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NATIONAL HEALTH POLICY REFORMS AIMED AT CONTROLLING COST AND IMPLICATIONS FOR HEALTH SYSTEM EFFICIENCY AND EQUITY

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Overview

The post-2008 economic crisis has added urgency to the need to "bend the cost curve" in health care. In this paper, we provide a conceptual framework to analyze health policy responses to fiscal pressures in terms of their effect on overarching health system goals. We then summarize and assess policies implemented since 2008 in Denmark, England, France, Italy, the Netherlands, Portugal, and Spain in terms of their anticipated impacts on cost, efficiency, and equity.

We find that the majority of policies implemented in response to the crisis are aimed at reducing costs and activity concurrently, making their impact on efficiency difficult to evaluate. Common measures include reductions of overhead and prices, tightening constraints on the number of health workers or their incomes, increases of user charges or changes to service coverage, and measures to improve service quality or to substitute hospital with outpatient services. Value-based measures were less common. Real-term growth in health expenditure has slowed in France and the Netherlands and expenditure has declined in the remaining five countries, with the most significant cuts in southern Europe. Pharmaceutical expenditure also decreased while volumes generally continued to grow, suggesting efficiencies from price cuts and generic substitution. Data on service availability, access, and utilization are more ambiguous. Although user charges have commonly been increased, raising equity concerns, they continue to account for a small portion of total financing. This may be related to extensive exemptions. Yet, there is some indication that access to services is deteriorating and unmet need is increasing in southern European countries.

The post-2008 economic crisis sharpened the focus on containment in national health care systems and left behind a constrained environment. While short-term cost containment appears to have been successful, there is some indication that the depth of cuts may have already decreased health system performance in southern Europe. Available data do not allow for clear conclusions about equity implications. It also remains to be seen whether a tendency toward blanket cuts, which are technically easier to implement ("low-hanging fruit"), will control costs in the longer run without undermining health system performance.

1. Background and Objective

Most high-income countries have acknowledged the need to "bend the cost curve" in health care in the last decades and lower the rate of growth in health care spending. The post-2008 economic crisis, which precipitated a continuing sovereign debt crisis across European countries and squeezed public budgets, added particular urgency to the long-term policy goal of containing health care costs. The years since 2008 thus present an opportunity to review different strategies adopted by national policymakers to achieve this objective and to evaluate their intended or unintended consequences in terms of overarching health system goals. WHO defined these goals as improving population health, maintaining responsive health services, and ensuring fair financing and financial protection from ill health (Murray & Frenk

2006). Protection of high-need and vulnerable populations, such as the elderly, people at the low end of the income distribution, or social minorities, who tend to also be characterized by lower health status and a disproportionate prevalence of illness, remains a priority across all three of these goals. Equitable financing and access to health care is particularly important in protecting these groups who can least afford paying for services at the point of use and may face additional nonfinancial barriers in accessing the services needed. As economic activity slows or declines and unemployment increases during crises, private incomes and government revenue decline, causing pressure on public budgets and private income available for health care. At the same time, demand for care may increase during crises.

In such an environment of short-term pressures to cut costs, policymakers will need to ask questions that include the following: Where should cost containment efforts be targeted to avoid undermining health system performance and to maintain or improve equity of access and quality? Should policies aim at controlling prices or volumes? Which measures can generate short-term savings and what are their implications in the longer term? Which measures require significant up-front financial investment or are technically demanding? Which measures are politically difficult to adopt?

The objective of this paper is to provide an overview of the health policy responses to fiscal pressures in a sample of European countries since 2008, with a focus on cost containment. These are presented as part of a conceptual framework and their effects are analyzed from the perspective of overarching health system goals.

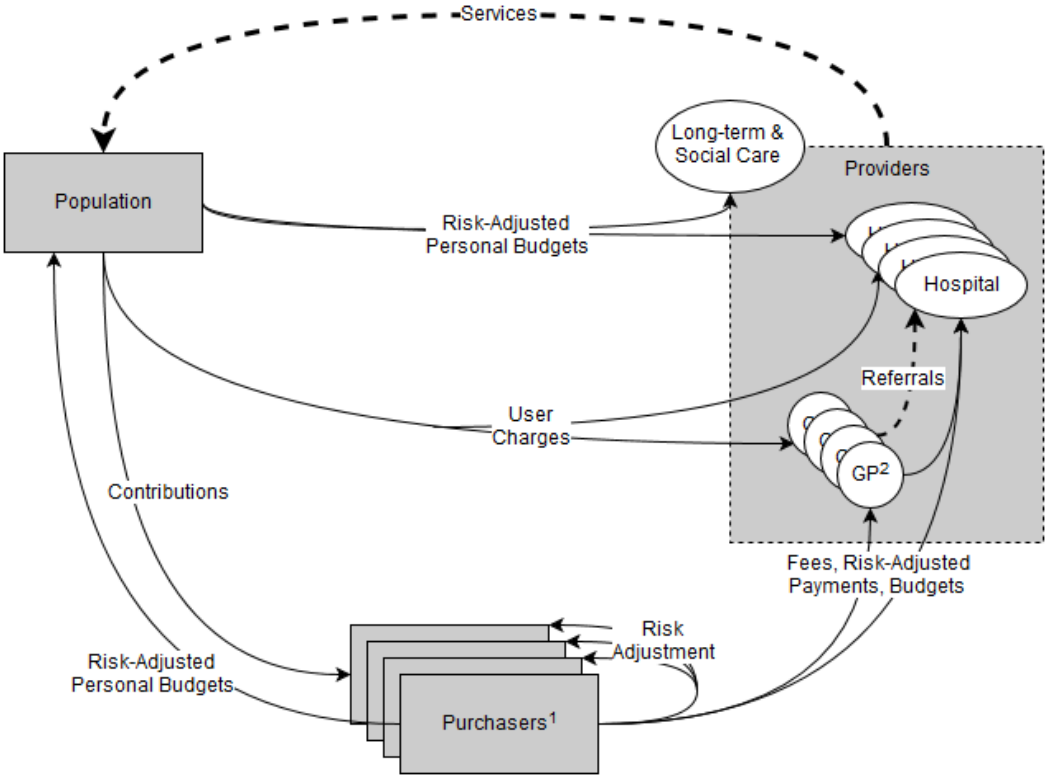
2. Conceptual Framework, Scope, and Methods

We draw on conceptual frameworks provided by a number of prior studies and develop these further. In their review of policies since the post-2008 financial crisis in Europe, Mladovsky et al. 2012 provide a framework for analyzing responses to constraints (or opportunities) external to the health system, such as economic crisis, against health system goals. They distinguish between an overall decision to decrease, maintain, or increase publicly financed health expenditure and identify examples of distinct policy levers that allow for altering expenditure levels in accordance with the direction set. It should be noted that a decision to cut public expenditure, for example, through reduced population or service coverage, may lead to substitution of public with private financing. Such cost-shifting measures (also see Mossialos & Le Grand 1999; Stabile et al. 2013) may be particularly harmful to equity of access and lead to increased aggregate expenditure as the cost of health care financed by fragmented private sources is more difficult to contain than in an environment of monopsonistic purchasing.

We identify distinct policy examples from surveys and country case studies on health policy responses to the post-2008 economic crisis, which were conducted by the European Observatory on Health Systems and Policies between 2008 and 2013 (Maresso et al. 2015; Mladovsky et al. 2012; Thomson et al. 2015). First, we categorize these according to where in the tri-partite relationship between patients, purchasers, and providers their effect lies

(Figure 1). We then analyze policies in terms of criteria in each relationship relevant to achieving health system goals. These include financial risk, protection against risk through insurance coverage, and equity of financing in financial flows from the population to purchasers and direct payments (user charges) to providers. Incentives for risk selection and for changing the volume and quality of services, and their impact on cost and efficiency in the system, are the main concerns in risk adjustment between purchasers and in resource allocation to providers. The effect of these financial flows on provider behavior and equity of access is the main concern in service provision to the population.

Figure 1: Financial and Service Flows Between the Population, Purchasers, and Providers



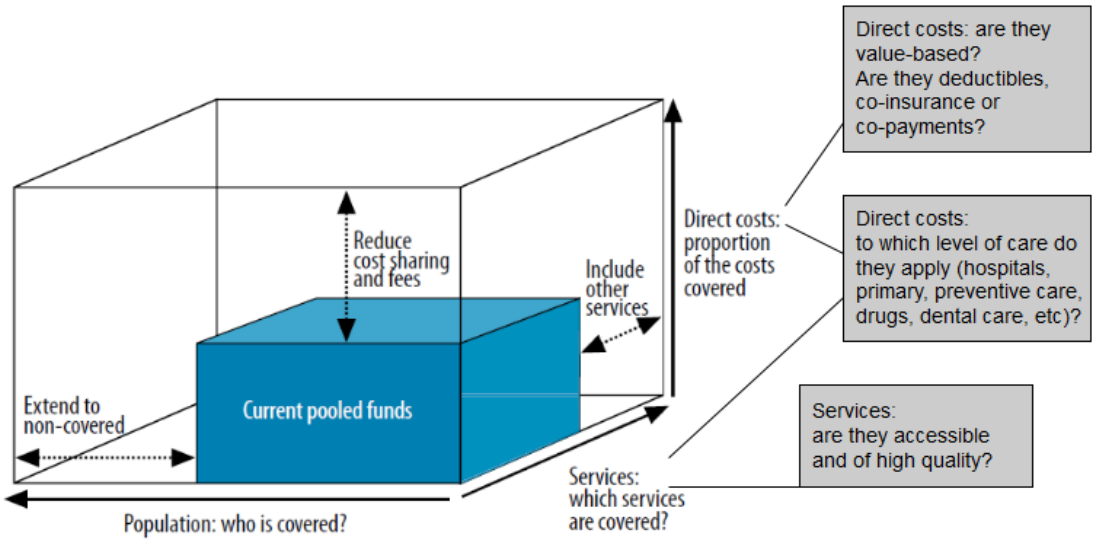
Source: Authors

Notes: 1. Depending on the country, there can be multiple payers with varying levels of autonomy and with or without risk adjustment between them or a single purchaser at the national level.

2. GP refers to General Practice as a generic term for primary care providers. These are involved in resource allocation and, through referral requirements, act as gatekeepers to hospitals and specialists in some countries (e.g. England), but not everywhere.

Second, in analyzing the effect of policies on insurance coverage, we extend the framework of the three dimensions of coverage provided by WHO 2010 (see Figure 2). User charges, that is, policies with effects on the height of coverage, are broken down into value-based charges that may facilitate efficiency gains and blanket charges, which reduce equity. They are also analyzed according to type (deductibles, co-insurance, and copayments) and the level of care to which they apply, with varying implications for access and utilization.

Figure 2: The Three Dimensions of Health Insurance Coverage

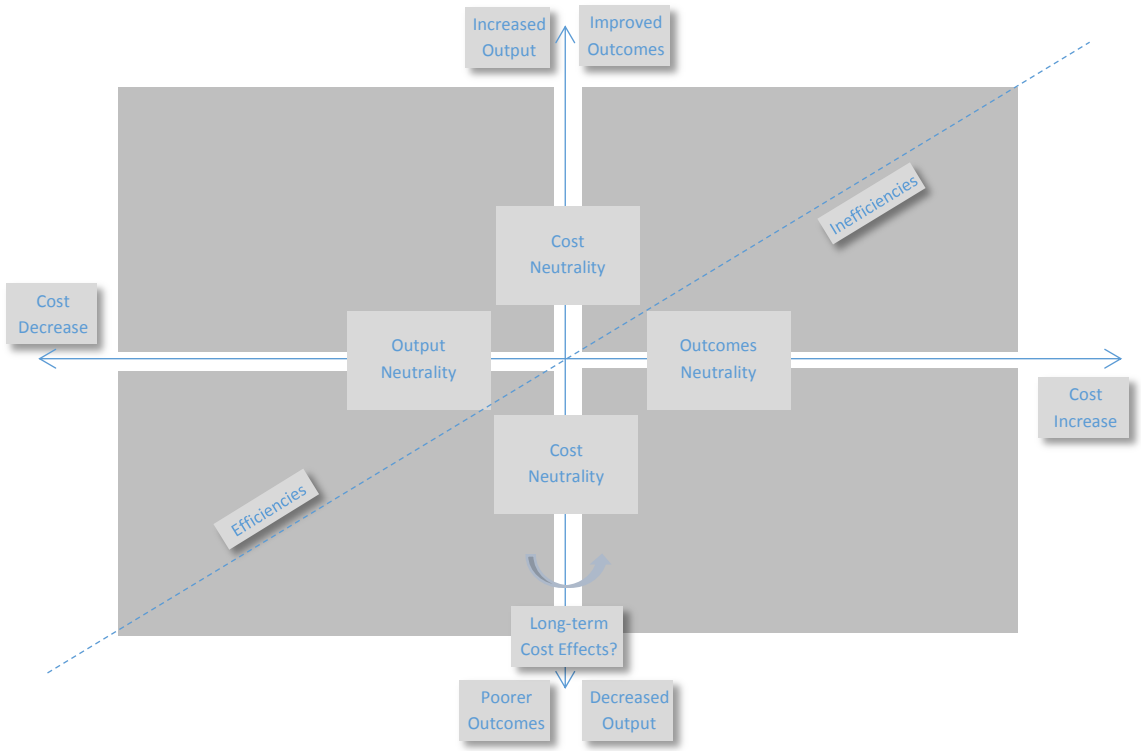


Source: Adapted by the authors from WHO 2010, p. 12.

Third, we expand on the framework proposed by Thomson et al. 2014 and categorize initiatives that aim at containing (or increasing) health expenditure according to whether they represent efficiency gains. The concept of efficiency requires a measure of outcome or output as numerator in addition to measures of cost as denominator; the numerator could be aggregate health system output (e.g., volume of services provided) or health outcomes attributable to health care (such as avoidable mortality, although the effect of health care is notoriously difficult to disentangle from the wider determinants of health). The analysis below mainly focuses on health system output. The framework is presented graphically in Figure 3. Policies are evaluated in terms of their impact on total health care expenditure, whether financed publicly or privately, to distinguish cost containment from cost shifting. It should further be noted that only policies in the northwestern quadrant, which increase output and decrease cost, clearly represent efficiency gains, while measures in the southeastern quadrant, which decrease output and increase cost, are clearly inefficient; measures in the remaining two quadrants, which decrease or increase both cost and output concurrently, may be efficiency neutral or considered either efficient or inefficient based on a threshold set by policymakers or analysts.

We then re-apply the framework depicted in Figure 3 with a measure of equity on the vertical axis. In addition to considering aggregate output, this expands the analysis to distributional considerations, which are particularly relevant when aiming to protect the most vulnerable in society. It thus categorizes policies that alter expenditure according to whether they increase or decrease equity of financing, shifting a relatively larger burden of financing toward the poorer or the better-off, as well as equity of access, enhancing or worsening equality of access to services for equal need.

Figure 3: Framework to Distinguish Between Cost Containment and Efficiency



Source: Adapted by the authors from Thomson et al. 2014, p. 33

Implications of the reforms are discussed based on trends in health expenditure, availability of human and physical resources in the health systems, utilization of services and pharmaceuticals, and measures of access available through the OECD.Stat database (OECD 2015) and from Eurostat (2015). Given how recent the crisis, rigorous empirical evidence on the effects of policies is scarce. As a result, our analyses focus on the conceptual framework and, where empirical evidence is insufficient, the theoretical effects of policies in terms of the criteria discussed above. We describe examples from Denmark, England,[1] France, Italy, the Netherlands, Portugal, and Spain. These countries have experienced varying degrees of economic downturn and cuts to public budgets since 2008 and have adopted a wide variety of policies in response. They further represent two countries (Denmark and England) outside the European Monetary Union and four inside, of which Portugal and Spain were subject to Economic Adjustment Programs (EAPs) supervised by the European Commission, the European Central Bank (ECB), and the International Monetary Fund (IMF). Italy was under scrutiny and pressure from external actors, including creditors, to cut public expenditure while France remained less affected by such external forces. The urgency to reform and to find measures with immediate effects can thus be assumed to have varied significantly between these countries.

3. Results

[1] Data from OECD and Eurostat is only available for the UK as a whole and not disaggregated by country. While the review of policies covers England only, data presented refers to the UK.

Policies Implemented Since 2008

Based on the surveys and case studies conducted by the European Observatory (Maresso et al. 2015; Thomson et al. 2015) and our conceptual framework, we summarized 45 distinct policy initiatives in the six countries of focus since 2008. Some of these were direct responses to the economic crisis, particularly in southern European countries hit most severely by the crisis and where reforms were subject to EAPs, while others have represented a continuation of ongoing fiscal consolidation and reform processes. Based on the relationship between population, purchasers, and providers illustrated in Figure 1 and the dimensions of insurance coverage illustrated in Figure 2, we categorized these according to whether they relate to population or service coverage (breadth and depth), user charges (height), provider payment and prices, the organization and structure of providers, or directly to the provision of services. A final category was added for initiatives related to the health system in its entirety. We also categorized initiatives according to the type and direction of their intended effect, such as coverage increases, price cuts, or service quality improvements.

Twenty-seven of 45 initiatives were related to changes in coverage and accessibility of publicly funded health care, among which 13 related to changes in user charges, that is, the height of coverage. Among the remaining 19 initiatives, eight were related to changes in provider payment or prices (i.e., price reductions), five to changes in provider structure or in procurement of provider supplies, another five were directly related to changes in service provision or the quality of services, and one was related to changes in ministries or other government agencies, affecting stewardship of the entire health system. All policies and their categorization are summarized in Appendix Table 1.

Based on the type and direction of intended effects identified in Appendix Table 1, we mapped these initiatives in terms of their impact on efficiency (Figure 4). Color codes indicate which area of the health system and dimension of coverage these are related to.

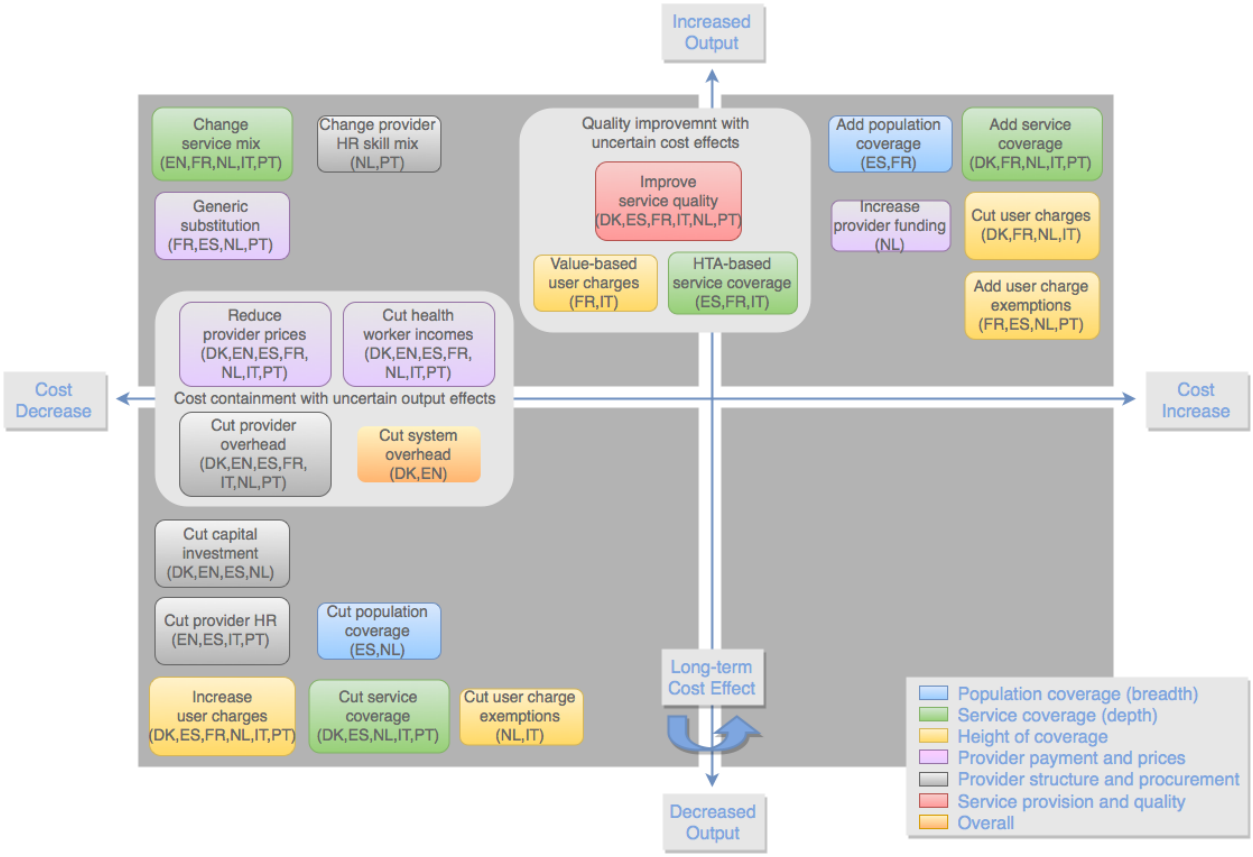
It is not always straightforward to categorize policies according to their effect on cost and output without having access to detailed empirical evidence on their design and actual effects, which is largely lacking. Generic substitution or reductions in drug prices, for example, could reduce cost and be neutral to output but might also increase output, as drugs become more affordable (as has been reported in the Netherlands or Portugal (Batenburg, Kroneman & Sagan 2015; Sakellarides et al. 2015)). We assumed that reductions in provider prices and overhead are likely to be efficient through reducing costs and leaving output unchanged. This is also true if providers respond with an increase in activity. If cuts are excessive, however, and some provider activity becomes economically unviable, such reductions may also be associated with reductions in service output. A similar dynamic may apply to cutting health worker incomes—if these cuts are substantial, motivation of the workforce, and thus service volumes and quality, may suffer. In Portugal, for example, where salaries and benefits of staff at public health care providers were reduced significantly, doctors and nurses have been reported to resort increasingly to private sector jobs or even to leaving the country to practice abroad (Correia, Dussault & Pontes 2015; Maresso et al. 2015). In Spain, salary cuts were of

similar magnitude (Gallo & Gené-Badia 2013) and have been reported to have had negative effects on workforce morale and on quality of care (Cervero-Liceras, McKee & Legido-Quigley 2015).

Measures such as the introduction and monitoring of adherence to evidence-based guidelines or expanding the use of e-health systems, the introduction of value-based user charges, or health technology assessment (HTA) to define coverage are likely to improve the quality of services and, potentially, health outcomes achieved. While this can reduce the use of services with little benefit and create savings, it may also uncover unmet need and encourage the additional use of effective services and lead to cost increases.

Finally, measures that aim at changing the mix of services or the skill mix of the workforce providing them, such as substituting hospital with primary care or doctors with nurses, may also generate savings if service volumes remain unchanged. Providers may, however, also respond with increases in activity. If designed carefully to make the delivery of services more appropriate to patient need and provider skill, quality may even be improved by such measures.

Figure 4: Likely Effect of Policies on Health System Efficiency



Source: Authors based on Maresso et al. 2015; Thomson et al. 2015, 2014

These limitations notwithstanding, Figure 4 illustrates that the majority of policy initiatives are aimed at reducing costs and activity concurrently. At the same time, most countries also

appear to have used the crisis as an opportunity to increase spending in some areas by expanding coverage of services and the population. All seven countries reported measures to reduce provider overhead or costs in procurement of provider supplies, to reduce prices of services, drugs, or devices and to control incomes of health workers. Other frequent initiatives, implemented by five countries or more in each case, were the introduction or increase of user charges, changes in service coverage, measures to encourage evidence-based practice or reduce waste to improve service quality, or decreases in the supply of hospital care or increase in the supply of primary care to substitute for hospital services.

The widest range of policies was in the Netherlands, covering all except the southeastern quadrants; these included changes or reversals of policies after their initial introduction, such as an initial freeze of funding for primary care followed by controlled increases at a later stage. In Denmark, the majority of initiatives were aimed at reducing cost while being neutral to or also reducing output, making their impact on efficiency difficult to evaluate. However, reforms also aimed at improving quality and expanding coverage of preventive interventions for vulnerable populations. A number of measures were reported in France that are likely to increase quality, such as value-based user charges and expansion of HTA, and increase efficiency, such as substitution of inpatient hospitalizations with outpatient care. Initiatives also included increases in user charges and the expansion of protection schemes, such as an expansion of publicly funded statutory insurance coverage and complementary insurance reimbursing user charges to low-income populations. Similarly, all three southern European countries took measures across all except the southeastern quadrants. England appears to be somewhat of an exception in that neither policies that might increase cost were reported nor, contrary to the rest of countries, were additional user charges introduced. Policies in England appear to have focused on cutting provider prices and incomes as well as gaining efficiencies from substituting hospital services with primary care.

Although some policies may be inefficient in the longer run through causing delayed cost increases, our analysis did not identify clearly inefficient policies that are likely to decrease output while increasing cost in the short run. Somewhat of an exception to this may be increases to user charges for primary care services, which were reported in two countries. Depending on the barriers to accessing other levels of care, such charges could cause people to substitute primary care with more expensive care, such as hospital-based services, or forgo early treatment, causing utilization of more costly interventions at a later stage.

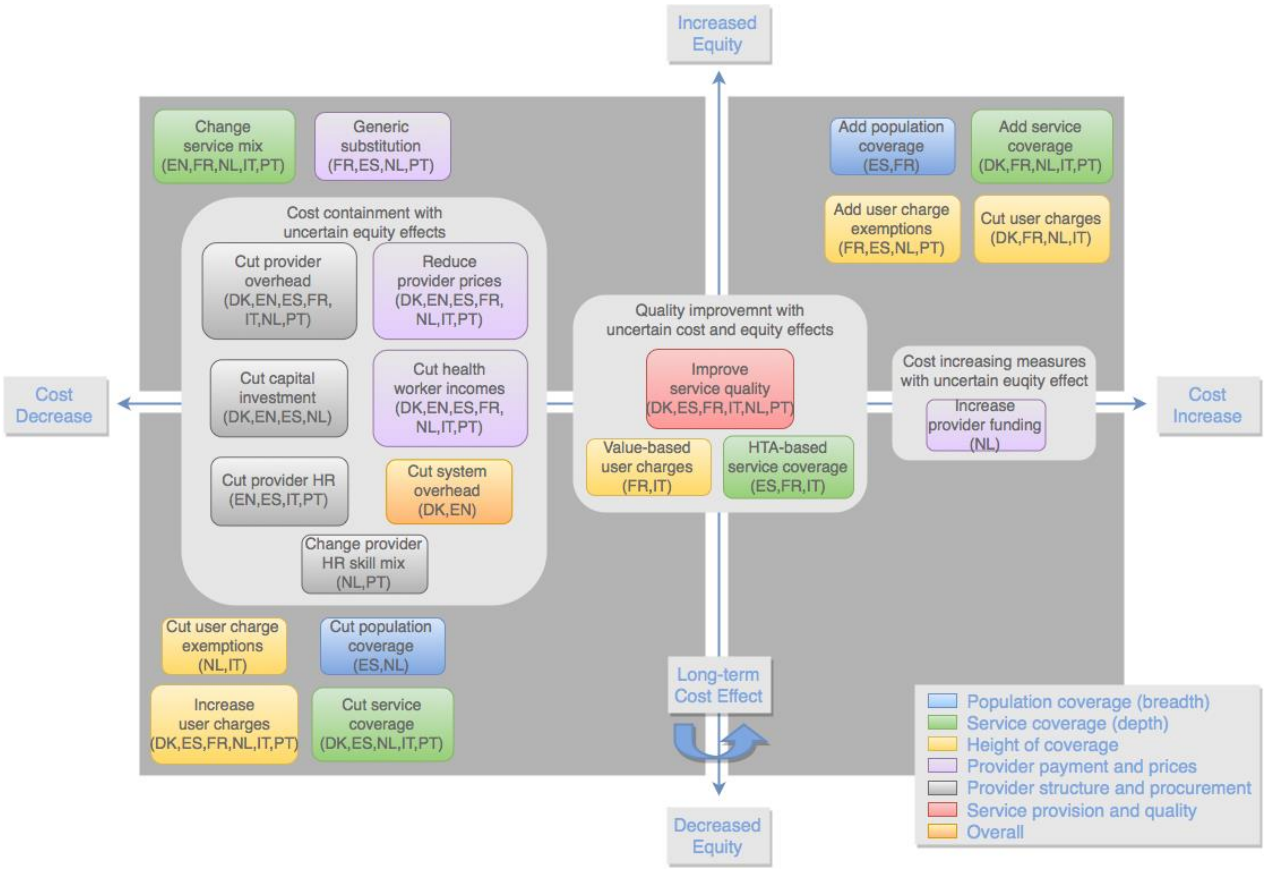
User charge increases were most commonly applied to hospital or specialist services and drugs or devices. Copayments and co-insurance were most common, while only the Netherlands applies a mandatory deductible across all types of services, with some exceptions, such as GP consultations. To attenuate the effect of such measures on low-income and high-need populations, user charges for additional services or increases were generally accompanied by expanding exemptions. Policies expanding or increasing user charges as well as changes to exemptions are summarized in Appendix Tables 2 and 3. In Denmark, France, Italy, and the Netherlands initial changes to user charges were reversed at

later points in time during the period considered; increases and decreases are thus listed for these countries.

Mapping initiatives in terms of their impact on equity (Figure 5) illustrate the obvious connection between insurance coverage and equity—measures that reduce the breadth, depth, or height of coverage also reduce equity, and measures that increase coverage also increase equity. Some of the initiatives that are likely to increase efficiency can also be positive for equity—generic substitution and the reduction of drug prices are likely to reduce financial access barriers and substituting hospital with primary care can increase equity if primary care is more accessible to poorer and more needy population groups than specialized care. Cost containment measures that are output neutral are likely to also be neutral to equity.

Analogous to efficiency effects, however, not all initiatives can easily be assessed in terms of equity. Measures that aim at reducing the availability of services and service volumes provided are equity neutral if such reductions are proportionate to need in the population. If, however, they are concentrated in areas of higher need or providers respond to measures such as price reductions or volume caps with shifting activity toward lower-risk or private patients, such reductions may have negative implications for equity. Quality improvement measures can similarly be equity neutral provided that they improve the quality of care for all population groups and proportionately to different levels of need in the population. They can indeed have a positive effect if they render appropriate care more accessible to high-need patients, such as those with chronic conditions. Conversely, they can be detrimental to equity if improvements occur disproportionately for population groups with lower needs. Without more detailed analysis and disaggregated data, it is not possible to assess the *de facto* effects of these measures on low-income and high-need populations. However, the expansion of user charge exemptions may indicate that protection of the most vulnerable populations continued to be a policy goal throughout the reform processes.

Figure 5: Likely Effect of Policies on Equity



Source: authors based on Maresso et al. 2015; Thomson et al. 2015, 2014

Trends in Health System Metrics

We review the potential implications of policies described above in terms of changes in aggregate health expenditure as well as the mix of public and private sources of financing, the availability of physical and human health care resources, health care utilization, pharmaceutical sales and consumption, and waiting times and self-reported unmet need as indicators of access. Taking 2008 as the first year of the crisis and a delay of at least one year between policy implementation and effect, we compare trends after 2009 to trends until 2009. For the UK, policies reviewed above refer to England only while data provided below are not disaggregated by constituent country.

Health Expenditure

Trends in health expenditure since 2009 are summarized in Appendix Table 4 and Appendix Figure 6, based on OECD 2015. Total health expenditure decreased between 2009 and 2013 in all countries except France and the Netherlands, with the most significant decreases in Portugal (–12%) followed by Spain (–7%) and Italy (–6%). In France and the Netherlands, expenditure has continued to grow throughout this period albeit at a lower rate than historically (compared to mean annual growth rates between 2000 and 2009).

In Italy, Portugal, Spain, and the UK, where publicly financed expenditure has decreased at a higher rate than total expenditure, this has been accompanied by a shift to private spending and an increase in the share of private out-of-pocket (OOP) spending in total expenditure. In Portugal, the most significant increases in OOP spending were for hospital services, while the share of OOP expenditure on nonhospital providers, such as GP practices, and retail purchases of medical goods decreased; however, the latter two still represent the largest portion. In Spain, the main increases in OOP spending were on retail purchases of medical goods and residential and nursing care providers, while OOP expenditure for hospital service decreased. No breakdown by provider type was available for Italy and the UK. In France the share of OOP spending decreased during this period, and a slight decrease is also apparent in data for the Netherlands. In Denmark, the share of OOP spending decreased between 2009 and 2012 before increasing again in 2013 to a similar level as in 2009.

Physical and Human Health Care Resources

In the same period, OECD 2015 reports that the number of hospital beds per population has decreased in all countries for which data are available,[2] except in Portugal, where it has remained relatively stable (Appendix Table 5). Decreases were most significant in the UK (-15%) and Denmark (–12%), where the average annual decrease was more significant than prior to 2009. In other countries the decrease since 2009 was similar or less significant than prior to 2009. In Portugal, however, there appears to have been somewhat of a shift from the public to the private sector, with the share of public beds vs. the total decreasing from 73 percent to 70 percent and corresponding increases in the private nonprofit and for-profit sectors between 2009 and 2013.

The number of professionally active physicians and nurses per population has remained stable or increased in all countries for which data are available in the same period,[3] with the sharpest increases in active physicians in the Netherlands (+13%), where average annual growth rates after 2009 exceed those before 2009, and Spain (+7%), albeit with similar average annual growth rates after 2009 as before. In Denmark the increase also slowed after 2009 while in Italy the number of physicians remained fairly stable before and after the onset of the crisis. In the Netherlands and Spain, the number of nurses increased at a lower rate (about +4%) than that of physicians, while in Denmark the number of nurses grew faster. The most significant increases in the number of nurses per population are found in France (+15%), where the growth rate increased after 2009, and Portugal (+11%), where growth slowed after 2009. No breakdown between the public and private sectors was available.

Utilization

The number of doctor consultations (in all settings, see Appendix Table 5) decreased in France and in Spain after 2009 and was flat in Denmark. In France and Denmark, this represents a reversal of growth prior to 2009 while data for the reference period are lacking

[2] No data is available for the Netherlands.

[3] No data on physicians are available for Portugal and the UK and on nurses for Italy and the UK.

for Spain. In the Netherlands and in Portugal, the number of consultations increased, with an accelerating growth rate in the Netherlands and slower growth than prior to 2009 in Portugal.[4]

The number of inpatient hospital discharges (Appendix Table 5) decreased in all countries between 2009 and 2013 for which data were available except France,[5] which represented a reversal of slight growth prior to 2009 in Portugal and the UK, while in Denmark the number was stable prior to 2009. In Italy the decline prior to 2009 accelerated after 2009. In France, the number remained approximately constant between 2009 and 2013, versus a trend of decreasing discharges prior to 2009.

Based on data from the Ministry of Health, Sakellarides et al. 2015 also report that utilization of primary care and hospital emergency services in Portugal have decreased between 2011 and 2012. Also using a national database, Perelman, Felix & Santana 2015 find that inpatient discharges from public hospitals remained roughly stable in Portugal between 2009 and 2012 but that the crisis may have been related to decreased utilization of services by private providers. Using data from the Spanish National Health Survey, Urbanos Garrido & Puig-Junoy 2014 analyze generalist, specialist, and dentist consultations between 2006 and 2012. After controlling for a number of socio-economic and geographic variables as well as need, they find a lower likelihood of consulting a generalist or specialist for all socio-economic groups in 2012. The likelihood of consulting a dentist, which is excluded from public coverage, declined for lower socio-economic groups only. For France, Brunn et al. 2015 report that at-home hospitalizations have increased as a result of incentives put in place to reduce in-patient hospital activity.

Pharmaceuticals

Based on OECD 2015, total pharmaceutical sales have decreased in all countries between 2009 and 2013 vs. increases prior to 2009, except Italy and the UK (Appendix Table 5). Decreases were most significant in Portugal (–21%), followed by Spain (–16%) and the Netherlands (–15%). In Italy and the UK, sales have increased slightly (1% and 4%, respectively) albeit at significantly lower growth rates than before 2009.

During the same period, consumption has generally increased. Use of defined daily dosages (DDD) per population and day of agents regulating blood pressure and modifying lipids as well as diabetes drugs, the three highest-selling groups of drugs reported by OECD, has continued to increase in all countries except Portugal.[6] However, average annual increases since 2009 were generally below pre-2009 average growth rates. In Portugal the volume of blood pressure regulating agents and diabetes drugs has decreased (–13% and –7%, respectively). This is in line with Sakellarides et al. 2015, who report that, despite overall increases in publicly financed drug purchases, unmet pharmaceutical need may be high

[4] No data are available for the UK.
[5] No data are available for the Netherlands in 2013.
[6] No data on consumption are available for France after 2009.

among chronic patients, such as people with hypertension or diabetes. For Spain, data analyzed by Urbanos Garrido & Puig-Junoy 2014 indicated that the number of prescriptions for which drugs were dispensed by pharmacies decreased after introduction of copayments in 2012.

OECD only provides data on the share of generics in the total pharmaceutical market for France, Italy, and Portugal. In all of these countries, the share of generics in the total volume of pharmaceuticals dispensed has increased, with the highest increase in Portugal (+14 points) followed by Italy (+7 points). In these two countries, the average annual increase in the share of generics since 2009 has exceed the average before 2009, while the increase in France has been slower since 2009 than before.

Data is available for all countries on consumption of pharmaceuticals reimbursed by a third-party payer only and all countries report increases in the share of generics since 2009, with the highest increases in Spain (+23 points), Portugal (+19 points) and the Netherlands (+13 points). Average annual increases since 2009 exceed those before 2009 in all countries except Denmark and France.

Access to Services

Access to health care is difficult to measure at the aggregate level. However, OECD 2015 reports waiting times between specialist assessment and treatment for three common types of elective surgery (cataract surgery, and hip and knee replacements) for all countries surveyed here other than France and Italy.[7] Based on the European Survey on Income and Living Conditions (SILC), Eurostat 2015 estimates the percentage of the population in each country having missed medical examinations. Changes in these two metrics can be an indication of changing accessibility of services.

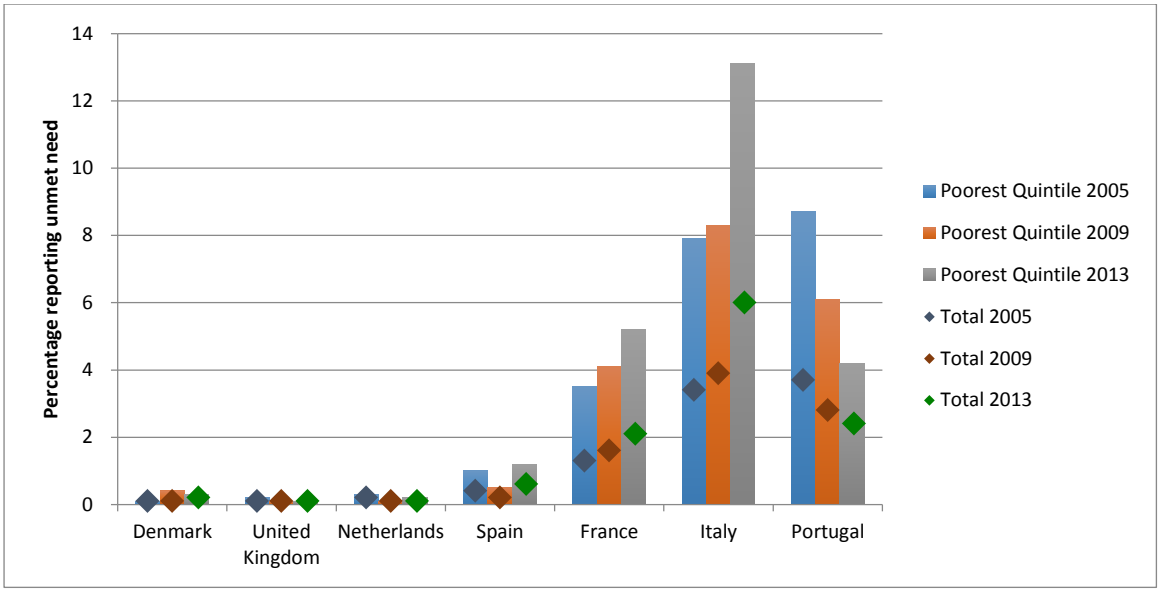
Waiting times for all three of these procedures have decreased significantly between 2009 and 2013 in Denmark and the Netherlands (from –12% for cataract surgery in the Netherlands to –27% in Denmark and between –24% and –29% for hip and knee replacements in both countries) while they have increased in Portugal, Spain, and the UK (Appendix Table 5). Increases appear to have been most significant in Spain (+13% for cataract surgery and +12% for hip replacements) followed by Portugal (+12% for cataract surgery and +10% for knee replacement). For these three countries, this represents a reversal in trends compared to decreasing waiting times prior to 2009. For Spain, increases in unmet need due to waiting times were also reported by a study based on the Spanish National Health Survey (Garcia-Subirats et al. 2014).

Data on self-reported unmet need from SILC are disaggregated by reason, including cost as an indicator of financial barriers, and income quintile, allowing some conclusions to be drawn on equity of access by income group. These are summarized in Figure 7 for 2005, 2009, and 2013. Data indicate that in France, Italy, and Portugal, the countries with the

[7] No data are available for knee replacements in Spain.

highest unmet need due to cost, the trend prior to 2009 continued between 2009 and 2013: in the poorest quintile as well as the entire income distribution, unmet need due to cost continued to increase in France and Italy and continued to decrease in Portugal. Although it should be noted that the increase between 2009 and 2013 was particularly sharp in Italy, which appears to be supported by data from local surveys and patient complaints (De Belvis et al. 2012), gaps between the poorest quintile and the total in these three countries do not appear to have widened. Also, in Portugal, although the percentage of people reporting unmet need due to cost was lower in 2013 than in 2009, it had already reached an even lower level by 2011 (2.2% in the poorest quintile and 1.3% overall) before increasing again through 2013. Sakellarides et al. 2015 cite a number of Portuguese studies that also indicate that health care utilization may be decreasing in Portugal as a result of unmet need. In Spain, self-reported unmet need due to cost decreased before 2009 and increased again after 2009. In the remaining countries, less than 0.5% of respondents reported unmet need due to cost throughout the period with only small changes over time.

Figure 7: Self-Reported Unmet Need Due to Cost by Income Quintile, 2005, 2009 and 2013



Source: Authors based on Eurostat 2015

However, these numbers need to be interpreted with some caution. Differences in utilization patterns of people surveyed (Allin, Grignon & Le Grand 2010) or cultural attitudes may affect self-reporting and reduce the comparability of figures between countries. Figures provided by SILC are somewhat contradictory to studies cited by Batenburg, Kroneman & Sagan 2015 for the Netherlands, indicating that unmet need due to cost is more prevalent and that the high overall deductible might be a reason. For instance, a study by Schoen et al. 2013 reports that more than 20 percent of adults surveyed in the Netherlands have forgone medical care due to cost. Contrary to SILC, Garcia-Subirats et al. 2014 report that overall unmet need in Spain and unmet need due to cost, especially among immigrant groups from low-income

countries, declined between 2006 and 2012; the authors hypothesize that this might be related to differences in phrasing of the questions between SILC and the Spanish Health Survey.

Brunn et al. 2015 also report increased unmet need due to cost in France and decreased equity related to increasing reliance on private insurance, based on a number of French studies. While overall estimates of unmet need due to cost are higher than those from SILC and are particularly prevalent among people who do not have complementary private insurance coverage, one study concludes that this is mostly related to dental and optometry services. They also add that some protection schemes have been successful at attenuating financial risk for the least well-off.

4. Discussion

We provided a conceptual framework to assess cost-containment policies in terms of efficiency and equity and reviewed policies adopted during the most recent economic crisis in national health systems of Denmark, England, France, Italy, the Netherlands, Portugal, and Spain. We reviewed intended effects of these policies against expenditure trends and a number of selected measures of health system structure and output.

Policies cluster to the left of the efficiency and equity frameworks and mostly aim to contain cost through price reductions or cuts to capacity and activity. We find the widest range of policies adopted in the Netherlands and the fewest in England. However, the number of distinct policies we identify in each country is not related to the intensity of their potential impact on the dimensions we consider—the fact that a wider range of different cost-containment policies were introduced in the Netherlands than in England does not imply that cost reductions were more significant in the Netherlands. Indeed, we find that expenditure continued to increase in the Netherlands, albeit at a lower rate than before, while it decreased in England. In England, the crisis occurred at the same time as reforms under the 2012 Health and Social Care Act that increased autonomy of devolved purchasers (Clinical Commissioning Groups). Greater local discretion in purchasing and thus *de facto* service coverage in combination with flat or decreasing real-term budget allocations might imply reductions in accessibility that are not fully reflected by analyses of policies and data at the national level. Growth also slowed since 2009 in France and expenditure declined in all other countries reviewed. Reductions were most marked in southern European countries, which were most severely hit by the crisis and were subject to external pressures to cut public expenditure. Pressure from outside is likely to have added particular urgency to reform and rendered technically and politically easier measures that provide short-term savings.

Reductions in prices of pharmaceuticals as well as generic substitution have been reported in all countries, with a particularly wide range of measures taken in Portugal and Spain (also see Mendonça 2011; Vogler et al. 2011). Data indicate clearly that pharmaceutical sales have slowed or decreased while volumes of the drug categories considered have largely continued to increase, as has the share of generics. However, while volume increases were generally slower than before 2009, some data from Portugal and Spain indicate that policies such as

increased copayments reduced pharmaceutical consumption. Policies also frequently attempted to cut prices of nonpharmaceutical products, but no data were available to assess their impact.

Although studies on health worker perceptions of the impact of cuts or controls to human resources in Spain and Italy raised concerns about deteriorating working conditions, patient access and quality of care (Cervero-Liceras, McKee & Legido-Quigley 2015; Palese et al. 2014; Legido-Quigley et al. 2013; De Belvis et al. 2012), cuts appear to have thus far had a limited effect on the availability of health care staff, as measured by the growth in the number of active physicians and nurses relative to the population. However, available data do not allow for an assessment of whether there has been a shift of staff from public to private providers. Policies to control incomes were reported in all countries and were particularly marked in Spain and Portugal. While no comparable data are available on health worker incomes, the fact that blanket salary cuts were introduced in the public sectors of these countries, which represent a large share of providers, makes the assumption reasonable that these have played a role in reducing aggregate expenditure.

Price cuts, whether affecting provider incomes or that of industry supplying the health care sector, are relatively easy to implement technically and can generate immediate savings. Although political resistance might be encountered if parties bearing the brunt of such measures are well organized and have strong representation, these may represent low-hanging fruit and be relatively painless for the population (Bodenheimer & Grumbach 2012) and neutral to equity, provided that they are not excessive and result in *de facto* reduction of availability and accessibility of services. The depth of cuts, however, is crucial and some data indicate that they may have had a negative effect on access to and quality of care in Portugal and Spain (see below).

While also technically easy to implement, direct cuts to the availability of services are more painful for the population. Such measures, including hospital closures, reduction of staff, or other cuts to capacity as well as introducing direct barriers to accessibility, notably through introduction of user charges, may be politically more difficult and are likely to have a more immediate effect on health system performance. Additional user charges have been a common theme in reforms throughout most countries. This is particularly concerning as they imply a direct reduction in equity of financing and access to services and affect vulnerable and high-need population groups the most. In addition, prior evidence has shown clearly that blanket user charges are a blunt tool to control cost and may not only be inequitable but also inefficient (Gemmill, Thomson & Mossialos 2008; Robinson 2002). This is because they may lead people to forgo unnecessary as well as needed care and delay utilization of cost-effective services at the early stage of disease while increasing utilization elsewhere ("squeezed-balloon effect"). A similar effect can be expected by blanket cuts to service availability with a purely short-term goal of balancing budgets.

However, increases in user charges have largely been accompanied by additional exemptions for low-income or high-need population groups. Some cost shifting is apparent in countries

such as Spain and Portugal, where the share of out-of-pocket expenditure has increased more than in other countries and now accounts for more than 25 percent of total health expenditure. In Portugal the extension of charges to additional services and the increase of existing ones came alongside an expansion of eligibility for exemptions from about 4.2 to 7.2 million people (Barros 2012). The combined effect of increases and additional exemptions is not clear, but extensive exemptions may be part of the explanation for why user charges continue to constitute a relatively small portion of total health expenditure and should continue to be viewed as a poor cost control measure.

The decrease in the share of OOP spending in total expenditure in France might be partly caused by the expansion of eligibility of low-income populations for complementary insurance (CMU-C) covering user charges. It is less clear why the share of OOP spending has also decreased slightly in the Netherlands, while the mandatory deductible has been raised repeatedly. Although additional services, mainly outpatient (such as GP consultations), were exempted from counting toward the deductible, this does not appear to be an explanation as OOP spending on outpatient care has increased more than total expenditure.

The introduction of value-based user charges was only reported for France and Italy. This may represent a missed opportunity since, if applied carefully, such charges can reduce the use of inappropriate care while freeing up resources for needed services and can have, as such, equity and efficiency-enhancing effects. Value-based policies more generally, such as expanding the use of HTA or tying coverage to HTA, were less common. One reason for this may be that such policies are technically more difficult to implement, may require up-front investment in building capacities to conduct assessments, and may not generate immediate cost savings. A number of measures for HTA-based "disinvestment" to restrict the service package were announced in Spain, although these may take some time to be implemented and show their effect (also see García-Armesto, Campillo-Artero & Bernal-Delgado 2013).

Decreases in utilization of hospital services as well as increases in unmet need and waiting times might be an indication of reduced accessibility of services and are particularly apparent in southern European countries and, to a lesser extent, in the UK. Although the need for health care might be expected to increase during economic crisis, and decreases in utilization may seem somewhat surprising, it is not possible to conclude definitively whether such decreases are in fact driven by increased unmet need or as a result of access barriers. Changes could also be related to other factors, such as increases in the utilization of primary care or similar substitution effects, which may represent efficiencies. For instance, analysis by Perelman, Felix & Santana 2015 suggests that, after controlling for time trends prior to the crisis, economic downturn was associated with an increase in discharges from public hospitals in Portugal, driven by increased nonelective stays while elective stays decreased. They find some indication that this pattern may be related to increased demand for care as a result of the crisis and substitution of forgone earlier interventions in primary care with later and more urgent use of hospital services. They further note that length of stay decreased, which may represent efficiencies if outcomes do not deteriorate. Limitations of the data

notwithstanding, however, increasing waiting times and self-reported unmet need should be a cause for concern.

Although we find changes in trends of expenditure, physical resources, activity, and broad proxy measures of access, the aggregated data available and the multitude of changes implemented concurrently do not allow for attribution of these patterns to specific policies. The reforms are too recent to draw definitive conclusions on their more sustained effects on health system goals, which tend to materialize with some delay. Nevertheless, it does appear reasonable to conclude that the policies discussed above are related to the observed trends in the data and have been somewhat successful at containing cost in the short run.

Beyond these implications, available data do not allow for an assessment of overall effects cost containment policies have had on efficiency and equity in the health systems of the six countries reviewed and, specifically, vulnerable populations that require stronger protection during a crisis. For instance, studies from Spain cited above report that health workers are raising concerns about availability and quality of services. Beyond reported increases in waiting times, however, it is not possible to conclude definitively whether access or utilization has decreased significantly based on data available through 2013. Some specific measures, such as the expansion of state-sponsored complementary insurance in France, are likely to have had a protective effect. Policies that restricted coverage to exclude vulnerable groups, such as undocumented migrants in Spain, likely had a detrimental effect on access for these population groups. Whether cost containment measures that also reduced overall service availability and utilization represent disproportionately affected vulnerable populations is less clear. Similarly, whether short-term cost containment measures will be able to control costs in the longer run without undermining health system performance remains to be seen.

5. Conclusion

In contrast to findings by Stabile et al. 2013, who identified a trend toward value-based and efficiency-enhancing policies between 2000 and 2010, the most recent economic crisis appears to have been related to a stronger cost containment focus in national health care systems than before and created a more constrained health care environment. Measures that are relatively easy to implement, such as price reductions, were common and are likely to have been successful at containing cost while preserving the availability and accessibility of services in the short run, implying efficiency gains. However, a number of policies also aimed to cut costs by reducing coverage and access to services. Not surprisingly, we find that expenditure reductions were most marked in southern European countries, which were most severely hit by the crisis and were subject to external pressures to cut public expenditure. There is some indication that access to services and equity may have been reduced by cost containment in these countries, although not all data are conclusive and it may be too early to evaluate effects. Increases in blanket user charges, which were another common theme of reforms, are a cause for concern although, together with additional exemptions, their effect on vulnerable populations remains difficult to evaluate. It remains to be seen what longer-run

effects cost containment policies adopted during the post-2008 economic crises will have on cost and health system performance.

APPENDIX TABLES AND FIGURES

Appendix Table 1: Summary of Policies Implemented Since 2008 in the Six Countries Reviewed

Health System Area Affected	Type and Direction of Effect	Description of Policy	Countries
Population coverage (breath) and access to services	Increase breadth	Expanding coverage for uninsured population or vulnerable groups	FR, ES
	Reduce breadth	Restricting coverage for vulnerable groups (nonpermanent residents, non-EU citizens, undocumented migrants, etc.)	ES
		Tightening of eligibility criteria for long-term care, resulting in de-facto narrowing of population coverage	NL
Service coverage (depth) and access	Increase depth	Ad hoc expansion of coverage for additional services	FR, NL, IT
		Increasing public health budgets or expanding public health interventions (screening, prevention)	DK, FR, PT
	Reduce depth	Ad hoc or blanket restrictions to coverage of services	NL, ES, IT, PT
		Reducing public health budgets or removing public health interventions (screening, prevention)	DK, NL
		Reducing supply and accessibility of primary care	ES
		Reducing supply of hospital care (closures, reduction in beds, mergers)	DK, ES, NL, IT, PT
		Reducing supply or funding for long-term care	NL, IT
	Change service mix	Increasing supply and accessibility of primary care to substitute for hospital	EN, FR, NL, IT, PT
	Value-based changes (increase or reduction)	Introducing HTA to define coverage (all types of benefits including services)	ES
		Introducing HTA to define coverage of drugs and/or devices	ES, FR, IT
		Using HTA to identify services for disinvestment	ES, FR,
Height of coverage and access to services	Increase height	*Remove or decrease user charges for:*	
		Hospital and/or specialist care	DK, NL, IT
		Primary care (in NL, GP consultations excluded from deductible, charges for mental health reversed in 2014)	NL
		Decreasing or abolishing user charges for vulnerable populations	DK, FR
		Expanding user charge exemptions for vulnerable populations (e.g., based on age, income, employment status, health status) or reducing exemptions for	FR, ES, NL, PT

		wealthier populations	
	Decrease height	*Introduce or increase user charges for:*	
		Hospital and/or specialist care	DK, FR, NL, IT, PT
		Primary care (in NL, mental health only)	NL, PT
		Drugs and/or devices	DK, ES, FR, IT, PT
		Long-term care	NL
		Dental care	DK
		Introducing / increasing overall deductibles (for all levels of care and types of services)	NL
		Introducing or increasing user charges for vulnerable populations or removing exemptions	DK, IT
	Value-based changes	Introducing or increasing value-based user charges (nonurgent use of ED, drugs with limited effectiveness, inappropriate service utilization, etc.)	FR, IT
Provider payment and prices	Increase prices	Increasing funding for or prices of primary care	NL (2010)
	Reduce prices	Decreasing or freezing funding for or prices of primary care	NL (2008)
		Reduce hospital expenditure through budget caps or payment scheme reforms	FR, NL, IT, PT
		Reduce hospital expenditure through price cuts	DK, EN, FR, NL
		Reduce drug or device prices through direct cuts or indirect policies (increased competition, centralized procurement, tendering, reference pricing, etc.)	DK, EN, ES, FR, NL, IT, PT
		Generic substitution	ES, FR, NL, PT
		Introducing measures to control health worker incomes (salary or fee-for-service cuts, freezes or slowed increases, increased social contributions, increasing overtime shifts, etc.)	DK, ES, EN, FR, NL, IT, PT
		Increase competition among payers	NL
Provider structure and procurement	Cut overhead	Reducing provider administrative budgets or staff	DK, EN, NL, PT
		Centralization of procurement of medical supplies	EN, ES, FR, IT, PT
	Cut human resources	Introducing controls of health worker staff levels (cuts, recruitment freezes, nonrenewal of temp contracts, etc.)	EN, ES, IT, PT
	Change skill mix	Strengthening the role of nurses to substitute doctors with nurses in primary care	NL, PT

	Cut capital investment	Reducing or delaying publicly financed capital investments in hospitals	DK, EN, ES, NL
Service provision and quality	Improve quality	Introducing or expanding measures to encourage evidence-based prescribing of drugs and avoid errors (INN, e-prescriptions, guidelines, etc.)	DK, ES, PT
		Adding new criteria to HTA or expand scope	FR
		Introducing or expanding measures to encourage evidence-based practice	DK, FR, IT, PT
		Introducing additional e-health systems to facilitate information exchange, improve quality, and reduce waste	DK, FR, PT
		Incentivize treatment and management of chronic patients	FR, NL
Overall	Cut health system overhead	Restructuring ministries or other public agencies to reduce overhead and administrative costs	DK, EN

Source: Authors based on Maresso et al. 2015; Thomson et al. 2015

Appendix Table 2: Summary of User Charges and Exemptions Introduced Since 2008.

Level of Care and Type of Service or Good	**Type of Charge**	**Countries and Type of Change**
Hospital in-patient stay	Copayment	FR (2010): from EUR16 to 18 per day for all hospital stays NL (2012): introduction of copayment of EUR145 / month for stay in mental care hospital (abolished in 2014)
Hospital emergency services	Copayment	PT (2011-13): depending on type of emergency, from EUR8.60 to 9.60 to EUR 15 to 20.60 and future inflation-indexed increases. IT (2011): increase to a minimum of EUR25 for nonurgent use, amount set by region (value-based charge)
Outpatient specialist services	Copayment	DK (2012): introduction for IVF and sterilization NL (2012): introduction of EUR100 to 200 per secondary mental health treatment (abolished in 2014) PT (2011-13): increase from EUR4.60 to 7.75 for all specialist consultations and future inflation-indexed increases. IT (2011): increase to a minimum of EUR10 nationally, with remaining amount set by region
Primary care	Copayment	NL (2012): increase from EUR10 to 20 per primary mental health care consultation (abolished in 2014) PT (2011-13): from EUR2.25 to EUR 5 for GP consultations and up to EUR 10 for other primary care services and future inflation-indexed increases.

Devices	Co-insurance	ES (2012): Introduction for prostheses, depending on category of coverage FR (2010): increase from 35% to 40% for all devices, subject to exceptions approved by sickness funds NL (2013): introduction of 25% for hearing aids (replacing varying levels of copayments)
Devices	Copayment	NL (year not specified): introduction of EUR141 per pair of orthopedic shoes for adults and EUR57 for children aged <16 years
Pharmaceuticals	Co-insurance	DK (2008-13): slight increases of ceilings for decreasing co-insurance rate (from 100% for annual costs <DKK915 to 15% for costs >DKK3,235 ES: increase in co-insurance rate from 40% to 40% to 60%, depending on type of drug FR (2010): 65% to 70% for less effective drugs (value-based charge) PT (2010-11): co-insurance applied to over-the-counter drugs and pharmaceuticals for mental health conditions; co-insurance rates increased from 0 to 80% depending on the type of drug to 10% to 85% (but decrease of co-insurance rate for generics)
Pharmaceuticals	Copayment	DK (2012): slight increase for over-the-counter drugs ES (2012): Introduction for prescription drugs, depending on region and category of coverage IT (2008-11): introduction in four regions for outpatient prescriptions
Long-term care		NL (2013): increase of co-insurance rates
Dental care	Copayment	DK (2013): slight increase
All, subject to exceptions	Deductible	NL: repeated increases from EUR 150 / year in 2008 to EUR 350 in 2013
All, subject to exceptions	Co-insurance	FR (2009): Increase for care not compliant with agreed pathways from 40% to 70% (value-based charge)
Services related to health care	Copayment	DK (2013): introduction for translation services for migrant groups

Source: Authors based on Maresso et al. 2015; Mutual Information System on Social Protection 2015a, 2015b

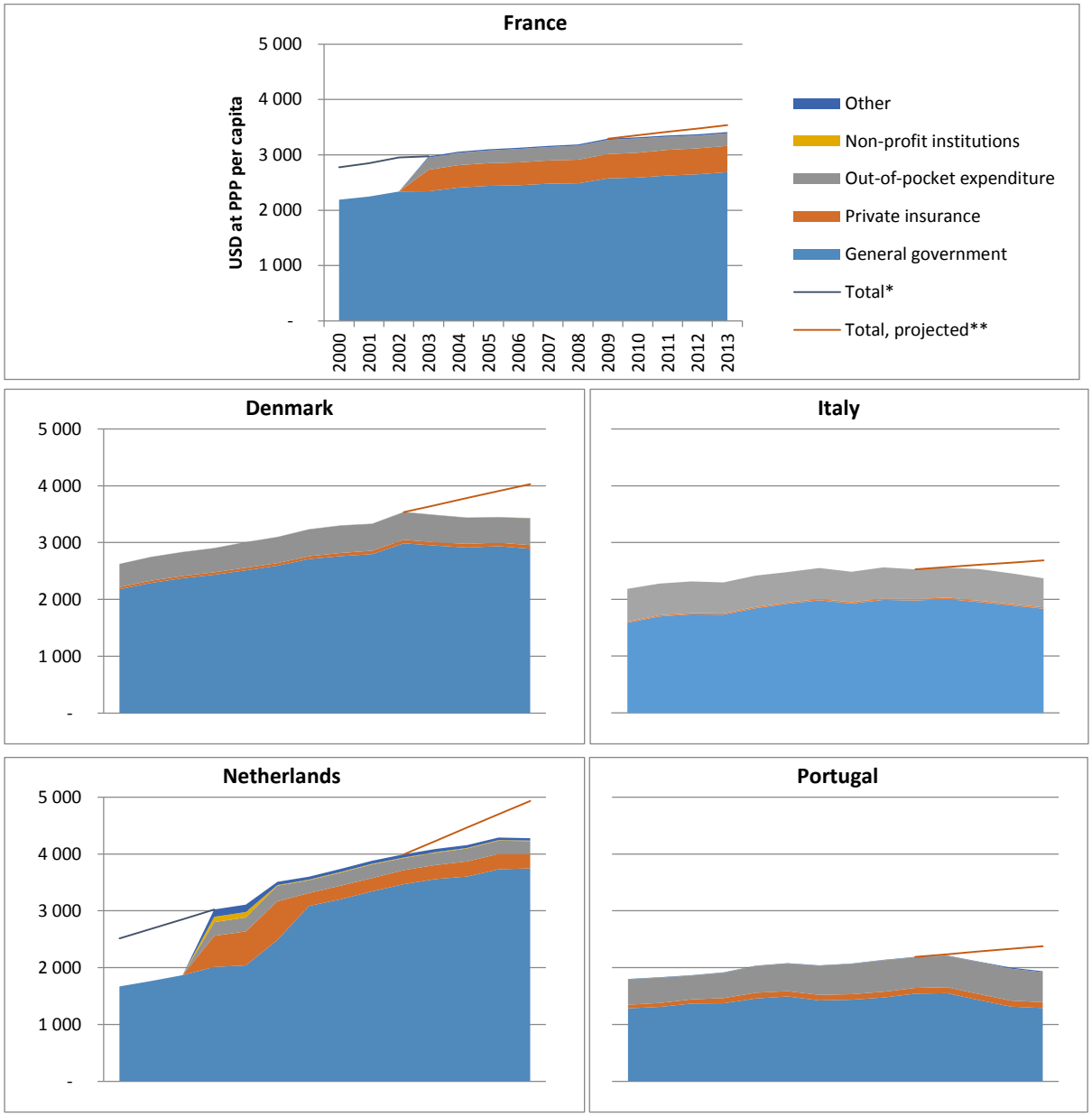
Appendix Table 3: Summary of Changes to User Charge Exemptions and Protection Mechanisms

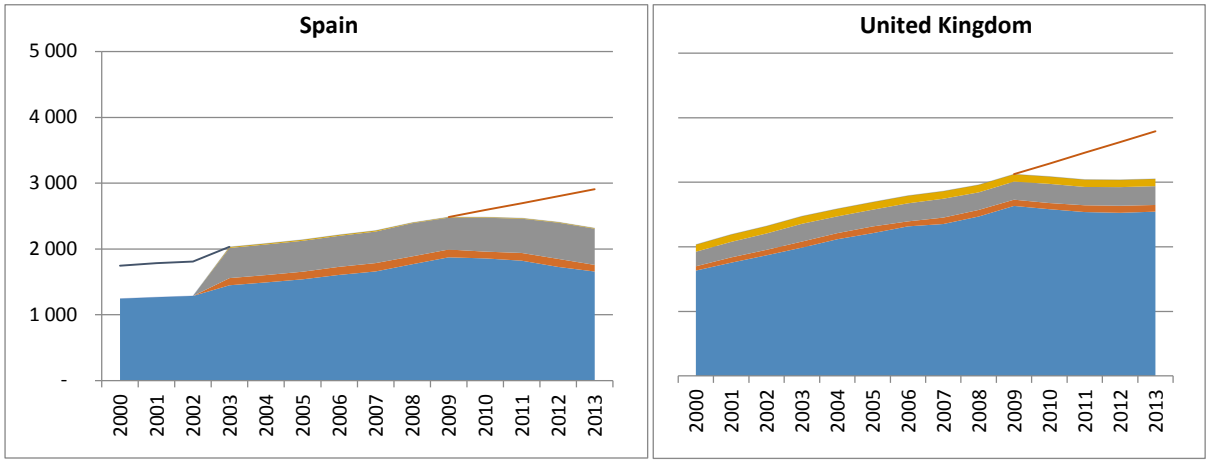
Type of Exemption or Protection	**Countries and Targeted Populations**
Exemptions from all user charges	IT (2008-11): varying arrangements by region, but charges generally based on household income; increase of age threshold for exemption for people receiving the min. pension from 60 to 65 years PT (2012): expansion based on income, health status (e.g., people with chronic conditions), disability, age (e.g.,

	children), and employment status (e.g., unemployed, fire fighters) to cover about 70% of the population
Expansion of publicly funded statutory insurance coverage and private insurance for user charges	FR (2009): expansion of low-income population eligible for statutory coverage (CMU) and complementary insurance covering user charges (CMU-C) FR (2011): removal of deductible for undocumented migrants
Income-based co-insurance rates and monthly caps for prescription drugs	ES (2012): introduction of varying rates from 10% to 60% and monthly caps ranging from EUR8 to EUR61 for annual incomes between EUR18,000 and 100,000
Insurance premium subsidies	NL (2011-13): gradual reduction of subsidies for purchase of insurance and lowering of income threshold for eligibility. However, reductions less significant for lower than higher incomes.
Exemptions of services from deductible	NL (year not specified): exclusion of GP consultations, maternity care and pediatric care from overall deductible

Source: Authors based on Maresso et al. 2015; Mutual Information System on Social Protection 2015a, 2015b

Appendix Figure 6: Growth in Actual Health Expenditure and Breakdown by Financing Source 2000 to 2013, Projection 2009 to 2013





Source: Authors based on OECD 2015

* Breakdown of private financing sources not available

** Projection of total expenditure from 2009 to 2013 if average annual growth rate between 2000 and 2009 had remained unchanged.

Appendix Table 4: Selected data on health expenditure, 2009 to 2013

Country	Financing Source	Provider Type	2009	2013	2009-13	Annual Avg pre-2009	Annual Avg 2009-13
			USD PPP	*USD PPP*	*% Change*	*% Change*	*% Change*
Denmark	All	All	3 536	3 428	-3,1%	3,5%	-0,6%
	Public	All	2 987	2 892	-3,2%	3,7%	-0,6%
	Private	All	550	537	-2,4%	2,4%	-0,5%
	OOP	All	484	470	-2,8%	2,0%	-0,6%
		Hospitals	71	65	-8,7%	7,2%	-1,7%
		Nursing and residential care facilities	-	-			
		Providers of ambulatory health care	236	238	0,7%	1,8%	0,1%
		Retail sale and other providers of medical goods	177	168	-5,0%	1,0%	-1,0%
France	All	All	3 293	3 413	3,6%	1,9%	0,7%
	Public	All	2 575	2 687	4,4%	1,8%	0,9%
	Private	All	718	725	1,1%	2,2%	0,2%
	OOP	All	256	229	-10,7%	2,4%	-2,1%
		Hospitals	30	25	-17,3%	2,8%	-3,5%
		Nursing and residential care facilities	nd	nd	nd	nd	nd
		Providers of ambulatory health care	99	86	-12,3%	3,2%	-2,5%
		Retail sale and other providers of medical goods	128	118	-7,9%	1,8%	-1,6%
Italy	All	All	2 528	2 371	-6,2%	1,6%	-1,2%
	Public	All	1 979	1 834	-7,3%	2,5%	-1,5%
	Private	All	548	536	-2,2%	-0,8%	-0,4%
	OOP	All	522	513	-1,7%	-1,0%	-0,3%
		Hospitals	nd	nd	nd	nd	nd
		Nursing and residential care facilities	nd	nd	nd	nd	nd
		Providers of ambulatory health care	nd	nd	nd	nd	nd
		Retail sale and other providers of medical goods	nd	nd	nd	nd	nd
Netherlands	All	All	3 995	4 278	7,1%	5,9%	1,4%
	Public	All	3 469	3 748	8,0%	10,8%	1,6%
	Private	All	526	530	0,8%	-3,8%	0,2%
	OOP	All	211	225	6,6%	-1,8%	1,3%
		Hospitals	6	4	-28,5%	1,6%	-5,7%
		Nursing and residential care facilities	2	1	-47,2%	-10,2%	-9,4%
		Providers of ambulatory health care	66	72	8,7%	-4,1%	1,7%
		Retail sale and other providers of medical goods	124	135	8,5%	-1,6%	1,7%
Portugal	All	All	2 190	1 937	-11,5%	2,2%	-2,3%
	Public	All	1 542	1 289	-16,4%	2,0%	-3,3%
	Private	All	648	648	0,0%	2,5%	0,0%
	OOP	All	538	527	-1,9%	2,1%	-0,4%
		Hospitals	57	90	57,5%	3,2%	11,5%
		Nursing and residential care facilities	5	8	57,9%	1,5%	11,6%
		Providers of ambulatory health care	255	240	-5,9%	4,4%	-1,2%
		Retail sale and other providers of medical goods	218	186	-14,7%	0,1%	-2,9%
Spain	All	All	2 484	2 316	-6,8%	4,2%	-1,4%
	Public	All	1 872	1 656	-11,5%	5,0%	-2,3%
	Private	All	612	660	7,8%	2,3%	1,6%
	OOP	All	485	550	13,6%	0,8%	2,7%

		Hospitals	11	11	-1,7%	-7,5%	-0,3%
		Nursing and residential care facilities	27	35	29,8%	-0,9%	6,0%
		Providers of ambulatory health care	246	240	-2,6%	1,0%	-0,5%
		Retail sale and other providers of medical goods	200	264	32,1%	-9,5%	5,1%
UK	All	All	2 956	2 939	-0,6%	5,3%	-0,1%
	Public	All	2 634	2 546	-3,4%	6,1%	-0,7%
	Private	All	532	510	-4,1%	2,7%	-0,8%
	OOP	All	280	292	4,0%	2,4%	0,8%
		Hospitals	nd	nd	nd	nd	nd
		Nursing and residential care facilities	nd	nd	nd	nd	nd
		Providers of ambulatory health care	nd	nd	nd	nd	nd
		Retail sale and other providers of medical goods	nd	nd	nd	nd	nd

Source: Authors based on OECD 2015

Notes: Pre-2009 average annual growth rates are generally based on the period 2000 to 2009. For private financing sources and the breakdown of out-of-pocket spending by provider type, data are not available for all years in the early 2000s.
OOP…out-of-pocket spending
nd…no data available

Appendix Table 5: Selected Indicators of Health Care Resources and Utilization, Waiting Times, and Pharmaceutical Sales

Measure	**Country**	**2009**	**2013**	**2009-13**	**Annual Avg pre-2009**	**Annual Avg post-2009**
				% Change	*% Change*	*% Change*
Hospital Beds, per 1,000 population	Denmark	3,5	3,1	-12,0%	-1,9%	-3,0%
	France	6,7	6,3	-5,6%	-1,6%	-1,1%
	Italy	3,7	3,4	-7,3%	-2,2%	-1,8%
	Netherlands	4,7	nd	nd	-0,4%	nd
	Portugal	3,4	3,4	0,9%	-0,9%	0,2%
	Spain	3,2	3,0	-6,3%	-1,4%	-1,3%
	UK	3,3	2,8	-15,3%	-2,0%	-3,1%
Public hospital beds, per 1,000 population	Denmark	3,3	2,9	-12,1%	-2,2%	-3,0%
	France	4,2	3,9	-7,8%	-1,9%	-1,6%
	Italy	2,5	2,3	-7,1%	-2,0%	-1,8%
	Netherlands	nd	nd	nd	nd	nd
	Portugal	2,5	2,4	-3,2%	-1,5%	-0,6%
	Spain	2,1	2,0	-2,9%	-1,4%	-0,6%
	UK	3,3	2,8	-15,3%	-2,0%	-3,1%
No. of active doctors, per 1,000 population	Denmark	3,7	3,9	3,5%	1,9%	0,9%
	France	3,3	3,3	1,8%	0,0%	0,4%
	Italy	4,2	4,2	0,5%	0,0%	0,1%
	Netherlands	2,9	3,3	12,7%	2,0%	2,5%
	Portugal	nd	nd	nd	nd	nd
	Spain	3,9	4,1	6,5%	1,3%	1,3%
	UK	nd	nd	nd	nd	nd
No. of active nurses, per 1,000 population	Denmark	16,9	17,6	4,0%	2,7%	1,0%
	France	8,2	9,4	14,7%	2,3%	2,9%
	Italy	nd	6,1	nd	nd	nd
	Netherlands	11,7	12,1	4,0%	1,3%	0,8%
	Portugal	5,4	6,1	11,4%	4,8%	2,3%
	Spain	5,2	5,4	4,3%	3,6%	0,9%
	UK	nd	nd	nd	nd	nd
Doctor consultations (in all	Denmark	4,6	4,6	0,0%	1,0%	0,0%

settings), per 1,000 population	France	6,7	6,4	-4,5%	0,7%	-0,9%
	Italy	nd	6,8	nd	0,0%	nd
	Netherlands	5,7	6,2	8,8%	0,3%	1,8%
	Portugal	4,0	4,1	2,5%	1,6%	0,6%
	Spain	7,5	7,4	-1,3%	nd	nd
	UK	5,0	nd	nd	0,0%	nd
Inpatient care discharges (all hospitals), per 1,000 population	Denmark	160,3	151,7	-5,3%	0,0%	-1,1%
	France	185,6	185,9	0,1%	-1,7%	0,0%
	Italy	135,3	117,3	-13,3%	-1,7%	-2,7%
	Netherlands	114,9	nd	nd	2,3%	nd
	Portugal	111,9	108,8	-2,8%	0,3%	-0,6%
	Spain	113,7	110,4	-2,9%	-0,5%	-0,6%
	UK	136,0	132,4	-2,7%	0,2%	-0,5%
Mean waiting time from specialist assessment to cataract surgery, days	Denmark	109,3	79,7	-27,1%	15,5%	-5,4%
	France	nd	nd	nd	nd	nd
	Italy	nd	nd	nd	nd	nd
	Netherlands	38,3	33,9	-11,5%	0,0%	-2,3%
	Portugal	82,2	92,1	12,0%	-15,0%	2,4%
	Spain	92	103,7	12,7%	-2,1%	2,5%
	UK	65,3	71,7	9,8%	-6,4%	2,0%
Mean waiting time from specialist assessment to hip replacement, days	Denmark	67,4	51,5	-23,6%	-2,6%	-4,7%
	France	nd	nd	nd	nd	nd
	Italy	nd	nd	nd	nd	nd
	Netherlands	54,3	38,4	-29,3%	0,0%	-5,9%
	Portugal	112,5	121,3	7,8%	-8,5%	1,6%
	Spain	142	159,3	12,2%	-1,1%	2,4%
	UK	86,9	88,6	2,0%	-6,4%	0,4%
Mean waiting time from specialist assessment to knee replacement, days	Denmark	77,1	55,8	-27,6%	-1,7%	-5,5%
	France	nd	nd	nd	nd	nd
	Italy	nd	nd	nd	nd	nd
	Netherlands	54,4	39,1	-28,1%	0,0%	-5,6%
	Portugal	169,2	186	9,9%	-11,5%	2,0%
	Spain	nd	210,8	nd	0,0%	0,0%
	UK	91,7	94,5	3,1%	-6,8%	0,6%
Total pharmaceutical sales, per capita, USD at PPP	Denmark	479,0	474,6	-0,9%	8,5%	-0,2%
	France	490,1	477,6	-2,6%	6,1%	-0,5%
	Italy	559,9	565,8	1,1%	7,3%	0,2%
	Netherlands	365,4	310,7	-15,0%	6,8%	-3,0%
	Portugal	496,3	391,3	-21,2%	5,3%	-4,2%
	Spain	398,2	336,5	-15,5%	5,2%	-3,1%
	UK	353,9	369,0	4,3%	3,6%	0,9%
Consumption of drugs used in diabetes, DDD per 1,000 population per day	Denmark	45,1	51,8	14,9%	9,4%	3,0%
	France	65,7	nd	nd	4,9%	nd
	Italy	53,7	66,7	24,2%	6,1%	4,8%
	Netherlands	70,5	74,9	6,2%	5,8%	1,2%
	Portugal	67,3	62,7	-6,8%	3,3%	-1,4%
	Spain	62	66,6	7,4%	5,9%	1,5%
	UK	70,5	82,3	16,7%	nd	3,3%
Consumption of agents acting on the renin-angiotensin system, DDD per 1,000 population per day	Denmark	148,9	174,3	17,1%	22,5%	3,4%
	France	144,8	nd	nd	9,4%	nd
	Italy	206,6	233,1	12,8%	10,0%	2,6%
	Netherlands	131	144,1	10,0%	11,8%	2,0%
	Portugal	141,2	122,3	-13,4%	9,0%	-2,7%

	Spain	153,1	162,6	6,2%	9,0%	1,2%
	UK	177,6	195,1	9,9%	nd	2,0%
Consumption of lipid modifying agents, DDD per 1,000 population per day	Denmark	99,4	125,7	26,5%	99,2%	5,3%
	France	91,7	nd	nd	5,2%	nd
	Italy	59,2	82,6	39,5%	13,5%	7,9%
	Netherlands	88,3	111,6	26,4%	6,0%	5,3%
	Portugal	87,7	101,9	16,2%	37,2%	3,2%
	Spain	74	96,2	30,0%	15,9%	6,0%
	UK	121,1	134,7	11,2%	nd	2,2%
Volume share of generics in total pharmaceutical market	Denmark	nd	nd	nd	0,0	0,0
	France	17,8%	23,5%	5,7pts	1,5pts	1,1pts
	Italy	11,8%	18,7%	6,9pts	1,0pts	1,4pts
	Netherlands	nd	nd	nd	nd	nd
	Portugal	15,9%	29,6%	13,7pts	1,6pts	2,7pts
	Spain	nd	nd	nd	nd	nd
	UK	nd	nd	nd	nd	nd
Volume share of generics in reimbursed pharmaceutical market	Denmark	42,4%	54,0%	11,6pts	2,4pts	2,3pts
	France	23,6%	30,2%	6,6pts	1,9pts	1,3pts
	Italy	11,6%	20,3%	8,7pts	1,2pts	1,7pts
	Netherlands	57,0%	69,7%	12,7pts	1,6pts	2,5pts
	Portugal	20,1%	39,0%	18,9pts	2,0pts	3,8pts
	Spain	23,8%	46,5%	22,7pts	2,1pts	4,5pts
	UK	72,5%	83,4%	10,9pts	0,7pts	2,2pts

Source: Authors based on OECD 2015

Notes: Pre-2009 average annual growth rates are based on data availability for each country, with the comparator period starting in 2000 or later.

nd…no data available

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