistent gap in self-reported health across socioeconomic groups, the impact of non-health care determinants, long waiting times in surgery and specialized visits; the effects of cost-sharing mechanisms on highly effective drugs dispensation and adherence to required treatments; among others.

- Structural measures are needed to improve resource allocation and technical efficiency, as well as patients' participation in decisions on their care.

7.1 Monitoring health system performance

Despite the vast impact of the financial and economic crisis on Spanish society, and the austerity measures imposed by the Stability Programme for the Kingdom of Spain, the underlying principles and goals of the SNS (universal coverage, equitable access to a comprehensive package of benefits, easy access to primary care and gatekeeping, taxation as the basis for financing with limited patient cost-sharing and low risks of financial hardship) remain in place. On the other hand, the SNS response in the form of budgetary cutbacks and new regulations on the scope, breadth and depth of coverage did apparently not have any substantial immediate impact on health outcomes, although discontent is observed to be growing among the population and professionals.

7.1.1 *SNS information system*

This section describes the nationwide initiatives approved by the ACs in the context of the Interterritorial Council. Individual ACs may have developed these initiatives further; for example, projects aiming to reuse and link electronic health data sources to develop smart health systems – notably, in Aragon, Basque Country or Catalonia.

The MSSSI, as well as the Health Departments of the 17 ACs, have responsibility for the design, collection and maintenance of data sources that allow monitoring of health, health determinants and health system performance. Traditionally, these information systems have operated as a collection of data repositories that provided partial information on a specific topic, frequently aimed at responding to the data requirements of the National Plan of Statistics. In the last years, the MSSSI and the ACs have been looking for a more integrated approach with a view to providing more complete, meaningful and actionable information. As a consequence of the 2003 Law for the Cohesion and Quality of the SNS, the MSSSI set up the so-called Information System for the SNS (IS-SNS) (MSSSI, 2014f).

The IS-SNS, whose main users are the health authorities, professionals, citizens and civil organizations, is run by the MSSSI under the mandate of the Interterritorial Council. Since its inception, the IS-SNS has been working on the development of the Statistical Portal of the SNS (MSSSI, 2017s), the SNS Data-Bank (MSSSI, 2017t), the reporting of the SNS Key Indicators (MSSSI, 2017b), the Model of Indicators for the analysis of hospitalization (iCMBD) (http://icmbd.es/) and several technological background projects, such as the "Insurance ID card" project, the EMR project (more information on the EMR project can be found at MSSSI, 2017k) and the "Interoperable Electronic Prescription" project (see Section 4.1.4, *Information technology and eHealth*).

Other initiatives within the scope of the IS-SNS are the new regulation on Specialized Care Activity registration (RAE-CMBD), two initiatives on primary health care (BDCAP and BIFAP) and the accreditation of scientific data collections as utility registries for the SNS.

A new regulation was enacted in 2015 (RD 69/2015) aimed at the registration of all the activity developed in specialized care. This registry enhances the information currently collected on hospitalizations (consolidated since the mid-1990s), and increases its scope to emergency care provided in hospital

premises, and outpatient specialized care, in particular, day-case care, day-case surgery and at-home hospitalizations.

The primary care data set (BDCAP) collects clinical data from a random sample of primary health care (including all the registered population and their episodes). It includes information on active health problems, interventions and some intermediate health outcomes. BDCAP aims to facilitate the study of the effectiveness, quality and cost of primary care. Designed, curated and maintained by the MSSSI, it has been operational since 2011 and currently manages 4.68 million electronic health records covering 16 of the 17 ACs.

The primary care drugs prescription data set (BIFAP) aims to facilitate pharmaco-epidemiological research evaluating the benefits or risks of drugs as used in real-life outpatient settings. The information is voluntarily collected by GPs and paediatricians working in seven ACs. BIFAP includes clinical and prescription data from around 4.8 million patients. BIFAP is maintained by the Spanish Agency of Medical Products and Devices, a public agency of the MSSSI.

In turn, the utility registries are a compilation of data sources, a by-product of different research or monitoring projects, endorsed by the MSSSI after an accreditation process. The information collected in those "registries" is deemed of interest to inform SNS policies. The data sources currently certified are: (a) RECALCAR (a registry on health care quality in the departments of cardiology); (b) REDECAN (a joint data set by the Spanish network of cancer registries); (c) ENVIN-UCI (a Spanish registry on nosocomial infections in intensive care units); (d) a joint data set of the Spanish Network on Hospital Costs Measurement; (e) ARIAM (a registry for the analysis of the delay in therapeutic interventions in acute myocardial infarction); (f) the Spanish Fertility Registry; and (g) the Atlas VPM (*Atlas de Variación de la Práctica Médica en el Sistema nacional de salud español* (Atlas of Variations in Medical Practice in the National Health System)) data infrastructure for the assessment of unwarranted variations in health care performance.

7.1.2 *Monitoring initiatives*

Given the richness of the data available (the SNS occupies a remarkable position in the meaningful adoption of information technologies), EMRs are not being used systematically to monitor the effect of interventions and policies.

It is worth highlighting three nationwide monitoring initiatives, key indicators for the SNS (*Indicadores Clave del Sistema Nacional de Salud*, INCLASNS), the model of indicators for the anlysis of hospitalization (iCMBD) and the Atlas VPM project, namely the atlas of variations in health care performance in the SNS.

INCLASNS compiles data from the different administrative data repertoires. Conceptually, INCLASNS is an adaptation of the framework developed by the European Core Health Indicators initiative and contains 247 indicators, with a short list of 50 indicators, covering a number of areas: health outcomes, determinants of health, health care resources, utilization and adequacy, accessibility, effectiveness and safety, expenditure and population satisfaction. The main goal is the overall assessment of the health system and the comparison of performance across ACs. INCLASNS is run by the MSSSI on behalf of the Interterritorial Council (MSSSI, 2017b).

Furthermore, since 2007, the iCMBD – the model of indicators for the anlysis of hospitalization – has monitored the outcomes of a series of indicators of performance and results of the hospital network of the SNS, including indicators for the evaluation of certain strategies in the SNS and the safety of the patient (see http://icmbd.es/).

Since 2002, Atlas VPM has linked a number of administrative data sets consolidated by the 17 ACs, the MSSSI and the National Statistics Office. So far, Atlas VPM has analysed unwarranted differences in the effectiveness, efficiency, quality and safety of hospital providers at geographical level. Hence, Atlas VPM[1] has found unwarranted variability in orthopedic procedures, cardiovascular care, cancer surgery, mental health admissions, and potentially avoidable hospitalizations in chronic conditions, ischaemic stroke and low-value procedures.

1 Atlas VPM is curated and exploited by the Institute for Health Sciences (IACS) in Aragon, a public institution of the SNS at regional level. All the research outputs are open access at www.atlasvpm.org.

7.2 Health system impact on population health

The usual monitoring mechanisms of the statutory SNS and some published research (González López-Varcárcel & Barber, 2017) have not found any impact of the health system reforms on the health of the population. On the contrary, a positive trend of amenable[2] and preventable[3] mortality was observed in this period (Fig. 7.1). Amenable mortality declined from 103.6 deaths per 100 000 inhabitants in 2000 to 65.8 deaths in 2015, far below the EU average (125 deaths per 100 000 inhabitants in 2015). A similar trend was observed in the case of preventable mortality, declining in Spain from 62.9 preventable deaths per 100 000 inhabitants in 2000 to 45.4 deaths in 2015, far below the EU average (60.9) and one of the lowest preventable death rates in the EU. When using the consensus list of causes of avoidable mortality agreed for the Spanish case (Gispert, Bares & Puigdefabregas, 2006), a noticeable decrease in standardized mortality can be observed between 2000 and 2014, but since 2011 the reduction has flattened (Barber Pérez, González López-Valcárcel & Pinilla, 2017).

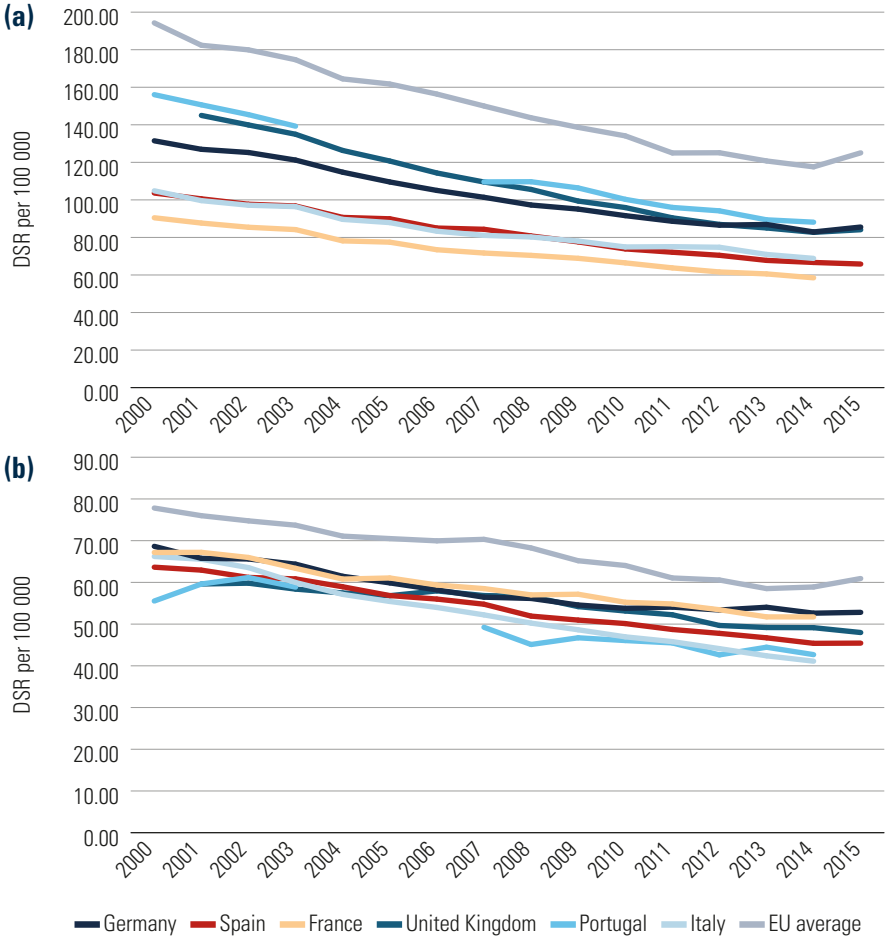
When it comes to maternal and child mortality, a slight reduction is observed in maternal mortality between 2000 and 2014 (from 3.8 to 3.5 deaths per 100 000 live births), whereas in infant mortality the reduction is notable (from 4.4 to 2.9 deaths per 1000 live births) (WHO Regional Office for Europe, 2017).

Considering specific causes of death, deaths due to cardiovascular diseases have declined considerably. Death rates due to ischaemic heart disease declined from 65.9 deaths per 100 000 inhabitants in 2000 to 36.4 deaths per 100 000 inhabitants in 2014, while deaths due to cerebrovascular disease declined from 56.7 deaths per 100 000 inhabitants to 27.2 deaths per 100 000 inhabitants during the same period. Cancer mortality has also experienced a decline. Breast cancer mortality reduced from 24.1 deaths per 100 000 women in 2003 to 21.0 deaths per 100 000 women in 2013. A smaller reduction has been observed in the same period for colorectal cancer (with a reduction from 27.6 deaths per 100 000 inhabitants to 27.1 deaths per 100 000 inhabitants) and cervical cancer, with a reduction from 2.3 deaths per 100 000 women to

2 Amenable mortality: death from causes that should not occur if people have access to timely and effective health care.

3 Preventable mortality: deaths that could have been avoided by public health interventions focusing on wider determinants of health.

FIG. 7.1 Amenable mortality (a) and preventable mortality (b) in Spain and selected countries, 2000–2015; direct standardized rates per 100 000 inhabitants



Source: Calculations based on WHO (2017c).

Note: List of amenable and preventable mortality as defined by Nolte & McKee (2004).

2.2 deaths per 100 000 women. Finally, a dramatic reduction in deaths due to unintentional accidents has been observed, from 26.4 deaths per 100 000 inhabitants to 14.0 deaths per 100 000 inhabitants (OECD, 2015d).

Better treatments and better control of hypertension, the expansion of population screening programmes (with 77% of participation in breast cancer screening and 67.7% in cervical programmes), the implementation of a new demerit point system in traffic legislation (Pulido et al., 2010), the implementation of two laws on smoking cessation (Pinilla & Abásolo, 2017), and the reduction in alcohol consumption, particularly for men (declining

4.9% between 2006 and 2014) (see Table 1.4) might be factors contributing to declining death rates.

7.2.1 *Equity in outcomes*

Differences in self-reported good or very good health persist across income or educational level quintiles, although figures have tended to converge since 2005. Self-perceived health was 22.9 points higher in 2005 in the most affluent individuals (78.7% versus 55.8%) whereas in 2015 the difference was 8.8 points (81.6% versus 72.8%); similar trends can be observed in self-reported morbidity and self-perceived long-term limitations. Self-reported morbidity was 14 points higher in less affluent people in 2005, whereas in 2015 the difference was 3.4 points (30.8% versus 27.4%). With regard to self-perceived long-term severe limitations, the difference declined from 5.6% in 2005 to 3.4% in 2015 (Eurostat, 2017e).

The eventual impact of the crisis and subsequent reforms on the distribution of health outcomes across socioeconomic strata is, therefore, still undetectable; the likely effect requires a longer period to manifest. The mix of unemployment or precarious employment, lower household incomes and growing indirect taxation (OECD, 2015a; Eurostat, 2015) has increased the poverty level of the country (almost five points between 2005 and 2016) with 27.9% of the population under the poverty threshold and a 3.4-fold variation across ACs (from 44.6% of the population in Canary Islands to 13% in Navarre). Moreover, impoverishment has hit more already poorer households, increasing the inequality gap; since the inception of the economic crisis the Gini coefficient has increased, from 0.32 in 2008 to 0.35 in 2016 (INE, 2016a), while the degree of intergenerational mobility has decreased (García-Altés & Ortún, 2014). Evidence suggests that there is scope for implementing the intersectoral strategy for Health in All Policies enacted in Law 33/2011.

7.3 **Access**

Access to health care services has been generally preserved although the reforms have entailed some changes in the breadth and scope of coverage,

as well as in cost-sharing mechanisms, that have partially affected the SNS *status quo* (see Section 6.1, *Analysis of recent reforms*).

There are no studies analysing the effect of the changes in the breadth of coverage. Although the basis for entitlement changed, *de facto*, it only temporarily affected non-emergency care for undocumented migrants (emergency care and maternal and child care remained covered), generally younger and healthier individuals; hence, any negative impact on health is expected to be limited.

When it comes to the scope of coverage, the reform was actually more focused on redefining its depth than on narrowing the package of benefits. The new co-payment policy was observed to affect the average level of outpatient dispensations for any drug (Puig Junoy, Rodríguez-Feijoó & López-Valcárcel, 2014), having a dramatic short-term effect on highly effective drugs (such as anti-diabetic treatments, thrombolytic drugs and treatments for chronic obstructive pulmonary disease) (Puig Junoy et al., 2016), and reducing adherence to effective drugs in highly vulnerable patients (such as after an acute myocardial infarction) (González López-Valcárcel, Puig-Junoy & Rodríguez-Feijoo, 2017). Nevertheless, the effect faded rather soon after the inception of the co-payment (around 18 months).

When it comes to the immigrant population, it is worth noting the limitation of legal access to primary health care services for those non-registered or authorized foreigners resident in Spain as enacted in the RDLs 16/2012 and 1192/2012. The new regulation included exemptions for maternal and child care and emergency assistance for serious illness or accidents, whatever their cause, until the end of the episode of illness (see Section 3.3.1, *Coverage* and Section 6.1.2, *Changes in the breadth of coverage*). It is not possible to quantify the number of migrants who lost their health care entitlement, which was previously linked to the condition of residence. In any case, there is evidence of additional access barriers (administrative, legal or cultural) for the immigrant population compared with native Spaniards (Urbanos-Garrido, 2016).

7.3.1 *Waiting lists*

Austerity measures, essentially budgetary and supply cutbacks, may have been the underlying cause of the increase in waiting lists observed in Spain

in the very aftermath of the crisis. According to OECD data, waiting times for cataract surgery increased – from 89 days in 2010 to 105.1 days in 2015 (median time 82.5 days). Similarly, waiting times for hip replacement increased from 136 to 150.1 days (median wait of 130 days). In the case of knee replacement, the median waiting time was 137 days in 2015 (OECD/EU, 2016).

When it comes to primary care, according to patients' responses, 86% of non-emergency primary health care appointments took place within 2 days of being requested, with 36% of people requesting care being assisted the same day (MSSSI, 2016k).

Since 2014, the number of patients on the surgical waiting list has increased, although waiting times and the percentage of individuals above the 6-month threshold have slightly decreased.[4] In the case of diagnostic visits, although the number of patients on the waiting list and average waiting times have stabilized, patients above the 60-day threshold have increased, from 30.5% in June 2014 to 41.1% in June 2016 (MSSSI, 2016j).

7.3.2 *Supply distribution*

The vast majority of human resources in primary health care and 92% of doctors and 90% of nurses in specialized care work in the public sector. The distribution of physicians and nurses in 2015 showed a fairly low variation across ACs (MSSSI, 2017b). In the case of primary health care workers, the geographic variation in personnel per 100 000 inhabitants was fairly small for both, physicians and nurses, and smaller than the variation in the case of doctors and nurses working in hospitals or specialized outpatient settings. The observed differences are consistent with the strong regulation of the SNS, where staff are distributed according to Health Authorities' planning and redistributive policies. This small variation contrasts with the distribution of dentists (whose solo or small practices are not included in the package of benefits), which follows market forces. In this case, the ratio of variation is as great as three times across ACs (Spanish General Council of Dentists, 2016), the largest compared with the distribution of other health workers.

4 Since June 2016, there has been a change in the way waiting lists are reported, which makes it difficult to assess subsequent trends.

The uneven distribution of hospital beds and PCC across ACs (see Section 4.1, *Physical resources*) should not be seen as a potential source of inequalities in access but as the consequence of an uneven distribution of the population across the territory – the population density across ACs varies between 25 and 795 inhabitants per km^2. Despite the uneven distribution, ACs' planning and redistributive policies regulate the allocation of centres in such a way that 90% of the population in Spain lives less than 30 minutes away from a hospital (between 74% and 98% depending on the AC) and 95% of the population resides less than 60 minutes from a tertiary hospital (between 47% and 98.2% depending on the AC). When it comes to primary health care, centres and attached local health offices cover the whole population and are settled within a 30-minute ride from the place of residence.

The observation of negligible variations across health care areas (for instance, areas developed around a hospital) in the standardized population rates of highly effective admissions (acute myocardial infarction or acute ischaemic stroke) or highly effective procedures (breast cancer surgery, colorectal cancer surgery and lung cancer surgery) is an indirect indicator of the absence of access barriers due to supply distribution (Angulo-Pueyo et al., 2017).

7.3.3 *Unmet needs*

After the onset of the crisis and subsequent reforms, participation in preventive services has been retained. Differences across educational quintiles have not significantly widened in the case of breast and cervical cancer. So, for example, in 2014, the number of women who never had a mammogram as breast screening reached 7.2% in those with the lowest educational attainment versus 3.2% in those with the highest attainment, a negligibly larger difference than the one in 2008 (8.2% versus 5.7%). The percentage of women who never underwent a smear test for cervical cancer prevention was 20.9% in those with the lowest educational attainment versus 11.3% in those with the highest one, a similar difference to that in 2008 (24.9% versus 16.4%). New legislation is in progress aiming to include the organized programme of cervical cancer screening in the basic services of the SNS. For colorectal cancer screening, the overall improvement (from 90% of eligible individuals not covered in 2008 to 80.8% in 2014) also differed across education levels:

82.8% were not covered in the lower educational level versus 76.6% in the higher education levels (Eurostat, 2017e). This fact has no apparent association with the health reforms it is rather related to colorectal cancer screening being initially implemented in urban populations, where individuals with higher education are generally more frequent.

Latest data for unmet needs for medical examinations (for any reason) show negligible differences between the better and worse-off, Spain being one of the countries with the smallest difference (Fig. 7.2).

The percentage of unmet needs for medical examination due to economic reasons followed a similar pattern; while better-off individuals declared no unmet needs for economic reasons neither in 2008 nor in 2015, less affluent respondents reported a negligible increase of unmet needs from 0.2% in 2008 to 0.4% in 2015.

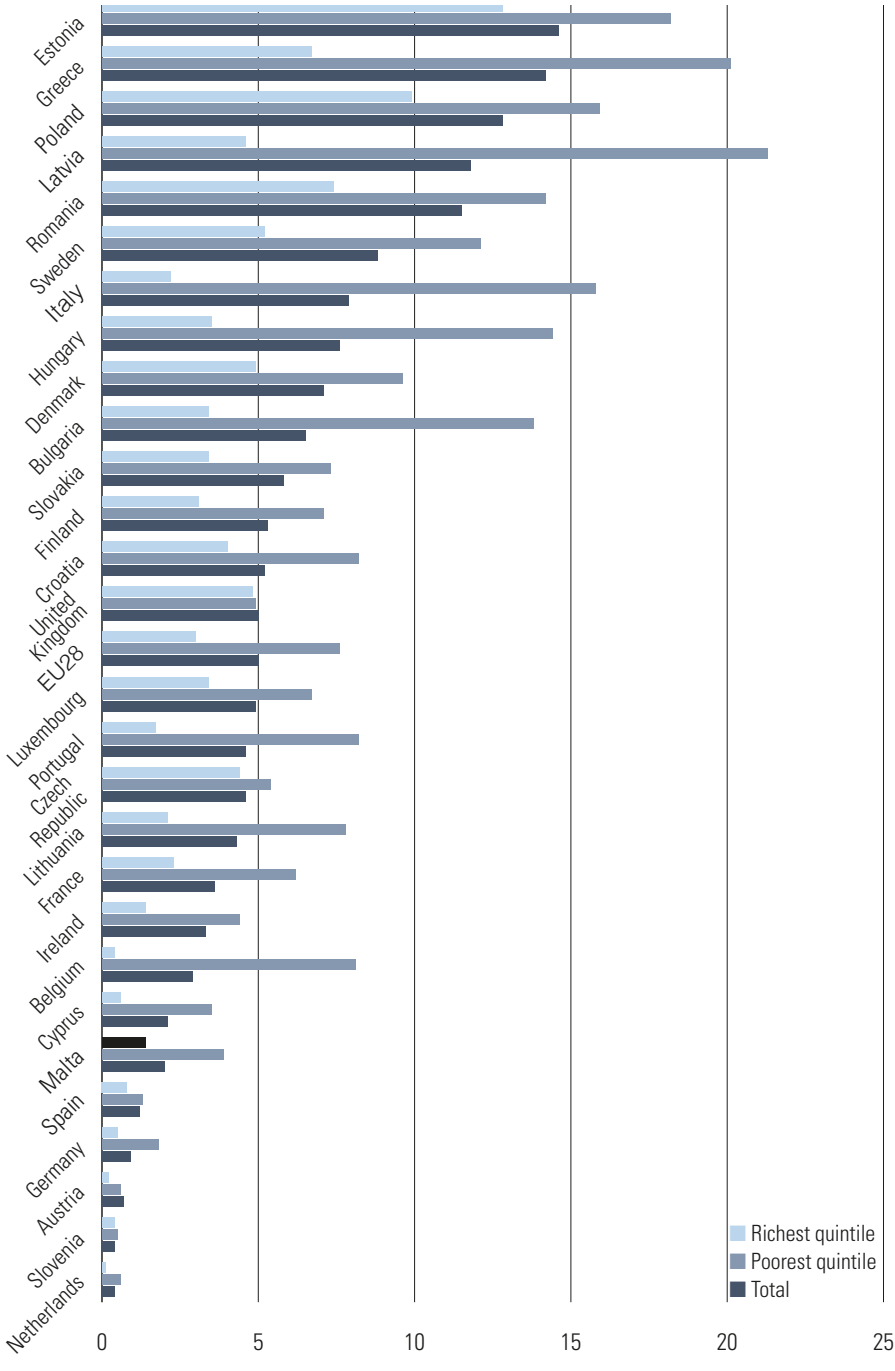
This was not the case for unmet needs in dental care (due to economic barriers) as the percentage increased in the lowest income quintiles. While in the better-off, figures decreased (from 1.2% in 2008 to 0.9% in 2015), in the worse-off individuals unmet needs rose from 7.0% in 2008 to 10.5% in 2015. However, the underlying cause should not be seen as a collateral effect of the coverage reforms, as dental care has never been part of the package of benefits, but as a consequence of the impact of the crisis on household budgets.

Finally, in view of the aforementioned access barriers, the self-reported health status of the immigrant population has been worsening over the years compared with native population, very probably as a consequence of a differential impact of the economic crisis (Gotsens et al., 2015).

7.4 Financial protection

In 2014, 71% of total health expenditure was publicly funded via taxation; the remaining financing came from OOP expenditures (24%) and voluntary health insurance schemes (5%). It is worth noting that the share of private expenditure on health has increased from 25.6% in 2010 to 29.1% in 2015, the vast majority of this growth attributable to OOP expenditure (see Section 3.4, *Out-of-pocket payments*). This growth has represented a small increase in household expenditure on health, from 3.1% in 2011 to 3.4% in 2016 (average expenditure increase from €894.7 to €966.7 per household) (INE, 2016b).

FIG. 7.2 Unmet needs for medical examinations (for financial or other reasons), by income quintile, EU/EEA countries, 2015



Source: Eurostat (2017c).

Notes: EEA: European Economic Agreement; EU28: European Union Member States at July 2013.

Despite this increase in OOP payments, the risk of catastrophic expenditure for households is minor. On the one hand, the reduction observed in the government contribution to health expenditure has not essentially changed the scope and depth of the package of benefits. On the other hand, although the taxation system (tax revenues are the main source of government funds) has lost progressivity since 2007 (see Section 3.2, *Sources of revenue and financial flows*), public expenditure has a substantial influence on alleviating household expenditures. When considering the in-kind contribution of the SNS, household income is estimated to increase 15%. Moreover, this impact is progressive as the families in the lowest income quintiles benefit proportionally more than those in the higher quintiles; indeed, when computing household incomes including public expenditure on health (as in-kind benefits for households) the Gini coefficient is reduced (since 2003, between 3.3 and 4.2 percentage points). The largest redistributive effect is attributable to primary health care expenditure. Interestingly, the highest reduction in the GINI coefficient was observed in the immediate aftermath of the economic crisis (Goerlich-Gisbert, 2016).

It is worth noting that in those services not covered by the SNS, in particular dental care (there are no official data for optical care), the level of unmet needs declared as a consequence of economic barriers has increased since 2011. Whether patients' cost-sharing in services covered by the SNS has increased unmet needs is not conclusive. While the 2016 Health Barometer found that 4% declared having stopped taking medications prescribed by a physician of the public sector for economic reasons (MSSSI, 2016k), looking at effective drugs used in secondary prevention of acute myocardial infarction, the new co-payment scheme was followed by a reduction in treatment adherence to high-priced drugs (not in low-priced drugs), irrespective of the income level (González López-Valcárcel et al., 2017).

7.5 Health system efficiency

7.5.1 *Allocative efficiency*

As mentioned above, the SNS is very decentralized (see Section 2.2, *Decentralization and centralization*); decisions on the allocation of resources

are taken by both the central government and the ACs' Departments of Health.

Health care services (as well as education and social services) are mainly funded with resources from the Fund for Basic Public Services. This fund represents 75% of ACs' aggregated fiscal resources and seeks to evenly provide sufficient funding to the ACs according to a formula of 'weighted need' (see details in Section 3.3.3, *Pooling and allocation of funds*). This fund is complemented with a general fund, the Fund for Global Sufficiency, which largely guarantees the financial *status quo* of the ACs, based on the relative level of expenditure at the moment of the decentralization of health care competences (2001). This second mechanism has largely hampered the reallocation of funds, as it *de facto* perpetuated financing imbalances across ACs not driven by differences in need. Furthermore, funds allocation within ACs follows a rather retrospective approach, generally not based on effectiveness, leading, for example, to the widening of the gap between funding for hospital/specialized care and primary care. The share for hospital and specialized services increased 4.3% between 2009 and 2015 (from €39 251 million to €40 942 million), whereas the financing of primary health care services declined 13.3% in this period (from €10 775 million to €9336 million) (MSSSI, 2015c, 2017h) (see Section 3.2, *Sources of revenue and financial flows*).

Although cost-effectiveness is required by law as a main point when making decisions on resource allocation, few steps have been taken in that sense. It is worth highlighting the new role of the Spanish Network of Agencies for Health Technologies and Benefits Assessment that is mandated to report on the effectiveness and efficiency of techniques, technologies and procedures considered for inclusion in the package of benefits, as well as to monitor and report on the discontinuation of technologies currently in the package (see Section 6.1.8, *A new status for Health Technologies and Benefits Assessment*). This approach has indeed superseded the classical priority-setting mechanism based on health strategies or general plans – inspirational documents whose recommendations were not always based on effectiveness. The new *status quo*, however, does not change the advisory role of the health technology assessment network, and none of its reports and recommendations are legally binding.

Nevertheless, initiatives looking for increasing value as way to reallocate resources are gaining momentum in the SNS. The Ministry of Health, with the methodological advice of GuíaSalud (a national programme for the

development and implementation of clinical practice guidelines), invited each of the medical scientific societies in the country to provide five *"do-not-do"* recommendations, replicating the "Choosing Wisely" initiative by the American Board of Internal Medicine (MSSSI, 2017o). As a consequence of this initiative, the ACs' Departments of Health are putting into operation the monitoring of a number of unnecessary or harmful services and implementing local measures to reduce them. Concurrent to this strategy, an atlas of variations in procedures with low levels of effectiveness has been recently published, raising awareness on the vast and unwarranted differences across health care areas and hospitals all over the country (García-Armesto et al., 2016). The observed excess cases of low-value procedures entail, at population level, high opportunity costs and, subsequently, a high potential for reallocation. This atlas is being used by the health authorities to monitor local initiatives in Andalusia, Navarre and Aragon.

7.5.2 *Technical efficiency*

This subsection outlines some of the achievements and challenges in terms of technical efficiency. Achievements include: a growth in hospital productivity, an increasing orientation of hospitals towards day care, and policies affecting the average price of drugs. Challenges include inappropriate staff mix, inappropriate use of resources and inadequate pricing for new drugs.

Achievements

Increase in hospital productivity

A recent study on the evolution of technical efficiency in acute SNS hospitals, accounting for 86% of total SNS activity, found an average increase in productivity, from 0.88 in 2003 to 0.91 in 2013 (maximum value 1), with small variation (that is, coefficients of variation below 10%) across hospitals. This progress in productivity translates into 14.2% more outputs (adjusted discharges and outpatients visits) using the same amount of inputs (doctors, nurses, beds) (Gorgemans et al., 2017). One of the drivers of this increase in productivity may be the shift to day care.

Hospital orientation to day care

Length of stay has decreased from 7.6 days to 6.9 days between 2003 and 2015. The decrease observed in surgical stays has been even larger (currently 6.5 days). In the case of medical stays, the reduction might be related to early discharge initiatives linked to long-term care services or development of home-care programmes. In the case of surgical stays, beyond the reduction in presurgical stays (from 2.2 days to 1.5 days), the increase in day surgery is very likely to play a major role – while in 2003 the share of day surgery was 33.7%, in 2014 the average rate amounted to 48% of overall surgical activity (Comendeiro-Mälloe et al., 2017).

Policies affecting the average price of drugs

Reference prices, prescription by active ingredient and dispensation of generic drugs have been the three policies oriented to increase the efficiency of pharmaceutical care. Modestly incepted in the late 1990s, and regulated in several legal provisions, the latest being RD 177/2014 (see Section 2.4.5, *Regulation and governance of pharmaceuticals*), the three measures are complementary. Thus, once the maximum price at which a drug could be financed by the public sector has been decided, and homogeneous groups of drugs to which this reference price is applicable are set up, doctors have to prescribe using the active principle and the retailing pharmacists have to dispense the cheapest drug within the group, usually a generic. Since 2011, the use of generic drugs has increased from 34.2% to 48% in 2014. With regard to the 2014 regulation on average cost per prescription, its impact is still uncertain as, in the years following the measure, the cost per prescription increased 0.31% in 2015 and 1.71% in 2016 (MSSSI, 2017p).

Challenges

Inappropriate staff mix

The rate of nurses per population in Spain remains one of the lowest among EU Member States, with a ratio of nurses to doctors' of 1.4, far below the OECD countries' average ratio (2.5). In the case of primary care, where nurses

are supposed to have a major role in health promotion and prevention as well as in the care of chronic care patients, the ratio is even lower, with just 0.85 nurses per doctor (OECD, 2016d).

When it comes to the distribution of professional roles, beyond micro-level allocation of tasks at the bedside, the only statutory development in the last decade has been the regulation on prescriber nurses. While the new rule (RD 954/2015) allowed nurses to prescribe under specific circumstances (as specified in jointly elaborated clinical guidelines and protocols, and with prescriber nurses accredited according to specific criteria and procedures), it still needs to be implemented.

Finally, although long-term care expenditure has increased, particularly the amount spent on home care (see Section 5.8, *Long-term care*), the number of formal workers (4 workers per 100 people aged 65 and over) is still below the OECD average (6 workers per 100 people aged 65 and over) and does not cover the needs of highly vulnerable chronic care patients and families. Nevertheless, accredited informal carers cover 34% of personal services provided to SAAD beneficiaries (OECD, 2017d) (see Section 5.9, *Services for informal carers*).

Inappropriate use of resources

The inappropriate use of resources may translate into technical efficiency flaws at micro-level but it may also challenge allocative efficiency at macro-level. The evidence on potentially avoidable hospitalizations in chronic care conditions, the utilization of highly effective technologies in non-eligible patients, or the use of techniques or procedures that have more cost-effective alternatives is well known in the Spanish health system (Angulo Pueyo et al., 2015; García-Armesto et al., 2016). For example, although there is a decrease in potentially avoidable hospitalizations in chronic obstructive pulmonary disease, the variation across health care areas in the country is substantial – 4.6-fold difference and 5 times more than that expected by differences in epidemiology (Ibañez-Beroiz et al., 2017). Another example is the uneven use of back, knee or hip surgery in degenerative conditions beyond differences in epidemiology, which is evidence of the overuse of effective procedures in non-eligible patients; the variation across health care areas is as large as 3.4 times in back surgery, and 4 times in hip and knee

replacement, almost twice what is expected by differences in epidemiology (Ridao-López et al., 2014a, 2014b; Angulo Pueyo et al., 2014).

Lastly, the inappropriate use of medicines is also vast and affects any drug group as well as any population subgroup, being one the greatest sources of technical inefficiency. For example, the prescription of calcium and vitamin D supplements in older women showed that at least 85.8% of patients had at least one criterion of inappropriateness (Youngster et al., 2017), and 29% of them took an inadequately excessive daily-dose (Sanfélix-Gimeno et al., 2013). Besides, the prescription of antibiotics in the first 2 years of life accounted for 1.5 courses per year, with just a third of prescriptions using first-line penicillin treatments.

Inadequate pricing for new drugs

When it comes to the price-setting mechanisms for drugs reimbursed by the public system, the negotiation process is inspired by a number of criteria: (a) severity, duration and consequences of the disease for which the drug is indicated; (b) specific needs of certain groups; (c) therapeutic and social value and incremental clinical benefit in terms of cost-effectiveness; (d) budgetary impact; (e) existence of drugs or other therapeutic alternatives at a lower price or lower cost of treatment; and (f) degree of innovation of the drug. Recent decisions on the pricing of anti-hepatitis C drugs (Campillo-Artero et al., 2016) have cast shadows on whether this mechanism leads to the most efficient price. A recent report by the National Commission for Markets and Competition, while highlighting some valuable aspects of this legal reform, also points out ambiguities in the decision-making process, in particular, its vagueness and the lack of a formal explicit weighting mechanism for the application of those aforementioned criteria. The report also stresses the lack of transparency (the pricing reports are not made public) and the unpredictability of the decisions (CNMC, 2015).

7.6 **Health care quality and safety**

The SNS draws on a long tradition in development and implementation quality and safety initiatives. Many of the current lines of work can be regarded as stemming from the 2010 Quality Plan, notably the 10 national health

strategies focused on the most relevant health problems (MSSSI, 2017i), the extension of GuíaSalud (the national network for development and implementation of clinical guidelines) (GuíaSalud, 2017), the development of the National Strategy for Patient Safety (MSSSI, 2016d), the aforementioned Scientific Societies Commitment for SNS Quality (MSSSI, 2017o) or the National Plan for Antibiotic Resistance (AEMPS, 2014b).

Despite the efforts in raising awareness and creating a culture of quality and safety, the outcomes are debatable. Except in the case of in-hospital mortality after acute myocardial infarction, after coronary revascularization (percutaneous coronary intervention plus coronary artery bypass graft), and after fracture repair, showing an average decline, the remaining indicators either hold or increase, particularly in the case of safety events (a registration bias may be still possible in this case). Finally, readmissions follow the same pattern: except in readmission after an acute myocardial infarction episode, those readmissions after surgery, psychiatric acute admissions and asthma do not show any particular trend (Table 7.1).

However, the massive variation in quality and safety across hospitals is more concerning. Recent figures show that, for example, in thromboembolism and deep vein thrombosis after surgery, there is a 1.9-fold variation across hospitals, in-hospital mortality after coronary artery bypass graft varies 2.2 times and in-hospital mortality after percutaneous coronary intervention exhibits a 3.5-fold variation.[5] The impact that low quality might have on excess costs is worth highlighting – a study showed that thromboembolism after surgery increased average length of stay by 1.74 days (Comendeiro-Mälloe et al., 2015).

When it comes to the use of appropriate treatments in nosocomial infection, the ENVIN-UCI study (SEMICYUC, 2016) revealed that in intensive care units in 2016, 14.4% of patients with pneumonia associated with mechanical ventilation and 18.8% of patients with bacteraemia associated with catheter, did not receive the appropriate antibiotic, clearly worsening the 2011 findings (5.9 and 6.8 of inappropriateness, respectively).

Lastly, the rates of potentially avoidable hospitalizations for chronic conditions, also a proxy measure on how appropriately the whole system manages chronic care patients, showed an ambivalent trend between 2009 and 2013. While chronic obstructive pulmonary disease and short-term

5 Own source (2017): *Ad hoc* estimation with data from the Atlas of Variation in Medical Practice in the Spanish SNS (www.atlasvpm.org)

TABLE 7.1 Selected quality and safety indicators, 2005–2015

INDICATORS	2005	2010	2015
SAFETY INDICATORS			
Hospital infection (per 100 admissions)	1.18	1.29	1.18
Thromboembolism after surgery (per 100 surgeries)[b]	0.1	0.1	0.1
Deep Venous Thrombosis after surgery (per 100 surgeries)[b]	0.2	0.2	0.1
Hip fractures in admitted patients per 100 admissions	0.05	0.07	0.05
Adverse events associated with pharmaceutical drugs (per 100 000 inh.)	190	310	347
Severe adverse events associated with pharmaceutical drugs (per 100 000 inh.)	80	150	208
Foreign body left during intervention (per 100 000 surgeries)[a]	3.8	3.1	3.5
Obstetric trauma for vaginal delivery with instrumentation (per 100 vaginal deliveries)[a]	2.2	3.2	4.9
Obstetric trauma for vaginal delivery without instrumentation (per 100 vaginal deliveries)[b]	0.7	0.7	1.04
QUALITY INDICATORS			
In-hospital mortality after surgery (per 100 surgical admissions)	1.8	1.7	1.6
In-hospital mortality after PCI (per 100 PCI interventions)	2.2	2.3	2.6
In-hospital mortality after coronary revascularization (per 100 interventions)[b]	7.4	6.3	5.03
In-hospital mortality after myocardial infarction (per 100 AMI admissions)	10.2	8.4	7.2
In-hospital mortality in patient with CHF (per 100 CHF admissions)	10.2	9.5	9.9
In-hospital mortality after hip fracture repair (per 100 repairs)	5.9	5.3	4.9
In-hospital mortality in patients with digestive haemorrhage (per 100 admissions)	5.5	5.8	5.8
In-hospital mortality in patients with pneumonia (per 100 admissions with pneumonia)	10.1	8.4	8.9
Lower-extremity amputation in people with diabetes (per 1000 people with diabetes)	0.1	0.1	0.1
READMISSIONS			
Readmissions after elective surgery (per 100 elective surgeries)	2.3	2.7	3.1
Readmissions after AMI (per 100 AMI discharges)	11.6	9.2	8.6
Psychiatric acute readmissions (per 100 psychiatric patients discharged)	10.1	10.1	10.4
Readmissions after an asthma episode (per 100 asthma discharges)	10.1	9.9	11.4

Source: MSSSI (2017b).

Note: AMI: acute myocardial infarction; CHF: chronic heart failure; PCI: percutaneous coronary intervention; [a]OECD (2017e); [b]iCMBD (http://icmbd.es/)

complications of diabetes were observed to decrease (from 254.1 admissions per 100 000 inhabitants to 194 per 100 000 inhabitants in 2013 in the former, and from 64.4 admissions per 100 000 inhabitants to 52.3 admissions per 100 000 inhabitants in the latter), potentially avoidable hospitalizations in congestive heart failure increased (from 191.7 admissions per 100 000 inhabitants to 206 admissions per 100 000 inhabitants) and pulmonary arterial hypertension in asthma remained stable, with 42 admissions per 100 000 inhabitants (OECD, 2017e).

Patients' view

Every year, the Healthcare Barometer provides a view on patients' satisfaction with the SNS. In 2016, most declared having received good or very good care – 85.8% in primary care and hospital care, 79.5% in specialized outpatient settings and 75.8% in emergency departments. However, if they had to choose, numbers are more ambiguous: 69.6% would use the public primary health care services, 68.1% would go to public hospital settings, 57% would visit public specialized premises, and 66.4% would go to public emergency departments. Most respondents declare that the system has neither improved nor worsened between 2011 and 2016; however, the number of individuals that think that the system has worsened reached 21.2% when referring to primary health care, 28.7% when referring to specialized outpatient care and 27.3% when referring to hospital care. This is consistent with the assessment that respondents gave to waiting times: 5.7 (out of 10) in the case of diagnostic tests referred from primary health care, 5 for the first visit to specialists and 4.8 in the case of waiting times for surgery. 30% of women and 25% of men think that the SNS needs profound reforms. Nevertheless, the overall satisfaction has not shown any change since 2006, not even in the worst years of the economic crisis (MSSSI, 2016k).

7.7 Transparency and accountability

Although, generally speaking, Spain does not rank high in the Transparency International Ranking (the perception of corruption has increased since 2012, and Spain was ranked 18th in 2016 among EU countries and 41st

in the world, with a score of 58 out of 100) (Transparency International, 2016), over the years, the SNS has implemented regulation and instruments that have improved patients' rights and provided patients and taxpayers with empowering information (see Section 2.5, *Patient empowerment*).

In terms of patients' rights, the SNS regulation covers the WHO patients' rights framework since the overarching 1986 Health care General Act, the complaint avenues have been explicit and accessible since the early 1990s, and liability and compensation mechanisms are available both within the health system and through external bodies such as the Ombudsperson[6] or the judiciary.

Patients also have accessible information on statutory benefits, access to their own medical records, interactive 24/7 information sites at AC level, and information on hospital waiting times (see Section 2.5, *Patient empowerment*). However, despite the availability of performance information at AC level, stakeholders only have partial access to comparative information on the quality and safety of specific providers, although some ACs release this type of information.

When it comes to patients' choice, opting out of the Statutory Public System is not possible. Within the public system, patient's choice has been well developed in the case of GPs, although there is a limit for the number of individuals allocated to a doctor and choice is confined to the same primary health care team. In the case of outpatient visits to specialists (as they require referral from the GP) or in the case of hospitals (where the population is allocated to administrative areas usually set up around a single hospital), the implementation of patients' choice is *de facto* limited. Interestingly, civil servants insured in MFs are entitled to annually choose between public and private providers. Finally, although patient participation in treatment decisions is regulated by law (for example, they have the right to consent or not to treatment, and in some ACs, they may request a second opinion), the actual exercise of this right is still suboptimal; in the 2016 Healthcare Barometer, 20.7% of patients in primary health care, 27.6% of patients attending specialized visits and 32.5% of patients receiving hospital care declared not having the possibility to participate in decisions about their health problem.

6 There is no health-specific Ombudsperson but a general (for any topic) Ombudsperson that usually assists citizens with claims on health issues.

8

Conclusions

The SNS builds on the foundations of a "Beveridge" model, and is composed of 17 subsystems under the ACs that comprise the Spanish quasi-federal state. In the statutory SNS, insurance is mandatory with coverage virtually universal, mainly funded from taxes and predominantly provided within the public sector, with a strong gate-keeping role played by primary care physicians serving the entire population. Provision is free of charge at the point of delivery, with the exception of pharmaceuticals and some ancillary goods, where co-payment is set considering a maximum ceiling of monthly payment, fixed according to annual household income.

In general, the health departments of each AC purchase the services from another public body, the so-called regional health service, the administrative structure that runs all inpatient and outpatient health care centres. Generally, the health department contracts (and budgets) annually the service with the regional health service, which, in turn, negotiates global annual contracts with its integrated providers, primary care centres and hospitals and allocates lump-sum budgets. Additionally, the ACs' health departments may contract services to private providers, usually hospitals that generally play a subsidiary role.

Since 2010, the SNS has been facing the consequences of the economic and financial crisis. In terms of governance, there has been a clear shift from the usual decision-making mechanisms developed within the health system (consensus-based decisions reached within the Interterritorial Council for the SNS) to more centralized, executive decisions, aimed at responding to the requirements of the Stability Programme of the Kingdom of Spain with its focus on deficit and debt reduction. Under these circumstances,

priority-setting mechanisms have been subordinated to budgetary constraints. In particular, RDL 16/2012, the legal text that aimed to guarantee the sustainability of the SNS, has implied changes in the scope, depth and breadth of the SNS benefits. It changed the basis for entitlement from a scheme where entitlement was linked to residence to a system where the entitlement is linked to the working status of individuals. RDL 16/2012 also set out a supplementary and accessory package of benefits with a view to regulate patients' cost-sharing. However, only a new scheme for drugs co-payment has been fully developed.

Apart from these cost-containment reforms, it is worth highlighting a widening of the anti-tobacco measures issued in previous reforms, initiatives to deal with the epidemiological transition (for example, the National Strategy on Chronic Conditions and developments in some ACs), and nationwide initiatives, such as the joint action on health technologies and benefits assessment and the *"do-not-do"* strategy. The long-term care system (the National System for the assistance of dependent people, SAAD) has also undergone a major expansion, currently assisting almost 900 000 people.

Despite the vast impact of the financial and economic crisis, and the austerity measures taken, the underlying principles and goals of the SNS have remained in place, and the SNS response (budgetary cutbacks and new regulations on the scope, breadth and depth of coverage) did apparently not have any substantial short-term impact on health outcomes. However, there are several challenges that need to be addressed in the coming years. When it comes to the impact of the SNS on population health, the trend in amenable mortality has flattened, obesity has increased, the gap in self-reported health across socioeconomic groups remains, and there is an uncertain impact of non-health-care determinants. Although the socioeconomic gap in unmet needs remains small, waiting times for surgery and specialized visits have increased, cost-sharing mechanisms may translate into a reduction of high-value drugs dispensation and adherence to required treatments, access to dental care depends on families' welfare; the relatively low coverage of SAAD (29% of those entitled to get benefits are not yet covered); and concerns on the sustainability of the current financing system all cast shadows on its long-term development. When it comes to efficiency, the SNS holds a reduced capacity for the reallocation of resources and for the reduction of inappropriate treatments. Regarding effectiveness, there is a worrying evolution of many quality and safety indicators albeit there is now a national strategy on

quality. Finally, on patients' perspective, a substantial proportion of Spaniards do see the need for substantial reforms and patients are demanding increased participation in the decisions on their care.

9

Appendices

9.1 References

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9.2 Principal legislation

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Law 3/2014, 27 March, amending the consolidated text of the General Law for the Defense of Consumers and Users and other complementary laws, approved by Royal Decree-Law 1/2007, 17 November [Ley 3/2014, de 27 de marzo, por la que se modifica el texto refundido de la Ley General para la Defensa de los Consumidores y Usuarios y otras leyes complementarias, aprobado por el Real Decreto Legislativo 1/2007, de 16 de noviembre] (https://www.boe.es/boe/dias/2014/03/28/pdfs/BOE-A-2014-3329.pdf, accessed 3 July 2017)

Law 5/2017, 28 March, on fiscal, administrative, financial, and measures from the public sector and to create and regulate taxes on large retailers, on stays in touristic establishments, on radiotoxic elements, on sugary drinks and on carbon dioxide emissions [Ley 5/2017, de 28 de marzo, de medidas fiscales, administrativas, financieras y del sector público y de creación y regulación de los impuestos sobre grandes establecimientos comerciales, sobre estancias en establecimientos turísticos, sobre elementos radiotóxicos, sobre bebidas azucaradas envasadas y sobre emisiones de dióxido de carbono] (https://www.boe.es/boe/dias/2017/06/27/pdfs/BOE-A-2017-7353.pdf, accessed 27 November 2017)

Order SSI/1833/2013, 2 October, creating and regulating the Council of the Spanish Network of Agencies of assessment of healthcare technology and benefits in the Spanish National Health System [Orden SSI/1833/2013, de 2 de octubre, por la que se crea y regula el Consejo de la Red Española de Agencias de Evaluación de Tecnologías Sanitarias y Prestaciones del Sistema Nacional de Salud] (https://www.boe.es/boe/dias/2013/10/11/pdfs/BOE-A-2013-10581.pdf, accessed 3 July 2017)

Order SSI/2065/2014, 31 October, amending annexes I, II and III of the Royal Decree 1030/2006, 15 September, on the common package of services of the National Health System and the procedures for its update [Orden SSI/2065/2014, de 31 de octubre, por la que se modifican los anexos I,II y III del Real Decreto 1030/2006, de 15 de septiembre, por el que se establece la cartera de servicios comunes del Sistema Nacional de Salud y el procedimiento para su actualización (https://www.boe.es/buscar/doc.php?id=BOE-A-2014-11444, accessed 17 April 2018)

Order SSI/1356/2015, 2 July, amending annexes II, III, VI of Royal Decree 1030/2006, 15 September, establishing the common benefits package for the Spanish National Health Service and updating procedures, and regulating the monitoring studies on techniques, technologies and procedures [Orden SSI/1356/2015, de 2 de julio, por la que se modifican los anexos II, III y VI del Real Decreto 1030/2006, de 15 de septiembre, por el que se establece la cartera de servicios comunes del Sistema Nacional de Salud y el procedimiento para su actualización, y se regulan los estudios de monitorización de técnicas, tecnologías y procedimientos (https://www.boe.es/boe/dias/2015/07/08/pdfs/BOE-A-2015-7629.pdf, accessed 7 July, 2017)

Organic Law 15/1999, 13 December, on the protection of personal data [Ley Orgánica 15/1999, de 13 de diciembre, de Protección de Datos de Carácter Personal] (https://www.boe.es/buscar/pdf/1999/BOE-A-1999-23750-consolidado.pdf, accessed 3 July 2017)

Organic Law 4/2000, 11 January, on rights and freedoms of foreigners in Spain and their social integration [Ley Orgánica 4/2000, de 11 de enero, sobre derechos y libertades de los extranjeros en España y su integración social] (https://www.boe.es/buscar/pdf/2000/BOE-A-2000-544-consolidado.pdf, accessed 3 July 2017)

Organic Law 2/2012, 27 April, on budgetary stability and financial sustainability [Ley Orgánica 2/2012, de 27 de abril, de Estabilidad Presupuestaria y Sostenibilidad Financiera] (https://www.boe.es/boe/dias/2012/04/30/pdfs/BOE-A-2012-5730.pdf, accessed 3 July 2017)

Organic Law 6/2015, 12 June, on the amendment of Organic Law 8/1980, 22 September, on the financing of the Autnonomous Communities and Organic Law 2/2012, 27 April, on

the budgetary stability and financial sustainability [Ley Orgánica 6/2015, de 12 de junio, de modificación de la Ley Orgánica 8/1980, de 22 de septiembre, de financiación de las Comunidades Autónomas y de la Ley Orgánica 2/2012, de 27 de abril, de Estabilidad Presupuestaria y Sostenibilidad Financiera] (https://www.boe.es/boe/dias/2015/06/13/pdfs/BOE-A-2015-6517.pdf, accessed 3 July 2017)

Reform of article 135 of the Spanish Constitution, of 27 September 2011 [Reforma del artiìculo 135 de la Constitucioìn EspanÞola, de 27 de septiembre de 2011] (https://www.boe.es/boe/dias/2011/09/27/pdfs/BOE-A-2011-15210.pdf, accessed 13 November 2017)

Royal Decree 605/2003, 23 May, on the measures for the homogeneous treatment of the waiting lists information in the Spanish National Health Service [Real Decreto 605/2003, de 23 de mayo, por el que se establecen medidas para el tratamiento homogéneo de la información sobre las listas de espera en el Sistema Nacional de Salud (https://www.boe.es/buscar/doc.php?id=BOE-A-2003-11266, accessed 7 July, 2017)

Royal Decree 1277/2003, 10 October, on setting the basis for accreditation and authorization of services and health care centres [Real Decreto 1277/2003, de 10 de octubre, por el que se establecen las bases generales sobre autorización de centros, servicios y establecimientos sanitarios] (https://www.boe.es/buscar/doc.php?id=BOE-A-2003-19572, accessed 19 September 2017)

Royal Decree 1030/2006, 15 September, establishing the common benefits package for the Spanish National Health Service and updating procedures, and regulating the monitoring studies on techniques, technologies and procedures [Real Decreto 1030/2006, de 15 de septiembre, por el que se establece la cartera de servicios comunes del Sistema Nacional de Salud y el procedimiento para su actualización] (https://www.msssi.gob.es/profesionales/prestacionesSanitarias/CarteraDeServicios/docs/RD_1030_2006_act08072015.pdf, accessed 7 July 2017)

Royal Decree 823/2008, 16 May, on the margins, deductions and discounts corresponding to the distribution and dispensing of medicaments for human use, modified by Royal Decree-Law 4/2010, Royal Decree-Law 9/2011 and Royal Decree-Law 16/2012 [Real Decreto 823/2008, de 16 de mayo, por el que se establecen los márgenes, deducciones y descuentos correspondientes a la distribución y dispensación de medicamentos de uso humano. Modificado por: Real Decreto-ley 4/2010, Real Decreto-ley 9/2011 and Real Decreto-ley 16/2012] (https://www.boe.es/buscar/doc.php?id=BOE-A-2008-9291, accessed 7 July 2017)

Royal Decree 843/2011, 17 June, on the basic criteria on the organization of resources to develop the health care activity of prevention services [Real Decreto 843/2011, de 17 de junio, por el que se establecen los criterios básicos sobre la organización de recursos para desarrollar la actividad sanitaria de los servicios de prevención] (https://www.boe.es/boe/dias/2011/07/04/pdfs/BOE-A-2011-11428.pdf, accessed 15 September 2017)

Royal Decree 1039/2011, 15 July, on the framework criteria to guarantee a máximum time for access to healthcare benefits in the Spanish National Health System [Real Decreto 1039/2011, de 15 de julio, por el que se establecen los criterios marco para garantizar un tiempo máximo de acceso a las prestaciones sanitarias del Sistema Nacional de Salud] (https://www.boe.es/buscar/doc.php?id=BOE-A-2011-14190, accessed 7 July 2017)

Royal Decree 1192/2012, 3 August, regulating the condition of insured and of beneficiary for the purpose of the health care services in Spain, out of public funds, through the National Health System [Real Decreto 1192/2012, de 3 de agosto, por el que se regula la condición de asegurado y de beneficiario a efectos de la asistencia sanitaria en España, con cargo a fondos públicos, a través del Sistema Nacional de Salud] (https://www.boe.es/buscar/doc.php?id=BOE-A-2012-10477, accessed 15 September 2017)

Royal Decree 576/2013, of 26 July, on the basic requirements of the special agreement of health care provision to uninsured or nonbeneficiaries individuals in the National Health System, and amending Royal Decree 1192/2012, 3 August, regulating the condition of insured and of beneficiary for the purpose of the health care services in Spain, out of public funds,

through the National Health System [Real Decreto 576/2013, de 26 de julio, por el que se establecen los requisitos básicos del convenio especial de prestación de asistencia sanitaria a personas que no tengan la condición de aseguradas ni de beneficiarias del Sistema Nacional de Salud y se modifica el Real Decreto 1192/2012, de 3 de agosto, por el que se regula la condición de asegurado y de beneficiario a efectos de la asistencia sanitaria en España, con cargo a fondos públicos, a través del Sistema Nacional de Salud] (https://www.boe.es/boe/dias/2013/07/27/pdfs/BOE-A-2013-8190.pdf, accessed 3 September 2017)

Royal Decree 81/2014, 7 February, establishing the norms to guarantee the cross-border health care and amending Royal Decree 1718/2010, 17 December, on the medical receipt and dispensation rules [Real Decreto 81/2014, de 7 de febrero, por el que se establecen normas para garantizar la asistencia sanitaria transfronteriza, y por el que se modifica el Real Decreto 1718/2010, de 17 de diciembre, sobre receta meìdica y oìrdenes de dispensacioìn] (http://www.boe.es/boe/dias/2014/02/08/pdfs/BOE-A-2014-1331.pdf, accessed 3 September 2017)

Royal Decree 177/2014, 21 March, regulating the system of reference prices and the homogeneous groups of drugs in the SNS, and specific information systems on drugs and health care products' pricing and financing [RD 177/2014, de 21 de marzo, por el que se regula el sistema de precios de referencia y de agrupaciones homogéneas de medicamentos en el Sistema Nacional de Salud, y determinados sistemas de información en materia de financiación y precios de los medicamentos y productos sanitarios] (https://www.boe.es/boe/dias/2014/03/25/pdfs/BOE-A-2014-3189.pdf, accessed 3 September 2017)

Royal Decree 639/2014, 25 July, regulating the core module, the core re-especialization and the specific training areas, establishing the applicable norms of the annual tests to access training places and other aspects of the system of specialized training in health sciences and creating and amending certain specialist titles [Real Decreto 639/2014, de 25 de julio, por el que se regula la troncalidad, la re-especialización troncal y las áreas de capacitación específica, se establecen las normas aplicables a las pruebas anuales de acceso a plazas de formación y otros aspectos del sistema de formación sanitaria especializada en Ciencias de la Salud y se crean y modifican determinados títulos de especialista] (https://www.boe.es/diario_boe/txt.php?id=BOE-A-2014-8497, accessed July 2017)

Royal Decree 640/2014, 25 July, regulating the state registry of health care professionals [Real Decreto 640/2014, de 25 de julio, por el que se regula el Registro Estatal de Profesionales Sanitarios] (https://www.boe.es/diario_boe/txt.php?id=BOE-A-2014-8712, accessed 20 November 2016)

Royal Decree 69/2015, 6 February, regulating the Registry of Activity of Specialized Health Care [Real Decreto 69/2015, de 6 de febrero, por el que se regula el Registro de Actividad de Atención Sanitaria Especializada] (https://www.boe.es/buscar/pdf/2015/BOE-A-2015-1235-consolidado.pdf, accessed 30 April 2018)

Royal Decree 954/2015, 23 October, regulating the indication, use and authorization of the dispensing of medicines and health care products for human use by nurses [Real Decreto 954/2015, de 23 de octubre, por el que se regula la indicación, uso y autorización de dispensación de medicamentos y productos sanitarios de uso humano por parte de los enfermeros] (https://www.boe.es/diario_boe/txt.php?id=BOE-A-2015-14028, accessed 10 July 2017)

Royal Decree Legislative 1/2013, 29 November, approving the Consolidated Text of the General Law on the Rights of Persons with Disability and Social inclusion [Real Decreto Legislativo 1/2013, de 29 de noviembre, por el que se aprueba el Texto Refundido de la Ley General de derechos de las personas con discapacidad y de su inclusión social] (https://www.boe.es/boe/dias/2013/12/03/pdfs/BOE-A-2013-12632.pdf, accessed 10 July 2017)

Royal Decree-Law 4/2010, 26 March, on the rationalization of the pharmaceutical expenditure covered by the National Health System [Real Decreto-ley 4/2010, de 26 de marzo, de racionalización del gasto farmacéutico con cargo al Sistema Nacional de Salud] (https://www.boe.es/boe/dias/2010/03/27/pdfs/BOE-A-2010-5030.pdf, accessed 10 July 2017)

Royal Decree-Law 9/2011, 19 August, on the measures to improve the quality and cohesion of the National Health System, of contribution to the fiscal consolidation and the increase of the maximum amount of the guarantees of the state for 2011 [Real Decreto-ley 9/2011, de 19 de agosto, de medidas para la mejora de la calidad y cohesioìn del sistema nacional de salud, de contribucioìn a la consolidacioìn fiscal, y de elevacioìn del importe maìximo de los avales del Estado para 2011] (https://www.boe.es/boe/dias/2011/08/20/pdfs/BOE-A-2011-14021.pdf, accessed 3 July 2017)

Royal Decree-Law 7/2012, 9 March, creating the Fund for financing payments to providers [Real Decreto-ley 7/2012, de 9 de marzo, por el que se crea el Fondo para la financiación de los pagos a proveedores] (https://www.boe.es/boe/dias/2012/03/10/pdfs/BOE-A-2012-3395.pdf, accessed 3 July 2017)

Royal Decree-Law 16/2012, 20 April, on urgent measures to guarantee the sustainability fo the National Health System and to improve the quality and safety of their benefits [Real Decreto-ley 16/2012, de 20 de abril, de medidas urgentes para garantizar la sostenibilidad del Sistema Nacional de Salud y mejorar la calidad y seguridad de sus prestaciones] (https://www.boe.es/boe/dias/2012/04/24/pdfs/BOE-A-2012-5403.pdf, accessed 3 July 2017)

Royal Decree-Law 21/2012, 13 July, on measures of liquidity of the Public Administrations and in the financial sphere [Real Decreto-ley 21/2012, de 13 de julio, de medidas de liquidez de las Administraciones públicas y en el ámbito financiero] (https://www.boe.es/boe/dias/2012/07/14/pdfs/BOE-A-2012-9365.pdf, accessed 3 July 2017)

Spanish Constitutional Court, Sentence 139/2016, 21 July [Tribunal Consititucional de España, Sentencia 139/2016, de 21 de julio (http://hj.tribunalconstitucional.es/es/Resolucion/Show/25063, accessed 3 July 2017)

Supreme Court Ruling, Third Division, 12 December 2016, that voids Royal Decree 639/2014, 25 July, regulating the core module, the core re-especialization and the specific training areas, establishing the applicable norms of the annual tests to access training places and other aspects of the system of specialized training in health sciences and creating and amending certain specialist titles [Sentencia de 12 de diciembre de 2016, de la Sala Tercera del Tribunal Supremo, que anula el Real Decreto 639/2014, de 25 de julio, por el que se regula la troncalidad, la reespecializacion troncal y las areas de capacitacion especifica, se establecen las normas aplicables a las pruebas anuales de acceso a plazas de formación y otros aspectos del sistema de formación sanitaria especializada en Ciencias de la Salud y se crean y modifican determinados títulos de especialista] (https://www.boe.es/buscar/doc.php?id=BOE-A-2017-3480, accessed 27 April 2018).

9.3 Useful web sites

Health Barometer http://www.msssi.gob.es/estadEstudios/estadisticas/sisInfSanSNS/

Interterritorial Council of the National Health System: https://www.msssi.gob.es/organizacion/consejoInterterri/home.htm

Key indicators of the SNS. Database [Indicadores Clave del Sistema Nacional de Salud: Base de datos]: http://inclasns.msssi.es/main.html

Medical Practice Variation Atlas Group www.Atlasvpm.org

National Institute of Statistics (INE) www.ine.es

National Office of clinical practice guidelines GUIASALUD http://www.guiasalud.es/home.asp

National System for the assistance of dependent people (SAAD) Information System http://www.imserso.es/dependencia_01/documentacion/estadisticas/datos_estadisticos_saad/index.htm

Public Health Expenditure Statistics (EGSP) https://www.msssi.gob.es/estadEstudios/estadisticas/inforRecopilaciones/gastoSanitario2005/home.htm

Quality Plan for the National Health System:

http://www.msssi.gob.es/organizacion/sns/planCalidadSNS/
(pdf document 2010) http://www.msssi.gob.es/organizacion/sns/planCalidadSNS/pdf/pncalidad/PlanCalidad2010.pdf

SNS Statistical portal
http://www.msssi.gob.es/estadEstudios/estadisticas/sisInfSanSNS/home.htm

Spanish Agency of Medicines and Health Products (AEMPS)
http://www.aemps.gob.es/

Spanish Association of Public Health and Health Administration (SESPAS)
http://www.sespas.es/

Spanish Observatory on Drugs and Addictions (OEDA)
http://www.pnsd.msssi.gob.es/profesionales/sistemasInformacion/home.htm

9.4 HiT methodology and production process

HiTs are produced by country experts in collaboration with the Observatory's research directors and staff. They are based on a template that, revised periodically, provides detailed guidelines and specific questions, definitions, suggestions for data sources and examples needed to compile reviews. While the template offers a comprehensive set of questions, it is intended to be used in a flexible way to allow authors and editors to adapt it to their particular national context. The most recent template is available online at: http://www.euro.who.int/en/home/projects/observatory/publications/health-system-profiles-hits/hit-template-2010.

Authors draw on multiple data sources for the compilation of HiTs, ranging from national statistics, national and regional policy documents to published literature. Furthermore, international data sources may be incorporated, such as those of the OECD and the World Bank. The OECD Health Data contain over 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 for 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. With its summer 2007 edition, the Health for All database started to take account of the enlarged EU of 27 Member States.

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

A typical HiT consists of nine chapters.

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, complaints procedures, public participation 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 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, dental care, complementary and alternative medicine, and health services for specific populations.

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 based on the stated objectives of the health system, financial protection and equity in financing; user experience and equity of access to health care; health outcomes, health service outcomes and quality of care; health system efficiency; and transparency and accountability.
8. Conclusions: identifies key findings, highlights the lessons learned from health system changes; and summarizes remaining challenges and future prospects.
9. Appendices: includes references, useful web sites and legislation.

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 (see the following section).
- 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.

9.5 About the authors

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(1999, 2002[ag])
Andorra
(2004)
Armenia
(2001[g], 2006, 2013)
Australia
(2002, 2006)
Austria
(2001[e], 2006[e], 2013[e])
Azerbaijan
(2004[g], 2010[g])
Belarus
(2008[g], 2013)
Belgium
(2000, 2007, 2010)
Bosnia and Herzegovina
(2002[g])
Bulgaria
(1999, 2003[b], 2007[g], 2012)
Canada
(2005, 2013[c])
Croatia
(1999, 2006, 2014)
Cyprus
(2004, 2012)
Czech Republic
(2000, 2005[g], 2009, 2015)
Denmark
(2001, 2007[g], 2012)
Estonia
(2000, 2004[gj], 2008, 2013, 2018)
Finland
(2002, 2008)
France
(2004[cg], 2010, 2015)
Georgia
(2002[dg], 2009, 2017)
Germany
(2000[e], 2004[eg], 2014[e])
Greece
(2010, 2017)
Hungary
(1999, 2004, 2011)
Iceland
(2003, 2014)
Ireland
(2009)
Israel
(2003, 2009, 2015)
Italy
(2001, 2009, 2014)
Japan
(2009)
Kazakhstan
(1999[g], 2007[g], 2012)
Kyrgyzstan
(2000[g], 2005[g], 2011[g])
Latvia
(2001, 2008, 2012)
Lithuania
(2000, 2013)
Luxembourg
(1999, 2015)
Malta
(1999, 2014, 2017)
Mongolia
(2007)
Netherlands
(2004[g], 2010, 2016)
New Zealand
(2001*)
Norway
(2000, 2006, 2013)
Poland
(1999, 2005[k], 2011)
Portugal
(1999, 2004, 2007, 2011, 2017)
Republic of Korea
(2009*)
Republic of Moldova
(2002[g], 2008[g], 2012)
Romania
(2000[f], 2008, 2016)
Russian Federation
(2003[g], 2011[g])
Slovakia
(2000, 2004, 2011, 2016)
Slovenia
(2002, 2009, 2016)
Spain
(2000h, 2006, 2010, 2018)
Sweden
(2001, 2005, 2012)
Switzerland
(2000, 2015)
Tajikistan
(2000, 2010[g], 2016)
The former Yugoslav Republic of Macedonia
(2000, 2006, 2017)
Turkey
(2002[gi], 2011[i])
Turkmenistan
(2000)
Ukraine
(2004[g], 2010[g], 2015)
United Kingdom of Great Britain and Northern Ireland
(1999[g], 2015)
United Kingdom (England)
(2011)
United Kingdom (Northern Ireland)
(2012)
United Kingdom (Scotland)
(2012)
United Kingdom (Wales)
(2012)
United States of America
(2013)
Uzbekistan
(2001[g], 2007[g], 2014[g])
Veneto Region, Italy
(2012)

All HiTs are available in English.

When noted, they are also available in other languages:

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

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