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Joint Report on Health Care and Long-Term Care Systems and Fiscal Sustainability

Prepared by the Commission Services (Directorate-General for Economic and Financial Affairs), and the Economic Policy Committee (Ageing Working Group)

Volume 1

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The report was prepared under the supervision of Lucio Pench (Director in DG ECFIN), Jens Granlund (Chair of the EPC), Giuseppe Carone (Head of Unit, DG ECFIN) and Wolfgang Merz (Chair of the AWG).

The report was written by Santiago Calvo Ramos (DG ECFIN), Benedetta Martinelli (DG ECFIN) and Christoph Schwierz (DG ECFIN) with contributions from Pedro Arevalo (DG ECFIN), Katia Berti (DG ECFIN) and Per Eckefeldt (DG ECFIN) and the members of the AWG.

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Comments on the report would be gratefully received at the following addresses:

Secretariat of the Economic Policy Committee
European Commission
Rue de la Loi 200
B-1049 Brussels
E-mail: EPC-Secretariat@ec.europa.eu

DG ECFIN - Unit C2
Directorate-General for Economic and Financial Affairs
European Commission
Rue de la Loi 200
B-1049 Brussels
E-mail: ECFIN-Secretariat-C2@ec.europa.eu

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EXECUTIVE SUMMARY

The 2016 Joint Report on Health Systems and Fiscal Sustainability presents policy challenges and options, for health care and long term care, on how to contain spending pressures through efficiency gains, in order to ensure fiscally sustainable access to good quality services for all. Health systems contribute to preserving and restoring good health of the EU population. They also enable people to live independently through the provision of social care services, such as those for patients with a certain degree of dependency. The health care and long-term care sectors also play an important role in the overall economy: they account for 8% of the total European workforce and for 10% of GDP in the European Union. The sector contributes to economic prosperity through improving labour market participation and productivity and will be crucial to ensure longer working lives in the context of an ageing society.

All EU Member States face strong and growing fiscal pressures on their health and long-term care systems, driven by already high levels of public expenditure and debt in most countries, demographic pressures and technological advances ([1]). Further policy action will therefore be needed to safeguard and sustain the contribution of health care and long-term care systems to improve population health. The need to make health systems sustainable by making them more effective, accessible and resilient has been duly recognised by policy makers at the EU and national level ([2]).

The current joint EC-EPC report updates the findings from the previous 2010 report ([3]) and extends the analysis to long-term care systems. Specifically, it describes past and future expenditure trends. It analyses the drivers and the institutional and organisational set-ups of health care and long-term care systems, and discusses policy options to improve their sustainability. Detailed descriptions of health care and long-term care systems and of the associated challenges are provided in the country documents to this report. It should however be noted that reform measures in these areas are the responsibility of Member States ([4]) and the policy options presented in this report should not pre-empt the Country Specific Recommendations produced as part of the European Semester.

Projections of expenditure

Public expenditure on health care and long-term care accounts for 8.5% of GDP in the EU and, based on a combination of assumptions, is expected to increase by an additional 2 to 4 pps of GDP by 2060 ([5]). According to the *2015 Ageing Report*, expenditure on health care in the EU may increase by 0.9 pps of GDP by 2060, from 6.9% to 7.8%, driven mainly by demographic changes under the assumption that half of the additional life years gained would be spent in good health (*AWG reference scenario*). When accounting for past trends of non-demographic drivers of expenditure, such as those related to the institutional set-up of health care systems, technological progress and the labour intensive nature of the health sector, projected expenditure may however rise by 2.6 pps of GDP in the EU, up to 9.5% (*Non-demographic drivers scenario*). According to an intermediate hypothesis accounting for improvements in health status, non-demographic factors are still expected to be a key

([1]) See European Commission (2015a), Fiscal Sustainability Report 2015, Institutional Paper 018: http://ec.europa.eu/economy_finance/publications/eeip/pdf/ip018_en.pdf and European Commission (DG ECFIN)-EPC (AWG) (2015b). "The 2015 Ageing Report – Economic and budgetary projections for the 28 EU Member States (2013-2060)", European Economy 3. May 2015. Brussels. http://ec.europa.eu/economy_finance/publications/european_economy/2015/pdf/ee3_en.pdf.

([2]) Council Conclusions on the sustainability of public finances in the light of ageing populations http://www.consilium.europa.eu/en/press/press-releases/2015/05/12-ecofin-ageing-populations/ ; Communication from the European Commission on effective, accessible and resilient health systems. http://ec.europa.eu/health/healthcare/docs/com2014_215_final_en.pdf.

([3]) See European Commission and EPC (AWG) (2010), 'Joint Report on Health Systems', European Economy, Occasional papers No. 74.

([4]) As stated in ART 168 TFEU (European Union 2012), in particular para. 7. thereof: "7. Union action shall respect the responsibilities of the Member States for the definition of their health policy and for the organisation and delivery of health services and medical care. The responsibilities of the Member States shall include the management of health services and medical care and the allocation of the resources assigned to them."

([5]) European Commission (DG ECFIN)-EPC (AWG) (2015b). "The 2015 Ageing Report – Economic and budgetary projections for the 28 EU Member States (2013-2060)".

driving force of health expenditures, if past trends persist, and could lead to an increase in health care spending of 1.6 pps of GDP by 2060, reaching 8.5% (*AWG risk scenario*). Concerning long-term care (LTC), pressure for increased public provision and financing of services may grow substantially in coming decades, especially in Member States where the bulk of long-term care is currently provided informally. In the *AWG reference scenario*, mainly driven by demographic changes public LTC expenditure in the EU is projected to increase from 1.6% of GDP to 2.7% of GDP, i.e. an increase of almost 70% until 2060. If one assumes in addition that until 2060 EU Member States will have equal coverage and costs per dependent (*AWG risk scenario*), reflecting an underlying convergence process of EU economies, expenditure is expected to increase to 4% of GDP in the EU.

Challenges of health care and long-term care systems

Many EU Member States see potential to improve the quality of information about the value for money of investments in health care and long-term care systems. Inadequate or insufficient information on specific investment needs is perceived as a challenge in half of the EU Member States. Additionally, other causes are a concern to further investment and to the fiscal sustainability of the system, such as competing fiscal pressures stemming from various ministries, changing policy priorities and the reported existence of fraud or corruption.

The allocative distribution of resources across functional areas of health care and long-term spending can be improved. Containing costs on hospital and pharmaceutical care is regarded as particularly important by virtually all EU Member States. Investments in outpatient care, primary care and health promotion activities are ranked as important areas for investment by most EU Member States. Related to LTC, all functions of spending, i.e. spending on residential care, home care and cash benefits, deserve policy attention in terms of investment and cost containment. The fact that both cost containment and investment are perceived as important may suggest that there is scope for substantial improvements in the allocative efficiency of LTC systems, which may be achieved by an improved distribution of funds and by increasing the value for money of each investment.

Frequent budget overruns on health care and long-term care spending are another important reason why authorities are concerned about the fiscal sustainability of health systems. Monitoring and controlling expenditure with specific budgetary tools, using to a wider extent performance-based budgeting and spending reviews to improve the quality of spending, introducing spending targets and spending ceilings, as well as budget buffers and early-warning mechanisms, can give the fiscal and health authorities more steering tools to prevent blunt cost-cutting that does not serve health system objectives.

Evidence-based policy reforms are necessary in order to improve the performance of the health care and long-term care systems and ensure that it remains fit for purpose in a changing context. Policy makers planning health sector reforms should make systematic use of available evidence in formulation, implementation and evaluation of their policies. Ex-ante impact assessments are a helpful tool to establish the problem to be solved, the objectives of public intervention, the available options, the rationale for the preferred option and how to monitor implementation. Ex-post evaluations should be used to determine the degree of effectiveness and cost-effectiveness of implemented policies, as well as to potentially provide the rationale for further policy reforms.

In many cases, budgeting officials and officials in charge of health systems do not have the same set of information, nor the same incentives, which makes it more difficult to find the most cost-effective solutions for improving the systems' sustainability. Also, decision-making on budgeting processes is done often by one government authority, while decisions on how to run the system are taken by another. Better governance could mean more consultation or even more co-decision between the ministries in charge. In many EU Member States, decision making is still divided in ministerial silos.

The substantial challenges related to health care and long-term care spending call for those reforms with the highest potential to improve the value for

money of the services and goods provided. The report provides ample evidence that quality of spending on health care and long-term care can be improved in virtually all EU Member States. There is a wide range of good practices that lead to greater effectiveness and efficiency of health care and long-term care systems, such as related to governance, financing and purchasing arrangements that are used below their potential in many EU Member States. Each country may learn from these best practices in order to boost the sectors' efficiency, while potentially generating savings to both public and private payers.

Coverage and expenditure of health care

Universal coverage of health care in most EU Member States does not preclude differences on the scope and depth of coverage. Health insurance coverage is universal or almost universal in all EU Member States. However, there are relevant cross-country differences with regard to whom and what is publicly covered and the quality of care received. Also, while public health expenditure represents the largest part of total health expenditure in almost every EU country, there is a great deal of cross-country variation. Out-of-pocket payments are partly linked to cost-sharing, which is widely used to moderate demand and/or raise revenue. While this tool can promote greater efficiency and be effective in reducing inappropriate health care, it can also reduce appropriate use of health care. To prevent this, EU Member States apply cost-sharing exemptions to ensure access to care to the more vulnerable groups of population. Private insurance plays a relatively small but growing role in EU health care systems, which may raise efficiency and equity concerns if not appropriately regulated. Finally, informal payments for healthcare are prevalent in several EU Member States, with negative implications for access to health care and efficiency of the system.

There are also differences regarding access to and quality of care. Barriers to access include affordability, waiting times and travelling distance, as well as socio-economic and cultural factors. The average level of unmet needs for medical examination in the EU is relatively low, but there is a considerable variation across Member States. This signals that adequate access to care is an issue particularly, but not exclusively, in lower income countries. Access to care is closely linked to good quality care. In order to measure the quality of care provided, EU members have developed a range of indicators. This data can be used to compare different care providers within and across regions and countries. International comparisons are useful in contextualising performance, although they require taking into account national differences.

Health care financing

Adequate and sustainable financing is a key for ensuring good coverage, access and quality of care. Public financing plays a major role with a EU median of 76% publicly funded health expenditure. With projected increases in spending needs, the challenge is to ensure sustainability focusing on efficiency. Different aspects, such as size and features of the national economy and political priorities, aside from those strictly related to financing, like revenue generation and collection, determine how well each health care system achieves its policy objectives and it is not possible to define a one-size-fits-all model. Adequate and stable financing stands out as a key feature to build a truly resilient system that can ensure universal coverage. This includes provision of accessible high quality services and protection of the population against the financial consequences of ill health. Some characteristics such as a broad revenue base, capacity for countercyclical spending, efficient and transparent revenue collection and broad pooling of resources paired with redistribution, have the potential to deliver stable financing to ensure affordable, sustainable and equitable healthcare.

To promote sustainability the design of the publicly funded benefits package should ensure an efficient use of public resources. In addition to almost universal population coverage, service provision in EU Member States' healthcare systems is in general comprehensive, with a large set of goods and services that are publicly funded. To ensure its provision is sustainable in the medium and long term, the benefits package should be designed and periodically reviewed based on evidence of cost-effectiveness to the greatest extent possible especially in view of upwards pressures on spending driven by an ageing population and the other non-age related determinants.

Health care service providers

EU Member States face a range of health workforce issues regarding recruitment, retention, spatial distribution, and skill-balance of the workforce. In a labour-intensive sector such as health care an adequate workforce is an important necessary condition for a well-performing health system. 19 EU Member States report issues in ensuring an adequate health workforce. There is large variation across the EU in terms of the number and relative proportions of practising physicians, general practitioners and nurses, which can impact on the cost-effectiveness and adequacy of the system. The medical workforce in a number of EU Member States is ageing, which can affect the availability and adequate spatial distribution of labour supply in the future. Ensuring sufficient medical workforce is a particular challenge for low income countries and remote regions.

EU health systems should use the available policy levers to proactively manage their workforce including adopting a long-term strategic approach. Medical professionals are highly trained, which means that it can be difficult to hire additional staff when there are short-term shortages or skill imbalances. Therefore a strategic long-term proactive approach is necessary including ensuring that there is timely and accurate data on the characteristics of the health workforce.

Remuneration and working conditions, including career progression should be appropriately designed to ensure adequate staffing, including across skill-sets and regions. Tools such as *numerus clausus* can be used to modulate the flow of medical graduates as the current medical workforce retires. Special attention should be given to the possibility of broadening the role of the nurse and midwife workforce. Programmes to recruit migrant physicians or nurses can help alleviate shortages in the short run, but can create additional shortages of staff in their countries of origin.

Purchasing, contracting and remuneration systems of health care

Current purchasing, contracting and remuneration systems are mostly designed at sector level, preserving some system-level inefficiencies. Member States increasingly adopt mixed solutions that can exploit pros and cons of different payment mechanisms. Further efforts are needed to contain potential distortions, such as inefficient use of resources and the predominant role of secondary care (defined as the set of health care services provided by specialists, often in a hospital setting) and, in general, of curative care over more cost-effective solutions such as primary care (defined as the set of health care services and operators that constitute the first point of contact between patients health care systems). Incentives should encourage efficient use of resources within each sector (primary care, secondary care), while also promoting the most efficient use of resources at system level, avoiding cost-shifting and encouraging activity in primary care, to strengthen its gatekeeping role and its cost-containment potential. Payment mechanisms also have the potential to attract high quality workers, which can, in its own right, have an impact on efficiency and cost containment.

Purchasers struggle to reward quality, with scope to improve payment mechanisms and quality measurement to steer providers to follow national health strategies. How providers are contracted and reimbursed has an impact on their incentives for activity and, in turn, on outcomes in terms of quality and cost. By contracting based on activity and rewarding quality of care, governments can improve value for money of public expenditure through performance-related remuneration, but it requires certain conditions, in particular quality must be measurable and this is linked to the challenge of improving data availability. A growing number of countries adopted mechanisms such as, for instance, pay-for-performance (P4P) in primary care, explicitly rewarding signals of good performance such as prevention activities. The extent to which hybrid payment mechanisms and P4P solutions have been adopted varies across EU Member States, which leaves room for further efficiency gains.

Market mechanisms

To promote effective purchasing and increase system-wide efficiency, Member States make use of market mechanisms to different extents. Competition, under appropriate regulation, can steer the system towards better outcomes. When prices are set, higher quality may be the way

providers use to differentiate their services from competitors and attract patients, especially if information on performance is publicly available. Competition can promote greater efficiency and cost containment while preserving quality, as in the case of generics in pharmaceuticals and competitive tenders. Member States have adopted these solutions to different extents so far, with evidence of market mechanisms, including the faculty of patient choice, paired with examples of more highly regulated systems. Although it is not possible to establish an uncontroversial link between competition and cost containment at system level, some areas in which competition has greater potential of increasing efficiency, such as pharmaceuticals and pharmacy distribution, diagnostic services and patients transportation, can be defined and may deserve greater attention from policy makers, especially where market solutions have not been explored yet.

Regulatory frameworks do not always strengthen incentives for competition. Competition between public and private can improve quality; however, this depends on the legal status of provider organisations, for instance for-profit or not-for-profit, and the rules on access, again related to patient choice. One key issue driving the incentive to compete to attract patients is the possibility to retain profits and to exercise managerial autonomy, which is not a common trait to all EU health care providers. The regulatory framework should be adjusted to support policy action by strengthening the tools and incentives it can make use of to promote efficiency in health care systems.

Performance of primary care

The need to improve the performance of primary care systems is perceived as an important challenge by a majority of EU Member States. Strong primary care systems tend to reduce unnecessary hospitalisations, increase population health, and help contain health care expenditure. There is wide variation at EU level concerning the features of primary care and its performance, with key dimensions being represented by accessibility, continuity and coordination of care. Policies which support this goal aim at promoting integrated care and at improving the purchasing and payment arrangements for primary care. Countries should invest in cost-effective ICT and eHealth solutions which not only enable better coordination but provide a possibility for seamless integration. In addition, primary care systems should be strengthened with regard to gatekeeping and referral. Further, remuneration for primary care physicians could combine capitation and fee-for-service at the base, and be supplemented with incentives for productivity and quality.

Sustainability of secondary care

Increasing the sustainability of secondary care is perceived as a challenge by a majority of EU Member States. Secondary care includes both inpatient and specialised outpatient services, with inpatient care, i.e. hospital care, representing the biggest part of national health systems in terms of service delivery and costs. For this reason, political focus on successful reform policies in hospital care is continuous. There is a large cross-country variation in the number of hospital beds per capita in the EU. This is hinting at potential inefficiencies in health service provision. Major intermediate goals in this respect are: 1) shifting excessive activity of acute inpatient to outpatient care services; 2) reallocating resources from inpatient to outpatient care, and; 3) improving the cost-efficiency of hospitals.

To improve the sustainability of secondary hospital care, EU Member States can improve the reimbursement arrangements, reduce operational costs and pursue structural reforms of the sector. Hospitals are likely to perform better if reimbursed on a combination of activity-based payments with global budgets and pay-for-performance schemes. This toolbox sets incentives for cost control and motivates hospital managers to bring medical services to patients adequately and in high quality. In addition, bundled payments, whereby “care groups” receive bundled payments to manage chronic conditions, seem a promising way forward to address well known deficiencies in more traditional financing tools. Reducing operational costs can be an important aspect of improving the cost-efficiency of hospitals. Operational costs include costs paid for hospital consumables and the wage bill for health professionals. Purchasing strategies, including extending public procurement, of medical and non-medical goods should be optimised.

Planning hospital capacities with a whole system perspective from primary to highly specialised care, as well including social care is likely to be beneficial for improving health outcomes at a lower cost. eHealth plays a growingly important role for timely sharing of information, empowering patients in their care, and may increase quality of service and create savings of resources in hospital care. Greater hospital autonomy can have positive effects through competition if appropriately regulated. Hospital performance should be measured as a pre-condition for improving the sector's performance. Benchmarking tools reporting on fiscal parameters are promising in this respect. Finally, policies to reduce the demand for emergency care services and divert inappropriate visits away from emergency care units should be deployed.

Access to affordable medicines

Many EU Member States perceive it as a challenge to improve the access to affordable medicines. Public and private payers increasingly grapple with how to afford the rising number of new and often expensive medicines. Over the next years, savings opportunities based on more traditional pharmaceutical policies will be reduced dramatically in the EU. First, the number of patent expiries will go down substantially, reducing the potential of cost-containment based on traditional "genericisation" of medicines. Second, a high number of new medicines are forecast to be launched in the next years, creating higher financing needs compared to the last decade. Third, the nature of new medicines is gradually changing, as innovations are based on relatively costly biopharmaceuticals rather than small molecule medicines, and increasingly target smaller populations.

EU Member States should exploit to the greatest extent possible policies to improve the access to affordable medicines. Policy-makers should employ pre-launch activities that provide a forward-looking perspective on new medicines in development and post-launch activities that address the value for money and the rational use of medicines. The decision to pay for a medicine with public money should be transparent, based on relevant criteria and revisable. Budget impact analysis should play a standard role in the impact assessments of medicines. International cooperation on health technology assessment (HTA), such as the HTA Network and EUnetHTA Joint Action, should be developed further. In addition, exploring possible strategies on voluntary joint price negotiations by coalitions of Member States can help promote affordability and access to medicinal products

Pricing policies, such as external reference pricing (ERP), internal reference pricing, rebates, clawback and payback policies give the authorities a tool to control prices and thus to set one key parameter of expenditures (besides volume). Price control should, nevertheless, be supplemented by other policies, including demand-side policies promoting the rational use of medicines. Countries should seek ways to promote the availability of low price medicines, particularly of generics and biosimilars. This can lead to significant savings, while not compromising on quality. In addition, exploring possible strategies on joint price negotiations in coalitions of Member States can be important to promote a higher affordability and better access to medicinal products.

Promoting faster access to effective medicines should be conditional on a clear set of requirements. These may include supplemental research regarding data on effectiveness and cost-effectiveness, budget impact, and the definition of an potential exit strategy, if the medicines do not live up to their promises.

Health care system governance

Health care system governance is faced with increasing challenges to deliver efficiency and cost-containment brought about by the complexity of health care systems. Governance concerns the broad set of actions and actors involved in steering systems towards national goals. As such, it involves a wide range of stakeholders that need to converge on supporting or implementing policies. Due to the multitude of interests involved, and the strong need of cohesive action, in the challenging context of the need to contain expenditure, governance is faced with several challenges. Strengthening governance means strengthening the system's potential effectiveness and efficiency. Strong governance is particularly important whenever individual stakeholders, including governing authorities, buyers and producers/providers of health care

goods or services and patients, may have diverging interests, such as in pharmaceuticals. More in general, strong governance supports efficient purchasing and revenue generation and collection. In addition, strong governance emerged as key in promoting effectiveness wherever policy horizons are medium-to-long term, as in the case of public health.

The increasing complexity of new emerging models of governance needs tools to be in place to realise efficiency and cost-control. A wide range of tools can be employed to strengthen governance, acting on accountability, transparency, participation, integrity and policy capacity. One of the critical issues driving system performance is that of autonomy in spending decisions and of its association with accountability. Decentralisation, including that of health care spending, has become a reality in a growing number of Member States, offering potential opportunities, but also additional challenges, including that of enforcing accountability. This solution requires strong coordination and monitoring systems, clear financing mechanisms between central and sub-national levels as well as transparency and accountability tools. To this end, budgetary tools need to be designed to promote efficient spending. Indeed, spending autonomy and exposure to the direct budgetary impacts of poor management are amongst the main incentives of effective governance.

Information and monitoring

Data availability, information and monitoring have improved across the EU, but further efforts are needed, especially in the measurement of performance and in cross-country comparisons. Given limited resources and growing demand for care, it is important that publicly provided/funded care is safe, effective in achieving the objective of better health and cost-effectiveness. Available data determines the ability to perform system diagnostics, design appropriate policies and implement effective governance. Growing attention has been devoted to the issues of quality and availability of data, and evidence-based policy making, such as that based on HTAs is increasingly adopted across Member States to achieve greater efficiency and cost containment. To the same end, another way to rationalise expenditure is the systematic creation of interoperable electronic records, and, more generally, the use of eHealth. Many countries monitor performance at hospital-sector level and both national and international benchmarking tools are available. However, performance at system level, i.e. system efficiency, is difficult to capture and challenged by data availability, as there is no well-defined set of outcome measures at the system level. This becomes even more challenging when implementing international comparisons, for which the additional issue of homogeneous measures and international availability of data comes into play. There are differences across Member States on the degree of development of these tools, which could improve comparisons and support member states in increasing the efficiency of their health systems.

Public health policies

Public health and prevention policies, embracing a wide set of functions, from surveillance and monitoring, to health protection, promotion and disease prevention, to research and communication in their support, have received increasing attention, but they remain poorly funded. Life expectancy has risen in all EU Member States, and the path of future health expenditure will depend on whether increases in life expectancy will be spent in good health or not. The differences in health status and spending point at public health policies as a cost-effective tool to achieve efficiency gains. All Member States have to some extent implemented public health policies. However, debate on capacity building has highlighted how public policy often suffers from low funding and weak governance. This suggests there is further scope to increase the efforts in the field of public health, especially under current and future projections of increasing pressures on national budgets.

With health care spending still centred around curative care sustainability is threatened, especially with an ageing population. According to the projections contained in the European Commission's *2015 Ageing Report* ([6]), an increase

([6]) European Commission (DG ECFIN)-EPC (AWG) (2015b). "The 2015 Ageing Report – Economic and budgetary projections for the 28 EU Member States (2013-2060)", European Economy 3. May 2015. Brussels.

in projected health care spending of 0.3 pps of GDP could come from one additional year in bad health, which highlights the sustainability challenges that can come from the current curative care centred model of spending. This strengthens the rationale to increase the efforts in public policy, with strong emphasis on health promotion and disease prevention to delay the onset of age-related conditions, as well as, more broadly, of non-communicable diseases with life-long consequences, to maximise the system's potential to deliver better health care outcomes, while promoting efficiency and cost containment.

Challenges of long-term care systems

Driven by population ageing, the big challenge of long-term care (LTC) systems is to meet the needs of a growing number of older people at risk of suffering from frailty and disability, while keeping costs affordable and public finances sustainable. As part of health systems, LTC systems should provide recipients with adequate care that responds to their level of need and prevents them and their relatives from falling into financial deprivation due to the high financial burden of paying for care. With rapidly growing LTC needs, EU Member States need to prioritise the use of public LTC funds in order to ensure goals are met without endangering long-term fiscal sustainability.

Current coverage rates of dependents vary strongly across EU Member States. The number of people in potential need of LTC services in the EU is estimated to increase by 30% between 2013 and 2060. The increase in the absolute numbers of dependent population also means that the share of the potentially dependent in total population will increase from 8% to 10.2% in the EU. The increasing need for care will have to be addressed through a mix of policies, which are described below.

Coverage and expenditure of long-term care

In the EU, LTC is covered by different arrangements that vary in the extent of public financial coverage. How comprehensive coverage is can be assessed according to the dimensions of whom, what and to what extent services are covered. While these are good guiding principles, the complexity of real LTC systems makes it difficult to compare actual comprehensiveness of coverage across countries. Roughly, coverage can be approximated by public expenditure levels on LTC. Public spending on LTC as a share of GDP ranges by more than a factor of 13 in the EU. Generally, public expenditure on LTC is significantly lower in the Member States that accessed the EU after 2004. However, as significant parts of private spending are not accounted for within public systems, due to the high degree of informal care in many countries, there is significant under-reporting of private expenditure.

Financing arrangements for long-term care

Financing arrangements for LTC services vary greatly and most EU Member States could in fact benefit from improving their financing arrangements. There are many ways in which LTC services are financed, including the public-private financing mix, the sources of public funding and the levels of governments involved in the financing of the services. The extent of public and private financing varies highly between countries. In terms of what is financed publicly, this basically differs by the type of service and where the service is delivered. In terms of how much is financed, all financing schemes require private cost-sharing. Private insurance for LTC has only played a limited role until now.

The typology of LTC systems shows that there are drawbacks and advantages to each of the systems. More than in health care, countries have different perceptions on whether LTC is an individual or collective responsibility. Universal tax-funded social care systems and systems relying on public/social insurance schemes provide relatively comprehensive coverage at the disadvantage of higher costs to the taxpayers. Countries providing little social insurance against LTC risks have, on the other hand, a low level of public spending on formal care, and little social protection.

EU Member States should explore ways of fostering predictable public financing of LTC expenditure in a fiscally sustainable way. Countries should define strategies on how to target

http://ec.europa.eu/economy_finance/publications/european_economy/2015/pdf/ee3_en.pdf.

coverage to the services that can be funded. Prioritisation of services should be undertaken to increase the predictability of whether and to what extent those in need can count on public support, as already now it is difficult to meet all needs of care. Targeting can be further improved by including the assets in the means-test used to determine individual cost-sharing (or entitlement to public support) to better reflect individual wealth. Countries could increase the forward-looking time frame as a basis for the design of LTC financing schemes. In order to face increasing LTC costs, countries may consider tax-broadening which means financing beyond revenues earned by the working-age population. Pensioners could be required to contribute premia to social LTC insurance, based on their income. Financing could be strengthened by incentivising or mandating pre-funding elements. This would mean saving, e.g. based on an insurance scheme, to pay for future obligations.

Provision of long-term care

LTC services are provided in institutional and home settings. Across EU member States there is scope for optimising the provision of care by ensuring recipients are matched with the most appropriate setting and by reducing unwarranted variation in unit costs for each setting. All EU Member States provide formal LTC services to their population. There is, however a great deal of variation in the distribution of recipients and expenditure that mainly reflects differences in the coverage of formal systems of home care and institutional care. Institutional settings typically have greater unit costs and are more appropriate for high levels of dependency. Home settings typically have lower costs, can reduce dependency, encourage independent living and are most suitable for relatively low levels of dependency.

Several EU Member States report predominant use of either institutional care or home care. This suggests that there is scope for optimising the provision of care by ensuring the most efficient setting is used for each recipient. In particular, evidence suggests that in many EU Member States it would be possible to move towards home care rather than in institutional settings, supporting care recipients to remain independent longer and allowing for the provision of informal care.

The unit costs of care also vary to a great extent by country, both within and across care settings. This variation indicates different coverage of services, different care needs, but may be also indicative of inefficiencies in care delivery (e.g. because care is delivered in traditional hospitals rather than residential care institutes), as well as potentially revealing under-provision of LTC. The high unit costs for specific settings in several Member States therefore suggest there is potential for improving the efficiency of the system by rationalising the delivery of the respective type of care or by ensuring that adequate levels of care are provided.

Long-term carers workforce

In most EU Member States, LTC systems face the challenge of ensuring an adequate formal workforce. Several EU Member States have reported difficulties in ensuring an adequate formal LTC workforce. Strategies used to increase recruitment include using migrant workers and training unskilled young people. Improving working conditions and professionalising the workforce have been used to increase retention, although in some cases there may be a loss of flexibility. As for health care, EU Member States need to implement these policies proactively according to a strategic long-term plan.

Informal care helps increase the sustainability of LTC systems but can have a significant personal impact on the carers themselves. EU Member States should ensure that policies to support informal carers are consistently implemented. Informal care has a lower direct fiscal impact than formal care, as it is provided without payment on a voluntary basis. By increasing the staff available to provide LTC it can have a positive impact on the sustainability of the LTC system. However, it can have indirect fiscal costs through the adverse impact it may have on the financial and health status of the carer. The quality of informal care is also difficult to measure and it can lead to adverse financial and health-status outcomes for carers. To remediate this, EU Member States have set up a number of measures to support informal carers, including carer allowances, increasing giving carers the right to carers leave and flexibility of employment in order to keep them attached to the labour market, respite care, counselling as well as information and training. There is however variation in the breadth

and depth of these measures across EU Member States, which emphasises the potential for improving support for informal carers.

Integration of care

Integration of care, both within LTC and between LTC and health care can enhance the quality of care, improve system efficiency and contain cost-growth across multiple systems and providers, but no EU country seems to have an optimal level of coordinated care. EU Member States should enhance the coordination and continuity of care. There are several challenges in integrating LTC. First, with health and social care being traditionally separated, it is a challenge to establish continuity of care. Second, traditionally, systems are fragmented in terms of different public payers, types of reimbursement and providers of care, which make it challenging to incentivise care integration. Third, it is not straightforward how to appropriately mix health and long-term care services. LTC patients have many contacts with both the health care and LTC system. Whereas LTC system provision is often under the responsibility of local governments, the oversight of acute care tends to be at the regional or national level. This creates problems at the interface between acute care and LTC.

To overcome the difficulties, many countries have already put policies in place which aim at improving the link between health care and LTC services. One way to reduce cost in LTC is to prevent dependency and several countries have set up other good practices, which can guide the development of integrated care.

In addition, the care continuum could be strengthened by establishing a single point of access to information for patients and providers of care. Care coordination responsibilities could be allocated to care managers. Appropriate care utilisation across health and long-term care could be facilitated, by arranging an adequate supply of services and support outside hospitals. The governance of LTC systems should also be strengthened, as good governance is a precondition for enabling care integration and setting the right incentives for patients, payers and providers along the care continuum.

Disease prevention, health promotion and rehabilitation

Disease prevention, health promotion and rehabilitation are key aspects of integrated care and should have a more central part of LTC systems. One way to reduce cost in LTC is to prevent dependency. The levels and cross-country variations in self-reported dependency suggest considerable scope for fostering healthy and active ageing. Prevention and promotion are preferable to acute and reactive care, enabling the individual to stay healthy for longer, potentially bringing also financial savings. Rehabilitation can also be cost-effective in long-term care and thus create cost savings. In some Member States, rehabilitation is clearly identified as a specific service and is an integrated part of comprehensive programmes of health care and health promotion. Countries should invest in evaluating the most promising initiatives targeting health promotion.

Remuneration of providers of long-term care

Remuneration for care workers and institutional care providers in some EU Member States has not always taken into account their incentive structure. For instance, worker remuneration through wages alone provides no particular incentive to over- or under-provide care, but at the same time provides no incentives to provide high-quality care. Payment methods for institutional providers tend to be similar to those of acute care hospitals (i.e. through per-diem payments, more rarely fee for service, case fees and institutional budgets).

Remuneration methods should be adapted to align the incentives of workers and providers with the public interest. Mixed remuneration methods can be used to align the incentive structure with the public interest. This can be achieved through methods that combine several payment modes to overcome the perverse incentives linked to each individual method. Adjusted remuneration methods can be used to address the perverse incentives implicit in a single remuneration method. Specific features can be added to each of the methods to overcome their specific weaknesses. As an example, salaried providers can also receive incentive payments to encourage output and productivity by treating a number of patients or providing timely treatment.

Payment mechanisms such as pay-for-performance schemes (P4P) that link payments to quality and efficiency can be used to circumvent the shortcomings of traditional remuneration mechanisms. However, they need to be carefully designed to avoid perverse behaviour such as deterioration of non-observed dimensions of performance, reporting issues and preferential admission of users most likely to lead to good performance ratings.

Governance of long-term care

Coordination problems in governance of LTC are common, and most EU Member States see potential for improving the governance framework for LTC. Governments at different levels are dealing with planning, strategy, regulation, implementation and management of eligibility and provision of LTC. At national level, general LTC legislation may be defined with respect to the rights for public LTC provision, while the funding, provision and regulation of LTC may be left to the regional and local level. Coordination problems in governance arise because various aspects of governance are executed by various stakeholders at various levels of government. This can negatively impact on administrative efficiency. Even more importantly, this means that collaboration between health care professionals and LTC professionals can be hampered, leading to lower quality of care and lower health outcomes.

This could be done by establishing a coherent and integrated legal and governance framework for a clear delineation of responsibilities of state authorities for the provision of LTC services and strategic integration of medical and social services. Governance should also address aspects of financing and workforce supply. Good information platforms for LTC users and providers should be established. Data should be shared within government administrations, as coordination and administrative inefficiencies are also linked to lack of data sharing.

Regardless of the complexity of governance arrangements of LTC, a clear access point for users could improve administrative efficiency, clarify governance responsibilities for each stakeholder and lead ultimately to efficiency gains and cost containment. Guidelines to steer decision-making at local level or by practising providers should be established.

In conclusion, in view of the fiscal challenges at the current juncture, amplified by future pressures on health expenditure influenced by population ageing, EU Member States should intensify efforts towards improving the efficiency and effectiveness of health care and long-term care systems to ensure universal and equitable access to good quality care for all.

Policy options

The main policy options to enhance the fiscal sustainability and the cost–effectiveness of health care systems are:

- Governance should be improved, including strengthening the cooperation between fiscal and health policy government authorities and employing a wide range of budgetary planning tools, performance–based planning and regular spending review, early-warning mechanisms and automatic stabilisers aiming at boosting efficiency and cost-control;

- Health-policy reforms should be assessed and evaluated ex-ante and ex-post in a systematic and formalised manner based on evidence;

- The financing mix should be continuously improved including by ensuring that benefits package are based on cost-effectiveness criteria whenever possible and that cost-sharing supports the containment of public spending, while preserving access;

- Workforce planning and tools should be used to actively manage the health workforce. Appropriate modulation of *numerus clausus* is needed to ensure that the inflow of new doctors is aligned with prospective needs. Remuneration, benefits, and working conditions can be adjusted and the regulations of professions reviewed in order to improve recruitment and retention in the health workforce, as well as to tackle the imbalance in specialities, including shortages of GPs. Special attention should be given to the nurse and midwife workforce, including the possibility of broadening its role;

- Health care systems should move away from the traditional hospital-centric model, by giving a stronger role to primary care in the care mix between primary and secondary and by fostering health promotion and disease prevention, and make the full use of the possibilities of digitalisation;

- The performance of primary care systems should be improved, their role of gatekeeping and referral strengthened and care should be integrated across the whole spectrum of health service provision, both within primary care and between the latter and other sectors;

- The sustainability of hospital care should be enhanced by improving financing arrangements, through combination of activity-based payments, global budgets and pay-for-performance schemes, and by reducing operational costs, also through extending the use of centralised public procurement, price transparency and strengthening the fight against corruption, fraud and misuse of public resources. Systematic monitoring, comparison of hospital performance and benchmarking is key to improving the sector's performance. Policies should be deployed to reduce the demand for unnecessary emergency care;

- Policies should strengthen the cost-effective use and the affordability of medicines, by promoting public procurement and the role of generics and biosimilars, appropriate pricing and price-control policies, promoting rational use of medicines and addressing the challenges posed by the regulation on IPRs, and by the incentives affecting the whole value-chain, from manufacturers to distributors. Ways of cross-country cooperation, including appropriate regulatory mechanisms at EU level, could help addressing the issues of availability and accessibility of medicinal products in EU countries and should be explored further and enhanced;

- Payment and purchasing mechanisms should be designed to promote efficiency within each sector and at the wider system level. Payment strategies should combine all available tools, salary, capitation and fee-for-service, building on their complementarity to reward and incentivise performance;

- Competition should be encouraged in the areas of pharmaceuticals and pharmacy distribution, of diagnostic services and of patients transportation to promote quality efficiency improvements, paired with a close monitoring of quality of services;

- The regulatory framework should be adjusted to support and strengthen efficiency incentives, including by promoting greater financial and managerial autonomy of providers, along with enhanced transparency and accountability;

- The generation and usage of health systems data should be fostered, to allow for comparing performance across services providers and as an essential tool to support governance, as well as health outcomes within and across countries. Countries should set up ITC and data management strategies to ensure transparency and appropriate use of data.

Related to long-term care systems the main policy options are:

- Establish a coherent governance framework for a clear delineation of responsibilities of state authorities for the provision of LTC services, aiming at integrating medical and social services via a legal framework and improving administrative efficiency;

- Improve the financing of LTC expenditure in a fiscally sustainable way, increasing the forward-looking time frame for LTC financing schemes and incentivising pre-funding elements. Target public funding according to the recipient's needs ensuring that resources are directed at those that need care the most. Regularly review and update minimum dependency thresholds and the design of means testing schemes;

- Ensure adequate numbers and qualification mix of formal carers, by improving recruitment and retention policies and aligning payments to both care providers and workers with quality and efficiency of care provision;

- Support delivering LTC services at home rather than in institutional settings when appropriate, supporting care recipients to remain independent longer and allowing for the provision of informal care;

- Strengthen policies for health promotion and rehabilitation enabling the individual to stay healthy for longer, potentially bringing also financial savings;

- Support family carers for providing informal care through features such as cash benefits, allowances, specific rights, respite leave, counselling and information, while minimising any disincentives for their labour market participation;

- Ensure coordination and continuity of care, such as through a single point of access to information and the allocation of care coordination responsibilities to providers or care managers. Deal with cost-shifting incentives across health care and LTC.

1. INTRODUCTION

European health care and long-term care systems are a central part of Europe's high levels of social protection. Health systems contribute to preserving and restoring good health of the EU population. They also enable people to live independently through provision of social care services, such as for patients with a certain degree of dependency. The health care and long-term care sectors also play an important role in the overall economy: they account for 8% of the total European workforce and for 10% of GDP in the European Union. The sector contributes to economic prosperity through improving labour market participation and productivity and will be crucial to ensure longer working lives in the context of an ageing society.

Total spending on health care and long-term care costs absorbs a significant and growing share of total resources in the economy. Health and long-term care goods and services also constitute a significant share of public expenditure. As highlighted in the European Commission's *Fiscal Sustainability Report 2015* and in the Economic Policy Committee (EPC) - European Commission's *2015 Ageing Report*, all EU Member States face strong and growing fiscal pressures on their health and long-term care systems, driven by tight fiscal constraints, demographic pressures and technological advances. Major reforms will therefore be needed to safeguard and sustain the contribution of health systems to progress in population health. In addition, reforms in more recent years need to be continued and implemented. Reform measures in these areas are the responsibility of Member States ([7]), and the need to make health systems sustainable by making them more effective, accessible and resilient has thus been widely recognised by policy makers at the EU and national level ([8]). Improving modes of cooperation between the responsible Ministries, and increasing the cost-effectiveness of health service delivery are key aspects in this regard.

The 2010 Joint Report on Health Systems ([9]) **presented policy challenges on how to contain spending pressures through efficiency gains, in order to ensure fiscally sustainable access to good quality health care services for all.** The report has widely informed policy discussions and developments. There are three main reasons why an update of the aforementioned report has been considered necessary by the Economic Policy Committee ([10]).

Firstly, the *2010 Joint Report on Health Systems* did not deal with long-term care. Driven by population ageing, EU Member States are expanding and reforming long-term care systems to meet the needs of a growing number of older people at risk of suffering from frailty and disability. From the perspective of public finances, long-term care expenditure is gaining prominence and is expected to grow faster than GDP and also faster than health care expenditure in the decades to come. In this respect, the current report aims at narrowing down the information gap on long-term care systems and informing policy-makers about the challenges of long-term care systems and options for policy reform.

([7]) As stated in ART 168 TFEU (European Union 2012), in particular para. 7. thereof:

"7. Union action shall respect the responsibilities of the Member States for the definition of their health policy and for the organisation and delivery of health services and medical care. The responsibilities of the Member States shall include the management of health services and medical care and the allocation of the resources assigned to them."

([8]) See Council Conclusions on the sustainability of public finances in the light of ageing populations http://www.consilium.europa.eu/en/press/press-releases/2015/05/12-ecofin-ageing-populations/ ; Communication from the European Commission on effective, accessible and resilient health systems. http://ec.europa.eu/health/healthcare/docs/com2014_215_final_en.pdf. Investing in health: http://ec.europa.eu/health/strategy/docs/swd_investing_in_health_en.pdf

([9]) The report was jointly prepared by the European Commission (DG ECFIN) and the Economic Policy Committee (Ageing Working Group): https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ecofin/118273.pdf .

([10]) The Economic Policy Committee (EPC) comprises two delegates from each Member State, the Commission, and the ECB. Members are senior officials and come from the authorities responsible for formulating economic and structural policies. The Committee provides policy advice to the Economic and Financial Affairs Council (ECOFIN Council), which is responsible for EU policy in three main areas: economic policy, taxation issues and the regulation of financial services. The ECOFIN Council comprises the economics and finance ministers from all EU Member States. Relevant European Commissioners also participate in the meetings.

Secondly, since 2010 EU Member States have undertaken substantial health policy reforms, which call for an update of country-specific challenges on health care and long-term care systems ([11]). Taking stock of these reforms is an essential ingredient to extract lessons learned and possible ways forward to be able to further improve performance. In this respect, the report specifically aims at contributing to: i) a better understanding of the drivers of health care and long-term care expenditure and the differences in effectiveness and efficiency in delivery across Member States; ii) the identification of main challenges facing health systems across Member States; iii) the identification of good practices that lead to greater effectiveness and efficiency of health care and long-term care systems.

Thirdly, ensuring fiscally sustainable health-care and long-term care systems will require cooperation between those who finance and those who organise care. Typically this means that Ministries of Finance, Ministries of Health and Ministries of Social Affairs will need to understand better what are the constraints and opportunities for policy change, as well as the tools to improve health system performance in a fiscally sound way. The report aims at contributing to this goal by exploring the current modes and tools of cooperation between those Ministries in the EU, while identifying challenges and possible ways forward.

This report is structured as follows. Section 2 analyses the fiscal sustainability challenge of health systems, describes trends in health care and long-term care (LTC) expenditure and discusses the underlying drivers. Section 3 is devoted to describing budgeting practices and challenges facing health care systems, as well as their different characteristics in terms of coverage and institutional and organisational set-ups ([12]). This is followed in Section 4 by a discussion of policy options to improve the sustainability of health care systems. Section 5 dwells on long-term care systems, describing current arrangements and trends in terms of coverage, financing arrangements, provision of care (institutional versus home and informal versus formal carers), budgeting for long-term care spending, and perceived challenges of LTC systems. Section 6 discusses the strengths and limits of present LTC approaches, mostly from the perspective of the sustainability of public finances, and draws conclusions on policy options. Section 7 concludes. Country-specific descriptions and challenges are presented in the country documents.

([11]) The cut-off date for incorporating international database updates was set at April 2016.

([12]) The report draws from a country survey, conducted for the purpose of the report, and evaluating budgeting processes in health care and long-term care as well as identifying modes of cooperation between different government authorities in budgeting and policy tools for health care/long-term care system design. Also, perceived challenges relating to health care and long-term care systems are explored.

2. HEALTH EXPENDITURE AND FISCAL SUSTAINABILITY

2.1. SUSTAINABLE PUBLIC FINANCES

The sustainability of public finances has been brought to the fore by significantly increasing debt levels in the aftermath of the economic and financial crisis that started in 2008. For the EU-28, this has meant an increase in gross public debt by about 30 pps of GDP between 2007 and 2015, with a downward reversal in the increasing trend of the debt ratio observed only in 2015. The present higher public debt ratios pose a risk to sustainability, as highlighted in the European Commission's *Fiscal Sustainability Report 2015* ([13]).

Sustainable public finances are needed to ensure that EU countries have sufficient fiscal space to cope with adverse macroeconomic developments over the economic cycle. The conduct of fiscal policy should therefore importantly ensure that buffers are built in good times to be ready to be used to support the economy in bad times, along the spirit of the rules enshrined in the Stability and Growth Pact. In a longer term perspective, ensuring the sustainability of public finances is important to create fiscal space to cope with projected implicit liabilities related among others to healthcare and long-term care. Though latest projections of age-related public spending show more favourable expected developments relative to the past ([14]), the burden on public finances is still expected to be significant. This deserves particular attention when assessing fiscal sustainability over the medium to long run.

A thorough discussion and assessment of the sustainability of public finances in the EU has been conducted in the European Commission's Fiscal Sustainability Report 2015. Sustainability challenges faced by Member States are highlighted over the short, medium and long run based on a horizontal assessment framework, bringing together results on debt sustainability analysis and fiscal sustainability indicators ([15]). The underlying drivers of the challenges are thoroughly analysed in the report. Medium-term sustainability challenges are assessed by having regard to the underlying country's initial budgetary position, the level and projected evolution of the country's public debt and projected implicit liabilities related to an ageing population. In the long run, on the other hand, the report highlights the fact that it is not the level of debt that matters most, but its projected evolution, taking also into account the projected cost of an ageing population. The identification of the nature, the scale and the urgency of the challenges faced by individual Member States is provided in the Fiscal Sustainability Report as a key ingredient to support the formulation of appropriate policy responses.

Among the 27 EU countries object of analysis over the medium term, more than half of the Member States are still deemed to be at high or medium fiscal sustainability risk based on Commission's Spring 2016 forecasts (Table 2.1.1). Countries that appear to face potential high medium-term risks are Belgium, Ireland, Spain, France, Croatia, Italy, Cyprus, Poland, Portugal, Slovenia, Finland and United Kingdom. Five EU countries are deemed to be at medium sustainability risk in the medium term (Lithuania, Hungary, Netherlands, Austria and Romania). For the majority of the countries concerned, challenges are related to the still high projected stock of public debt in 10 years from now, under the

([13]) European Commission (2015a), Fiscal Sustainability Report 2015, Institutional Paper 018: http://ec.europa.eu/economy_finance/publications/eeip/pdf/ip018_en.pdf.

([14]) European Commission (DG ECFIN)-EPC (AWG) (2015b). "The 2015 Ageing Report – Economic and budgetary projections for the 28 EU Member States (2013-2060)", European Economy 3. May 2015. Brussels. http://ec.europa.eu/economy_finance/publications/european_economy/2015/pdf/ee3_en.pdf.

([15]) Fiscal sustainability indicators include the S0, S1 and S2 indicators, capturing fiscal sustainability challenges over the short, medium and long run respectively. The S0 indicator is a composite indicator aimed at evaluating the extent to which there might be a fiscal stress risk in the short term (the upcoming year), stemming from the fiscal, as well as the macro-financial and competitiveness sides of the economy. The medium-term sustainability indicator S1 shows the additional adjustment required, in terms of a *cumulated* gradual improvement in the government primary balance (in structural terms) over 5 years (starting from the year after the forecasts, currently 2018), to reach a 60% public debt-to-GDP ratio (the EU Treaty reference value) by 2030, including financing for any future additional expenditure arising from an ageing population (until the target date). The long-term sustainability indicator S2 shows the upfront adjustment to the current structural primary balance (kept then constant at the adjusted value forever) required in order to stabilise the debt-to-GDP ratio over the infinite horizon, including financing for any additional expenditure arising from an ageing population. See European Commission (2015a) for more details.

Table 2.1.1: **Fiscal sustainability assessment by Member State**

	Overall SHORT-TERM risk category	Debt sustainability analysis - overall risk assessment	S1 indicator - overall risk assessment	Overall MEDIUM-TERM risk category	Overall LONG-TERM risk category	
BE	LOW	HIGH	HIGH	HIGH	MEDIUM	BE
BG	LOW	LOW	LOW	LOW	LOW	BG
CZ	LOW	LOW	LOW	LOW	MEDIUM	CZ
DK	LOW	LOW	LOW	LOW	LOW	DK
DE	LOW	LOW	LOW	LOW	LOW	DE
EE	LOW	LOW	LOW	LOW	LOW	EE
IE	LOW	HIGH	MEDIUM	HIGH	LOW	IE
ES	LOW	HIGH	HIGH	HIGH	LOW	ES
FR	LOW	HIGH	HIGH	HIGH	LOW	FR
HR	LOW	HIGH	MEDIUM	HIGH	LOW	HR
IT	LOW	HIGH	HIGH	HIGH	LOW	IT
CY	HIGH	HIGH	MEDIUM	HIGH	LOW	CY
LV	LOW	LOW	LOW	LOW	LOW	LV
LT	LOW	LOW	MEDIUM	MEDIUM	MEDIUM	LT
LU	LOW	LOW	LOW	LOW	MEDIUM	LU
HU	LOW	MEDIUM	LOW	MEDIUM	LOW	HU
MT	LOW	LOW	LOW	LOW	MEDIUM	MT
NL	LOW	LOW	MEDIUM	MEDIUM	MEDIUM	NL
AT	LOW	MEDIUM	MEDIUM	MEDIUM	MEDIUM	AT
PL	LOW	HIGH	MEDIUM	HIGH	MEDIUM	PL
PT	LOW	HIGH	HIGH	HIGH	LOW	PT
RO	LOW	MEDIUM	MEDIUM	MEDIUM	MEDIUM	RO
SI	LOW	HIGH	HIGH	HIGH	HIGH	SI
SK	LOW	LOW	LOW	LOW	MEDIUM	SK
FI	LOW	HIGH	HIGH	HIGH	MEDIUM	FI
SE	LOW	LOW	LOW	LOW	MEDIUM	SE
UK	LOW	HIGH	HIGH	HIGH	MEDIUM	UK

(1) Greece is implementing an economic adjustment programme. The macroeconomic and budgetary prospects for 'programme' countries are assessed more frequently than for the other Member States. The time horizon covered by the forecasts for these countries is also different than for the other Member States and assume full implementation of the adjustment programme. They are therefore not included here.
Source: European Commission (2015a); Based on the European Commission's Spring 2016 forecasts.

assumption of a normalisation of macroeconomic conditions (in terms of higher inflation, real GDP growth and interest rates) and the continuation of current fiscal positions. For the majority of countries, projected age-related public spending contributes to increasing the fiscal adjustment required to ensure fiscal sustainability in the medium term, requiring further reforms on pensions, healthcare and long-term care systems (depending on the country) aimed at containing costs and raising cost-effectiveness.

Over the long run, only one country (Slovenia), among the 27 considered, would appear to face high sustainability risks based on Commission's Spring 2016 forecasts ([16]), while half of the countries (Belgium, Czech Republic, Lithuania, Luxembourg, Malta, Netherlands, Austria, Poland, Romania, Slovak Republic, Finland, Sweden and United Kingdom) would still face medium risks. For most of the latter, challenges appear to be related to projected public spending over the long run, due to an ageing population (public spending on pensions, healthcare or long-term care, depending on the country). While being highly country-specific, for many EU countries the contribution from health care and long-term care to projected ageing costs is more significant than pensions (Table 2.1.2). For the EU as a whole, the

([16]) To which public spending on health and long-term care contribute though less than pensions.

Table 2.1.2: **Key indicators for fiscal sustainability challenges**

	Overall MEDIUM TERM risk assessment - Sustainability indicator (S1)	Cost of Ageing 2017-2030, of which:			Overall LONG TERM risk assessment - Sustainability indicator (S2)	Cost of Ageing 2017-2060, of which:			
		Pensions	*Health care*	*Long-term care*		*Pensions*	*Health care*	*Long-term care*	
BE	**3.6**	*0.4*	*-0.1*	*0.1*	**2.6**	*1.0*	*0.1*	*1.1*	**BE**
BG	**-2.9**	*-0.7*	*0.1*	*0.0*	**1.3**	*0.0*	*0.3*	*0.1*	**BG**
CZ	**-1.1**	*0.1*	*0.3*	*0.1*	**2.8**	*0.6*	*0.8*	*0.5*	**CZ**
DK	**-2.8**	*-0.8*	*0.3*	*0.3*	**0.7**	*-1.5*	*0.6*	*1.6*	**DK**
DE	**-0.6**	*0.6*	*0.2*	*0.0*	**1.8**	*1.7*	*0.4*	*0.0*	**DE**
EE	**-4.1**	*-0.4*	*0.1*	*0.1*	**0.6**	*-1.1*	*0.4*	*0.4*	**EE**
IE	**1.5**	*1.0*	*0.4*	*0.1*	**0.5**	*1.0*	*1.0*	*0.7*	**IE**
ES	**3.4**	*-0.4*	*0.3*	*0.1*	**0.8**	*-0.7*	*0.8*	*1.1*	**ES**
FR	**4.5**	*0.1*	*0.2*	*0.1*	**0.7**	*-1.7*	*0.7*	*0.6*	**FR**
HR	**1.9**	*-0.4*	*0.2*	*0.0*	**-2.3**	*-2.7*	*0.6*	*0.0*	**HR**
IT	**4.8**	*0.0*	*0.2*	*0.1*	**-0.6**	*-0.9*	*0.6*	*0.6*	**IT**
CY	**1.7**	*0.1*	*0.1*	*0.0*	**-1.8**	*0.2*	*0.2*	*0.2*	**CY**
LV	**-2.3**	*-0.8*	*0.2*	*0.0*	**0.8**	*-1.6*	*0.4*	*0.1*	**LV**
LT	**0.5**	*0.8*	*0.2*	*0.3*	**2.8**	*1.2*	*0.1*	*0.7*	**LT**
LU	**-4.2**	*1.0*	*0.0*	*0.1*	**4.6**	*2.9*	*0.4*	*1.3*	**LU**
HU	**-0.2**	*-0.9*	*0.2*	*0.0*	**1.7**	*0.3*	*0.5*	*0.3*	**HU**
MT	**-0.9**	*0.0*	*0.5*	*0.2*	**4.3**	*1.9*	*1.5*	*0.9*	**MT**
NL	**0.2**	*-0.1*	*0.3*	*0.4*	**4.1**	*0.1*	*0.7*	*2.7*	**NL**
AT	**1.2**	*0.2*	*0.3*	*0.1*	**2.5**	*0.5*	*0.9*	*0.9*	**AT**
PL	**1.3**	*-0.2*	*0.3*	*0.1*	**3.7**	*-0.2*	*0.8*	*0.6*	**PL**
PT	**5.4**	*0.5*	*0.5*	*0.0*	**1.2**	*-0.2*	*1.8*	*0.2*	**PT**
RO	**0.7**	*0.0*	*0.2*	*0.1*	**3.8**	*0.1*	*0.6*	*0.6*	**RO**
SI	**3.0**	*0.1*	*0.3*	*0.2*	**6.9**	*3.2*	*0.9*	*1.0*	**SI**
SK	**-1.3**	*-0.4*	*0.4*	*0.0*	**3.0**	*0.9*	*1.3*	*0.2*	**SK**
FI	**2.7**	*0.9*	*0.2*	*0.4*	**3.3**	*-0.4*	*0.5*	*1.6*	**FI**
SE	**-1.4**	*-0.4*	*0.1*	*0.4*	**2.2**	*-0.8*	*0.3*	*1.3*	**SE**
UK	**3.8**	*0.3*	*0.2*	*0.1*	**3.6**	*1.0*	*1.0*	*0.3*	**UK**
EU	**2.2**	*0.1*	*0.2*	*0.1*	**1.8**	*0.0*	*0.7*	*0.7*	**EU**
EA	**2.3**	*0.2*	*0.2*	*0.1*	**1.3**	*-0.1*	*0.6*	*0.7*	**EA**

(1) Greece is implementing an economic adjustment programme. The macroeconomic and budgetary prospects for 'programme' countries are assessed more frequently than for the other Member States. The time horizon covered by the forecasts for these countries is also different than for the other Member States and assume full implementation of the adjustment programme. They are therefore not included here.
(2) The sustainability indicators and projections of age-related expenditure in this Table are calculated on the basis of the baseline scenario from the 2015 Ageing Report and incorporate the European Commission's Spring 2016 forecast.
(3) As documented in the 2015 Ageing Report, the impact of the recent reform of the long-term care system in the Netherlands has been taken into account.
Source: 2015 Ageing Report, Fiscal Sustainability Report 2015, Commission services (DG ECFIN).

size of long-term sustainability challenges has nonetheless decreased significantly relative to the beginning of the crisis, under the effects of pension reforms introduced in the past, as well as recent fiscal consolidation.

If less favourable ageing cost projections were to materialise over the long term (especially due to higher healthcare spending, as assumed under the so called "AWG risk scenario" in the 2015 Ageing report, (see Section 2.4), significant changes would intervene in terms of long-term fiscal sustainability challenges. Four countries (Czech Republic, Malta, Romania and Slovak Republic) would be facing high, rather than medium, risks over the long term, while other eight countries (Denmark, Germany, Estonia, Ireland, France, Latvia, Hungary and Portugal) would face medium, rather than low, risks.

Overall, fiscal sustainability challenges are significantly lower in the EU today relative to the outset of the crisis. Significant challenges nonetheless remain over the medium term, mostly due to the public debt stocks cumulated during the crisis years, and over the long term, mostly related to the projected increase in age-related public spending.

2.2. PAST AND RECENT TRENDS IN HEALTH CARE AND LONG-TERM CARE EXPENDITURE

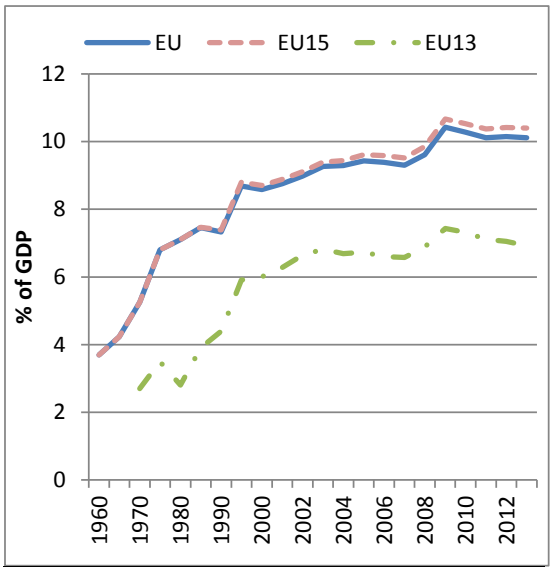
Total (public and private) expenditure on health in the EU absorbs a significant and growing share of Member States' resources ([17]). It has grown from an average of about 7% of GDP in 1980 to 10% in 2013 (EU weighted averages). As such, the health care and long-term care sectors play an important role in the overall economy (see Box 2.2.1). Public expenditure on health reached an EU average of 7.8% of GDP in 2013, having increased from 5.7% in 1980. Public expenditure on health is the largest component of total health expenditure in almost all EU Member States, averaging 77% in the EU in 2013. It should be noted that the term public expenditure used defined in this report includes both expenditure by the government, financed through taxation as well as expenditure by insurance bodies or companies, financed through contributions by citizens enrolled in compulsory insurance programs. On the other hand, private expenditure refers both to out-of-pocket and private health insurance expenditure.

There are significant differences in expenditure across EU Member States (Table 2.2.1, Graphs 2.2.1and 2.2.2). Indeed, in 2013 the share of public expenditure on health as percentage of GDP ranged from 3.4-3.5% in Cyprus and Latvia to over 10% in the Netherlands. Generally, expenditure on health is significantly lower in the Member States that accessed the EU after 2004 (a EU13-median of 4.6% against an EU15-median of 7.6% of GDP, giving an overall EU-median of about 6% of GDP), although the observed differences between countries have been narrowing in the past ([18]). There are also stark differences in spending per capita, with median spending per capita in purchasing power standards in the EU13 in 2013 being only a bit more than half of the level of spending in the EU28 as a whole and roughly a third of that in the EU15 (Graph 2.2.2).

Past trends of expenditure on health

While public expenditure on health, both as a share of GDP and in per capita terms, has risen markedly over the past decades, different periods can be identified with regards to the evolution of expenditure-to-GDP ratios (Graphs 2.2.1 and 2.2.2). The first period covers the 1960s and 1970s when public expenditure on health as a percentage of GDP grew particularly fast because many Member States substantially increased the share of the population covered by publicly funded health services and goods, either via national health services, or compulsory social health insurance schemes. This coverage extension was complemented in the following decades by the continued progress in medical knowledge and technology resulting in new or improved treatment possibilities, which may also have contributed to the recent general upward increase in health expenditure.

Graph 2.2.1: **Evolution of total (public and private) public expenditure on health as a share of GDP, 1960 - 2013**



(1) EU weighted averages.
(2) Calculations based on Eurostat, OECD and WHO health data.
(3) In the Netherlands, the implementation of the Health Insurance Act in 2006 causes a break in private/public health expenditures.
Source: Commission services (DG ECFIN).

The second period covers the 1980s, when health expenditure growth slowed down, as a result of increasing efforts of budgetary consolidation, and levelling-off effects due to the near completion of the broadening of the coverage of health systems. This resulted in the near stabilisation of the public health expenditure-to-GDP ratio in the second half

([17]) There are different sources for estimating the levels of health expenditure used in this report. These sources are the Systems of Health Accounts, COFOG and Ageing Reports. The specific sources are indicated in the tables and graphs.

([18]) This publication also refers to median values for different EU aggregates, as these may be more useful for a comparison of different statistics with country-specific data.

Table 2.2.1: **Past trends of expenditure on total and public health (including long-term nursing care) in EU Member States 1980-2014**

	Total (public and private) expenditure on health as % of GDP										Public expenditure on health as % of GDP										
	1980	1990	2000	2008	2009	2010	2011	2012	2013	2014	1980	1990	2000	2008	2009	2010	2011	2012	2013	2014	
BE	6.3	7.2	9.0	9.9	10.7	10.6	10.6	10.9	11.2	:	:	:	6.1	7.4	8.1	7.9	8.0	8.2	8.0	:	**BE**
BG	:	5.2	6.1	7.0	7.2	7.6	7.7	7.4	7.6	:	:	5.2	3.7	4.1	4.0	4.2	4.2	4.0	4.7	:	**BG**
CZ	:	4.7	6.5	6.8	7.9	7.4	7.5	7.6	7.2	:	:	4.4	5.7	5.6	6.6	6.2	6.3	6.3	6.2	:	**CZ**
DK	8.9	8.3	8.3	10.2	11.5	11.1	10.9	11.0	10.6	:	7.9	6.9	7.3	8.6	9.8	9.4	9.3	9.4	9.6	:	**DK**
DE	8.4	8.3	10.3	10.7	11.8	11.6	11.3	11.3	11.3	11.3	6.6	6.3	8.0	7.9	8.8	8.6	8.4	8.4	8.6	8.7	**DE**
EE	:	:	5.3	6.1	6.9	6.3	5.8	5.9	5.7	:	:	:	4.1	4.7	5.2	5.0	4.6	4.6	5.0	:	**EE**
IE	8.3	6.1	6.3	9.0	10.0	9.2	8.7	8.9	8.9	:	6.7	4.3	4.5	6.5	6.9	6.1	5.5	5.6	5.4	:	**IE**
EL	5.9	6.6	7.9	10.1	10.2	9.5	9.8	9.3	9.8	:	3.3	3.6	4.6	:	7.0	6.3	6.6	6.2	6.4	:	**EL**
ES	5.3	6.5	7.2	8.9	9.6	9.7	9.4	9.3	8.9	:	4.2	5.1	5.2	6.5	7.2	7.2	6.9	6.7	6.4	:	**ES**
FR	7.0	8.4	10.1	10.9	11.6	11.6	11.5	11.6	11.7	:	5.6	6.4	7.8	8.4	9.0	9.0	8.9	9.0	9.0	:	**FR**
HR	0.0	0.0	0.0	7.8	8.2	8.4	7.3	7.2	7.3	:	0.0	0.0	6.6	6.6	7.0	7.2	5.7	5.8	6.3	:	**HR**
IT	:	7.7	8.1	8.9	9.4	9.4	9.3	9.2	9.1	:	:	6.1	5.9	7.0	7.4	7.4	7.1	7.2	7.2	:	**IT**
CY	2.8	4.5	5.7	6.9	7.4	7.3	7.6	7.4	7.4	:	1.5	1.8	2.4	2.9	3.1	3.5	3.6	3.4	3.5	:	**CY**
LV	2.1	2.5	6.0	6.6	6.8	6.5	6.1	5.9	5.7	:	:	2.5	3.3	4.1	4.1	3.9	3.9	3.6	3.5	:	**LV**
LT	:	3.3	6.5	6.6	7.5	7.1	6.9	6.7	6.2	:	:	3.0	4.5	4.8	5.5	5.0	4.7	4.4	4.4	:	**LT**
LU	5.2	5.4	5.8	7.3	8.1	7.7	7.4	7.2	7.1	:	4.8	5.0	6.4	6.5	7.0	6.6	6.3	6.0	5.9	:	**LU**
HU	:	:	7.0	7.5	7.7	8.1	8.0	8.0	8.1	:	:	:	5.0	5.0	5.1	5.2	5.1	5.0	4.8	:	**HU**
MT	:	:	6.8	8.2	8.3	8.3	9.5	8.7	8.7	:	:	:	4.9	5.3	5.4	5.3	6.7	6.5	6.5	:	**MT**
NL	7.4	8.0	8.0	11.0	11.9	12.2	12.1	12.7	12.9	:	5.1	5.4	4.7	7.5	8.2	8.3	8.4	8.8	8.8	:	**NL**
AT	7.4	8.3	9.9	10.5	11.2	11.1	10.9	11.1	11.0	:	5.1	6.1	7.6	8.0	8.5	8.4	8.3	8.4	8.4	:	**AT**
PL	:	4.8	5.5	6.9	7.2	7.0	6.9	6.8	6.7	:	:	4.4	3.9	4.9	5.2	5.0	4.8	4.7	4.5	:	**PO**
PT	5.3	5.9	8.8	10.2	10.8	10.8	10.2	9.9	9.7	:	3.3	3.7	6.1	6.7	7.2	7.1	6.7	6.2	6.2	:	**PT**
RO	:	2.9	5.2	5.4	5.7	6.0	5.6	5.6	5.3	:	:	2.9	3.5	4.5	4.5	4.8	4.4	4.5	4.5	:	**RO**
SI	4.4	5.6	8.3	8.4	9.2	8.9	8.9	9.4	9.2	:	4.4	5.6	6.1	6.2	6.8	6.6	6.5	6.7	6.7	:	**SI**
SK	:	:	5.5	8.0	9.2	9.0	8.0	8.2	8.2	:	:	:	4.9	5.4	6.0	5.8	5.6	:	5.6	:	**SK**
FI	6.3	7.7	7.2	8.3	9.2	9.0	9.0	9.1	9.4	9.3	5.0	6.3	5.1	6.2	6.9	6.7	6.7	6.8	7.2	7.0	**FI**
SE	8.9	8.2	8.2	9.2	9.9	9.5	9.5	9.6	9.7	:	8.2	7.4	6.9	7.5	8.1	7.7	7.8	7.8	9.8	:	**SE**
UK	5.6	5.9	7.0	8.8	9.7	9.4	9.2	9.3	9.1	:	5.0	4.9	5.5	7.2	8.2	8.0	7.8	7.9	7.8	:	**UK**
EU	7.1	7.3	8.6	9.6	10.4	10.3	10.1	10.1	10.1	:	5.7	5.8	6.5	7.3	8.0	7.9	7.7	7.8	7.8	:	**EU**
EA	7.3	7.7	9.1	10.0	10.8	10.7	10.6	10.6	10.6	:	5.7	5.9	6.8	7.5	8.1	8.0	7.9	7.9	8.0	:	**EA**
EU (md)	6.1	6.0	7.0	8.3	9.2	9.0	8.9	9.0	8.9	:	5.0	5.0	5.2	6.5	6.9	6.6	6.6	6.3	6.3	:	**EU (md)**
EU15 (md)	6.7	7.7	8.1	9.9	10.2	9.7	9.8	9.6	9.7	:	5.1	5.7	6.1	7.3	8.1	7.7	7.8	7.8	7.8	:	**EU15 (md)**
EU13 (md)	2.5	4.5	6.0	6.9	7.5	7.4	7.5	7.4	7.3	:	1.5	3.0	4.5	4.9	5.2	5.0	4.8	4.7	4.8	:	**EU13 (md)**

(1) Total and public expenditure by the System of Health Accounts (SHA) is defined as the "core" health care categories (SHA categories (HC.1 to HC.9), including long-term nursing care category (HC.3) and capital investment in health (HC.R.1). Note that the figures on Germany cover the country before and after reunification, thus causing a break in the series, which should be taken into account when interpreting the results over time. In the Netherlands, the implementation of the Health Insurance Act in 2006 causes a break in private/public health expenditures.
EU: EU-28.
EA: Euro Area: Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia and Spain.
EU, EU15, EU13 (md): Median values.
EU15: Belgium, Denmark, Germany, Ireland, Greece, Spain, France, Italy, Luxembourg, Netherlands, Austria, Portugal, Finland, Sweden, United Kingdom.
EU13: Bulgaria, Czech Republic, Estonia, Croatia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovenia and Slovakia.
Source: OECD health data, Eurostat data and WHO Health for All database for health expenditure data. Eurostat data for public (government) expenditure using COFOG. EU and EA averages are weighted averages by either GDP or public expenditure where relevant and calculated by Commission Services.

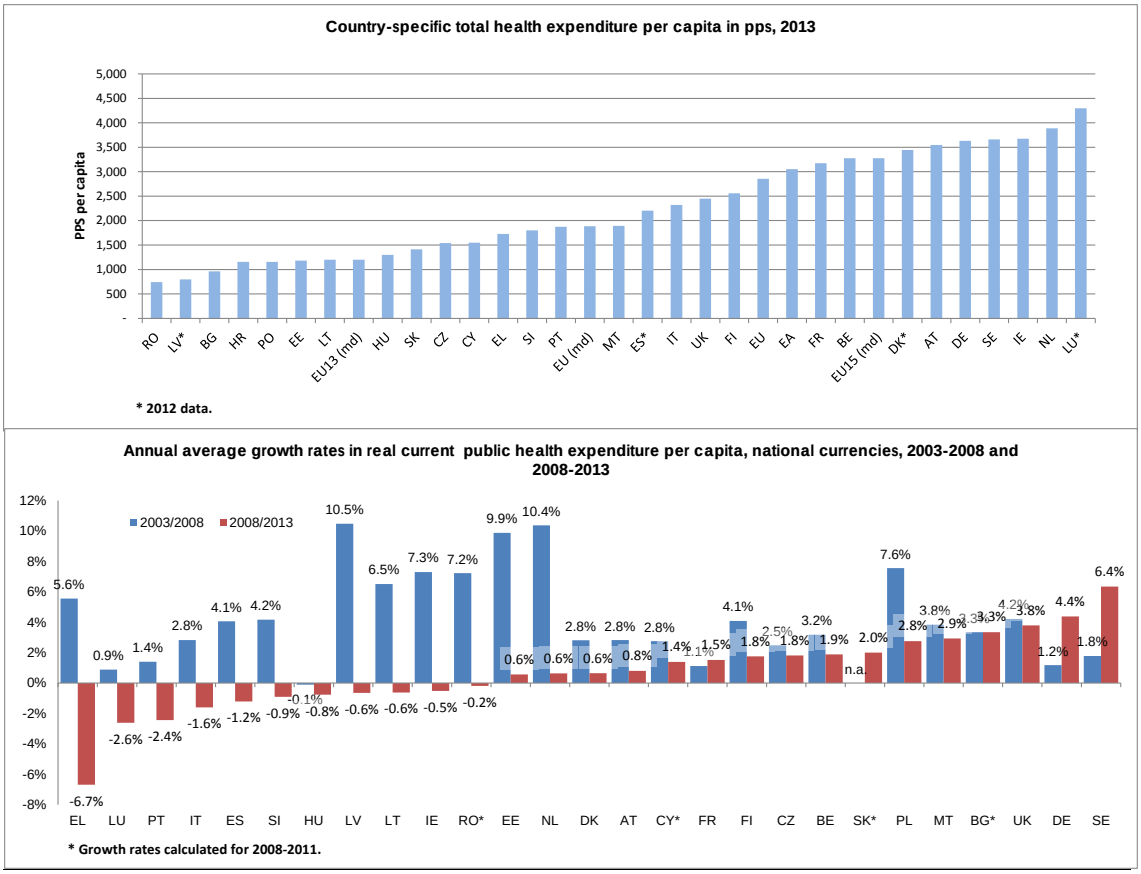
of the 1980s up to 1990, when the upward trend in the expenditure ratio picked up again. Between the late 1990s and the early 2000s, the rise in the expenditure ratio slowed down again, but was then followed by another period of increase, albeit at a slower pace.

Since 2000, two periods can be distinguished for the public health expenditure-to-GDP ratio: a fairly stable period in the first half of the decade, followed by an accelerated increase from 2006 up to 2009. This was followed, by a slight decrease and a stabilisation of the expenditure-to-GDP ratio in the following years, due to the fiscal consolidation policies in the frame of the economic crisis.

Recent trends of expenditure on health

The overall relative low nominal increases in expenditure since 2009 have contributed (in addition to inflation and population growth) to negative real growth rates in per capita public health expenditure in several Member States. This is the case for Croatia, Greece, Ireland, Spain, United Kingdom, Italy, Luxembourg, Latvia, Portugal, Slovenia, Hungary and Lithuania (Graph 2.2.2). This decrease in real per capita expenditure seems especially large in the Member States with relatively high increases in expenditure levels prior to the crisis, between 2003 and 2009. Thus, to a certain extent, growth rates after 2009 may have rebalanced growth rates in previous years, as Member States with high growth rates over

Graph 2.2.2: **Country-specific per capita expenditure levels and growth rates**



(1) Calculations based on Eurostat, OECD and WHO health data.
Source: Commission services (DG ECFIN).

2003-2008 reverted towards low growth rates afterwards.

The 2009 economic crisis was followed by a period of budgetary adjustment associated with the need to reduce large government deficits and keep public debt under control, to ensure that public finances were kept on a sustainable path. In many EU Member States stronger budgetary constraints have been put in place in various areas of public policy, affecting also both the provision and the funding of health goods and services in the short to the medium term.

Box 2.2.1: The economic importance of health and health expenditure

There is substantial evidence suggesting that "healthier is wealthier", i.e. that good health positively affects economic growth through a number of channels ([1]). Good health improves the population's ability to work, increasing individual and aggregate labour productivity. This has an impact on wages and earnings and, in aggregate terms, on GDP per capita. Good health is a main determinant of labour supply by older workers. In this latter case, improvements in health that can contribute to increase labour market participation at older ages and that accompany changes in retirement ages can have a positive impact on the general economy.

Good health affects not only the labour supply of the ill and disabled but also of those who live with and take care of them. Informal care is widely spread in Europe, often provided by adult female children. As discussed in this report, informal elderly care decreases women's labour force participation especially in their middle ages and until retirement in many EU countries.

Health affects the economic and social situation of individuals and societies also through its effect on the education attainment of children and young people. Good health is good for better educational attainment, which, in turn, is positively related to income, both at individual societal level.

The evidence that good health positively affects the welfare of both individuals and societies is often put forward as an argument for considering health expenditure as a driver of economic growth and as such as an investment rather than as a cost.

The health sector employs a significant and growing number of people of diverse skill and qualifications and creates demand for a number of industries. These industries are often associated with frontline knowledge, research and innovation and the development of high-tech products, and are recognised as drivers of economic growth.

The health sector is an important employer ([2]). The 'health and social work' sector saw the largest rise in employment between the 2nd quarter of 2008 and the 2nd quarter of 2015, creating over 2.6 million new jobs. In the EU, the 'human health and social sector' accounted for over 23 million employees in the second quarter of 2015. Workers in the health and social work sector have an education level above the average of all sectors. In the European Union, across all sectors, 33% of all workers held a tertiary degree. In the health and social work sector this value was 42%.

However, it is important to distinguish between good health and economic growth on the one hand and health expenditure and economic growth on the other hand. Indeed, the relationship between health expenditure and economic growth is not straightforward.

Wealthier countries tend to spend more on health and have higher life expectancies, but to what extent these outcomes are driven by higher health expenditure is controversial. This is because next to wider socio-economic determinants of health, such as education, income and environmental factors, health care is only one contributor to good health. Importantly, the benefits of increasing health expenditure seem to depend on the level of wealth of a country.

The slogan "healthier is wealthier" applies particularly to countries with relatively low life expectancies ([3]). Consequently, the "Lancet Commission on Investing in Health" ([4]) shows that health investments in developing countries made today may achieve dramatic health and economic improvements.

By contrast, for higher incomes countries, the relationship between health status and wealth is blurred: Countries with similar levels of life expectancy and wealth have very different levels of spending on health. As discussed amply in this

([1]) For a relatively recent literature overview see: Odrakiewicz, D., 2012. The connection between health and economic growth: policy implications re-examined. Global Management Journal, 4 (1/2), pp. 65-76.

([2]) http://ec.europa.eu/europe2020/pdf/themes/2016/health_health_systems_201605.pdf.

([3]) See e.g., Baker, P. (2008), 'On the relationship between economic growth and health improvements: Some lessons for health conscious developing countries', Radical Statistics, Issue 98, p.26.

([4]) http://www.thelancet.com/commissions/global-health-2035.

(Continued on the next page)

Box (continued)

report, this has to do with the ability of health systems to translate inputs into outputs (efficiency).

In addition, health expenditures may be affected by decreasing marginal returns: with rising levels of life expectancy, the unit cost of investing in health may increase relative to the expected gain in (healthy) life expectancy. Bearing in mind that most of health expenditures is publicly financed, investments in health have to be seen in light of competing investments in other economic sectors. Also, the long-term fiscal sustainability of health systems is an important aspect policymakers need to take into consideration, which this report focuses on.

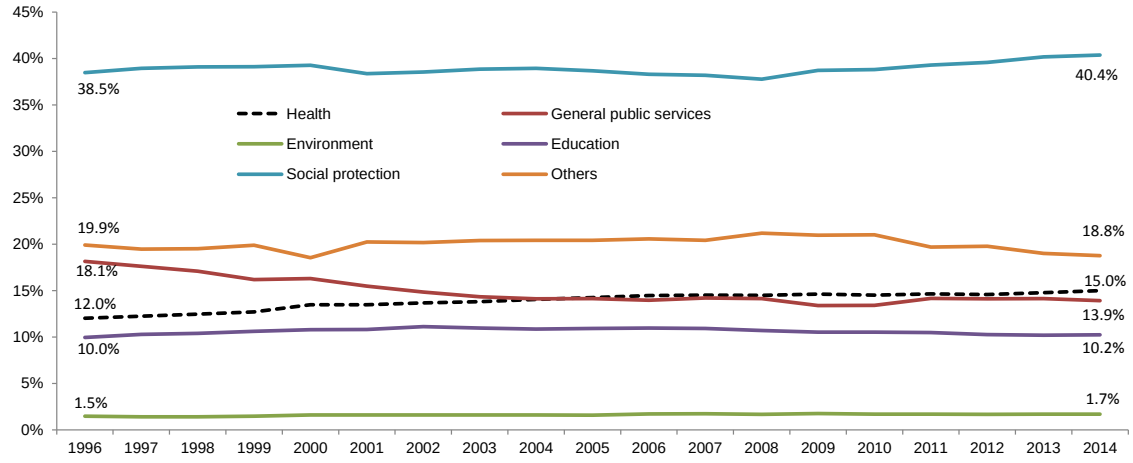
Trends observed in the expenditure-to-GDP ratio are the result of fluctuations in either health expenditure or GDP or both. In this respect, the 2008-2009 increase in the EU's health expenditure-to-GDP ratio is strongly related to the economic downturn in 2008-09. In addition, in those years some Member States maintained or even increased their level of expenditure on health as part of their economic recovery programmes. In 2009, GDP growth rates turned negative in most EU Member States. For many Member States there was no immediate change in health policy to curb expenditure. Despite negative GDP growth rates, many Member States continued to register increases in health expenditure. In another group of Member States, expenditure was reduced, though by less than the fall in GDP.

As part of this process, and since 2010, many Member States have undertaken or planned reforms aimed at adapting the financing and generating savings through efficiency gains. Several Member States appear to have been successful in reducing expenditure growth in health (Graph 2.2.1). This contributed to the observed reduction in health expenditure over GDP since 2010. In addition and not necessarily related to the economic crisis, countries initiated or continued ongoing reform efforts in the interest of increasing the systems' efficiency.

The rising share of health expenditure in government spending

Between 1996 and 2014, the share of health spending in total government spending increased significantly. The rising share of health and social protection expenditure was partly compensated by a reduced share of general public services. Public expenditure on health is now the second highest expenditure share in the EU with about 15% of total government expenditure after social protection (Graph 2.2.3). It can range from a level as high as 20% of total government expenditure (Croatia) to 7% of total expenditure (Cyprus).

Graph 2.2.3: **The shares of health and other public expenditure categories within total government expenditure in the EU, 1996-2014**



(1) Calculations based on Ameco and Cofog data; Category "Others" is the sum of spending on defence, order and safety, economic affairs and housing and recreation, culture and religion.
Source: Commission services (DG ECFIN).

Distribution of public health expenditure by functions of spending

It is particularly interesting to analyse which specific areas of spending contributed to growth in health expenditure in the past. First, this type of analysis helps revealing the priority areas of recent public policy action on health expenditure. Secondly, it contributes to identifying potential areas for policy interventions meant to generate efficiency gains in the sector. Seven main functions of health expenditure that are typically of interest in health policy are distinguished here.

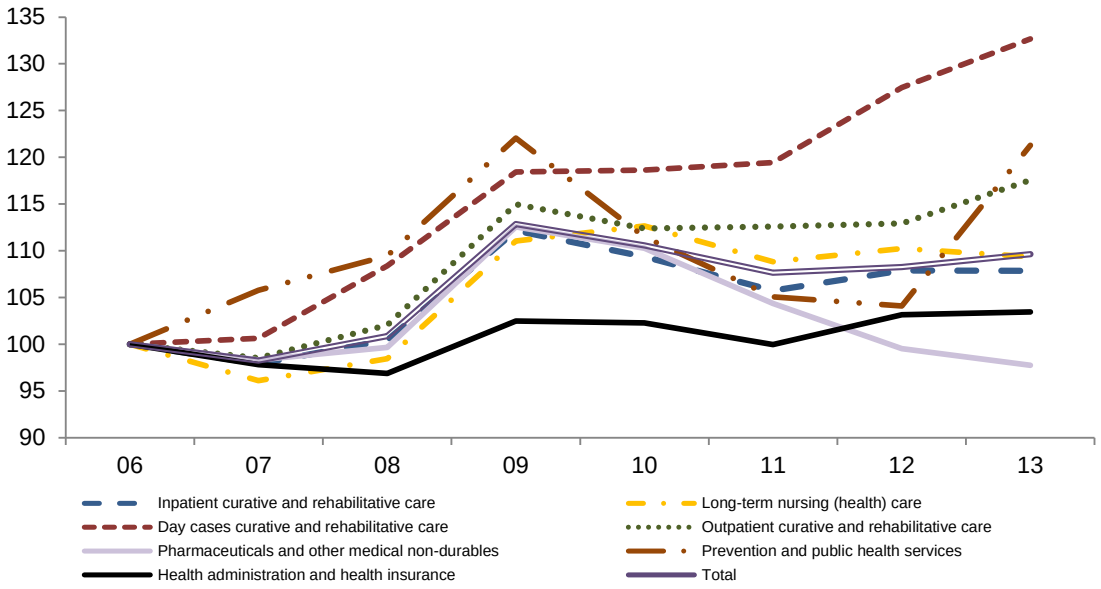
Traditionally, inpatient curative and rehabilitative care takes the highest share in spending (approximately 35%) in the EU. This is followed by outpatient care ([19]) (22%), outpatient pharmaceuticals ([20]) (14%), long-term nursing (health) care (9%), health administration and insurance (4%) and prevention and public health services (3%) (Graph 2.2.5). Since 2006, these shares have changed slightly at the EU level (increasing: outpatient care; remaining constant: prevention and nursing care; decreasing: hospital care and pharmaceuticals).

Between 2006 and 2013, public health expenditure grew differently across major areas (Graph 2.2.4). Public expenditure on day cases in curative and rehabilitative care saw the highest increase, around 30% between 2006 and 2013. This reflects the growing medical and technological shift to provide care more efficiently on a day basis rather than in inpatient care. This is also confirmed by the relatively steep increase in outpatient expenditure. Expenditure on disease prevention, health promotion and public health services was on the decline from 2009 until 2012, but had a rebound in 2013.

([19]) Outpatient care may refer to primary and secondary care. Primary care is generally understood as work of physicians, which are the initial point of consultation for patients in a health system (usually general practitioners). Secondary care refers to work by medical specialists (e.g. cardiologists, urologists). Primary care is usually to a much greater extent provided outside of the hospital system than secondary care.

([20]) Pharmaceutical spending corresponds to System of Health Accounts category HC51: "Pharmaceuticals and other medical non-durables" which refers to direct purchase of all goods acquired by a patient, regardless of whether purchased in an independent pharmacy or a pharmacy within a medical establishment, hospital or ambulatory setting, or through any other distribution channel. Excluded are pharmaceuticals which are a component of a package of services with a preventive, curative, rehabilitative or long-term care purpose. Pharmaceuticals include extemporaneous medicinal preparations, originator and generic medicines, serums and vaccines, vitamins and minerals and oral contraceptives.

Graph 2.2.4: **Evolution of health expenditure across major areas of spending, EU**

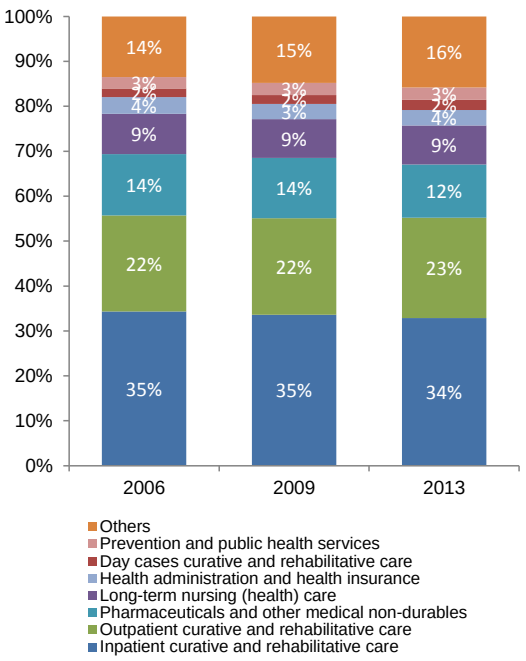


(1) Indexes series, 2006 base year.
Source: Commission services (DG ECFIN).

Outpatient pharmaceutical spending was growing at a similar pace as total expenditure over the period 2006 to 2010 and slower thereafter. Finally, expenditure on health administration and insurance was relatively low compared to the other expenditure items. These figures point to a slow, but consistent shift of care out of inpatient care, and probably more cost-effectiveness in the expenditure on outpatient pharmaceuticals, and also to the fact that spending on prevention and public health services continues to be at a very low level (Graph 2.2.5).

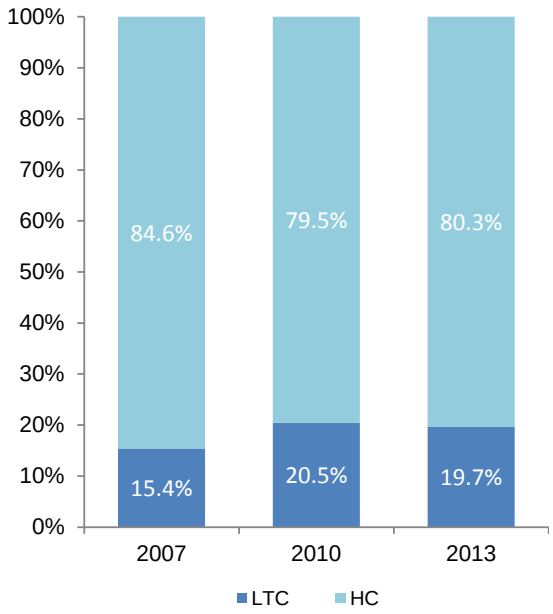
The share of overall public spending on long-term care out of public health care and long-term care expenditure seems to increase (Graph 2.2.6). Based on results obtained from the Ageing Reports 2009, 2012 and 2015, the share of spending on long-term care (health and social part) has increased from 15.4% to 19.7% between 2007 and 2013. While data between the different vintages of the report may not be fully comparable due to methodological changes (as is often the case with statistical data), this trend seems in line with the fact that access to long-term care services is improving in many countries. As a consequence, a growing share of resources is devoted to long-term care systems.

Graph 2.2.5: **Distribution of public health expenditure by areas in the EU, 2006-2013**



(1) Calculations based on Eurostat, OECD and WHO health data.
Source: Commission services (DG ECFIN).

Graph 2.2.6: **Spending split between health care and long-term care in the EU, 2007-2013**



(1) Based on European Commission's Ageing Reports 2009, 2012 and 2015.
HC: Based on System of Health Account (SHA), excluding long-term nursing care (HC.3) and including capital investments (HC.R.1).
LTC: For most of the countries based on SHA methodology, including long-term care health and social part (HC.3 + HC.R.6.1), and including expenditure for economic integration of handicapped from ESSPROS.
Source: Commission services (DG ECFIN).

2.3. DRIVERS OF GROWTH IN HEALTH CARE AND LONG-TERM CARE EXPENDITURE

When analysing the drivers of growth in health expenditure, it is common to differentiate between demographic and non-demographic drivers. The Ageing Report 2015 proposes a categorisation of the drivers in health care and long-term care. The most common drivers of health care and long-term expenditure are presented in what follows.

Health care - Demographic factors

Expenditure on health care depends on population size and age composition. Expenditure increases considerably at older ages (Graph 2.3.1), as elderly people often require costly medical treatment due to multi-morbidities and chronic illnesses. Improvements in life-expectancy may therefore lead to increases in health spending. However, if rising longevity went hand in hand with better health at older ages, health needs would decline and this might drive down health expenditure in the future (Rechel et al. 2009).

The relation between life expectancy and health care expenditures is nonetheless a complex one, as it is also influenced by proximity to death. According to the "red herring" hypothesis (Zweifel et al., 2005), age and health expenditure are not related once remaining lifetime (proximity to death) is taken into account. Zweifel et al. (2005) show that the effect of age on health costs is not relevant during the entire last two years of life, but only at the proximity to death does health expenditure rise significantly. Therefore, improvements in life expectancy due to decreases in mortality rates may even reduce expenditure on health. When controlling for proximity to death, age per se plays a less important role in explaining health expenditure increases. Overall, evidence suggests that population ageing accounts for only a minor share of the increase in government health expenditure per capita in EU countries over the last decades (Maisonneuve et al., 2013; Medeiros and Schwierz, 2015).

Health care - Non-demographic drivers (NDD)

Evidence shows that non-demographic factors, such as income, prices, patients' expectations and technology, are the key drivers of health care expenditure. As a country's wealth increases, so does health spending as a proportion of GDP. A priori, it is unclear whether health expenditure is an inferior, a normal or a superior good, i.e. whether the income elasticity of health demand is lower, equal or higher than one. As in the EU a high share of health expenditure is covered by public health insurance schemes, the individual income elasticity of overall demand is low.

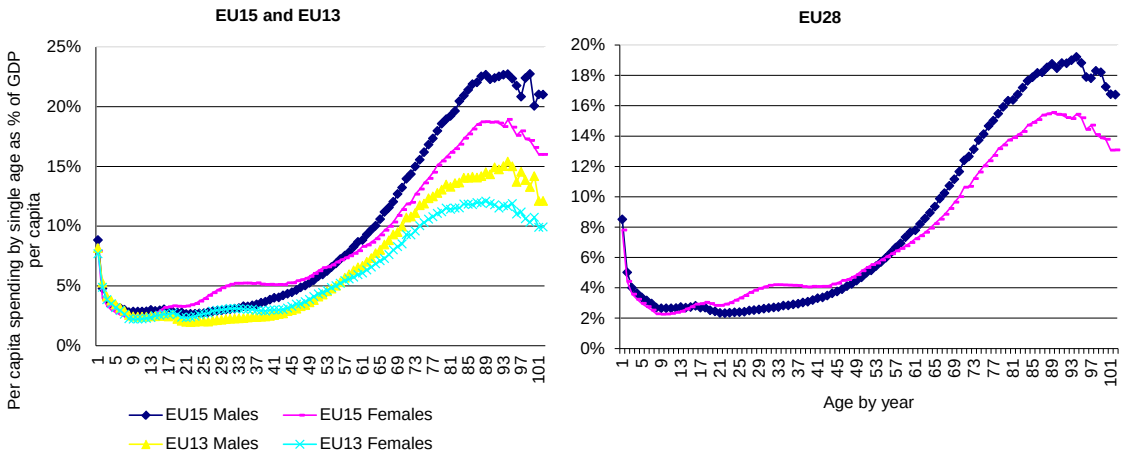
Income elasticity tends to increase with the level of aggregation of the data, implying that health expenditure could be both "an individual necessity and a national luxury". Getzen, (2000) suggests that the high income elasticities (above one) often found in macro studies may result from the failure to control for price and quality effects in econometric analysis. More recent studies, tackling some methodological drawbacks of previous ones (e.g. related to omitted variables and/or endogeneity bias), estimate income elasticities of health demand of around one or below (Azizi et al., 2005; Acemoglu et al., 2009; Medeiros and Schwierz, 2015). Please note that the concept of income elasticity does not intend to capture the impact on health care spending of non-demographic drivers other than income. These drivers are discussed in the next paragraphs.

Expenditure growth depends also on the prices of health care and the price elasticity of the demand for health care. When this price elasticity is below one, a given increase in health prices does not induce a proportionate decrease in demand volumes, thus increasing expenditures. There is evidence that health expenditure is driven by wage increases in excess of productivity growth in the whole economy (Maisonneuve et al., 2013).

Innovations in medical technology allow for expanding health care to previously untreated medical conditions and are believed to be a major driver of health expenditure. Smith et al. (2009) suggest that between 27% to 48% of health expenditure since 1960 is explained by innovations in medical technology. Earlier studies estimated that about 50% to 75% of increases in total expenditure were driven by technology (Newhouse, 1992; Cutler, 1995; Okunade and Murthy, 2002; and Maisonneuve et al., 2013).

Another important dimension of public health expenditure is the regulatory setting and the

Graph 2.3.1: **Age-related spending for health care (spending per capita as % of GDP per capita), EU, EU15 and EU13**



Source: Ageing Report 2015 (European Commission (DG ECFIN)-EPC (AWG), 2015).

policies on the provision and financing of health care. Regulations may set budgetary constraints, define the extent of public health coverage, and provide behavioural rules and incentives for providers and payers aimed at the financial or medical quality of outcomes. Jenkner et al. (2010) suggest that reliance on market mechanisms ([21]) and the stringency of budgetary caps on expenditure are negatively related to growth in public expenditure on health (meaning less growth), while the intensity of regulation and the degree of centralisation are positively related to growth in public health expenditure. A recent study confirms that institutional settings can explain a significant part of past expenditure growth in some EU countries (Maisonneuve et al., 2016).

Taking into account all NDD, i.e. income, technology, institutional settings, leads to elasticity that is typically higher than the income elasticity alone. This difference is effectively captured in the AWG references and risk scenarios (Section 2.4), where the income elasticity is estimated at 1.1, whereas the NDD elasticity amounts to 1.4.

Long-term care - Demographic factors

A key element of future public expenditure on long-term care (LTC) is the number of people who will need and receive LTC. The higher share of old and very old people expected in the coming decades is key in this respect. This is because the risk to live with physical or mental disability leading to a dependency situation that requires LTC tends to increase with age, especially with very old age (80+) (though the need for LTC is not arising from ageing itself, but is rather a consequence of sickness or frailty ([22]), causing dependency on others).

The age-related expenditure profiles are rather flat for LTC recipients. This signals that the LTC costs related to severe disability are relatively independent of age. Thus, contrary to health care, for which higher spending is related to increasing age-cost profiles, increases in LTC spending are more related to the growing number of dependent people as driven by population ageing.

As in health care, increased life expectancy can contribute to an increase in LTC spending. The increase in life expectancy may translate in an

([21]) In Jenkner et al. (2010), "market mechanisms" is a factor score resulting from a principal component analysis of 20 qualitative policies and institutions indicators presented in Joumard et al. (2010). The "market mechanisms" factor score is mainly characterised by the following indexes: i) "private provision" of health (breakdown of physicians and hospital services according to their nature, i.e. public or private); ii) "user information" (on quality and prices of various health services); iii) "choice of insurers" (in case of multiple insurers, the ability of people to choose their insurer); and iv) "insurer levers" (insurers' ability to modulate the benefit basket).

([22]) For a discussion of the term frailty, see Clegg et al. (2013), Frailty in elderly people, The Lancet , Volume 381 , Issue 9868 , 752 – 762.

increase in the number of people and years for which the need for LTC is higher, thus raising costs. This is the case when longevity is not accompanied by a corresponding improvement in the quality of life.

As in health care, it is not necessarily age per se, but the **prevalence levels of dependency** which determines LTC expenditure. The key question is of course whether dependency levels will increase, remain constant or decrease as life expectancy increases. Recent empirical research has not come to a clear conclusion regarding this question. Some evidence suggests that specific causes of disability may become more prominent with increasing age. These disabilities can have a direct impact on the frailty of longer-living older people. In particular, the number of people with a dementia (Alzheimer's disease) is expected to increase ([23]). On the other hand, certain studies have noted that, as life expectancy increases, the incidence of severe disability is postponed, leading to a reduction in the prevalence of severe disability for some age-groups.

Long-term care - Non-demographic factors

The extent to which a country relies on formal care and the extent to which this is provided in institutions or at home are important determinants of public expenditure on LTC. While traditionally, in most EU Member States, formal LTC services were first and foremost provided in institutions, there is now a growing trend to promote home care services for LTC patients. While this possibility is limited by the degree of dependency of the patient, home care tends to be cheaper than institutional care. Consequently, Member States with a relatively strong focus on institutional care may reap cost-effectiveness gains by encouraging home care (see Chapter 5).

The extent to which LTC is delivered formally or informally is also an important driver of public long-term expenditure. LTC is delivered informally by families and friends – mainly spouses and children – and formally by care assistants who are paid under some form of employment contract. All EU Member States are involved in either the public provision and/or financing of LTC services, although the degree of involvement differs across countries. Some Member States rely heavily on the informal provision of LTC and their expenditure on formal care is small. Other Member States provide extensive public services to the elderly and devote a significant share of GDP to LTC (see Chapter 5).

In some countries, staff shortages in the LTC sector are already high. In the future, there will be fewer people of working age and a decline in the size of the low-skilled workforce (which may be relevant for some home-care services), potentially increasing staff shortages in the sector. This, combined with higher pressure on the formal provision of LTC, may increase wages in the sector. As the cost of LTC is dominated by labour costs, changes in wage rates of LTC workers are likely to influence future costs of LTC.

One can foresee a shift from informal care towards formal care-giving as typical caregivers get more involved in the labour market and the new family structures and size may imply less informal support to the older generations. For instance, the growing importance of female labour participation may reduce the human resources for informal care. The current institutional arrangements for the provision and financing of LTC by the public sector may be under strong pressure in the future, if the availability of informal carers and their propensity to provide care diminish.

([23]) Some recent studies show that the incidence of Alzheimers's disease might be declining: https://www.sciencedaily.com/releases/2016/02/160211082311.htm.

2.4. PROJECTIONS OF HEALTH CARE AND LONG-TERM CARE EXPENDITURE

The Ageing Report 2015 proposes a series of "scenarios" that project the potential impact of the different determinants of public spending on health care and long-term care until 2060. The basic setup of the model used to project future expenditure is that of a traditional simulation model in which the overall population is disaggregated into a number of groups having a common set of features, such as age and sex ([24]). As the number of individuals in each group changes over time, so do the aggregate values of the endogenous variables. In the following, the main results of this major projection exercise are presented.

Projections of health care expenditure

For health care the projections show a wide range of results depending on the chosen scenario (Graph 2.4.1 and 2.4.2). Expenditure in the EU28 may grow up to 8% of GDP in 2060 only on accounts of demographic ageing, and to higher levels when other push up factors are accounted for, as in other scenarios presented in the report. The *Demographic scenario* assumes that per capita spending grows in line with national income per capita. The effect is that without population ageing, the share of health spending in percentage of national income would stay constant. The projections show that, whilst ageing per se has a non-negligible effect on expenditure growth, it is rather moderate. In effect, much depends on whether gains in life expectancy are spent in good or bad health. Optimistically, if all additional life years are healthy life years, the additional cost burden from ageing can be lowered, as exemplified in the *Constant health scenario*.

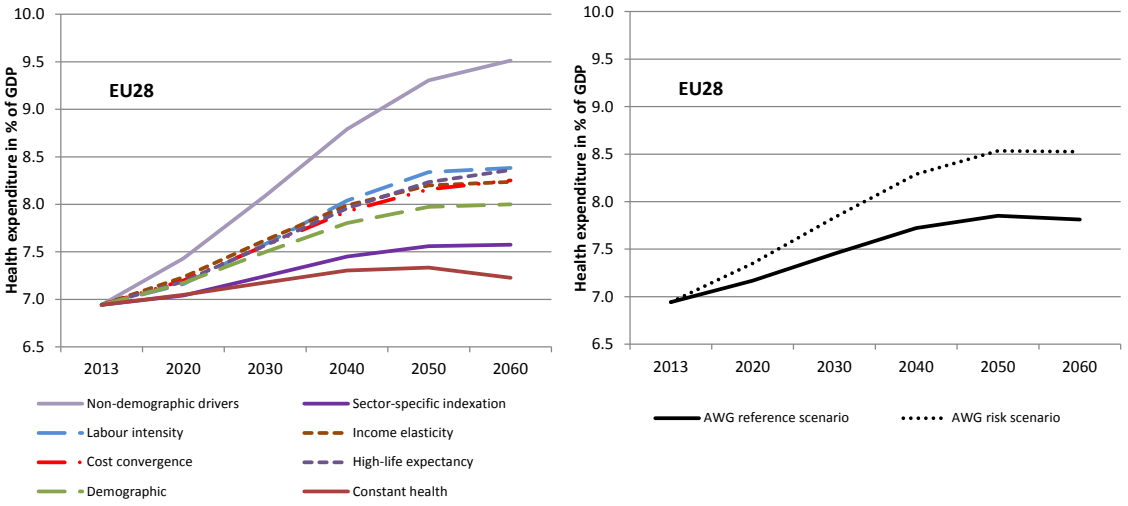
With rising income and longevity, older people require more spending on health care services ([25]). Assuming a higher growth in spending relative to national income (i.e. income elasticity of 1.1) adds an extra 0.2 pps of GDP to health expenditure. Rising income, in turn, is also associated with technological innovations in the health sector, which have been confirmed in many studies to be crucial in explaining past increases in health expenditure. In addition, policy decisions to expand access and improve the quality of health services, especially for older people, will inextricably mean that ageing remains at the core of public debates related to health expenditures.

Non-demographic factors will be a key driving force of health expenditures, if past trends persist. The projections show that - on the basis of an econometric estimate - when the impact of future income growth and technological progress on the demand for more and better health care is taken into consideration, projected expenditure becomes much higher (*Non-demographic drivers scenario*). This is reasonable, as increasing economic wealth puts governments at pressure to provide more health services and to improve the quality of care. Also, growing living standards change people's attitude towards their own health and raise their expectations of living a longer, healthier life. Innovations can produce efficiency gains and thus be cost-saving. Furthermore, in medical care they have also expanded the possibilities of life-saving treatments. However, these have added to costs, both by adding extra expenditure to previously non-curable diseases and by saving peoples' lives at the cost of longer periods of morbidity, especially at old ages. Overall, this has had a strong increasing and dominant effect on public spending. The currently prevalent consensus is that this will also be the case in the future. Still, extrapolating past trends may also mean overestimating the cost-increasing impact of non-demographic drivers and underestimating the cost-saving impact of technological progress in the future.

([24]) The methodology for running the long-term expenditure projections is explained in detail in the Joint Report prepared by the European Commission (DG ECFIN) and the Economic Policy Committee (AWG): "The 2015 Ageing Report: Underlying Assumptions and Projection Methodologies", European Economy. 8. November 2014. Brussels: http://ec.europa.eu/economy_finance/publications/european_economy/2014/ee8_en.htm

([25]) In the past decade there was an increase in the expenditure associated with old age diseases such as Alzheimer or dementia for example.

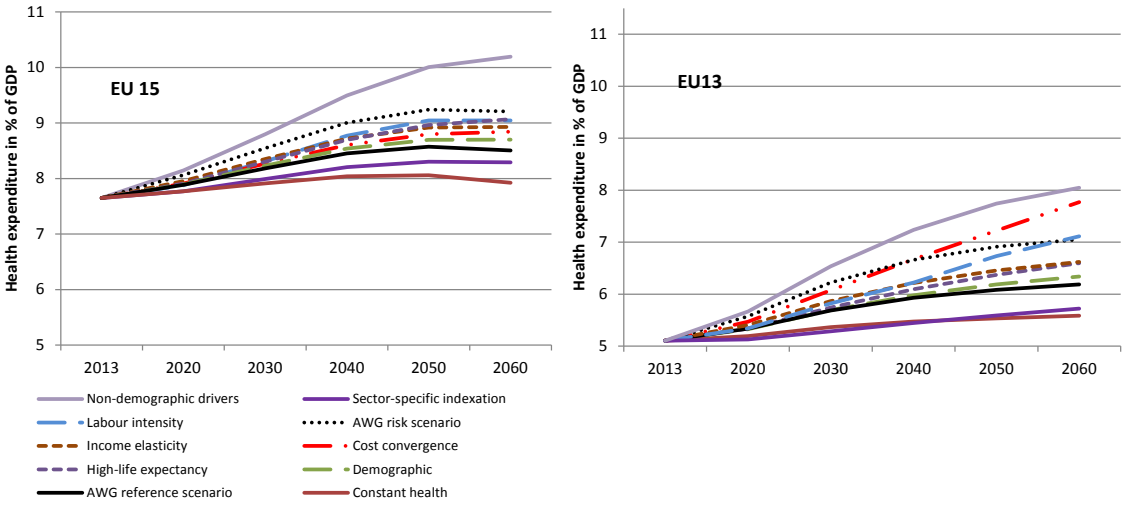
Graph 2.4.1: **Projected increase in public health care spending (excluding long-term nursing care) in EU28, 2013 - 2060**



(1) AWG reference scenario: the "AWG reference scenario" is used as the central scenario when calculating the overall budgetary impact of ageing. In this scenario health care expenditures are driven by the assumption that half of the future gains in life expectancy are spent in good health and an income elasticity of health care spending converging from 1.1 in 2013 to unity in 2060; AWG risk scenario: The "AWG risk scenario", as the AWG reference scenario, keeps the assumption that half of the future gains in life expectancy are spent in good health but attempts to take into account technological changes and institutional mechanisms which have stimulated expenditure growth in recent decades. This is approximated by an EU average elasticity of 1.4 converging to 1 until the end of the projection period.
(2) EU-averages are weighted.
Source: Ageing Report 2015 (European Commission (DG ECFIN)-EPC (AWG), 2015).

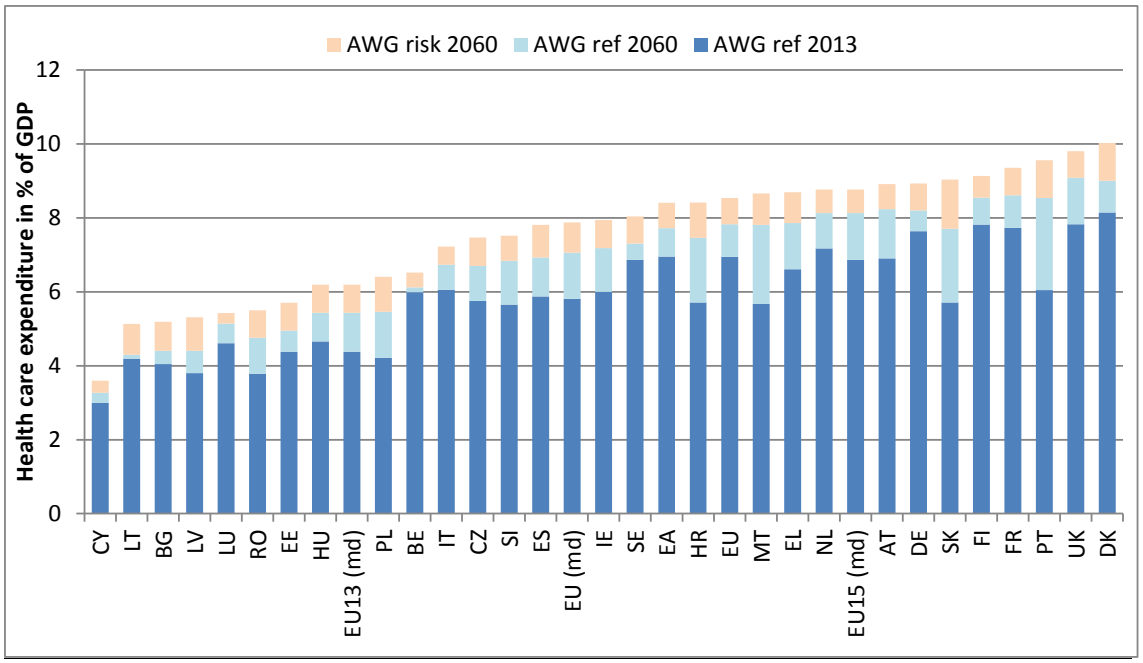
Other supply-related drivers, such as wages, are a non-negligible component of health expenditures. Health care is highly labour-intensive and requires highly skilled medical personnel who have a strong bargaining power in a number of countries. Assuming that wages grow in line with labour productivity (therefore exceeding growth in GDP per capita) - such as in the *Labour intensity scenario* - leads to an additional spending of 0.4 pps of GDP relative to the *Demographic scenario*.

Graph 2.4.2: **Projected increase in public health care spending (excluding long-term nursing care) in EU15 and NMS, 2013 - 2060**



(1)EU-averages are weighted.
Source: Ageing Report 2015 (European Commission (DG ECFIN)-EPC (AWG), 2015).

Graph 2.4.3: **Projected country-specific increases in public health care spending in AWG reference and risk scenarios, 2013-2060**



(1) Based on data from Ageing Report 2015 (European Commission (DG ECFIN)-EPC (AWG), 2015).
Source: Commission services (DG ECFIN).

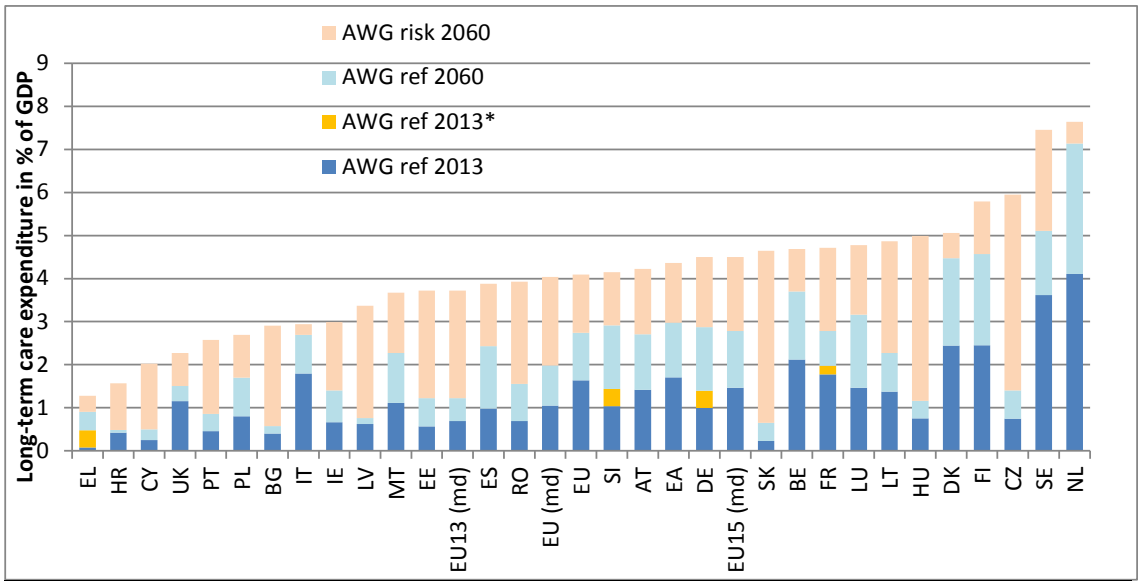
In addition to wages, medical products and health care infrastructure constitute large shares of total health care expenditure. Disentangling the contribution of the individual cost components and their contribution to changes in health care spending improves the understanding of the actual expenditure drivers (*Sector-specific composite indexation scenario).* The *Sector-specific composite indexation scenario*, in which future expenditure of each different sector-specific driver, i.e. wages, pharmaceuticals, therapeutic appliances, capital investment, prevention-related health care services ([26]), evolves in line with their specific past trends, leads to an average projected increase that is 0.4 pps of GDP lower than in the *Demographic scenario*. Two conclusions can be drawn from this scenario: first, wages and pharmaceuticals are very important drivers of expenditure growth; second, whether the growth contribution of the individual cost components is positive or negative is country-specific.

Lastly, growing convergence in citizens' income per capita and expectations of benefiting from a similar basket of health services and goods across countries may push expenditures up for below EU average income countries (*Cost convergence scenario*). In this *Cost convergence scenario*, it is assumed that Member States with shares of GDP per capita spending below the EU28 average converge in real living standards to the EU28 average.

Based on a combination of different scenarios, the AWG reference and the AWG risk scenarios show that spending in the EU28 may increase between 0.9 and 1.6 pps of GDP from 2013 to 2060 (Graph 2.4.3). In the *AWG reference scenario* health care expenditures are driven by the assumption that half of the future gains in life expectancy are spent in good health and an income elasticity of health care spending converging from 1.1 in 2013 to unity in 2060. The *AWG risk scenario*, as the AWG reference scenario, keeps the assumption that half of the future gains in life expectancy are spent in good

([26]) The full set of sector-specific drivers comprises wages, pharmaceuticals, therapeutic appliances, capital investment, prevention-related health care services and a residual. The set is different from that including non-demographic drivers, which spans through the broader set of all determinants that are not related to demographics.

Graph 2.4.4: **Projected country-specific increase in public long-term care spending (health and social part) in AWG reference and risk scenarios, 2013 - 2060**



(1) AWG ref = AWG reference scenario; AWG risk = AWG risk scenario; based on data from Ageing Report 2015 (European Commission (DG ECFIN)-EPC (AWG), 2015). Due to agreements taken with the Member States delegates in the AWG-EPC, definition of LTC expenditure may deviate from expenditure levels as reported in other publications. Specifically, cash benefits include period economic integration of handicapped from ESSPROS disability function, and are projected with age specific probability. Expenditure on this item amounts to 0.2% of GDP for France, 0.4% of GDP for Germany, Greece and Slovenia (AWG ref 2013*). Separate projections excluding costs for periodic economic integration of handicapped are not available. The level of expenditures in 2013 is the first year of projected expenditure based on latest available data. In Germany, long-term care benefits are indexed to prices (whereas they are indexed to GDP per hours worked in the displayed scenarios), which is relevant for budgetary surveillance purposes.
Source: European Commission (DG ECFIN).

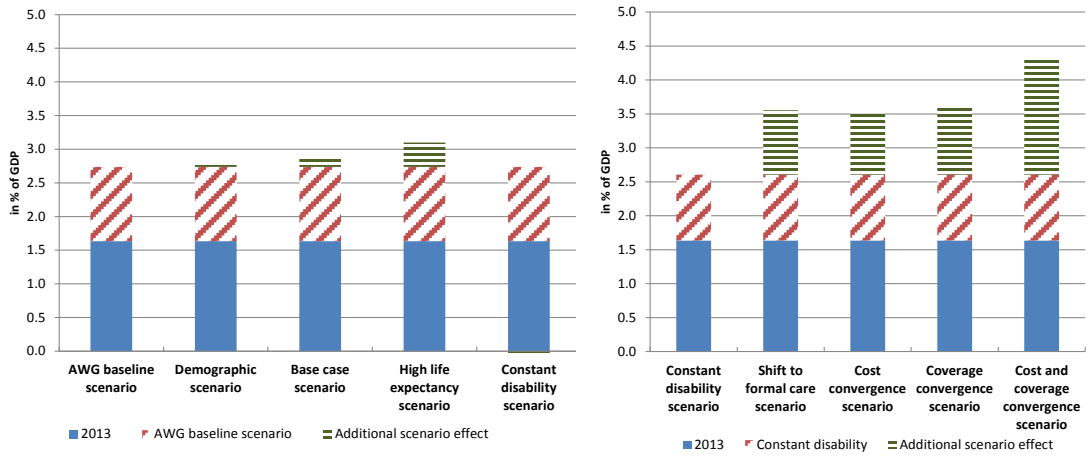
health, but attempts to take into account technological changes and institutional mechanisms which have stimulated expenditure growth in recent decades. This is approximated by an EU average elasticity of 1.4 converging to 1 until the end of the projection period. Different institutional and legal settings (financing mechanisms, ownership structure, organisation of health provision, etc.), as well as policy changes, which are not well reflected in the projections, further increase this range both at the low and high ends. Despite these uncertainties, all scenarios for almost all Member States point to considerable continuous pressures on public spending from the health care sectors – even under conservative assumptions.

Projections of long-term care expenditure

Concerning long-term care, pressure for increased public provision and financing of services may grow substantially in coming decades, especially in Member States where the bulk of long-term care is currently provided informally. The range of results is wide (Graph 2.4.4 - 2.4.6), and risks vary highly depending on the country and the scenario under consideration, reflecting the implicit uncertainty surrounding the evolution of key variables in this kind of long-term projections. In the *AWG reference scenario*, which assumes that one half of future gains in life-expectancy will be spent in good health and the other half in disability, public LTC expenditure in the EU is projected to increase from 1.6% of GDP to 2.7% of GDP, i.e. an increase of almost 70% until 2060. If one assumes in addition that until 2060 EU countries will have equal coverage rates of LTC dependents and equal costs per dependent (*AWG risk scenario*), reflecting an underlying convergence process of EU economies, expenditure is expected to increase up to above 4% of GDP in the EU.

While reflecting a plausible combination of developments in ageing and health status, the AWG reference scenario may underestimate

Graph 2.4.5: **Projected increase in public long-term care spending in EU28, 2013 - 2060**

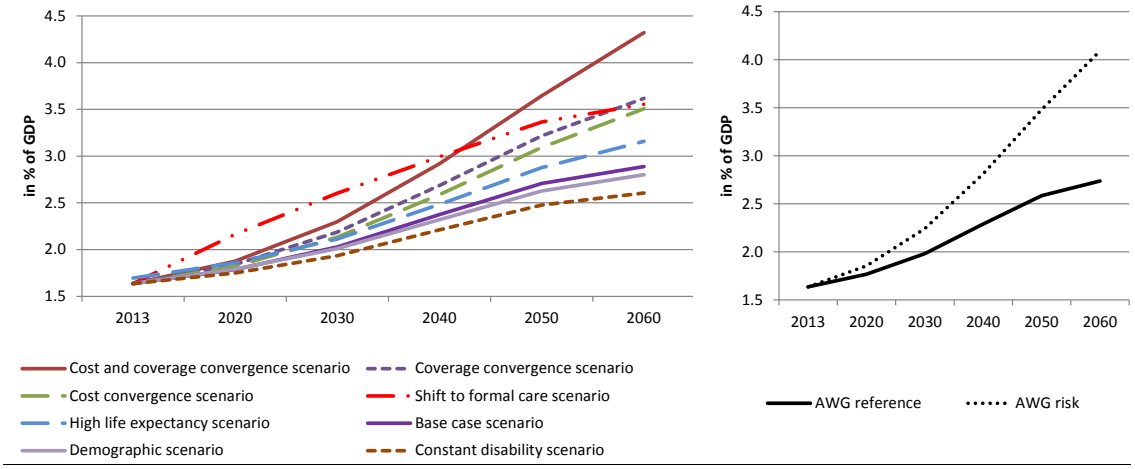


Source: Ageing Report 2015 (European Commission (DG ECFIN)-EPC (AWG), 2015).

expenditure, if due to higher life expectancy (*High life expectancy scenario*) people remain longer in disability and, in addition, if the assumed improvements in health status do not materialise (*Demographic scenario*) (Graph 2.4.5, left panel). Also, supply side bottlenecks may increase fiscal pressure, if labour costs of LTC personnel increase due to insufficient availability of health personnel (*Base case scenario*). On the other hand, if health status improvements match fully increases in life expectancy, projected expenditure turns out to be less pronounced (*Constant disability scenario*).

With rising need for formalised LTC solutions, it is plausible to assume that both coverage of dependents and costs of LTC services will change. Cost implications for the EU may be substantial (Graph 2.4.5, right panel). The shift of informal to

Graph 2.4.6: **Projected increase in public long-term care in different scenarios in EU28, 2013-2060**



(1) The "AWG reference scenario" combines the assumptions of the "demographic" and the "constant disability" scenarios. This scenario is used in the multilateral budgetary surveillance at EU level. Specifically, it is assumed that half of the projected gains in life expectancy are spent without disability (i.e. demanding care), taking thus an intermediate position between the "demographic" and "constant disability" scenario assumptions. The "AWG risk scenario" keeps the assumption that half of the future gains in life expectancy are spent with no care-demanding disability, as in the "AWG reference scenario". In addition, it combines it with the "cost and coverage convergence scenario" by assuming convergence upwards of unit costs to the EU-average as well as coverage convergence upwards to the EU-average. In comparison to the "AWG reference scenario", this scenario thus captures the impact of additional cost drivers to demography and health status, i.e. the possible effect of a convergence in coverage and in real living standards on LTC spending.
Source: Ageing Report 2015 (European Commission (DG ECFIN)-EPC (AWG), 2015).

formal care (*Shift to formal care scenario*), and a convergence process in terms of coverage and costs of LTC for the countries that are below the EU average levels of care in this respect, imply a substantial fiscal risk (*Cost and convergence related scenarios*).

It may be safely concluded that ageing and non-demographic drivers of long-term care expenditure will exert a continuous pressure on public finances. The obvious need for a broadening of formalised coverage of the European population with long-term care services will thus have to be balanced with the need to ensure sustainable public finances.

2.5. SUMMING UP

The sustainability of public finances has been brought to the fore by significantly increasing debt levels in the aftermath of the economic and financial crisis that started in 2008. Significant challenges remain over the medium term, mostly due to the public debt stocks cumulated during the crisis years, and over the long term, mostly related to the projected increase in age-related public spending.

Public expenditure on health care and long-term care absorbs a significant and growing share of economic resources. Most EU Member States are expected to face strong and growing expenditure pressures on their health systems in the coming decades. The demographic component related to spending pressures on health care is relatively small, and spending pressures are importantly related to other non-demographic drivers, such as the institutional setup of health systems, technological progress and the labour intensive nature of the health sector. Regarding long-term care, a key element of future public expenditure is the number of people who will need and receive LTC. The extent to which a country relies on formal care and the extent to which this is provided in institutions or at home are additional important determinants of public expenditure on LTC. While there is a degree of uncertainty regarding the exact point estimates of future public expenditure on health, most empirical studies point to the fact that health expenditure-to-GDP ratios are projected to increase considerably in most EU Member States. This indicates that there remains ample need for cost-containment policies.

Currently, challenging initial fiscal positions and projected future increases in health care and long-term care spending make fiscal sustainability of health systems an acute policy challenge. Spending on health care can contribute to better health, which by itself adds to economic prosperity and well-being through higher labour market participation, productivity, and quality of life. In addition, effective LTC systems contribute also to better health outcomes and lower dependency rates at old age, which contributes to reduced spending on services of acute health care. As spending on long-term care is mostly targeted to the population beyond working age, positive economic effects are more limited towards creating employment for formal carers and enabling informal carers to participate in the labour market. However, increasing expenditure on health care and long-term care can also limit resources available for other policy areas and targets, inter alia, education, R&D, and poverty reduction. Overall, the analysis underlines the need to increase efforts to decelerate the growth of expenditure in health care in long-term care. This should be done by increasing the cost-effectiveness of the systems in such a way that benefits for patients and European economies can be maximised. Notably, this calls for targeting reforms, which have the highest potential to improve the value for money of services provided in health care and long-term care.

In the wake of the economic crisis, but not solely related to it, many EU Member States have undertaken reforms to curb expenditure pressures. In general, the responses to the financial and economic crisis varied across Member States. Responses depended on the severity of the crisis itself, but also on the fiscal challenges associated with current and projected health expenditure levels and the need to address particular inefficiencies in health systems at national level. In addition, the widely recognised need for deep structural reforms of health systems has translated into ongoing reform efforts, which go beyond the economic crisis itself. Recent expenditure data confirm the slowdown in growth of public expenditure on health. In order to appropriately evaluate the implications of the health policy responses to the crisis, country-specific analysis is needed that considers reforms against the specific national context, taking into consideration country-specific idiosyncrasies. The next sections of the report, as well as the country documents describe country-specific challenges and a range of potential policy responses for health care and long-term care systems.

3. HEALTH CARE SYSTEMS IN THE EU AND THEIR RELATION TO HEALTH EXPENDITURE

3.1. OBJECTIVES AND POLICY TOOLS

Health care systems in the EU aim at providing timely access to good quality health care, ensuring that the need for healthcare does not lead to poverty or financial strain. This contributes to human well-being and economic prosperity through improving labour market participation and productivity, and will be crucial for longer working lives in the context of an ageing society. These goals are widely accepted by policy leaders in the EU, and have been adopted by the Council of Health Ministers in 2006 ([27]) and by EU Member States under the 2008 Tallinn Charter (WHO/Europe, 2008) ([28]). Against a background of rising demand for healthcare services and goods and constrained public finances, the need to increase the cost-effective provision of care, the resilience of health systems and their financial sustainability has been recognised as key to ensure achieving the aforementioned goals ([29]).

Health care goals can be achieved through a number of tools, which will be analysed in this report along with the main elements being budgeting and performance assessment, institutional arrangements and specific policy tools for health system design (Graph 3.1.1). These tools can serve a number of goals, such as ensuring a sustainable financing basis of healthcare systems, encouraging the provision of and access to effective primary health care services, providing for a cost-effective use of medicines, improving care integration and encouraging health promotion and disease prevention. These have been identified as systematic targets for improving health system performance, and will be subsequently discussed in the report.

Firstly, undertaking sound budgeting and assessing the performance and related challenges of health care systems can serve as diagnostic steps for potential policy action. This includes: i) the use of budgeting tools, such as expenditure and revenue forecasts and the definition of the financing mix; ii) the use of tools for information and monitoring of expenditure and system performance; and iii) an assessment of challenges related to health care spending (drivers, expenditure items).

Secondly, the political and institutional set-up in terms of cooperation and decision-making determine the type and scope of action by the respective stakeholders. These relate to: i) the cooperation on budgeting for health care spending between different governing bodies; ii) the cooperation between the latter on tools related to health care system design; and iii) system governance including the degree of decentralisation of health care services.

Thirdly, policy makers have a wide range specific tools that can be employed to secure the greater attainment of health policy objectives ([30]). These can be categorised into: i) supply-side policies, including purchasing, contracting and remuneration systems, the public-private mix of provision of services and medical goods, health workforce, market mechanisms, public health policies and health technology assessment; ii) demand-side policies, including coverage (who and what), private health system financing (cost-sharing), referral systems and gatekeeping and information policies; iii) expenditure controls, including budgetary targets and caps, price and volume controls and monitoring, evaluation and benchmarking of health system performance, and; iv) revenue tools, including deciding on the level of health system financing and the financing mix.

The following sections, 3.2 to 3.13, will describe the characteristics of health care systems, capturing the elements described above. Based on this analysis, policy options to improve the sustainability of health care systems will be discussed in Chapter 4.

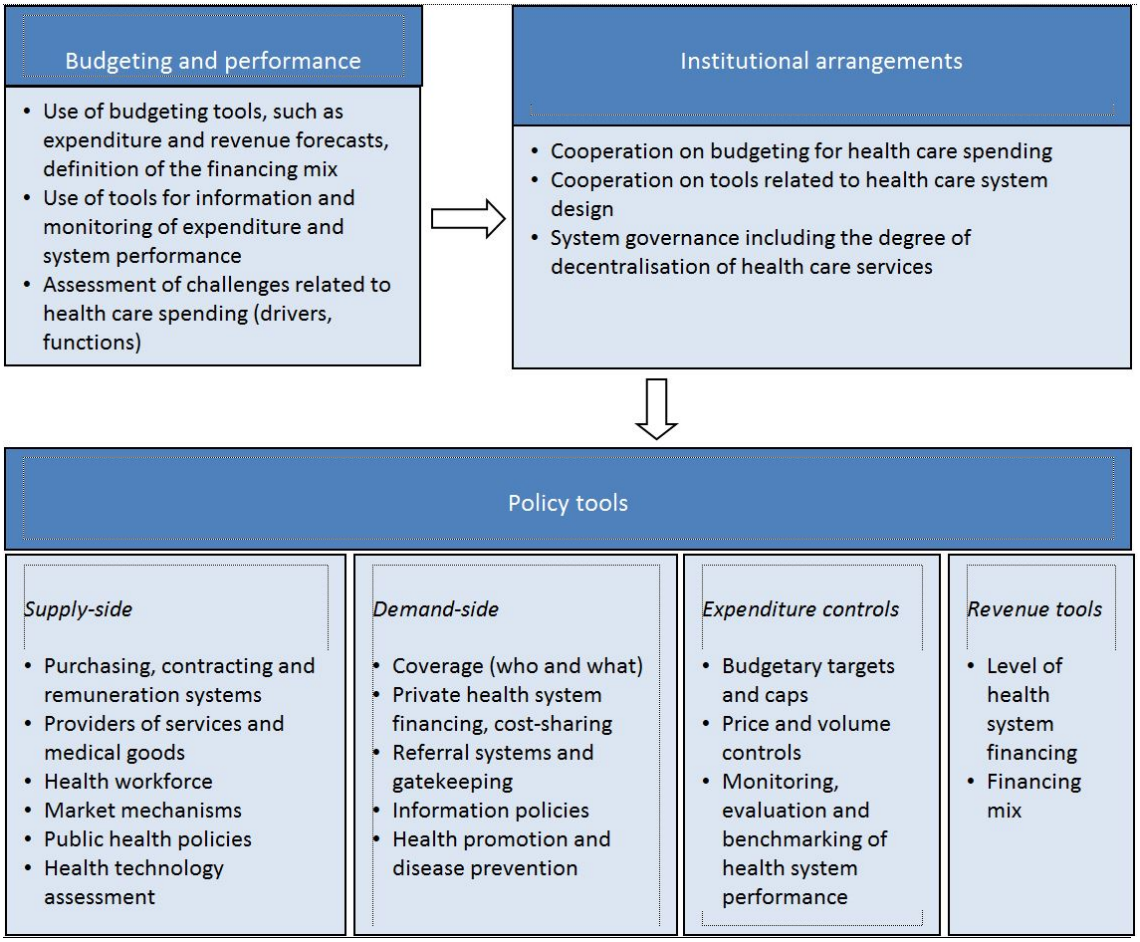
([27]) Council Conclusions on Common values and principles in European Union Health Systems (2006/C 146/01): http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2006:146:0001:0003:EN:PDF.

([28]) See http://www.euro.who.int/__data/assets/pdf_file/0008/88613/E91438.pdf.

([29]) Communication from the European Commission on effective, accessible and resilient health systems. http://ec.europa.eu/health/healthcare/docs/com2014_215_final_en.pdf.

([30]) See also: http://www.sciencedirect.com/science/article/pii/S0168851016300525.

Graph 3.1.1: **Elements for analysing the fiscal sustainability of health care systems**



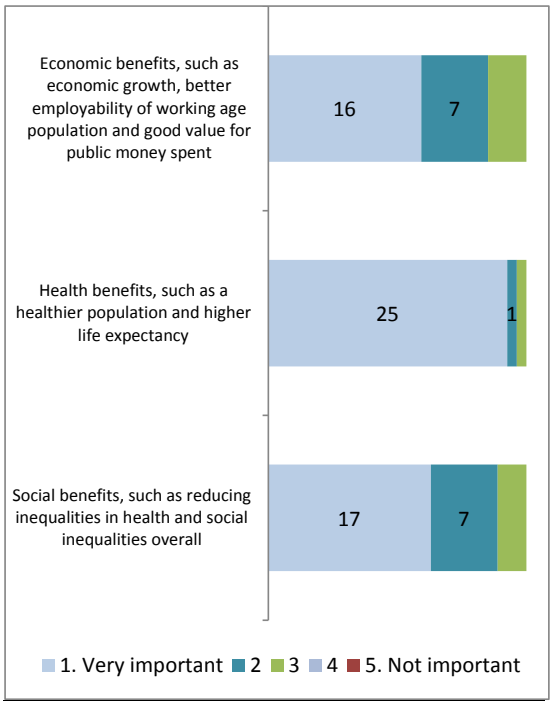
(1) Adapted from OECD (2015a).
Source: Commission services (DG ECFIN).

3.2. CHALLENGES OF HEALTH CARE SYSTEMS

This section highlights selected challenges of health care systems, as perceived by EU Member States. Results draw from data of the country survey.

Budgeting officials expect economic, health and social benefits from health care systems (Graph 3.2.1). Health benefits relate to a healthier population and higher life expectancy. Equal importance is given to social benefits, such as reducing inequalities in health and social inequalities overall. Economic benefits, such as economic growth, better employability of carers in working-age and good value for public money spent, play also an important role.

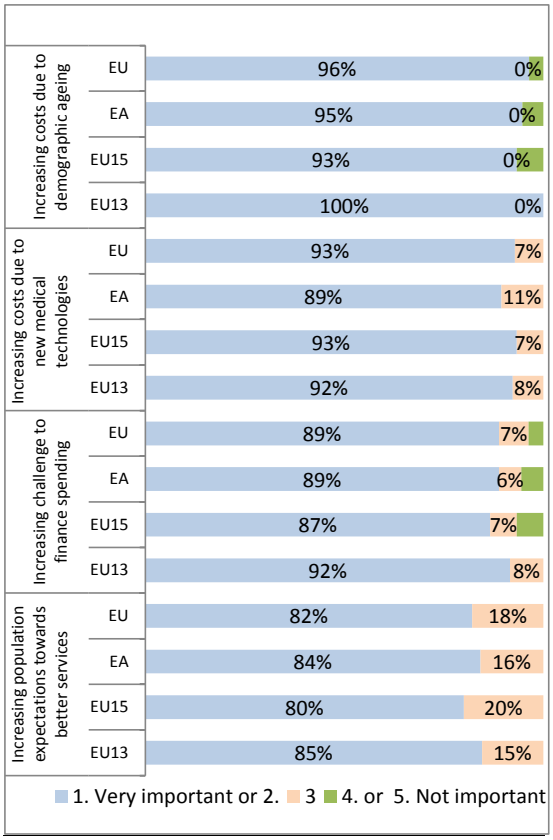
Graph 3.2.1: **Perceived benefits of health care systems as expected by budgeting officials, EU**



(1)Based on survey results.
(2) Numbers show how many countries answered with yes in corresponding category.
Source: Commission services (DG ECFIN).

Increasing costs due to demographic ageing are not the only perceived challenge for the long-term fiscal sustainability of health care spending by budgeting officials (Graph 3.2.2). An equally important challenge is financing spending due to demographic ageing. This may be reportedly related to increasing costs due to availability of new medical technologies and increasing population expectations for better care services, which are a driver of expenditure.

Graph 3.2.2: **Perceived challenges of health care systems as expected by budgeting officials**

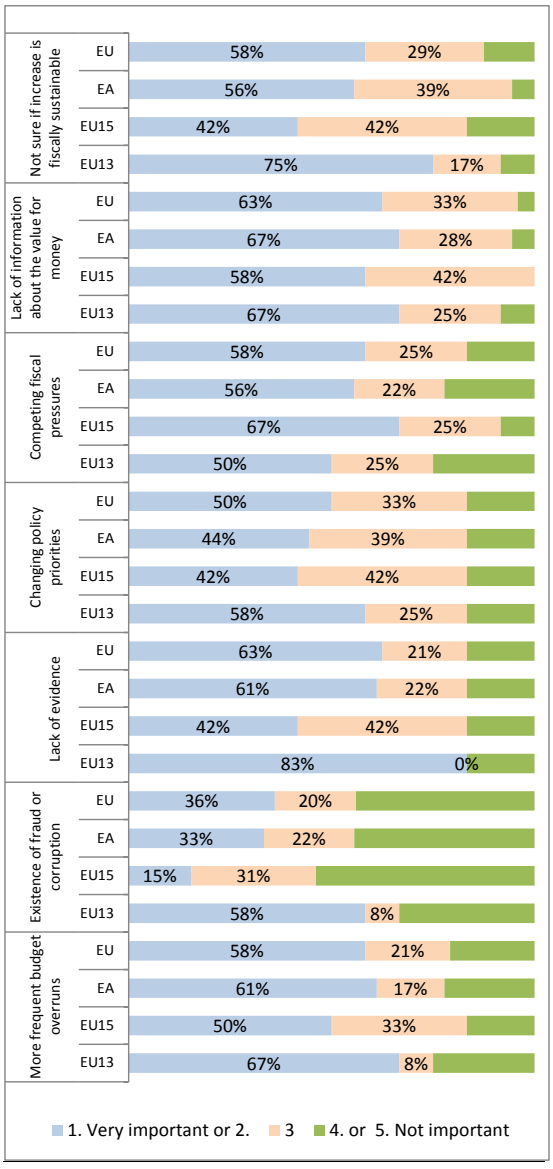


(1) Based on survey results.
Source: Commission services (DG ECFIN).

When deciding on whether to allocate more money to health care, a majority of EU government authorities have various substantial concerns. These concerns relate to uncertainty, whether the increase is fiscally sustainable both from a financing as well as from the expenditure side. Other causes are the lack of information about the value for money of the additional investment. Competing fiscal pressures stemming from various Ministries, changing policy priorities and a lack of sufficient evidence on why more money is needed are additional concerns. The existence of fraud or corruption in the health care sector seems to be a cause for worries particularly in EU13 countries. Lastly, more frequent budget overruns on health care spending are another important reason why government

authorities may be cautious about increasing health care spending.

Graph 3.2.3: **Causes of concerns for fiscal sustainability of health care when deciding on whether to allocate more money to health**



(1) Based on survey results.
Source: Commission services (DG ECFIN).

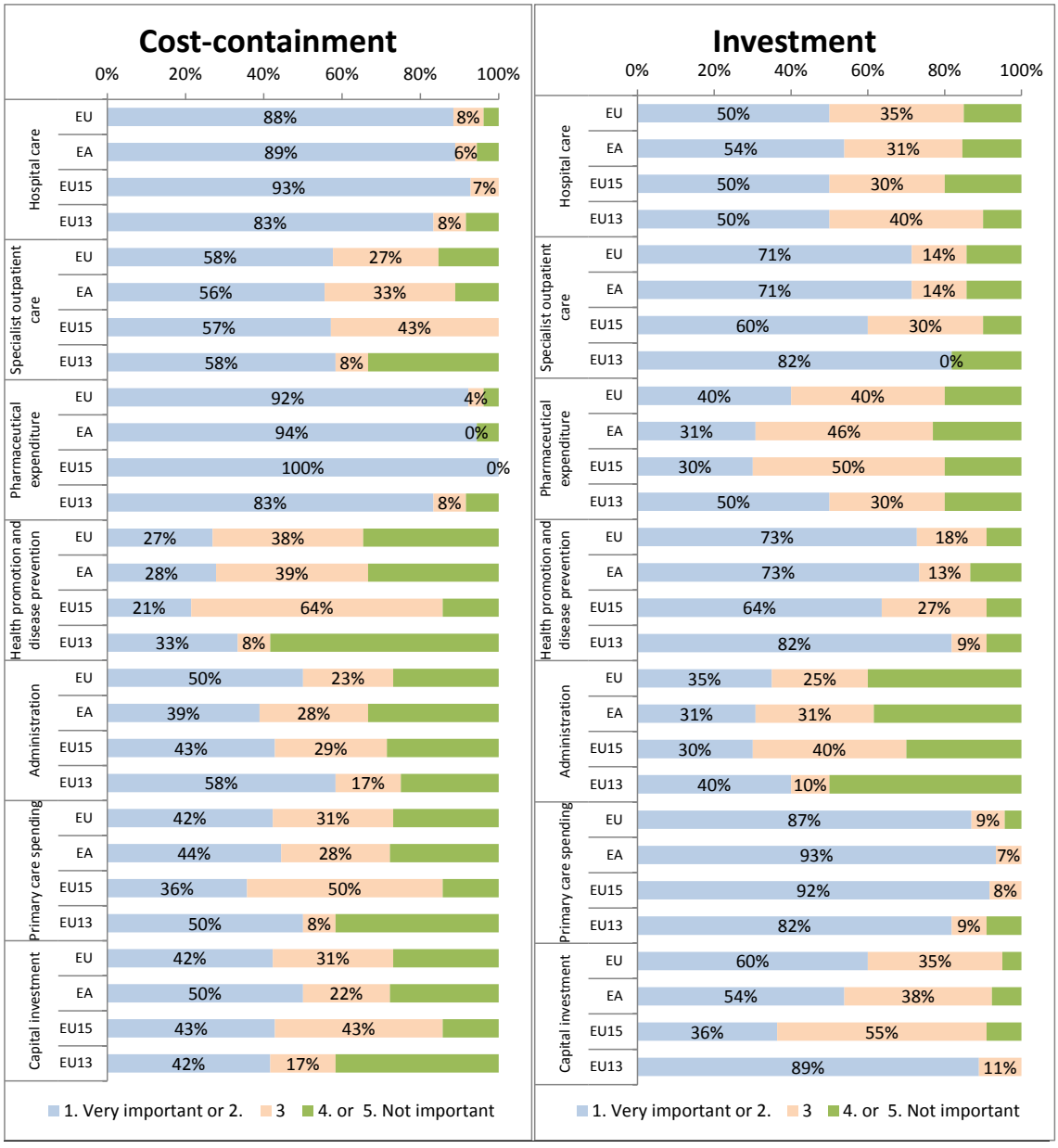
Cost-containment is perceived as a key policy option by government authorities in most EU Member States. According to the survey results, all functions of spending, i.e. spending on hospital care; specialist outpatient care; pharmaceutics; health promotion and disease prevention; administration, primary care spending and capital investment deserve policy attention in terms of cost containment. However, containing costs on hospital and pharmaceutical care is regarded as important by virtually all EU Member States. More than half of all EU Member States are of the view that containing costs in the other areas of spending is important, too. Only, capital investments, primary care and health promotion and disease prevention activities are less of an issue in this regard.

When it comes to allocating additional funds, and where it is mostly needed, the results mirror those on cost containment. Investing in pharmaceuticals is perceived as important by a minority of Member States, and allocating additional funding to the hospital sector get also relatively little focus. On the contrary outpatient care, be it specialist care or primary care and health promotion activities, is ranked as an important area for additional spending by most EU Member States. The fact that both cost-containment and additional funding are perceived as important in the same areas of care suggests that there might be scope for substantial improvements in efficiency of health care systems, which may be achieved by containing costs (via policies which produce efficiency gains) and allocating additional resources in such a way that the value for money of investment is increased. Further, there seems to be scope for redistributing funds across the different areas of spending.

Member States use a wide range of policy tools for improving the functioning of health care systems, but usage could be more widespread (Graph 3.2.5, left part). Government authorities in most EU countries assess the (potential) impacts of proposed policy reforms and are involved in improving reimbursement mechanisms, enhancing provider competition, setting wages of personnel, managing human resources, and regulating hospital capacity and prices of provider of care. To great extent, most EU countries are using the tools for changing entitlement to health care benefits, defining strategic objectives of the health systems, doing health-technology assessments, improving purchasing arrangements of medical goods and services, using eHealth tools, promoting integrated care and controlling access to care.

The perceived importance of the specific policy tools in many cases is close to their actual usage.

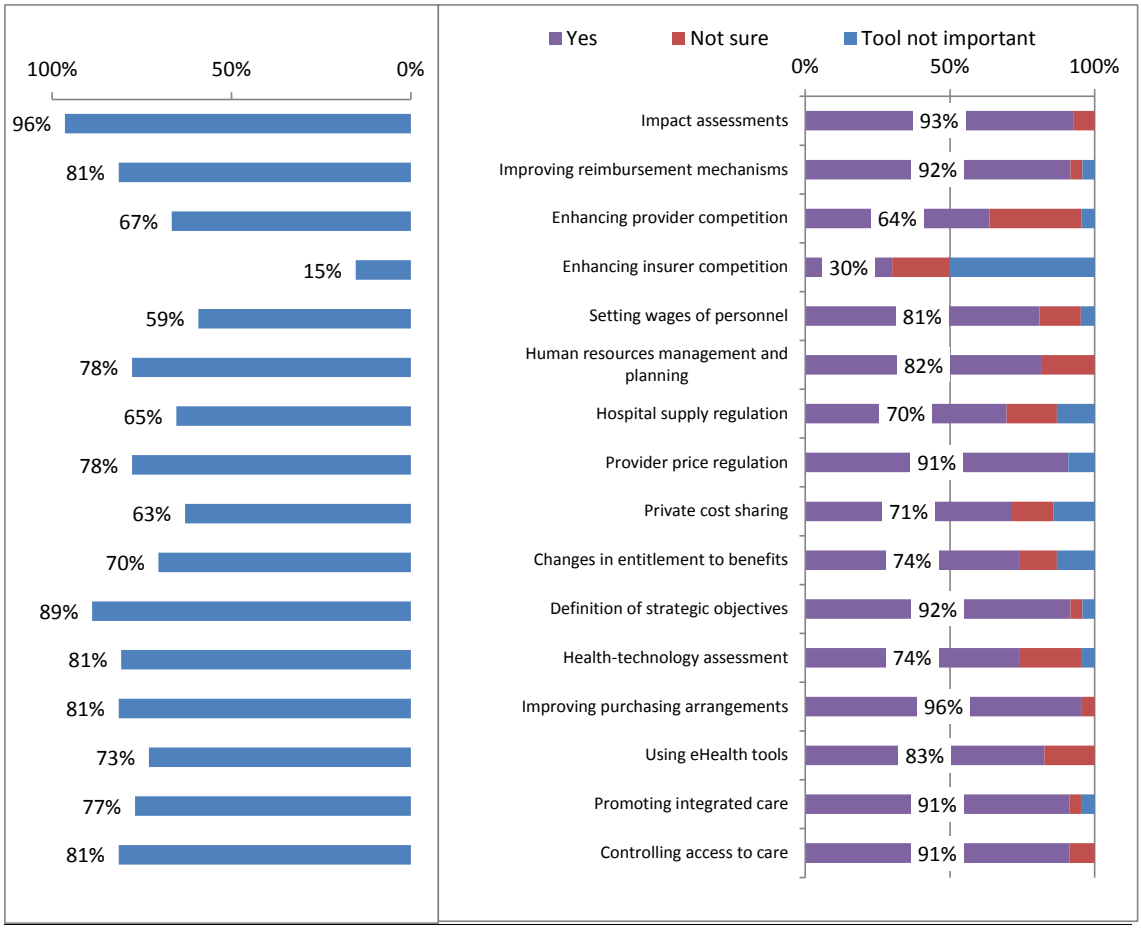
Graph 3.2.4: **Function of health care spending that deserves policy attention in terms of cost containment and investment**



(1) Based on survey results.
Source: Commission services (DG ECFIN).

For instance, while 67% of answers suggest that authorities try to improve provider competition mechanisms, 64% of the countries think this tool is important (Graph 3.2.5, right part). The high rates in terms of perceived importance of the policy tools indicate that these tools are important levers of the cost-efficiency of health care systems, and should be used widely.

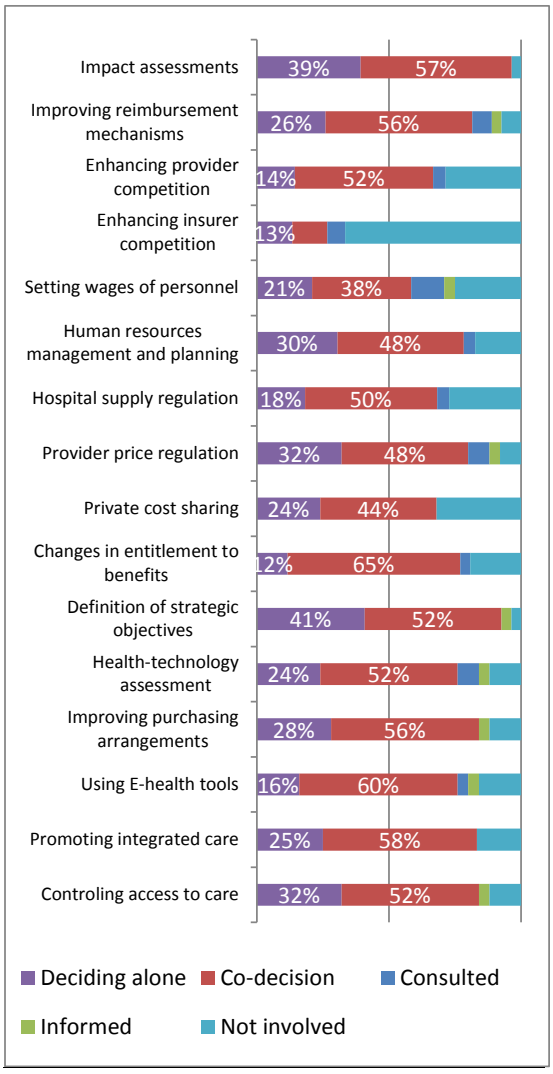
Graph 3.2.5: **Usage and perceived importance of tools for ensuring the fiscal sustainability of health care spending in the EU**



(1) Based on survey results.
Source: Commission services (DG ECFIN).

As regards the modes of cooperation between Ministry of Finance and Ministry of Health on specific policy tools for improving the functioning of health care systems, co-decision is reported as the most frequent mode, but lone decision-making is also common (Graph 3.2.6). Co-decision is the predominant form of decision making for most of the policy tools. This is linked to the fact that as in the budgeting process (Section 3.6), the Ministry of Finance and the Ministry of Health or/and Social Affairs are perceived as co-decision makers already. However, to what extent and in what setting the co-decision mode is playing a role could not be explored in this study. Presumably, the Ministry of Finance will examine the fiscal implications of proposed legislative changes, while the core aspects of the design of a specific health policy will be in the hands of the Ministry of Health. Still, in many cases, the authority in charge is deciding alone. The reasons why co-decision is more prevalent with one policy tool than with another are not self-evident, and do not seem linked to a particular category of policy tools.

Graph 3.2.6: **Modes of cooperation of government authorities on specific tools for the design of health care systems, EU**



(1) Based on survey results.
Source: Commission services (DG ECFIN).

3.3. COVERAGE AND EXPENDITURE

Coverage across EU Member States

Universal health coverage aims at two objectives: access to high-quality services and financial protection (WHO, 2010). Coverage can be thought of as having three dimensions: proportion of the population that is entitled to care, benefits package provided to those entitled and user charges. Health insurance coverage is universal or almost universal in all EU Member States ([31]) (see Table 3.3.1). In general, depending on the Member State, residents are either automatically covered for a set of goods and services provided through national, regional or local health services, or are covered through compulsory social health insurance organised via a common health insurance scheme or multiple insurers. By and large, since 1960 there has been an expansion in coverage in all EU countries. Since 2010 average coverage has been relatively flat in the EU, registering a slight increase.

As shown in Table 3.3.1, in some Member States a very small (though non-negligible) share of individuals is not covered by either public or private primary health insurance. Depending on the country, those not covered include individuals who failed to register with social health insurance, who do not work or qualify for unemployment insurance or social assistance. In some of these countries non-coverage may be problematic also in terms of the cost-effectiveness of the health system, if it leads to overuse of hospital emergency care (in some cases with free access) for treating common illnesses. This practice is likely to result in an inefficient use of resources and extra costs to the public budget, in addition to the financial burden related to the disease of the uninsured patients.

A specific case worth commenting on, in terms of discontinuity in coverage, is that of Greece. Prior to 2010 a 100% coverage was reported, which then fell to 86% by 2015 due to the severe economic recession. This highlighted that health care was de facto not based on a universal coverage system as is common in systems based on social security contributions ([32]). Until 2014, coverage in Greece for those who became uninsured or could not afford their health insurance fees was limited to very low incomes (Charalampos et al. 2014). However, the adverse change in the economic conditions generated a new group of uninsured people, mainly: a) the long-term unemployed (and their dependents) who did not have though very low incomes so as to obtain the “uninsured booklet” of the welfare system, b) the self-employed (and their dependents) who could not afford paying their social security contributions, thus as “debtors” of the social security funds were not entitled to certain provisions. Legislation introduced in 2014 aimed to cover this new group of uninsured with provision of full health coverage, including free hospital care. Bureaucratic barriers in the legislation prevented the free access to hospital healthcare for all the groups of uninsured. New legislation in 2016 enabled full universal health coverage to all uninsured people.

Overall, data in Table 3.3.1 are not homogeneous, depending on the basket of benefits: i.e. in some Member States there is a non-negligible share of non-insured population without access to the full package of health benefits. Therefore, it is worthwhile to look at the remaining dimensions of coverage.

Benefits package

The package of health services and goods provided by the public health system can be defined explicitly (e.g. through a positive list that sets out all provided services and goods, or a negative list that mentions those that are not provided) or implicitly (for instance, in Germany, services provided are defined as "all medically necessary services"). The definition often varies depending on whether the package relates to goods or services. Whereas in the EU almost every country has a positive list of reimbursed medicines, the use of positive lists for services is more limited, although it is still the main method used by member states to define their basket of goods and services OECD (2012a).

([31]) Indeed, EU Member States have a mandate from the European Council to ensure universal equitable access to health services (European Council, 2006).

([32]) The economic crisis brought to light this feature of the health system, which did not guarantee coverage universally, but only based on social security contributions or on very stringent income criteria.

Table 3.3.1: **Population coverage by both public and primary private health insurance**

	1960	1970	1980	1990	2000	2010	2011	2012	2013	2014	2015
Belgium	58.0	97.8	99.0	97.3	99.0	101.5	98.8	99.0	99.0	99.0	:
Bulgaria	:	:	:	:	:	:	77.0	77.0	:	:	:
Czech Republic	:	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.2	:
Denmark	95.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Germany	85.2	89.2	92.3	88.8	99.8	99.9	99.9	99.8	99.8	99.8	:
Estonia	:	:	:	:	:	95.6	92.9	93.7	93.6	93.9	94.3
Ireland	:	85.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Greece	:	55.0	88.0	100.0	100.0	:	:	:	:	:	86.0
Spain	54.0	61.0	83.0	:	:	:	99.9	99.9	:	99.8	:
France	76.0	95.6	99.1	99.4	99.9	101.9	99.9	99.9	99.9	99.9	99.9
Croatia	:	:	:	:	:	:	100.0	100.0	:	:	:
Italy	87.0	93.0	100.0	100.0	100.0	:	100.0	100.0	100.0	:	:
Cyprus	:	:	:	:	:	:	83.0	83.0	:	:	:
Latvia	:	:	:	:	:	:	100.0	100.0	:	:	:
Lithuania	:	:	:	:	:	:	100.0	100.0	:	:	:
Luxembourg	90.0	99.6	99.8	:	98.2	:	97.2	96.9	96.5	85.9	:
Hungary	:	:	100.0	100.0	100.0	97.0	96.0	96.0	96.0	95.0	:
Malta	:	:	:	:	100.0	100.0	100.0	100.0	:	:	:
Netherlands	71.0	69.0	68.3	61.4	97.6	98.8	99.9	99.8	99.8	99.8	:
Austria	78.0	91.0	99.0	99.0	99.0	98.8	99.9	99.9	99.9	99.9	:
Poland	:	:	:	:	:	97.8	96.6	91.0	91.6	91.3	:
Portugal	18.0	40.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	:
Romania	:	:	:	:	:	:	100.0	100.0	:	:	:
Slovenia	:	:	:	:	98.0	100.0	100.0	100.0	100.0	100.0	:
Slovakia	:	:	:	:	98.8	95.4	95.2	95.0	94.6	94.2	:
Finland	55.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sweden	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
United Kingdom	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	:
European Union	78.6	87.2	95.4	97.5	99.8	96.8	96.9	98.7	98.4	:	:
Euro Area	70.5	82.7	93.9	96.3	99.7	95.3	96.4	99.7	98.9	:	:

Source: OECD and Commission services computations.

In terms of the items covered in the publicly reimbursed benefits package, comparisons at the international level are difficult for various reasons. First, benefit baskets may comprise thousands of goods and services, making comparability conceptually difficult. Second, legal entitlements may not be fully implementable due to implicit or explicit rationing policies or actual inability to provide services. Third, there is currently no database available that would allow for a comprehensive comparison of benefits baskets across EU countries. It is therefore for the moment not possible to establish a link between what is covered and how this relates to expenditure, also because this would crucially depend on differences in cost-effectiveness of the different systems (see Section 3.12).

Public expenditure trends

In addition to universal or almost universal population coverage, service provision in EU countries' healthcare systems is in general comprehensive, with a large set of goods and services that are publicly funded. As a consequence, the share of public health expenditure in total health expenditure is high in the EU (75.5% is the median in 2013 for the EU as a whole, although the median for the EU15, 76.8%, is higher than that for the EU13, 69.6%, see Table 3.3.2).

In terms of past trends, the large increases in population and service coverage observed in the 1960s and 1970s can partly explain the increase in public expenditure in those decades. But, while universal or almost universal health coverage in terms of legal entitlement has been achieved in most European health systems, this entitlement to health coverage still masks considerable differences in terms of what is covered and to what extent it is covered. There is moreover good evidence that, despite universal or almost universal health coverage, factors such as poor quality care and long waiting times may be important barriers to access in many EU countries (Cylus and Papanicolas, 2015, see also Section 3.8). In addition, pronounced differences in healthcare per capita spending exist across EU countries, while providing universal or close to universal health coverage, is telling in this respect. The link between coverage rate and expenditure varies substantially across member states.

Table 3.3.2: **Public expenditure as a % of total health expenditure**

	1960	1970	1980	1990	2000	2010	2011	2012	2013	2014
Belgium	:	:	:	:	67.3	75.0	75.7	75.2	75.8	:
Bulgaria	:	:	:	100.0	61.7	55.7	54.7	56.3	59.3	:
Czech Republic	:	:	:	93.2	87.7	83.7	84.1	84.0	83.3	:
Denmark	:	:	88.3	83.2	87.9	85.1	85.3	85.8	85.4	:
Germany	:	72.9	78.9	76.1	80.3	76.7	76.5	76.7	76.8	77.0
Estonia	:	:	:	:	76.9	78.8	79.2	78.8	77.9	:
Ireland	75.0	80.2	80.6	70.6	72.7	69.6	67.8	67.6	67.7	:
Greece	:	43.0	55.9	54.2	59.9	66.7	67.4	67.1	69.5	:
Spain	58.3	65.5	79.9	79.1	71.7	74.3	73.4	71.7	70.4	:
France	63.0	75.5	80.4	76.3	79.2	77.6	77.3	77.3	77.5	:
Croatia	:	:	:	:	:	86.1	78.6	80.1	80.0	:
Italy	:	:	:	79.2	72.1	78.9	77.1	77.3	78.0	:
Cyprus	:	33.3	53.6	40.0	42.2	47.7	46.8	46.5	46.3	:
Latvia	:	:	:	100.0	54.4	59.6	63.5	60.6	61.9	:
Lithuania	:	:	:	90.9	69.3	70.8	69.1	65.2	66.6	:
Luxembourg	:	89.3	92.8	92.3	109.7	85.8	85.4	83.4	83.7	:
Hungary	:	:	:	:	72.6	64.8	63.8	62.5	63.6	:
Malta	:	:	:	:	70.0	64.2	69.7	65.4	66.1	:
Netherlands	:	:	69.6	67.2	62.8	79.4	79.5	79.6	79.9	:
Austria	69.2	62.5	69.2	74.1	76.6	75.5	76.5	75.9	75.8	:
Poland	:	:	:	92.1	70.3	71.2	70.3	69.2	69.6	:
Portugal	:	57.5	62.1	63.2	70.4	65.9	65.0	64.0	64.7	:
Romania	:	:	:	100.0	67.8	80.3	79.3	80.2	79.7	:
Slovenia	:	100.0	100.0	100.0	73.7	74.0	73.7	71.5	71.6	:
Slovakia	:	:	:	:	89.4	64.5	70.9	69.7	70.0	:
Finland	54.6	74.2	79.0	81.3	71.5	74.2	74.5	75.0	75.3	80.5
Sweden	:	85.8	92.7	90.4	84.7	81.5	81.7	81.2	81.5	:
United Kingdom	85.5	86.3	89.1	83.3	78.3	84.0	83.4	84.0	83.5	:
European Union	73.8	76.5	80.9	78.5	76.6	77.6	77.2	77.4	77.4	77.2
Euro Area	63.0	73.3	78.3	76.4	75.8	76.4	76.0	76.1	76.1	:

Source: Eurostat, OECD and WHO health data and Commission services calculations.

Cost containment of public expenditure in relation to coverage and benefits package

European governments face the difficult trade-off of keeping up the balance between covering by public means new and promising health goods and services and keeping public spending in check. Changes to coverage and rationing of health care services for those that are covered are often used to solve this dilemma. Changes in entitlement to health care benefits are thus perceived as an important tool to ensure the fiscal sustainability of public spending. As shown in Section 3.2, 74% of EU Member States indeed report that this policy tool is important. During the recent economic crisis, changes in coverage were frequently used to keep spending in check (WHO, 2013). Access to free public health services was removed, for instance, for people without permanent resident status in the Czech Republic and temporarily suspended in Spain for the same group or became income tested in Cyprus and Ireland; the publicly reimbursed benefits package was reduced in some countries (e.g. Estonia, Hungary, Lithuania); and user charges, i.e. private co-payments for using public health services, have been increased in some countries (e.g. Cyprus, Estonia, Greece, Italy, Latvia, Slovenia and Portugal ([33])). It is nonetheless not always clear to what extent equity and efficiency considerations have been weighted in these reforms, which were foremost motivated by fiscal considerations. Other countries have instead broadened the coverage to the long-term unemployed (Greece), added new items on the benefits package (e.g. Belgium, Bulgaria) and decreased user charges, particularly for vulnerable groups (e.g. Greece, Ireland, Slovakia) and increased the proportion of the population exempted from user charges (Portugal).

Rationing in health care can be defined as the limited distribution of health care goods and services to the population put into place when supply is limited by cost and demand is not limited by prices. It can be set up explicitly, with the authorities making decisions about which priorities and relative rankings should be applied to provide health care to the population. This can be achieved

([33]) Although these have been adjusted in 2016.

Table 3.3.3: **Out-of-pocket expenditure as a % of current health expenditure**

	1960	1970	1980	1990	2000	2010	2011	2012	2013	2014
Belgium	:	:	:	:	23.9	20.8	20.0	20.4	19.9	:
Bulgaria	:	:	:	:	40.4	43.1	44.5	42.5	39.6	:
Czech Republic	:	:	:	2.6	9.7	14.9	14.7	15.0	15.7	:
Denmark	:	:	11.4	16.0	16.0	13.7	13.3	12.9	12.8	:
Germany	:	13.9	10.3	11.1	11.1	12.3	12.3	12.2	12.9	13.5
Estonia	:	:	:	:	19.9	18.7	17.8	18.4	18.9	:
Ireland	:	:	:	16.5	15.2	18.2	17.7	16.9	16.8	:
Greece	:	:	:	:	37.8	29.4	28.8	28.8	26.4	:
Spain	:	:	:	:	23.6	20.4	20.6	22.1	22.8	:
France	30.3	17.6	12.8	11.4	7.1	7.7	7.8	7.8	7.4	:
Croatia	:	:	:	:	:	13.8	13.4	12.8	12.5	:
Italy	:	:	:	17.1	24.5	17.5	18.8	18.8	18.0	22.1
Cyprus	:	:	:	:	55.9	46.3	46.5	47.2	46.4	:
Latvia	:	:	:	:	44.1	37.8	32.1	35.1	36.5	:
Lithuania	:	:	:	:	26.1	27.6	28.2	31.8	32.6	:
Luxembourg	:	:	7.2	5.5	7.0	10.2	11.2	11.6	10.8	:
Hungary	:	:	:	:	26.3	27.0	28.0	29.1	27.5	:
Malta	:	:	:	:	26.7	33.3	30.3	32.2	31.5	:
Netherlands	:	:	:	:	9.0	5.8	5.9	6.0	5.4	5.2
Austria	:	:	:	:	15.3	17.2	16.9	16.7	15.8	:
Poland	:	:	:	8.3	30.0	23.7	24.0	24.3	22.8	:
Portugal	:	:	:	:	22.2	27.4	28.9	27.4	26.6	27.7
Romania	:	:	:	:	32.3	19.6	20.7	19.5	19.7	:
Slovenia	:	:	:	:	11.5	12.7	12.2	11.9	12.1	12.7
Slovakia	:	:	:	:	10.6	27.2	23.6	22.4	22.1	:
Finland	43.6	23.8	18.4	15.5	22.3	20.6	20.1	19.6	18.5	19.4
Sweden	:	:	:	:	13.8	17.3	17.1	17.5	16.3	:
United Kingdom	:	:	8.6	10.6	13.4	8.8	9.3	9.0	9.3	:
European Union	:	:	:	:	15.4	14.2	14.4	14.3	14.1	:
Euro Area	:	:	:	:	15.3	14.3	14.5	14.4	14.3	:

Source: Eurostat, OECD and WHO health data and Commission services calculations.

through defining the basket of goods and services to be provided, setting cost-sharing arrangements to simulate a market situation or waiting lists that prioritise specific medical interventions. It can also be performed implicitly, through informal payments, delays or denial for care. Rationing can help improve the efficiency of health care by promoting effective care, but it can also lead to poor access to care if badly designed.

During the economic crisis, many EU countries performed changes to their statutory benefits package, although most changes were relatively marginal reductions. Estonia and Ireland reported lower reimbursement for dental care; the Netherlands for In Vitro Fertilisation, physiotherapy, mental health services and coverage of care outside the EU; Portugal for cosmetic surgery and non-urgent patient transportation; Slovenia for non-acute spa treatment, specific medicines, non-urgent ambulance services, dental prostheses and specific ophthalmologic appliances; and Estonia, Hungary and Lithuania for temporary sickness benefits (WHO, 2012). In a context of reducing the benefits package, evidence-based prioritisation that encourages effective care and discourages low-value care can help reduce or avoid an adverse impact on access to essential health services. In contrast, across-the-board cuts can undermine access to health services, with an adverse impact on health outcomes and efficiency (Thomson, Foubister & Mossialos, 2009). One way countries can set priorities is by adopting Health Technology Assessments (HTA), a methodology for assessing the wider cost and benefits of medical interventions and products (see Section 3.11). Most EU countries use HTA, although they differ on the type of interventions and products they assess, as well as in their relative importance within their health system.

Other components of health expenditure: Out-of-pocket expenditure

Changes to coverage and to the benefits package may also lead to changes in out-of-pocket expenditure. Out-of-pocket expenditure is defined as a direct payment for services from the household primary income or savings (no third-

party payer is involved): the payment is made by the user at the time of the use of services. It consists of the sum of co-payments to the various insurance funds present in the health care system ([34]) and of over-the-counter (and other direct) payments for goods and services purchased by private households as direct and ultimate payers. It should be noted that in principle this should include informal payments as well, although the magnitude of this component is difficult to estimate (see informal payments section below). Out-of-pocket expenditure shows the direct burden of medical costs that households bear at the time of service use and is therefore affected by cost-sharing as part of public statutory health insurance schemes, but also by patient choices to use private health providers, purchase treatments not covered by the public sector or even choose originator medicines rather than cheaper generic medicines. Overall, since 2010 public expenditure as a proportion of total expenditure and out-of-pocket payments have remained relatively stable in terms of EU average, although the median has tended to fall, particularly for the EU13 (see Table 3.3.3).

Cost-sharing is widely used in western EU health systems to moderate demand and/or raise revenue (see also Section 3.4 on types of cost-sharing). By shifting the cost to individuals it can lead to significant reductions in the use of health care. Additionally, differential charges can be used to encourage more cost-effective patterns of health care use. However, cost-sharing should be used with caution as, while being effective in reducing inappropriate use of health care, it can also reduce the appropriate use of it. This is particularly the case when it applies to health care arising from referral or prescription. Similarly, given that cost sharing creates financial barriers to access, it should be accompanied by mechanisms to protect heavy users of health care and lower income groups.

In the vast majority of countries, cost-sharing applies to many health services, albeit to a different extent across different services and countries. Dental care, eye glasses and contact lenses and pharmaceuticals are services and goods for which patients typically bear a larger part of the costs. In some countries a comprehensive package is provided for free or at low cost for a certain part of the population (CY, IE, SI), while the remaining of the population has to pay a user charge for most of the services. As a result of cost-sharing or public provision being limited to means-tested groups, private expenditure, and in particular out-of-pocket expenditure, is a significant share of total expenditure in some countries (BG, CY, LV, LT and MT with about 39.6%, 46.4%, 36.5%, 32.6% and 31.5% share of total expenditure, respectively). Nevertheless, all countries apply a system of cost-sharing exemptions for certain groups to ensure access to care to the more vulnerable (see Section 3.4). This often relates to so called "catastrophically costly services", i.e. those which have a low probability of incurrence but a very high cost, as well as the need to protect access to cost-effective services by poorer people and people with chronic conditions.

Other components of health expenditure: Private health insurance

In most countries private health insurance, taken in addition to the basic public coverage, remains a small share of total health expenditure. It has, nevertheless, grown in recent years, often as part of employment packages or taken up individually, as a result of the growing desire to have care provided in specific settings (e.g. individual rooms).

Private insurance ([35]) in most countries has the role of supplementary insurance or supplementary insurance (covering additional services not included in the main and public benefit basket) and/or of complementary insurance (covering a share of patients costs).

About half of the Member States (CZ, HU, DK, FI, DE, LU, MT, EL, IT, PT, UK, NL, SI, BG) allow for supplementary health insurance (insurance covering for the services and goods not publicly funded/provided) (OECD, 2015b). Supplementary insurance may contribute to inequity in access if held only by a small and richer part of the population. While it does not a priori have efficiency implications, it may be disruptive for the functioning of the public system.

([34]) Cost-sharing with government schemes, compulsory contributory health insurance schemes or with voluntary insurance schemes.

([35]) This section draws on WHO (2004).

In some countries (FR, BE, LU, SI) the coverage of population with complementary health insurance is very high. This also raises efficiency concerns as complementary insurance renders cost-sharing less effective in its role of reducing unnecessary use of care (as patients who benefit from the private insurance are less cost-aware), although it still produces additional revenue to the sector. It can also increase inequities in access between those who can afford to be covered by private insurance and those who are not. As a result, some countries have introduced (or considered introducing) a fee which cannot be reimbursed or covered by complementary insurance. Additionally, if complementary insurance is limited to a small high-income section of the population, it can also increase inequity in access by increasing cost-coverage for those who have a higher ability to pay anyway.

Some countries (EL, IE, ES, UK, BG) allow private duplicative health insurance (insurance covering for the goods and services already included the public basket of benefits). The presence of private duplicative health insurance, combined with dual practice and a fee-for-service system in the private sector vs. a salary in the public sector, may create perverse incentives for physicians to be less efficient in the public sector.

Private health insurers lack efficiency incentives and tend to incur higher administrative costs than statutory health insurance due to the market failures inherent to the provision of health care (Arrow, 1963), whereas predominantly public-funded systems are generally more successful in controlling cost inflation. At the same time, a system combining public health insurance with duplicative private health insurance may contribute to raising inefficiency in the public sector if physicians treat fewer patients in the public sector to be able to treat more patients in their private practice. For certain patients though, this may not translate in additional costs if private insurance comes as part of the employment package, and it may also reduce the waiting time for simple non-urgent surgeries. Again, as with complementary and supplementary insurance, duplicative insurance may contribute to inequity in access if held by only a small and richer part of the population.

Other components of health expenditure: Informal payments

In addition to formal direct payments for health services, informal payments (also called non-official, under-the-table, envelope payments or even bribes) seem to be frequent in some countries. According to the 2013 Eurobarometer on corruption (European commission 2013c), the countries where respondents are most likely to say they had to make an additional payment or give a gift or hospital donation are RO (28%) and LT (21%), followed by EL (11%), HU (10%), SK (9%), DE and BG (both 8%) and LV (7%). All other countries have levels at or below the EU average of 5%, with FI showing the lowest level (0%), followed by DK, SE, ES, the UK, NL and LU (all 1%). Informal payments are estimated usually though household budget survey or living standard measurement survey and included as part of out-of-pocket expenditure in official statistics ([36]). Informal payments do not encourage a more effective or cost-effective use of services and constitute an additional barrier to access as no exemptions are of course made in this case for low-income or high-risk groups (as socio-economic characteristics of the family are not related to the size of informal payments). As such, they are a source of inefficiency and inequity in the use of services.

([36]) OECD, Eurostat, WHO (2011).

3.4. HEALTH SYSTEM FINANCING

All systems of health financing share a set of core functions. These functions are revenue raising, pooling, purchasing, benefit design and rationing policies, and stewardship of the financing system. The function of **revenue-raising** refers to the generation of funds, including the definition of sources (public vs private) and the set of criteria determining mechanisms for collection (taxes vs contributions) and including the size of contributions . The function of **pooling** translates in practice in the set of arrangements involved in the collection of the generated funds, which are then going to be reallocated within the system. The function of **purchasing** makes use of collected funds to finance providers of services to end users. The translation of this function into a system feature determines both the organisational structure of purchasers and the payment mechanism to providers, determining the nature of their incentives (see Section 3.9). The function of **benefits design** defines the criteria of entitlement and obligations of patients with respect to the available range of services, whether and how much they need to pay and how they can access it, including waiting lists (see Section 3.3). The function of **stewardship** is cross-cutting and it can be described as the practical implementation of governance, including regulatory aspects and the dissemination of information to the public (see Section 3.10) ([37]).

System goals that are more strongly linked with revenue raising and collection are equity and financial protection. To realise financial protection, health systems require stable and predictable revenues for planning purposes (medium-term investments, budgets and purchases of goods and services). Fluctuation in public revenue streams can make it challenging to support current service provision in terms of quality and service volumes, which may expose individuals to higher private expenditure, frequently when stronger financial protection may be needed. Indeed, the evidence suggests that circumstances related to the economic cycle, such as unemployment, may have an impact on health (see Section 3.12). Being able to rely on some counter-cyclical tool, such as budget buffers (see Section 3.6) may be especially important in similar circumstances ([38]) ([39]). Health care cuts may exacerbate existing problems by increasing inequity, which is an additional reason to design a robust system of financing. More generally, how revenues are generated and collected determines the size and stability of available funds, as well as the correspondence between contribution and entitlement and, consequently, the capability of the system to provide health care coverage and stable protection to enrolees that is need-based and not contribution-based.

Revenue-raising

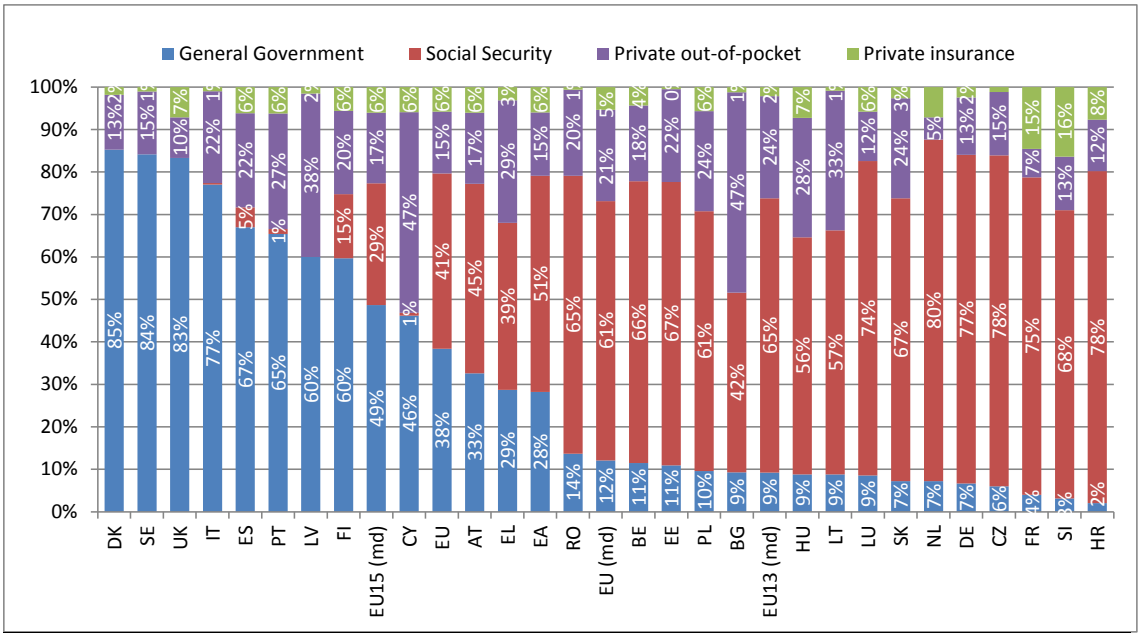
The revenue mix is an important determinant of the sustainability of the system determining the size and stability of the available resources and the gradient of individual contributions. Systems differ widely across the EU, as a strong element of path dependence has determined their evolution. However, all Member States raise revenues through a mix of public and private sources. Public money can be raised through taxation, be it general taxation or an earmarked tax, at the national or local level. Further, revenues can be drawn from social security contributions or the contributions of citizens enrolled in compulsory health insurance schemes. In some EU Member States such as Germany the latter make up a large proportion of public health expenditure. Taxes can be linked to different sources, such as income or wages, an individual's assets or consumption and, as such, be direct or indirect. In addition, they can be levied in the form of credits or subsidies. Private sources, which account for more than 30% of current health expenditure in EU Member States such as PT, LV, CY, EL, BG, HU, PL, LT and SI, can generate additional revenues through out-of-pocket payments, either in the form of co-payments or other direct payments, but also through private health insurance or dedicated accounts, like medical savings accounts. The way revenue is raised through these available tools will have different distributional effects, with taxes and

([37]) Joseph Kutzin, Winnie Yip, and Cheryl Cashin (2016), Alternative Financing Strategies for Universal Health Coverage. World Scientific Handbook of Global Health Economics and Public Policy: pp. 267-309.

([38]) Mladovsky P. et al. (2012), "Health policy responses to the financial crisis in Europe", Policy Summary 5, World Health Organization. http://www.euro.who.int/__data/assets/pdf_file/0009/170865/e96643.pdf.

([39]) Note that this may not always be technically feasible or sustainable from a political point of view.

Graph 3.4.1: **Expenditure on health care by financing source, 2013 (or nearest year)**



(1) Current health expenditure (including long-term care, SHA category HC.3).
(2) Figures have been rescaled when the sum of original figures exceeded 100% (UK).
(3) Data for IE and MT missing.
Source: Eurostat, OECD and WHO health data and Commission services calculations.

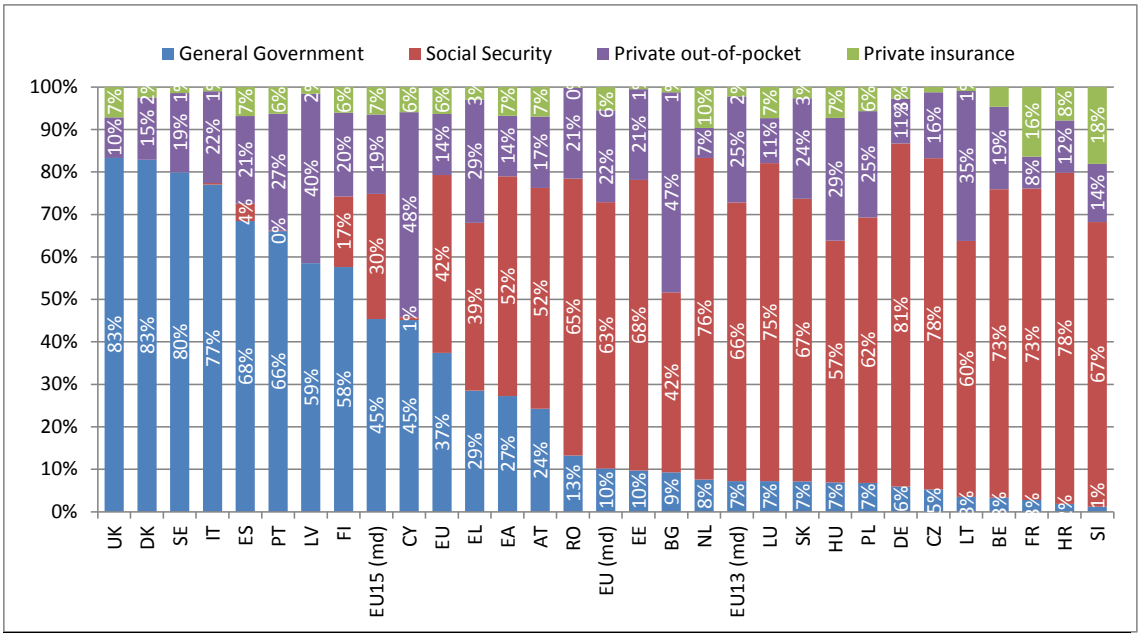
contributions being generally more progressive than revenues through private sources.

Looking at collection mechanisms, revenue tends to be raised in different ways, often linked to the prevalent organisational model. National health services (NHS) (though sometimes organised on a regional/county basis such as in Italy, Sweden or Spain) or local health services are mostly financed by taxation – general, regional or local taxes, depending on the extent to which the system is organised on a national, regional or local basis. In Sweden, for example, public health expenditure is financed by different government levels in different proportions, with county councils accounting for 57%, municipalities for 25% and central government for 2%. Both county councils and municipalities raise revenues through local income taxes for the large majority, complemented by subsidies and state transfers financed by a mix of direct and indirect taxes ([40]). In general, both direct and indirect taxes are used to finance the health system activities. Compulsory social health insurance (SHI) is mostly funded by income-related social contributions, often shared between the employer and the employee. This kind of insurance is, therefore, often linked to occupation, though often extended to relatives (spouse, children). In the Netherlands, for instance, the funding of the social health insurance comes primarily from community-rated premiums (the nominal premium paid directly to the insurer) and from income dependant contribution (a fixed percentage of income). Lastly, the third source of funding is a state contribution for the insured under the age of 18 (10% of total revenue).

A common feature to all Member States is the financing of healthcare based on a mix of public and private financing. Graph 3.4.1 displays health expenditure by financing agent according to international reporting standards, whereas Graph 3.4.2 displays health expenditure excluding the long-term care component HC.3, consistently with the separate analysis of health care and long-term care expenditure in two different sections of this report (the long-term care component is analysed in Section 5.4 of this report). Public financing includes general government expenditure and social security funds. Private financing includes

([40]) E. Mossialos, M. Wenzl, R. Osborn, and D. Sarnak (eds.), International Profiles of Health Care Systems, 2015, The Commonwealth Fund, January 2016.

Graph 3.4.2: **Expenditure on health care by financing source, excluding long-term care (health), 2013 (or nearest year)**



(1) Current health expenditure, excluding long-term care (health) (SHA category HC.3). For expenditure on long-term care by financing source see Section 5.4. For total expenditure including both health care and long-term care, see Section 2.2.
(2) Figures have been rescaled when the sum of original figures exceeded 100% (UK).
(3) For UK and IT, figures may contain LTC components as it was not possible to subtract the latter due to lack of data availability.
(4) Data for IE and MT missing.
Source: Eurostat, OECD and WHO health data and Commission services calculations.

private health insurance, other private funds (NGOs and private corporations) and households' out-of-pocket payments, which are expenditures borne directly by patients ([41]) (see also Section 3.3). Public health expenditure is predominantly left to government spending and financed by general revenues, and in many countries social insurance funds are responsible for the largest part of public health care spending. The role of private financing is mostly marginal and is represented by any form of private insurance undertaken to replace or increase coverage guaranteed through public funds, and by household payments, which often take the form of participation to public expenditure (co-payments). In countries like SI, FR and NL, private health insurance represents a non-negligible share of total health spending, although the nature of coverage (complementary, duplicative and substitutive) varies across them (see Section 3.3). In the case of Germany though, the low figure for private insurance should be interpreted with caution. In this case, private insurance is a substitute for public health care system and should not be confused with complementary private insurance ([42]).

In virtually all Member States the largest share of health care financing comes from public sources, and, across the EU, around 70% of health care expenditure is publicly financed (see Section 3.3). All countries display a higher share of publicly financed expenditure. The only outlier is Cyprus, with a share of public spending on health below 50% (46% in 2013) and a correspondingly large proportion of health spending (48% in 2013) financed directly by households. In Denmark, the UK and Sweden different levels of government (central, regional or local) finance at least 80% of total health spending (see Section 3.10). Including social security funds the share of public expenditure is higher than 80% also in NL, DE, LU and CZ. Please note that this discussion excludes category HC.3 of SHA as a

([41]) These mostly include cost-sharing. However, in some countries, informal payments to health care providers are non-negligible and therefore included in this item.

([42]) The figures refer to the aggregate as defined in Graph 3.4.1., which excludes SHA category HC.3.

simplified way of excluding LTC expenditure. LTC financing is itself discussed in detail in Section 5.4.

As services become "non-core", as is normally frequent in elective care, the public share of financing in provision shrinks and financing is increasingly left to private expenditure. This can be used to complement, supplement or substitute basic compulsory insurance. Inpatient care tends to be almost entirely publicly covered in most insurance schemes, with the lowest public coverage registered for Greece, at 78% (see Section 3.3).

Voluntary health insurance (VHI) schemes are confined to a secondary role in the EU. Large markets for VHI in Europe are an exception and do not seem to be a viable option to fill existing gaps in coverage. This is mainly due to the difficulties in setting up a market, importantly due to the issue of adverse selection and cherry-picking in health care. In very few EU countries like SI, FR or NL, VHI takes a higher share of total health financing.

Out of the sources of private financing, estimated around 22.6% for the EU, out-of-pocket payments (OOP) are the most important one. On average, households financed 14% of health spending across EU member states in 2013, whereas the median captures a higher share of spending (18.7% in 2013). There is nonetheless wide variation across countries, and the share of private out-of-pocket financing exceeds 30% in some EU countries (BU, CY, LV, LT and MT). At the opposite extreme, the countries with the lowest out-of-pocket expenditure are the Netherlands, France and the United Kingdom, in none of which OOPs exceed 10%.

The average share of out-of-pocket spending has remained more or less stable over the past years. This share accounted for 14.1% of GDP in 2013, with minor fluctuations since 2010 (14.2% in 2010; see section 3.3). However, the median has declined gradually over this period. Additionally, individual countries have registered fluctuations. In Slovakia, there has been a decrease of more than 5% since 2010. During the same period, Bulgaria and Greece have also registered a large decrease (approximately 3.5% and 3% respectively). Increases were seen in CZ, ES, IT, CY, LT, LU, DE, EE, HU RO and UK. Except for LT, with a registered increase of 5%, all these increases are relatively small (especially for Cyprus and Romania, where OOPs have remained virtually unchanged with respect to 2010 levels). As the aggregate of OOPs is affected by several factors, including private choices, as discussed in the previous section on expenditure and coverage, it is often not possible to draw clear conclusions without the support of context-specific information. Compared to a rather stable average, the median value has registered an overall decrease of approximately 0.5 pps in the last years (19.2 in 2010, with an increase up to 19.4 in 2011).

The lack of revenues vis-à-vis the potential demand could be related to a small contribution base. For instance, in Estonia and Romania there seems to be a relatively high number of beneficiaries compared to the number of those contributing to the system. A broader tax base is associated to greater stability of financial sources, as well as to higher responsiveness to demand and better coverage of non-contributors, especially when the share of non-contributors is relatively large. Need-based financial protection implies entitlement delinked from contributions. In this context, financing based on wage-linked contributions is not sufficient to finance expenditure in a sustainable way. This may be due to the challenge of ageing populations, but also to macroeconomic concerns regarding increasing wage-based taxation and projected economic growth and higher unemployment ([43]). Reflecting this growing concern, more countries have decreased, rather than increased, the tax burden as a share of GDP in the field of labour taxation, which includes personal income tax as well as social security contributions ([44]).

Greater diversification of revenue sources to achieve a broader levy base is emerging across the EU. A trend is recognisable in the EU towards decreasing the reliance on social security funding based on payroll tax, in favour of an increasing

([43]) From: Joseph Kutzin, Winnie Yip, and Cheryl Cashin (2016) Alternative Financing Strategies for Universal Health Coverage. World Scientific Handbook of Global Health Economics and Public Policy: pp. 267-309.

([44]) European Commission (2014),'Tax Reforms in EU Member States -Tax policy challenges for economic growth and fiscal sustainability' 2014 European Economy series, 6|2014 Directorate-General for Economic and Financial Affairs, Directorate-General for Taxation and Customs Union.

role of the general government budget (DE, FR, NL, LT, HU, SK, CZ) to establish a broader levy base and greater stability ([45]) ([46]). Originally relying almost solely on payroll contributions, France currently finances social health insurance based on a mix of payroll taxes, a national income tax (earmarked), taxes on alcohol and tobacco, a contribution from the pharmaceutical industry based on turnover and from voluntary health insurance from companies, transfers from other branches of Social Security and state subsidies ([47]).

Revenue raising is affected by political priorities, as health care is competing for public budget resources with many other sectors. The type of health and long-term care system, the demographic composition of the population and other features of the economy can determine funding choices. In fact, even earmarking resources can be ineffective with a changing political agenda. As a proxy for capturing political priorities, we should notice that the share of total government expenditure allocated to health has increased on average for the EU over the past decade. Accordingly, over the last decade, the share of public health spending has increased for most EU countries, with the exception of BG, IE, EL, ES, CY, HU and PT ([48]). However, this should also be crossed with information on the evolution of total public expenditure to be able to draw final conclusions on the joint effect of this changes on the size of expenditure allocated to health (on these issues, see Section 2).

Pooling

Pooling refers to the institutional and organisational structures and mechanisms in place to collect and manage generated funds. Four main models of risk pooling are recognisable ([49]), with different features related to sources of revenue, benefits design and entitlement criteria. Distinctive features of these four models appear in different proportions across member states and the specific way in which each model is organised defines each financing system and its potential. The models go from the widest scale, the one of national insurance systems, in which revenues typically come from general taxation and the whole population is covered by a standardised benefits package provided by public providers, to a potentially smaller-scale pooling ([50]), such as the one of social health insurance systems. In the latter, benefits are only offered to enrolees, who participate financially, together with the employer, through compulsory payroll contributions. In this case, the benefits package can differ when multiple insurance funds operate and can to some extent define their own benefit package. On an even smaller scale, typically at community level, health funds can be raised by community-based health insurance ([51]) and, lastly, through voluntary health insurance (VHI) schemes, providing different baskets of benefits to enrolees through a network of private providers.

Countries can have either a National Health System (NHS) model or a Social Health Insurance System (SHI) model, which, in turn, can be based on a single or multiple payer model, with or without choice of insurer. In DK, FI, IE, IT, PT, ES, SE and UK, the main model is NHS. EL, HU, LU, PL and SI, are based on a SHI with a single payer. AT, BE, FR are based on SHI with automatic affiliation and, lastly, in CZ, DE, the NL and SK, the main source of basic health care is social health insurance with the choice of insurer (see Table 3.4.1 in the next page). In addition, compulsory health insurance can be organised via a central insurance office only, or via a central office plus regional or district branches. Compulsory social health insurance can also be organised via SHI funds, either related to the type of occupation, or originally organised by political or religious affiliation, or still by private not-for or for-profit funds/insurance companies. Some

([45]) Note that listed Member States do not necessarily have a direct link between taxation and health budget and the Ministry of Health may not have own tax instruments.
([46]) Note that for some countries, as, for instance, the Czech Republic, this may be an adjustment to the economic cycle rather than a persistent trend.
([47]) E. Mossialos, M. Wenzl, R. Osborn, and D. Sarnak (eds.), *International Profiles of Health Care Systems, 2015,* The Commonwealth Fund, January 2016.
([48]) Commission services calculations based on Ameco and COFOG data.
([49]) http://siteresources.worldbank.org/INTHSD/Resources/topics/Health-Financing/HFRChap3.pdf, accessed 26/05/2016.
([50]) The reference to the smaller scale refers to the risk pooling which can be subject to fragmentation. No reference is therefore made to the coverage capacity of social health insurance systems.
([51]) Community-based health insurance schemes provide financial protection for people who otherwise would have no access to health coverage, which is especially common in developing countries.

Table 3.4.1: **Pooling schemes and their financing**

	Q2a. The basic primary health care coverage is supplied by:	Q2b. How is affiliation determined?	General government funding as % of total current health expenditure (2013 or latest available)	Social security funds as % of total current health insurance (2013 or latest available)
Belgium	Common health insurance scheme		11%	66%
Bulgaria	Common health insurance scheme		9%	42%
Czech Republic	Multiple insurers	Choice among several insurers	6%	79%
Denmark	Local health services		89%	0%
Germany	Multiple insurers	Choice among several insurers	7%	70%
Estonia	Common health insurance scheme		11%	67%
Ireland	National health services		:	:
Greece	Multiple insurers /National health services	Not a matter of choice	29%	39%
Spain	Local health services		68%	5%
France	Multiple insurers	Not a matter of choice	4%	75%
Croatia			2%	78%
Italy	National health services		77%	0%
Cyprus	National health services /multiple insurers		46%	1%
Latvia	Common health insurance scheme – tax funded		64%	0%
Lithuania	Common health insurance scheme		9%	57%
Luxembourg	Common health insurance scheme		14%	74%
Hungary	National health services		9%	56%
Malta	National health services		:	:
Netherlands	Multiple insurers	Choice among several insurers	7%	80%
Austria	Multiple insurers	Not a matter of choice	31%	45%
Poland	Common health insurance scheme		10%	61%
Portugal	National health services		65%	1%
Romania	Common health insurance scheme		14%	65%
Slovenia	Common health insurance scheme		5%	72%
Slovakia	Multiple insurers	Choice among several insurers	8%	67%
Finland	Local health services		64%	15%
Sweden	National health services		84%	0%
United Kingdom	National health services		87%	:

Source: Eurostat, OECD and WHO health data and adapted from "Health systems institutional characteristics: a survey of 29 OECD countries" Health working paper No. 50, OECD 2010, plus European Commission (DG ECFIN) sources.

countries – Greece and Cyprus – have a mixed system of public provision and insurance funds (defined by occupation).

Pooling directly influences the sector's capacity to spread risks and its redistributive capacity. Fragmented pooling forces redistribution to remain within the pools, thereby maintaining potential inequalities, often due to regional disparities in socio-economic conditions and demographic structures (e.g. type of production structure, income, population size and age structure, mortality and morbidity indicators). A limited pooling of funding and resource redistribution across regions can perpetuate cross-regional differences in the availability and quality of service provision. In most Member States collected funds are pooled at national level. However, in the case of countries with multiple insurers, each collecting funds separately and addressing different groups of beneficiaries, pooling is typically fragmented, which may also lead to higher administrative costs. In addition, fragmentation can come as a by-product of decentralisation where local taxes finance healthcare services. In both cases though, some degree of redistribution is usually in place.

Some countries have achieved wider pooling by merging lower levels administrative units. Some with a traditionally decentralised structure have started to merge and reduce the number of regions (SE, DK), merging counties into a small number of regions, and/or merging municipalities (FI), in order to increase the pooling of risks and explore economies of scale and scope.

Alternatively, redistribution and risk adjustment was used to preserve lower-level administrative units or multiple funds and replicated the effects of wider pooling. In the case of social health insurance with multiple insurance funds (as in NL, CZ, DE, AT, FR and SK) collecting social contributions or insurance premiums, a risk-adjustment/risk-equalisation mechanism is used which typically takes into account the size, age-gender structure and a proxy of the morbidity patterns of the individuals insured in each fund. In DE and NL, for instance, an effective National Health Insurance Fund has been created where all the contributions from all the

insurance funds are pooled together with the tax-based subsidies provided by the federal government and then redistributed to the various funds using the risk-adjustment resource allocation formula. Risk adjustment mechanisms are also used in SI to manage complementary health insurance ([52]).

An efficient and transparent revenue collection can reduce administrative costs and improve revenue raising and pooling. Depending on whether only national taxes are used or these are combined with regional and local taxes, different levels of government or tax collection authorities are to be involved. Collection of revenues from national taxation (IE, PT, UK) is typically centralised and then distributed to other administrative units. Public expenditure on health administration and insurance is typically a small share of GDP (EU average of 0.3% in 2013) and a small share of total current health expenditure (EU average of 3.5% in 2013). Revenues from social health insurance are typically collected by the regional or district and then, often, pooled together centrally and redistributed locally with some degree of risk-adjustment based on population size, age structure, mortality and morbidity patterns. In a number of countries (e.g. LT, EE, HU, RO) the responsibility to collect revenues has been allocated to a tax collection authority to contain tax evasion and promote re-distribution across subnational funds that generate the revenues.

([52]) In the case of complementary insurance in Slovenia, 95 % of the population liable for co-payments are insured by three private health insurers, but the age structure of insured population differs a lot between different insurers.

3.5. MARKET MECHANISMS

Historically, countries have dealt with demand and supply management of health care services with a mix of regulation and market mechanisms. Publicly provided, heavily regulated solutions have typically managed to achieve cost-containment, but sometimes at the expense of efficiency and productivity, with a lower perceived quality of health care systems. However, some degree of regulation is supported by robust economic theory demonstrating that, due to the many market failures in healthcare, unregulated markets would not achieve efficient outcomes.

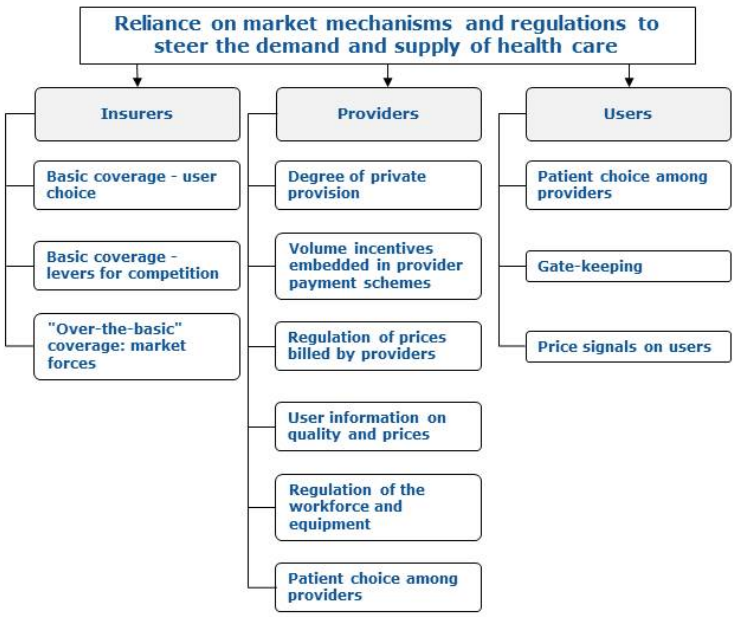
One of the ways to promote efficiency and cost-containment is to intervene on the market structure. Additional options are represented by supply-side and demand-side measures, adjusting incentives within a set market structure. Market oriented supply-side measures normally focus on incentives related to different payment mechanisms. The way in which providers are paid can influence their behaviour and, in turn, the outcomes of competition For example, retrospective (fee-for-service) payment will promote provider activity, and it may encourage providers to attract patients. Prospective payment may create incentives to attract patients, depending on the unit of payment, however it creates an incentive for cost control, and thus for risk. These issues are discussed in more detail in section 3.8 on purchasing, contracting and remuneration systems. Demand management tools often take the form of cost-sharing. Some countries have relied extensively on these tools requiring patients to pay for a significant share of the costs through out-of-pocket payments (see Section 3.2 and also 3.4).

Indicators of market-oriented mechanisms in health care systems

When looking into healthcare systems, some features may be indicative of a more "market-oriented" nature, as opposed to signals of heavy regulation. In the following paragraphs, the wording "signals of market strength" is used to refer to indicators which, depending on their value, point in the direction of market forces or regulation. Typically, for each indicator, the larger the potential choice available to consumers is interpreted as a signal of greater market-orientation (see Graph 3.5.1).

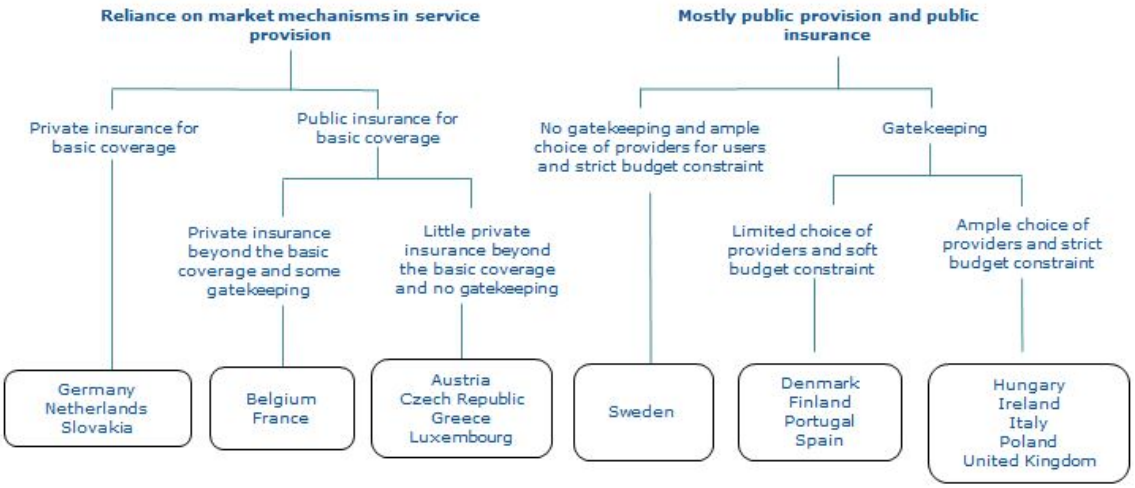
Several signals of market strength can be isolated with regard to insurers. Market signals (or their absence) may be observed in terms of user choice and levers for competition in the definition of basic coverage. This includes the type of coverage in terms of insurance, for instance a

Graph 3.5.1: **Market signals by insurers, providers and users**



Source: Adapted from Joumard, I., C. André and C. Nicq (2010), "Health Care Systems: Efficiency and Institutions", OECD Economics Department Working Papers, No. 769, OECD Publishing. doi: 10.1787/5kmfp51f5f9t-en.

Graph 3.5.2: **Country clustering based on system characteristics.**



Source: Adapted from Joumard, I., C. André and C. Nicq (2010), "Health Care Systems: Efficiency and Institutions", OECD Economics Department Working Papers, No. 769, OECD Publishing. doi: 10.1787/5kmfp51f5f9t-en.

single payer national insurance as opposed to local schemes or multiple insurers, and the number of insurers. In addition, the ability to define and differentiate the benefit baskets, the level of coverage, risk equalisation schemes and the availability of information for consumers to choose, are all market signals. With regard to supplementary coverage, the share of the population covered by non-primary insurance, as well as the degree of market concentration in its provision are signals of market strength.

Several signals of market strength can be isolated concerning providers. Relevant dimensions include the degree of private provision, the volume of incentives within providers payments, including existing regulation on their billed prices. Additional signals are captured by the existence of regulation on the workforce and equipment (quotas on the number of medical students, regulation of practice location, number of hospitals/beds/medical equipment etc.), as well as the degree of patient choice amongst providers.

Several signals of market strength can be isolated concerning users. Relevant signals are price signals such the level of out-of-pocket payments and the extent to which choice is possible, as well as the strength of gate-keeping, if any, in the system ([53]).

Following this classification of market signals adopted by the OECD countries can be clustered into different typologies. Market mechanisms appear to be more strongly in place in countries like Luxembourg, Belgium, France, Germany, Slovakia and the Netherlands (see Graph 3.5.2). Competition may take place on the basis of price, but also on the basis of quality, timely access, innovation and other factors relevant to patients and to purchasers acting on the behalf of patients. In countries like Italy, Finland, Portugal and Spain, on the contrary, "weak market signals and strict regulation" seem to be the norm, according to the OECD review of health systems characteristics ([54]) **(**[55]**)** ([56]). In this context, "market mechanisms" refers to a broad notion of whether there is actual or potential competition among health care providers.

([53]) Gatekeeping refers to the function of primary care physicians to pre-authorise the use of hospital services and specialist care by patients.

([54]) Paris V, Deveaux M, Wei L (2010). Health Systems Institutional Characteristics: A Survey of 29 OECD Countries. OECD Health Working Papers, No 50, OECD Publishing.

([55]) Joumard, I., C. André and C. Nicq (2010), "Health Care Systems: Efficiency and Institutions", OECD Economics Department Working Papers, No. 769, OECD Publishing. doi: 10.1787/5kmfp51f5f9t-en.

([56]) OECD HSC (2012d), "Health System Characteristics Survey", OECD 2012.

Competition in health care sectors ([57])

Competition already plays a role in health systems across the EU, though with variation in intensity and affected services across countries. The most widespread practices of competition seem to characterise providers of auxiliary services and pharmaceuticals and medical equipment. In all countries, providers of auxiliary medical services (e.g. cleaning or catering), compete for contracts with other purchasers and providers. Similarly, some form of competition among those who produce medicines and medical devices is present in all EU countries. There are examples of countries, though a minority, in which purchasers (such as health insurers) compete to offer people health coverage. More frequently, health service providers compete for contracts with purchasers of health care. In many countries, health service providers compete for patients, both in community and hospital settings. Therefore, even if not explicitly promoted or acknowledged, competitive forces are likely to be at play in one way or another.

Competition in healthcare can be encouraged by allowing and promoting patients' choice. This can be, at the extreme, choice over the whole set of available providers on the national territory. Alternatively, patient choice can be constrained to the surroundings of an area of interest, typically centred on the place of residence. In addition, there can be limitations of choice within the network of contracted providers imposed by the insurer (or other third-party payer). It is currently debated whether allowing patient's choice provides an incentive to compete over quality.

Competition in primary care is currently less developed than it is in other health care sectors. In addition, there is no strong evidence that countries where it was introduced, recorded better performance than those which opted for choice limitations (constraints in competition between primary care physicians). This is partly due to the lack of systematic and robust data to assess the performance of general practitioners (GPs) and on specific features of primary care that may intrinsically limit choice, such as, for instance, proximity to home being an important factor in the choice of GP, as well as potential stickiness deriving from trust-building, together with the administrative burden of formal registration.

Not in all EU systems the choice of specialist care is a feature of the main health insurance protection mechanism. When it comes to specialists, all EU health systems allow for patients' choice to some degree and in some form, as self-financed direct access to specialist care is in principle not prohibited in any of the EU countries. The overall picture though, when it comes to publicly reimbursed services, is diverse across countries. In some, like Sweden, the choice of specialists is virtually free. In some countries like the Netherlands, patient choice of specialists is closely related to the subset of hospitals contracted by the insurer ([58]). In this case too, there does not seem to be robust evidence linking competition and efficiency.

Pharmacies are often a sector targeted for competition. The existence of regulated mark-ups over costs in many European countries has been considered as a motive for introducing (or strengthening) competition. However, the evidence of benefits in this area seems to suggest that there are likely improvements in access, but that the impact on costs is not clear. For instance, in the analysis from Vogler et al. (2014) ([59]), no price effects were highlighted in relation to liberalised Over-The-Counter (OTC) drugs.

Given the size of expenditure on pharmaceuticals, several strategies have been implemented to improve the efficiency in this market and promote cost-containment. In Spain the Regional Health Services and the Ministry of Health have created a coordinated procurement mechanism in order to obtain better prices,

([57]) This chapter is largely based on the recent publication on competition in health care developed by the independent group of members of the Expert Panel on effective ways of investing in Health (EXPH), as a response to a submission by the European Commission. Expert Panel on effective ways of investing in Health (EXPH), Report on Investigating policy options regarding competition among providers of health care services in EU Member States, 7 May 2015.

([58]) In the Netherlands, every hospital holds a contract with the insurer. Patients are allowed to choose non-contracted providers, in which case the insurer will pay at least 65-70% of the costs.

([59]) Vogler, S., Habimana, K. and Arts, D., 2014, Does deregulation in community pharmacy impact accessibility of medicines, quality of pharmacy services and costs? Evidence from nine European countries, Health Policy, 117: 311 – 327.

reinforcing the purchaser bargaining power. On a larger scale, the Joint Procurement Agreement was agreed at EU level by the UK, ES, SI, SK, PT, NL, MT, LV, EL, EE, CY, CZ, HR, BE, LU, RO, IT, HU, LT, DK, IE, FR, AT and DE to act as a single buyer and to use increased bargaining power to ensure supply of medicines, especially vaccines, at lower prices ([60]). Another example is represented by Germany, with the "Reform of the Market for Pharmaceutical Products" (AMNOG), which allows for price negotiations for patented medicines instead of unilateral price setting by the producers (see Section 1.11 on Germany). In addition, strategies to increase the utilisation of generics have obtained good results. In the sub-market of generics vs off-patents, competition is a positive mechanism to improve efficiency (Niëns and Brouwer, 2013) ([61]).

The rationale for competition

Competition between hospital providers can lead to higher quality under strict price regulation. When prices are set, higher quality may be the way providers use to differentiate their services from competitors and attract patients. To this end, monitoring quality is particularly important. As the health services market is prone to several market failures including cream-skimming (i.e. selection of low risk/low cost patients), the health insurance market needs to be strongly regulated and monitored. Moreover, market concentration may take place. Importantly, if publicly available measures of quality include productivity measures, providers could try to attract patients by being awarded high performance scores, thereby triggering an impact on efficiency.

Competition between public and private can improve quality; however, this depends on the legal status of provider organisations, for instance for- or not-for-profit, and the rules on access, again related to patient choice. This kind of competition appears to vary across countries as partly captured by the share of private hospital beds in the total number of acute care beds, which, in some cases, can indicate competition between public and private. This share is virtually zero in Denmark, Poland, Sweden and the United Kingdom and it is a substantial share, i.e. more than 50%, in Belgium, Germany, and the Netherlands ([62]).

Many features can play an important role in affecting competitive interactions and the outcomes of competition in health insurance markets. For Social Health Insurance (SHI) systems, the role of insurers in selecting providers to be included in the plan can determine the extent and the type of competition between providers. Selections and/or negotiation also determine how hospital activity will be monitored and controlled. Health insurers, in turn, compete with each other based on premiums (which are a function of the prices they pay to hospitals) on the breadth and quality of their provider networks. However, a role is also played by employers selecting health plans for their workers. For NHS systems, aside for the number of providers and the rules on access, a key issue is whether or not providers can retain and reinvest profits.

The available evidence on the effects of competition on quality, efficiency and cost-containment is ultimately inconclusive. In pharmaceutical markets, competition in generics has been able to provide wider access at lower prices in several EU countries. Empirical evidence from studies on the effects of competition in hospital markets, largely based on mortality rates in hospitals (almost the sole indicator used to measure performance), does not allow for the generalisation of conclusions. A recent analysis by Bloom et al. (2014), suggests competition is useful for improving management practices and outcomes in healthcare ([63]). As a general rule, competition is going to affect different dimensions of health system performance at the same time, with results

([60]) http://ec.europa.eu/health/preparedness_response/joint_procurement/jpa_signature_en.htm, accessed 06/06/2016.

([61]) Niëns LM, Brower W. Measuring the affordability of medicines: Importance and Challenges. Health Policy 112 (2013) 45-52.

([62]) The share of private hospital beds is not necessarily associated with competition between the public and the private sector. In the Netherlands, for instance, this share is not indicative of competition between public and private, as the hospitals are only private and the public ones are academic centers. Due to the different services provided, public and private providers do not compete.

([63]) Bloom, N., Propper, C., Seiler, S., Van Reenen, J. (2010, revised 2014) Centre for Economic Performance (CEP) Discussion Paper No 983 "The Impact of Competition on Management Quality: Evidence from Public Hospitals", http://cep.lse.ac.uk/pubs/download/dp0983.pdf.

possibly going in opposite directions. If quality is the intended driver of competition, then this quality must be perceived by those exercising choice over alternative providers, be it the patient or the actor making choices on the patient's behalf. Some evidence suggests that competition between providers may take place on aspects of quality that privilege patients' perception to clinical quality with improvements to patient experience which may not necessarily translate into better clinical outcomes.

Empirical evidence reflects the context-specific effects of competition. Conclusions may vary according to market, country and policy details and time. The empirical evidence base on competition among providers of health care is small but expanding, focusing on a limited set of countries (mostly the US and the UK for competition among hospitals, but also the Nordic countries with regard to primary care and the Netherlands, Spain and Portugal, among others, for generic drugs).

Potential issues associated with competition

Higher competition may lead to higher prices through administrative costs. While insurer competition aims to encourage insurers to negotiate with providers on prices, quantity and quality of services provided, thereby lowering costs, this choice must be weighed against administrative costs. In the Netherlands, for instance, market concentration has been used to increase bargaining power over care providers and pharmaceutical companies, as an alternative tool to competition. Whether patients perceive the cost is also a relevant factor shaping competition, as it may lead to higher costs if competition focuses on adding value to services to attract patients, or those purchasing on their behalf.

Both who is going to choose a provider and who is going to pay for the care provided have a potential impact on costs. A patient privately asking for a service will bear its cost and, importantly, base the decision on a comparison of costs with expected benefits. On the contrary, with a public tax-based buyer if the patient is allowed to choose freely, without perceiving any costs, then the provider can generate supplier-induced demand, with higher total costs for the system.

Competition, in a context of low information, could have adverse effects that should be known and controlled. Competition could be useful to compare performance between different institutions for a certain procedure (e.g. dialysis, MRI scan, endoscopies, etc.), but it is key to have a good system of control and assessment of clinical outputs (see Section 3.11). More competition, i.e. more choice for patients and incentives for providers, under some conditions, will increase total costs and expenditure, mostly through supplier-induced demand.

Another relevant element to take into account when discussing introducing more competition in the market is the starting point. If the market is already competitive, additional elements of competition may have little impact overall, and the costs of promoting further competition may exceed the benefits.

Policy makers need to anticipate unintended consequences, such as supply induced-demand. Competition can at the same time increase the number of services provided and billed, creating uncertainty in relation to overall health care costs. That is, the introduction of competition may well result in increased costs and add to fiscal pressures. Increased costs may, or may not, be justified by additional health benefits to the population (or some parts of the population).

Competition as a policy tool promoting greater efficiency and cost-containment

The conditions under which competition can be a useful instrument for policy vary across countries, health system sub-sectors and time. There is no fixed set of conditions that will ensure that competition improves health system performance. However, conditions that make it more likely that competition has a positive impact on the use of available resources in the health system include: adequate information about provider prices and quality, standardised products (or services), the existence of multiple providers, easy entry and exit of providers and multiple buyers. Crucially, the lack of information and quality information and monitoring pose important challenges.

In their recent analysis, the Expert Panel on effective ways of investing in Health (EPXH)

Graph 3.5.3: **Propensity of different subsectors to fulfil conditions for effective competition in health systems**

Good conditions	Average conditions	Conditions unlikely to be met
Pharmaceuticals	Hospital care	Emergency room
Pharmacy distribution	Primary care	Pre-hospital emergency
Patients' transportation	Preventive care	Intensive care
Imaging	Long term nursing care	
Laboratory tests	Long term home care	
	Medical specialists	
	Renal dialysis	

Source: Expert Panel on effective ways of investing in Health (EXPH), Preliminary report on Investigating policy options regarding competition among providers of health care services in EU Member States, 17 February 2015.

identify a set of conditions that could lead to effective competition. Specifically, the identified conditions "make it more likely that competition will have a positive impact on the use of available resources in the health system". These are: adequate information about provider prices and quality, standardised products/services, multiple providers, easy entry and exit of providers and multiple buyers. Based on these requirements, the sub-market of non-clinical services may be a market place where competition can increase efficiency. Products can be standardised relatively well; the entry and exit of multiple providers has no major barriers; and information concerning providers and the quality of services produced is relatively easy to obtain. Based on the same arguments, the sub-market of clinical services (with the exception of laboratories) appears less subject to efficiency gains from the introduction of competition. In this case, conditions such as the standardisation of products, information on quality, and market entry and exit are less easy to meet.

Effective, competition should drive cost containment through increased efficiency and not through cost-cutting. The EXPH, based on the set of conditions identified in the previous paragraph, identified different several sub-markets that are stronger candidates for effective competition than others (see Graph 3.5.3). These are pharmaceuticals, pharmacy distribution, patients' transportation, imaging and laboratory tests. This suggestion comes with the strong caveat that the results of competition are highly context-specific and that enforcement or promotion of competition should never be disjoint from quality monitoring. Most of the areas of health care provision include different submarkets with different potential for competition (for instance, within the market for pharmaceuticals the submarkets for generics is not the same as that for biosimilars).

Notably, in the case of generics, many of the conditions promoting effective competition are met. Generics are close to a perfect substitute of the originator, information about the product is available to all (the active ingredient is known in its properties and effects from the under-patent period) and quality is enforced by regulation and essentially equal for all products.

As an alternative way to change the market structure, different models of commissioning public services have gained popularity. In circumstances where privatisation would not be appropriate, due to the nature of the provided good or service, as is the case for healthcare, concessions are often chosen to reap the benefits of efficient private provision, while preserving the public nature of the service. A competitive tender can be used to grant to a private provider the right to operate a service and to receive revenues deriving from it. Competitive tenders are a way of providing competition for the market – there is competition for the contract – providing benefits for consumers. Well-designed competitive tendering provides important opportunities for cost savings and efficiency gains. Yardstick

competition, which is not a market mechanism but a regulatory instrument, can be used as a substitute of competition ([64]). This can be beneficial to improve outcomes if there is no actual competition in place or if it fails to deliver the desired outcomes ([65]). The comparison of performance (benchmarking) can be linked to financial incentives in order to promote efficiency improvements.

Lastly, it must be stressed that competition is not the only way to affect market structure to promote cost containment. Reforms supporting and promoting competition have been developed in countries like the UK, the Netherlands, Belgium, Germany and Norway. However, in addition to competition-based models, re-organisation into providers networks has gained increasing popularity in the last years, due to their potential to increase quality while preserving affordability. Based on economic theory, these solutions would favour cost containment in two main cases: in the presence of high fixed costs calling for high-volume activity, and in the case of highly specialised services, in which learning by doing or using could increase efficiency.

([64]) Yardstick competition is a regulatory instrument setting the regulated price to match the average cost of the sector.

([65]) CPB - Netherlands Bureau for Economic Policy Analysis, 2000.

3.6. BUDGETING FOR HEALTH SPENDING

A good understanding of budgeting in health care is essential. This is conducive to advising policymakers on the realism of specific budget proposals, both from a macroeconomic and an efficiency perspective. It is easier to control government expenditure at the point of budget preparation than during the budgetary execution. In this respect, it is informative to know who is responsible for planning and preparing the budget, which tools are being used in the process and what are the potential weaknesses. This section draws from the country survey, evaluating budgeting processes in health care and long-term care as well as identifying modes of cooperation between different government authorities on budgeting tools for health care.

As part of fiscal governance, sound budgeting practices contribute to the fiscal sustainability and efficiency of health care spending. The objectives can be achieved by constraining the behaviour of policy makers and promoting a more long-term oriented fiscal planning. This can help avoiding the short-term adjustments to spending (typically cuts in spending) that may make it harder to attain health system objectives. There are several tools which support attaining these goals and which are covered in this section: budgetary planning, expenditure control tools, revenue tools and monitoring tools.

There are several important elements of a sound budgetary process. These are transparency, multiannual budgetary planning, budgetary centralisation at the planning, approval and implementation stages, top-down budgeting, realistic economic assumptions and reserves and performance budgeting (European Commission, 2010). Transparency requires reliable and timely budgetary data, standard accounting practices, and a comprehensive coverage of the budget law. A medium-term budgetary framework provides the basis for fiscal strategies beyond the yearly budgetary cycle. Budgetary centralisation heavily influences fiscal outcomes. Fragmented budget preparation by a large number of actors results in deficit bias because pooling usually shows that budgetary ceilings are not met. Top-down budgeting starts the budgetary planning with a binding ceiling on the total amount of resources to be distributed among expenditure areas and programmes. This is more conducive to fiscal discipline than the traditional bottom-up approach, where total spending is obtained as the sum of the individual expenditure requests of all ministries and agencies. Prudent and plausible macroeconomic assumptions should avoid systematic overly optimistic budgetary projections. Reserve funds provide flexibility to deal with unexpected budgetary developments. Performance budgeting is based on the evaluation of spending programmes against the achievement of their policy objectives: resource allocation in the budget preparation (including those of state/local budgets and social security funds) is then based on the efficiency of past spending.

In most EU Member States there is considerable scope for improvement of budgetary processes (European Commission, 2010). Potential weaknesses of budgeting can be that the central budget is not unified, in the sense of being based on different macroeconomic constraints, budget classifications, or accounting rules. The quality of economic assumptions underlying the costs of health care expenditure programs may be poor or erroneous. The same may be true for projections, which if not fully missing, may be too simplistic and/or not covering different time horizons. There may also not be any reviews of expenditure policies, and processes for program prioritisation.

Due to the complexity of budgeting processes, in most EU countries some form of cooperation between mostly the Ministry of Finance and the Ministry of Health is standard to defining what is the finally enacted budget for health care (Table 3.6.1). Where the Ministry of Finance is acting as the main responsible budgeting authority, such as in Denmark, Italy and Finland, cooperation and co-decision making with other Ministries and/or regional governments on specific budgeting tools are formalised.

In most countries the Ministry of Finance and the Ministry of Health or/and Social Affairs are perceived as co-decision makers in budgeting for health care. Estonia may serve as an example. In Estonia, the Ministry of Finance and Ministry of Social Affairs are both responsible for health care budgeting. The share of the state budget for health is prepared by the Ministry of Social Affairs. The Ministry of Finance sets the budgetary ceiling for the Ministry of Social Affairs based on the legislative process and government priorities. In

Table 3.6.1: **Ministries responsible for health care budgeting in EU countries**

Ministry responsable for health care budgeting	Country	Other stakeholders involved
Ministry of Finance	Denmark	Regional governments
	Italy	Ministry of Health, Regional Governments
	Finland	Ministry of Social Affairs and Health, Ministry of Finance, Public health insurance (KELA), regional governments
Ministry of Finance and Ministry of Health	Greece	-
	Cyprus	-
	Portugal	Regional governments for regional expenditure
	Malta	In Malta, the budget ceiling for the Health sector is determined by the Ministry for Finance based on a proposal submitted by Ministry for Health. The Ministry for Health is responsible for the allocation of these funds.
	United Kingdom	The following organisations have roles: - HM Treasury sets the overall budget for the Department of Health and NHS in England - they are then responsible for more detailed health budgeting - HM Treasury sets overall spending for the Devolved Administrations in Scotland, Wales and Northern Ireland - they are each responsible for determining funding for the NHS in Scotland, Wales and Northern Ireland.
Ministry of Finance and Ministry of Social Affairs	Estonia	The share of the state budget for health is prepared by the Ministry of Social Affairs. The Ministry of Finance sets the budgetary ceiling for the Ministry of Social Affairs based on the legislative process and government priorities. In addition, the health insurance expenditure (which is managed by Health Insurance Fund) is determined by the amount of revenue generated by the part of the social tax earmarked for health.
	France	-
Ministry of Finance, Ministry of Health, Ministry of Social Affairs and regional	Austria	Various responsibilities: Federation (Ministry of Health, Ministry of Finance), Regional Governments, Social Health Insurance.
Ministry of Health	Belgium	National Institute for health and invalidity insurance (RIZIV/INAMI)
	Bulgaria	Ministry of Finance, National Health Insurance Fund, Local Governments, Ministry of Defense, Ministry of Transport, Council Of Ministers, Ministry of Interior.
	Czech Republic	Ministry of Finance, Public health insurance.
	Germany	Statutory Health Insurance (SHI) is mainly organized as a corporatist system. SHI is based on the principles of subsidiarity, pluralism and self-government and competition. That implies that the MoH merely sets the legislative framework for the remuneration and budget negotiations that are undertaken by the self-governance partners (SHI-funds and providers) themselves. A budgeting process (setting budgets for expenditure items) as known from state-led systems (e.g. UK) does not exist in the German SHI.
	Ireland	Overall Allocation determined by Government, following budget submission by Health
	Croatia	Ministry of Social Policy and Youth & Ministry of Health & Ministry of Finance
	Latvia	Ministry of Finance
	Lithuania	National Health Insurance Fund (NHIF), Ministry of Finance
	Netherlands	Private health insurers, Ministry of Finance
	Poland	National Fund, Ministry of Finance
	Romania	Ministry of Finance, National Health Insurance House
	Slovakia	Ministry of Finance
Ministry of Finance, Ministry of Health and Municipalities	Slovenia	The Ministry of Finance sets the budgetary ceiling for the Ministry of Health and Municipalities based on legislative process and government priorities. In addition, the health insurance expenditure which are managed by HIIS is determined by the amount of revenue generated by social contributions. HIIS is not allowed to record a loss at the end of the year of go into debt and it cannot itself increase insurance contribution rates.
Ministry of Health and Social Affairs	Hungary	National Health Insurance Fund (NHIF), Ministry for National Economy (MNE)
Ministry of Social Affairs	Luxembourg	Ministry of Health, Ministry of Family
Regional governments	Spain	-

(1) AWG questionnaire on health budgeting practices and information submitted by national authorities.
Source: Commission services (DG ECFIN).

addition, the health insurance expenditure (which is managed by Health Insurance Fund) is determined by the amount of revenue generated by the part of the social tax earmarked for health.

Also in countries where the Ministry of Health is perceived by the respective government as the main authority responsible for budgeting for health care, effectively the Ministry of Finance or other entities are involved in key budgeting dimensions, such as in Estonia above. In

Bulgaria, a large set of stakeholders is involved including the Ministry of Finance, the National Health Insurance Fund, local governments, the Ministry of Defence, Ministry of Transport, Council Of Ministers and the Ministry of Interior. In Germany, statutory Health Insurance (SHI) is mainly organised as a corporatist system. SHI is based on the principles of subsidiarity, pluralism and self-government and competition. This implies that the Ministry of Health merely sets the legislative framework for the remuneration and budget negotiations that are undertaken by the self-governance partners (SHI-funds and providers) themselves. A budgeting process (setting budgets for expenditure items) as known from state-led systems (e.g. UK) does not exist in the German SHI. In the Netherlands, private health insurers play a key role in the system, which is to a high degree based on competition of payers.

Regional or municipal levels of government play also a key role in budgetary processes in a number of countries. These are Austria, Denmark, Germany, Italy, Portugal, Spain, Sweden and the UK. Often, these are countries with a more strongly developed component of decentralised health systems, where part of health care expenditure is controlled by sub-national agents/governments. Tightly linked to regional autonomy is the need for accountability or budgetary responsibility. Local governments can have autonomy to various degrees to decide and offer public services, and direct access to taxation. On the other hand, local governments should be made responsible for the management of resources. A tool of budgetary discipline is offered by local/sectorial budget ceilings, for instance, which are more or less strong depending on the stringency of the budget. In Italy, for instance, the so-called Health Pact defines the overall level of funds to be allocated to the health sector. A strict budget is also defined annually for the regions for the sector as a whole and for sub-sectors. The central government, through the Ministry of Health and the Ministry of Economy, monitors regional financial management and has sanctioning powers towards those regions running a deficit, leading to specific recovery plans with stringent obligations on the part of the regions. In the UK there is also a strict health budget defined annually by country and for different sub-sectors.

As mentioned above, budgeting officials have a range of tools available to ensure sound budgetary planning and execution in health. These can be broadly grouped into:

- planning and monitoring tools, such as expenditure forecasts, revenue forecasts and the use of multiannual budgeting based on projections of spending/revenue, monitoring of regional health care expenditure and early warning mechanisms for budget overruns;
- tools setting budgetary constraints, such as spending targets and ceilings;
- tools aiming at the quality of health care spending, such as use of performance based budgeting and spending reviews;
- tools dealing with unexpected increases in health expenditure, such as budget buffers, automatic stabilisers applying automatic cuts/increases to spending linked to revenue;
- tools defining the financing mix, such as health financed via the state budget, earmarked taxes and social contributions to health care.

Budgetary planning for health care expenditure in the EU countries is based on forecasted expenditure and revenues in most EU Member States. Also, multiannual budgeting seems to be the standard in all EU Member States. In many Member States this exercise is done jointly by multiple stakeholders, which seems important in the case of health care, as projections of expenditure typically depend on health care spending drivers, and it requires input from health system experts. However, from the survey it is not clear to what extent these projections ultimately are taken into account in the process of budget definition nor what the quality of the forecasting exercise is. Naturally, these projections will include a considerable degree of uncertainty, which is compounded by the time lags related to health care policy reforms, which are difficult to predict and often taken many years. Regional expenditure is monitored in all EU countries, which have more decentralised spending of health care.

Early-warning mechanisms for budget overruns are used in roughly more than half of all EU countries. This allows countries to more closely monitor the evolution of health expenditure through the year, and warn authorities when the risk of breaching a target is elevated. However, the usefulness of an early-warning mechanism depends on the availability of timely and comprehensive data from at least the most important sectors of care, such as inpatient care and outpatient pharmaceutical care. This in turn requires more sophisticated electronic monitoring system linking provision of care with financial data, which is a challenge in many health care systems. Thus, currently mostly, but not exclusively lower income countries report that a formalised early warning mechanism is not available (CZ, DE, EE, ES, LV, LT, PL, PT, SK and FI) ([66]).

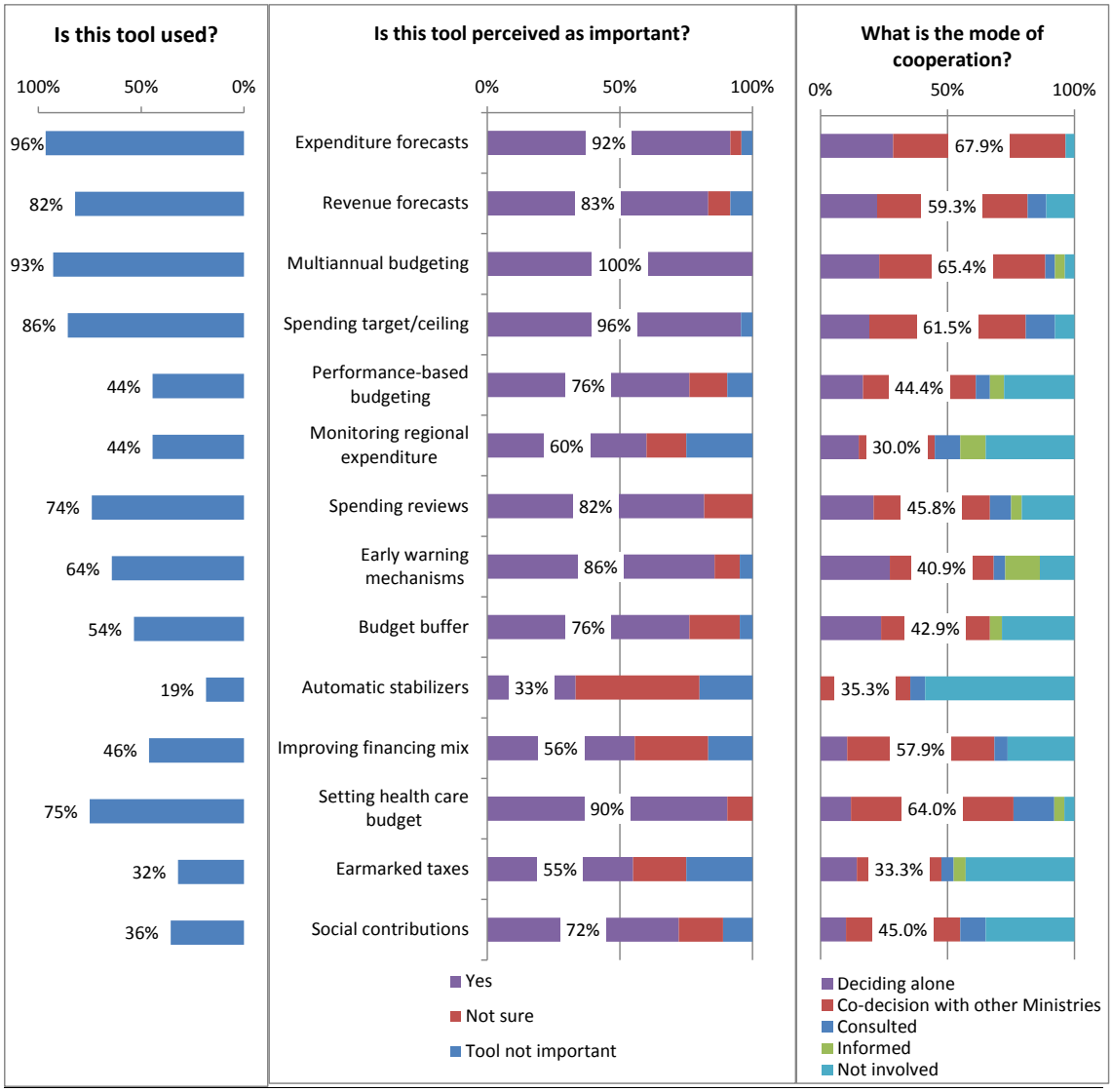
As a tool of governance, spending targets and ceilings on health are used in most countries at various levels to promote accountability in public spending. The only countries that report not having spending targets/ceilings are the Czech Republic, Germany, Finland and Slovakia. In Germany an explicit target/ceiling is not defined, as the budgetary process is in hands of a corporatist system, as described above. Spending targets/ceilings seem particularly important in health care, which is characterised by frequent budget overruns (see Section 3.2). Typically, spending targets/ceilings will be prioritised more on the grounds of fiscal targets of public expenditure rather than based on the health needs of the population. In Austria there are ceilings on health expenditure by the social security system and states. In Denmark, since 2014, all government spending is subject to real expenditure ceilings and a change in the ceilings for sub-national governments is compensated by an equivalent change in the budget ceiling for central government expenditure. In Slovenia, Poland and in Romania, the expenditure ceiling for the national insurance fund consists of an overall ceiling and ceilings by categories of health services (with some exceptions such as cancer care in the case of Slovenia). Belgium has introduced a "growth norm" to restrict the annual maximum increase in total health expenditure. Previously set to 3% in 2013 and 2014, it was lowered to 1.5% from 2015 onwards. Similarly, the Netherlands has a growth norm in certain healthcare sectors, agreed with healthcare stakeholders in covenants, which has been lowered from 2.5 in 2012 and 2013 to 1% from 2014 onwards.

Performance based budgeting and spending reviews are perceived as important tools for improving the quality of health care spending, and could be used in more EU Member States. Performance-based budgeting links funding to expected results and can guide budgeting authorities how to increase the quality of public spending. Performance based budgeting is not used in EE, IE, EL, IT, CY, LU, MT, NL, PL, PT, SI, CZ, DE, SK and FI. Spending reviews redefine the distribution of funds across different policy areas aiming at improving the quality of spending. Such reviews are currently not undertaken in BG, ES, EE, CY, PL, CZ and DE. A key question is whether countries that have spending reviews, put them also in practice, but this was not explored in this survey.

Tools dealing with unexpected increases in health expenditure are used more rarely than other budgetary tools. Budget buffers withholding a portion of anticipated spending against the risk of a budget overrun are available in half of the EU Member States only. They are, however, perceived as important by more countries, indicating that their use could and should be expanded. Automatic mechanisms which reduce/increase the allocation to health care proportionally to the available funding are rather an exception. They are reportedly used by LT, LU, DK, IT and PL. In LU the sickness funds are obliged to maintain a reserve of between 10% and 20% of the total planned expenditure. In case of full use of such reserves, an alarm device is activated to set specific actions. Also in the case of BE are held financially accountable for 25% of any discrepancy between their actual spending and the so-called normative, i.e. risk-adjusted, health expenditure. They are closely monitored throughout the year to see if there are any discrepancies and, should there be any, adopt the necessary measures. They are, overall, also not perceived as important by many Member States. While using automatic stabilisers should guard the budget against overruns (at least to some degree, depending on how they are applied), they may be a

([66]) It should be noted that these countries may instead monitor expenditure in a non-formalised manner.

Graph 3.6.1: **Budgeting practices for health care in the EU**



(1) AWG questionnaire on health budgeting practices and information submitted by national authorities.
Source: Commission services (DG ECFIN).

blunt tool, as they are delinked from the actual reasons, which may have triggered overruns, such as e.g. higher health needs of the population.

Reportedly, only half of the EU Member States seek to improve the financing mix for health care. This may be suboptimal in view of the importance of revenue raising and collection for attaining system goals, such as equity and financial protection. Health systems need stable and predictable revenues if feasible, and the revenue mix is an important determinant of the sustainability of the system determining the size and stability of funding. There are several options that can support revenue generation including giving higher priority to health care by increasing government budget transfers; increasing the revenue from contributions and increasing the revenue from taxation. The perceived importance of these tools relatively to their actual use is high. This indicated untapped potential to increasing fiscal sustainability of health care systems by activating policies to improve health care financing.

As indicated before, different ministries and authorities cooperate on putting sound budgeting practices into effect (Table 3.6.1 and Graph 3.6.1). When specific tools are used, co-decision is reported as the most frequent mode, followed by deciding alone. While this may increase the administrative complexity, it reflects that budgeting is a multidimensional challenge that requires informative input from expert from the several domains, including the fiscal and health domains. Still, in many cases, the authority in charge is deciding alone. The reason why co-decision is more prevalent with one policy tool than with another is not self-evident, and is not explored in this survey. The modes of cooperation most probably depend on the historically determined institutional set-up of governance.

3.7. HEALTH SERVICE PROVIDERS

Health workforce

Health systems are highly labour-intensive, more than many other sectors of society, so that health professionals are vital to the provision of health services and goods. As a result, the sources of pressures identified in Chapter 2 (ageing, technology developments, patient expectations, globalisation, health behaviour) have implications for the health workforce as they can change the way care is delivered.

Table 3.7.1: **Number of practising physicians per 100000 inhabitants**

	2003		2013	
Belgium	286		295	
Bulgaria	360		398	
Czech Republic	353		369	
Denmark	308		362	(2)
Germany	337		402	
Estonia	316		328	
Ireland	272	(1)	269	
Greece	474		629	
Spain	324		381	
France	:		310	
Croatia	244		303	
Italy	:		390	
Cyprus	260		322	
Latvia	279		319	
Lithuania	363		428	
Luxembourg	238		281	
Hungary	325		321	
Malta	:		346	
Netherlands	262		329	
Austria	411		499	
Poland	243		224	
Portugal	267		337	
Romania	199		264	
Slovenia	225		263	
Slovakia	315		:	
Finland	256		302	
Sweden	338		401	(2)
United Kingdom	218		277	
European Union	294		343	
Euro Area	328		374	
European Union (median)	297		322	
EU15 (median)	297		329	
EU13 (median)	297		322	

(1) 2006; (2) 2012.
Source: Eurostat and OECD health data and Commission services (DG ECFIN) computations.

Table 3.7.2: **Number of general practitioners (GPs) per 100000 inhabitants**

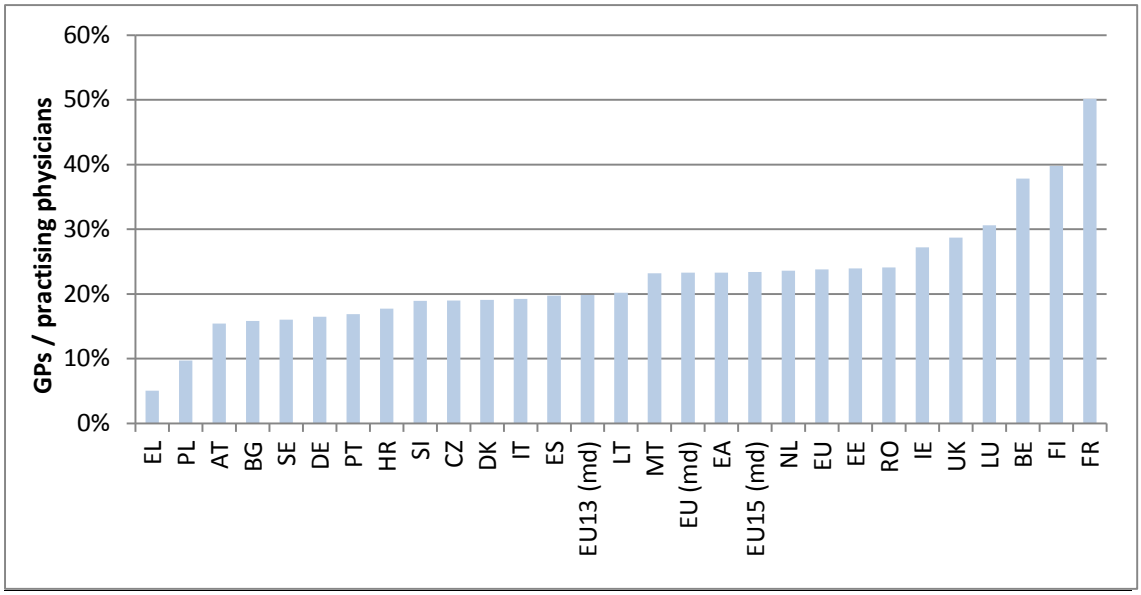
	2003		2013	
Belgium	119		112	
Bulgaria	69		63	
Czech Republic	73	(1)	70	
Denmark	65		69	(3)
Germany	66		66	
Estonia	66		79	
Ireland	51		73	
Greece	26	(1)	32	
Spain	71	(1)	75	
France	164		155	
Croatia	:		54	
Italy	82		75	
Cyprus	41		:	
Latvia	45		:	
Lithuania	65		86	
Luxembourg	78	(1)	86	
Hungary	:		34	(4)
Malta	:		80	
Netherlands	64		78	
Austria	75		77	
Poland	12		22	
Portugal	45		57	
Romania	67	(2)	64	
Slovenia	38	(1)	50	
Slovakia	:		:	
Finland	:		120	
Sweden	57		64	(3)
United Kingdom	68		80	
European Union	80		80	
Euro Area	95		89	
European Union (median)	66		75	
EU15 (median)	67		77	
EU13 (median)	55		64	

(1) 2005; (2) 2004; (3) 2012; (4) 2010.
Source: Eurostat and OECD health data and Commission services (DG ECFIN) computations.

Health professionals need to constantly acquire new skills (technical skills, to adapt to new technology). They need to adapt to the fact that a larger share of patients may be better informed and more demanding than in previous decades and that societies have become more diverse. They also need to gain a better understanding of the social determinants of health and of evidence-based care ([67]).

([67]) See e.g. the 2006 European Observatory of Health Systems and Policies "The health care workforce in Europe" and "Human resources for Health in Europe"; the 2008 Commission Green Paper "On the European workforce for health".

Graph 3.7.1: **Share of GPs in the total number of practising physicians**



2013 or latest available data.
Source: Commission services (DG ECFIN) computations based on Eurostat and OECD health data. Averages are population weighted with the observations available for each year.

In addition, the health workforce who has typically worked along non-standard working patterns (e.g. shift work, night hours) is aspiring to a better work-life balance while countries have to abide by the provisions of European Law related to working time, working conditions and the removal of many barriers to professional mobility in the EU.

As health systems are labour-intensive, improving the cost-effectiveness of health systems is strictly related to creating and maintaining an efficient, effective, committed and motivated workforce. Lack of staff and/or inadequately trained staff (also brought about by migration, or an uneven geographic distribution of staff) and unbalanced skill-mix, can create difficulties in ensuring an effective and cost-effective delivery of services or an equitable access to care. Numbers of staff and skill-mix need to be in line with the policy goals set for the system. For example, if countries wish to encourage the use of primary care as a means to ensure cost-effective provision of services, as most countries now emphasise, then measures have to be implemented to guarantee sufficient numbers and good geographic distribution of trained and practising primary care physicians and nurses.

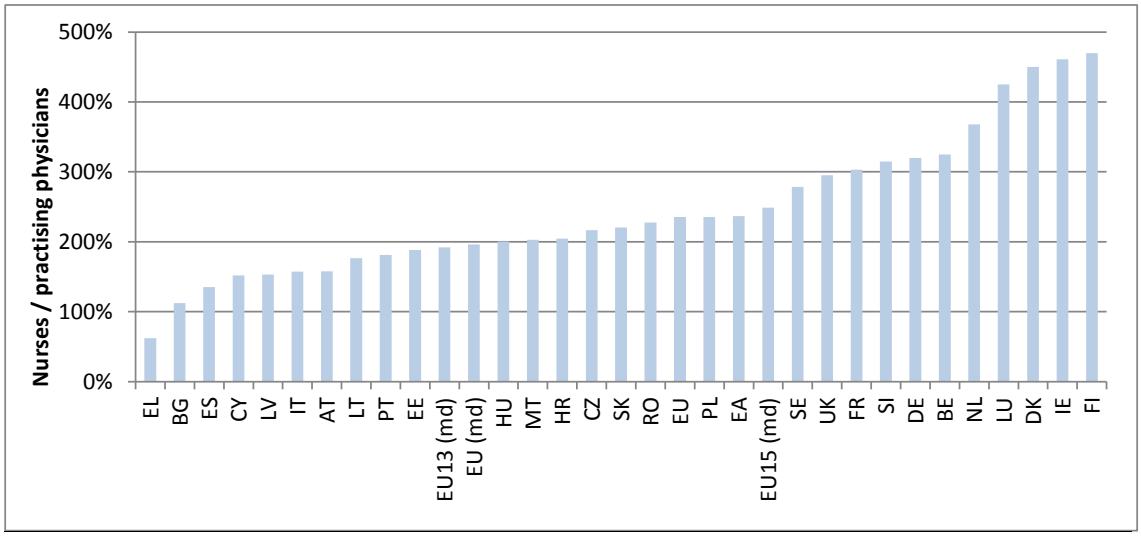
Numbers of physicians and nurses

Practising physicians

Available data suggests that **the number of practising physicians (including General Practitioners plus specialists) per 100,000 inhabitants** has increased significantly for the whole of the EU since 2003 (294 vs. 344 in 2013), although different patterns are registered across countries (see Table 3.7.1). EL, UK, PT, NL show the largest proportional increases in the figure over time. In the UK, for example, changes in the type of remuneration and wage increases have been used to attract licensed but not-practicing physicians back into the sector. PL and HU, on the contrary, recorded decreases in the number of practising physicians per 100,000 inhabitants. Depending on the country, the evolution in these numbers may be related to staff moving to other sectors, or other countries, or to a change in population due migration.

The number of practising physicians per 100,000 inhabitants differs considerably across countries, from 224 in Poland to 629 in Greece. A number of countries have a relatively low number and/or report shortages in the total number of practising physicians per 100,000 inhabitants: Poland with

Graph 3.7.2: **The ratio of practising nurses and midwives to practising physicians**



2013 or latest available data.
Source: Eurostat and OECD health data and Commission services (DG ECFIN) computations.

less than 225; Slovenia and Romania with less than 265; UK, Ireland and Luxembourg with about 280 physicians compared to an EU average of about 344. Note that some countries (NL, IE, EL, FR, SK and PT) do not report information on the number of practising physicians, although NL, IE, EL, FR and SK report the number of professionally active physicians, which is used as a proxy.

General practitioners (GPs)

General Practitioners (also known as "family doctors") are medical generalists who provide primary health care to the population. The number of general practitioners (GPs) per 100,000 inhabitants in the EU as a whole is relatively flat in terms of population-weighted average, but in terms of median it shows a consistent increase over time, from about 66 in 2003 to 75 GPs per 100,000 inhabitants in recent years (see Table 3.7.2). This is probably due to countries with large populations showing small increases (Germany) or decreases (France, Italy). Again, different trends can be observed across countries. The largest proportional increases are registered by Poland (albeit from a very low base), IE, LT and SI. Meanwhile, IT, BG, BE, FR and CZ all registered falls in the number.

The number of general practitioners (GPs) per 100,000 inhabitants varies significantly across countries: from 22 in Poland to 155 in France.

The share of GPs as a percentage of all practising physicians (EU average of 24% in 2013, the latest available year), shown in Graph 3.7.1, varies considerable across EU countries, from 50% in France ([68]) and 40% in Finland down to 10% in Poland and 5% in EL. Some countries have a relatively low number of practising GPs: in EL, PL, AT, BG, SE, DE, PT, HR, SI, CZ, DK and IT, GPs constitute less than 20% of all doctors. A low share of GPs may be of relevance if countries wish to implement a primary care-led system and a referral system from primary to specialist and hospital care, which requires sufficient numbers of GPs (as well as an adequate skill-mix). In some of these countries the number of GPs would nonetheless have to be complemented with the number of paediatricians (who work as family doctors for children) to obtain a better picture of primary care physicians vis-à-vis other physicians. This is important in assessing the gatekeeper's role of primary care.

A number of countries report relatively low numbers, or even shortages of physicians, including GPs, in certain geographic areas, especially rural, remote or less populated areas. In a number of countries recruitment of health staff is often decentralised with some regions, municipalities or hospitals finding it more difficult

([68]) As a share of professionally active physicians.

to recruit staff than others. Relatively low numbers of GPs vis-à-vis other physicians or relatively low presence in some geographic areas may result in long-waiting times for GP consultations. This, often in combination with limited access to primary care after office hours, makes patients seek specialist and emergency care also when not necessary (i.e. in presence of common illnesses), or private sector doctors at a cost to the patient. This can result in additional costs, for example through unnecessary consultations or unnecessary medical tests or the duplication of medical tests. It is also possible that demand for healthcare is higher in some countries not necessarily due to need (ill-health) but due to cultural habits and expectations, sometimes coupled with the absence of any cost-sharing. Consultations per capita indeed vary substantially across the EU (see Section 3.9). High demand compared to supply can also lead to long waits and patients going straight to emergency departments, again raising costs to the system.

Practising nurses and midwives

Available data suggests that the **number of practising nurses and midwives per 100,000 inhabitants** has increased significantly for the whole of the EU since 2003 (769 vs. 813 in 2013), although different patterns are registered across countries over this period (see Table 3.7.3) NL, PT, MT, LU and HR saw the largest proportional increases, whereas UK, SK, ES, EE and EL saw falls over this period.

The number of practising nurses and midwives per 100,000 inhabitants varies from a very low 390 in Greece to around 1200 or more in DE, IE, NL and LU. Some countries report a relatively low number of practising nurses and midwives per 100,000 inhabitants: Bulgaria and Greece with less than 450 nurses, followed by Latvia and Cyprus with around 490.

In addition, data show that the ratio of practising nurses and midwives to practising physicians varies substantially across countries: from 4.7 times in Finland, 4.6 in Ireland and about 4.5 in Denmark, down to 0.6 in Greece, 1.1 in Bulgaria and 1.4 in Spain (see Graph 3.7.2). Differences in statistics in this respect reflect another dimension of the skill-mix imbalance across health staff, but also differences in task attributions among doctors and nurses and midwives across different countries.

Table 3.7.3: **Number of practising nurses and midwives per 100000 population**

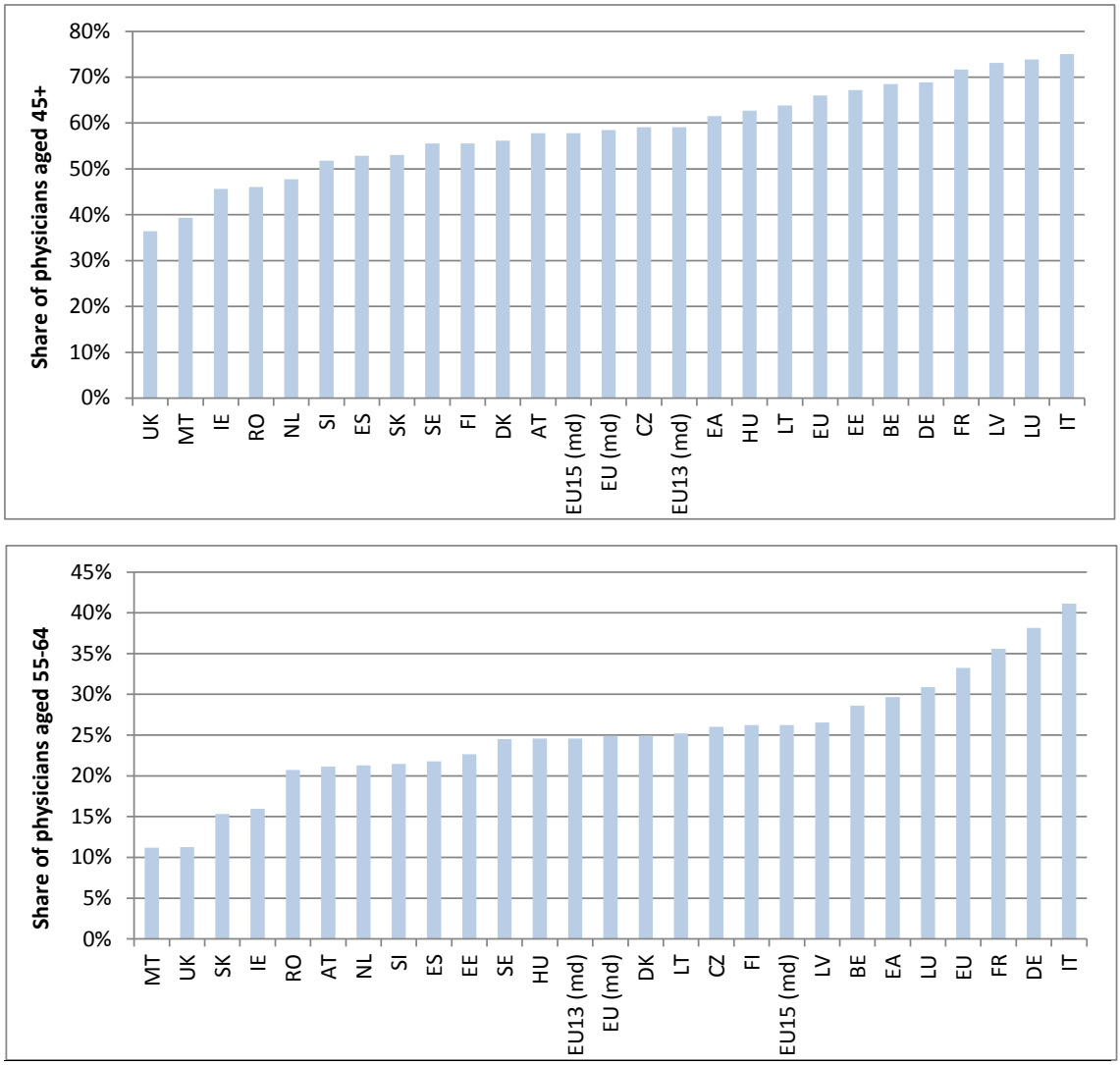
	2003		2013	
Belgium	854	(1)	951	(2)
Bulgaria	379		447	
Czech Republic	797		799	
Denmark	1358		1630	(2)
Germany	1095		1284	
Estonia	621		617	
Ireland	1246	(1)	1240	
Greece	429		390	
Spain	431		514	
France	743		940	
Croatia	470		621	
Italy	:		614	
Cyprus	425		492	
Latvia	464		488	
Lithuania	724		755	
Luxembourg	894		1193	
Hungary	577		643	
Malta	519		702	
Netherlands	812		1210	
Austria	720		787	
Poland	475		527	
Portugal	419		610	
Romania	528		601	
Slovenia	735		827	
Slovakia	680		580	
Finland	1213	(1)	1412	(2)
Sweden	1041		1115	(2)
United Kingdom	1003		818	
European Union	767		813	
Euro Area	768		880	
European Union (median)	651		632	
EU15 (median)	812		818	
EU13 (median)	528		617	

(1) 2004 ; (2) 2012.
Source: Eurostat and OECD health data and Commission services (DG ECFIN) computations.

In some countries, a more diverse skill-mix, where nurses prescribe medicines and undertake some of the roles traditionally carried out by doctors, is the norm ([69]). However, in other health systems, flexibility in assigning tasks or even creating teams, is hindered by tradition in the medical

([69]) As an example, Slovenia has introduced a system of family medicine "model practices", which includes the role of registered nurse, whose tasks include screening for chronic disease risk factors and preventive counselling, as well as the care coordination of all registered patients with stable chronic diseases, such as diabetes.

Graph 3.7.3: **Share of physicians aged 45+ and 55-64 in percentage of total physicians**



2013 or latest available data.
Source: Eurostat and OECD health data and Commission services (DG ECFIN) computations.

profession, legal barriers (what a nurse is or can do being laid down in national legislation), perverse incentives in the reimbursement system (e.g. doctors receiving fees for flu immunisation), and trade union distrust (delegation of tasks without commensurate remuneration).

Ageing of the health workforce

Population ageing is expected to increase the demand for health related goods and services. At the same time it can affect the provision of health services and goods if it shrinks the pool of workers available to the sector vis-à-vis a growing demand. Shrinking health staff due to ageing can become a policy challenge, exacerbated by the fact that the education of new doctors can take years so that it may be difficult to respond to staff shortages in the short term.

Available data (see Graph 3.7.3) indicate that, on average, in the EU almost 60% of physicians have more than 45 years. Again there is some variation across the EU: the figure reaches 75% in Italy, 74% in Luxembourg, 73% in Latvia, and 72% in France and it is still above 60% in HU, LT, EE, BE and DE, while being lower than 50% in UK, MT, IE, RO and NL.

Table 3.7.4: **Medical graduates per 100000 inhabitants**

	1980	1985	1990	1995	2000	2005	2010	2011	2012	2013	2014	
Belgium	:	:	:	11	10	7	9	10	11	11	11	Belgium
Bulgaria	:	:	:	:	:	:	:	:	:	:	:	Bulgaria
Czech Republic	14	14	9	13	8	10	14	14	15	13	:	Czech Republic
Denmark	12	11	10	6	11	21	22	21	19	18	20	Denmark
Germany	:	:	:	13	11	11	12	12	12	12	:	Germany
Estonia	18	17	13	11	5	8	11	9	11	11	:	Estonia
Ireland	14	12	12	13	14	14	17	16	17	20	:	Ireland
Greece	12	9	:	13	:	13	:	:	9	:	:	Greece
Spain	21	20	13	12	10	9	9	9	10	10	:	Spain
France	16	15	9	8	6	5	7	9	9	:	:	France
Croatia	:	:	:	:	:	:	:	:	:	:	:	Croatia
Italy	25	23	18	12	12	11	11	11	11	11	:	Italy
Cyprus	:	:	:	:	:	:	:	:	:	:	:	Cyprus
Latvia	:	:	:	:	:	:	:	:	:	:	:	Latvia
Lithuania	:	:	:	:	:	:	:	:	:	:	:	Lithuania
Luxembourg	:	:	:	:	:	:	:	:	:	:	:	Luxembourg
Hungary	:	9	9	10	9	11	10	12	14	15	:	Hungary
Malta	:	:	:	:	:	:	:	:	:	:	:	Malta
Netherlands	:	10	10	8	9	11	14	15	15	14	:	Netherlands
Austria	15	20	18	13	19	19	18	17	14	:	:	Austria
Poland	9	10	9	11	6	6	8	9	9	10	:	Poland
Portugal	:	9	5	4	6	7	12	12	13	14	:	Portugal
Romania	:	:	:	:	:	:	:	:	:	:	:	Romania
Slovenia	8	4	7	8	5	8	11	10	13	12	:	Slovenia
Slovakia	14	9	8	13	11	10	11	11	11	13	:	Slovakia
Finland	13	9	9	14	8	6	11	12	15	11	13	Finland
Sweden	10	10	8	9	9	9	10	11	12	10	:	Sweden
United Kingdom	:	:	6	7	8	11	14	13	14	13	:	United Kingdom
European Union	19	17	11	10	9	10	11	11	12	12	14	European Union
Euro Area	20	17	13	11	10	10	11	11	11	12	9	Euro Area
European Union (median)	14	10	9	11	9	10	11	12	12	12	:	European Union (median)
EU15 (median)	14	11	10	11	10	11	12	12	13	12	:	EU15 (median)
EU13 (median)	14	10	9	11	7	9	11	10	12	12	:	EU13 (median)

Source: OECD health data and Commission services (DG ECFIN) computations.

The share of physicians aged 55-64 varies from 11% in Malta and the UK and 15% in Slovakia to 41% in Italy and 38% in Germany. This means that a non-negligible share of physicians may be retiring in the next 10 years, potentially reducing the pool of practising physicians if retirement is not compensated by training and recruitment strategies. To address this challenge, several countries have been increasing the intake of students by medical schools and as a consequence have seen the number of young recruits and the share of younger physicians increase since 2000 (see Table 3.7.4).

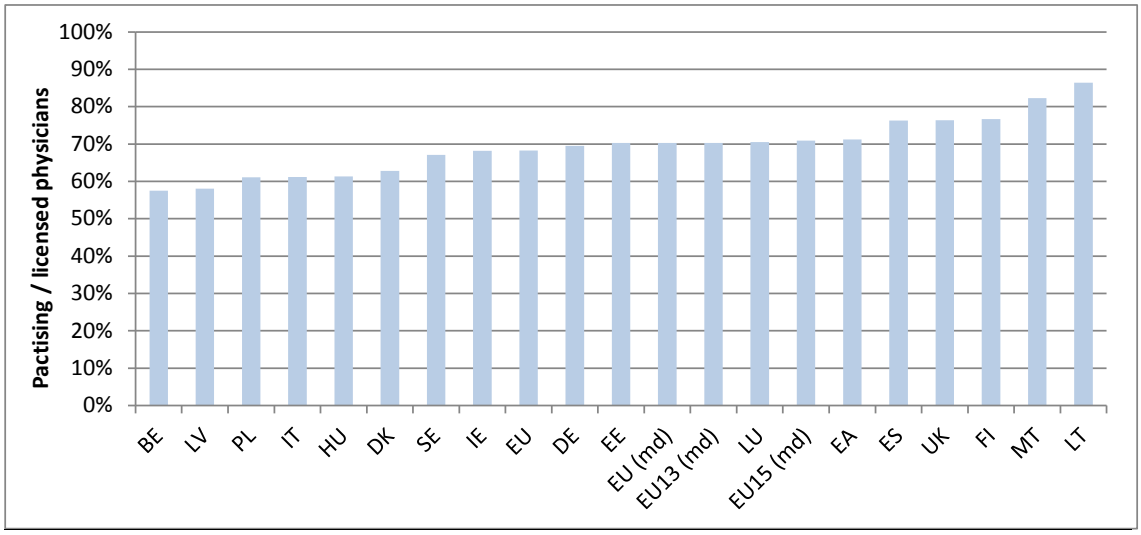
In some countries, possible future shortages due to ageing may be reinforced by staff migration to other countries that are also in need of qualified staff and provide higher wages compared to the country of origin. Indeed, several countries pursue an active policy to recruit foreign workers, a reasonable policy from the receiver's point of view. In some cases, this may also have had non-negligible cost implications for the country, through higher wages in the sector. This policy can also have had negative consequences on the countries of origin of the migrating health workforce, triggering or reinforcing staff shortages in the sector.

Licensed vs. practising physicians

To better understand the reasons behind possible relatively low numbers of practising personnel, we need to look at both licensed and practising staff numbers.

The difference between practising and licensed physicians is on average high in the EU context (Graph 3.7.4: the EU median is 70%, ranging from 86% in Lithuania to 58% in Belgium. Explanations put forward for the differences observed include: 1) the presence of pharmaceutical companies in a given Member States may account for justifiable number of non-practising physicians (whose skills are used in industry); and/or 2) the absence of ancillary professions might explain the higher demand for physicians in government/insurance/industry.

Graph 3.7.4: **Ratio of practising to licensed physicians**



2013 or latest available data.
Source: Commission services (DG ECFIN) computations based on Eurostat and OECD health data.

Providers' status

Countries differ in the way General Practitioners (GPs) and specialists provide services under public coverage, independently of whether Member States have national health services, local health services or compulsory social health insurance. A large number of combinations are observed (see Table 3.7.5).

In several countries (AT, BE, FR, DE, EL, NL, PL, LU, SK), GPs and outpatient specialists are mostly independent self-employed individuals working in their own individual private practices (BE, DE, EL, FR, LU, AT, SK for GPs, BE, DE, EL, FR, LU, AT, PL, SK for specialists) or group private practices (NL, PL for GPs, NL for specialists) and contracted by funds, private health insurers or hospitals to provide services under the public benefits basket.

In some other countries (CZ, DK, EE, IE, IT, UK) GPs are independent self-employed individuals working in their own individual (CZ, EE) or group (DK, EE, IE, UK, IT) private practices and contracted by funds or given budgets (UK) to provide services under the public benefits basket. However, in contrast with the group of countries described in the paragraph above specialists mostly work in outpatient departments in public hospitals.

Yet in other countries (ES, HU, PT, SI, FI, SE), GPs work mainly in publicly owned health centres and less often as independent self-employed individually working in their own private practices and contracted to provide services under the public benefits basket, while most specialists work in outpatient departments in publicly owned hospitals or public centres.

In addition many countries have private provision for privately paying patients in a combination of settings: private individual or group practices, clinics and polyclinics, private hospitals.

Hospital beds

Another aspect of the provider landscape relates to the density of hospital beds. For the EU as a whole the number of acute care beds per 100,000 inhabitants has fallen significantly and consistently since 2003 (412, down to 367 in 2013). This trend is visible for all Member States, with the exception of BG, EL and HR, where there has been an increase. However, there are still large differences across EU countries: the number of beds varies from less than 200 beds per 100,000 inhabitants in Sweden to more than 500 beds in BG, DE, LT and AT. In general, high numbers of acute care beds reflect a tradition of using hospital care and in particular hospital inpatient care as the main care setting for many health interventions. This is a

Table 3.7.5: **Predominant modes for the provision of primary care and outpatient specialist services**

Country	Q27. Predominant mode of provision for primary care services	Q27. Second predominant mode of provision for primary care services	Q28. Predominant mode of provision for outpatient specialists' services	Q. 28 Second predominant mode of provision for outpatient specialists' services
Belgium	private solo practices		private solo practices	public hospital
Bulgaria				
Czech Republic	private solo practices		public hospital	
Denmark	private group practices (various health professionals)	private solo practices	public hospital	private solo practices
Germany	private solo practices	private group practices (physicians only)	private solo practices	private group practices
Estonia	private solo practices	private group practices (various health professionals)	public hospital	
Ireland	private group practices (various health professionals)	public hospital	public hospital	
Greece	private solo practices	public clinics (various health professionals)	private solo practices	private group practices
Spain	public clinics (various health professionals)		public hospital	
France	private solo practices		private solo practices	
Italy	private group practices (physicians only)	private solo practices	public hospital	public group clinics
Cyprus				
Latvia				
Lithuania				
Luxembourg	private solo practices	private hospital	private solo practices	public hospital
Hungary	public clinics (various health professionals)		public centres	public group clinics
Malta				
Netherlands	private group practices (various health professionals)		private group practices	private hospital
Austria	private solo practices		private solo practices	public hospital
Poland	private group (various health professionals)	public clinics (various health professionals)	private solo practices	public group clinics
Portugal	public clinics (various health professionals)		public hospital	
Romania				
Slovenia	public clinics (various health professionals)	private solo practices	Public hospital	private solo practices
Slovakia	private solo practices		private solo practices	
Finland	public clinics (various health professionals)		public hospital	
Sweden	public clinics (various health professionals)		public hospital	
United Kingdom	private group (various health professionals)		public hospital	

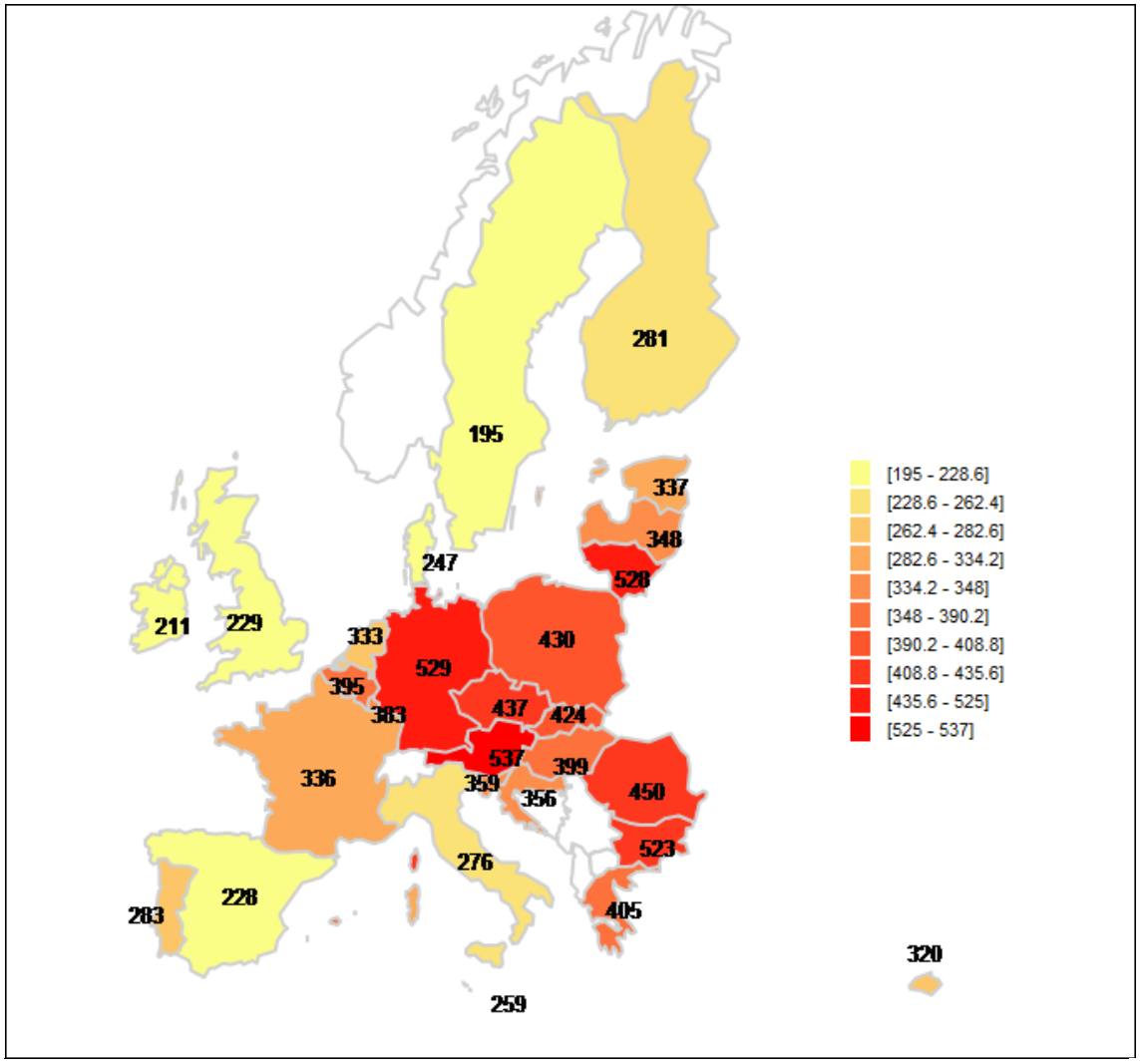
Source: Adapted from "OECD Health Committee Survey on Health System Characteristics 2012".

tradition that most Member States are now trying to change. On the other hand, low numbers of acute care beds may either reflect high efficiency in secondary care or, in some cases, under-provision.

Dual practice (i.e. the fact that public sector doctors are allowed to conduct private practice in public hospital settings or in their own facilities after public office hours), as shown in Table 3.7.6 is allowed in a number of countries (e.g. BE, CZ, DK, FR, IT, SK, FI, UK) with no additional conditions and in another set of countries in some specific circumstances (DE, EL, ES, NL, AT, PL, PT, SI). Finally, it is not allowed at all in Luxembourg or Sweden. When dual practice takes place, it may contain a number of "perverse" incentives which may result in public sector inefficiency. Doctors may have an incentive to reduce public activity or at least not conducting it to the maximum possible so as to increase demand for their private practice. It can also increase costs for the public sector, depending on how costs of using the same facilities are shared. This is particularly the case if dual practice is associated with:

- salary remuneration in the public sector (so that doing less does not translate in lower wages);
- fee-for-service in the private sector (with fee-for service encouraging higher activity as explained below);
- duplicative private insurance (private insurance that covers the same goods and services as the

Graph 3.7.5: **Acute care beds per 100,000 inhabitants (2013 or latest year)**



2013 or latest available data.
Source: OECD, WHO, EUROSTA data plus Commission services (DG ECFIN) internal calculations.

primary coverage) so that patients do not pay the full costs of pursuing private treatment.

- It is also possible that dual practice in public hospitals, rather than in private offices of physicians, provides extra revenues for hospitals and an additional income for physicians, while reducing the possibilities for informal work and tax evasion. This is the case if dual practice in public hospitals is strongly regulated (working hours, appointments, number of patients, staff remuneration and hospital organisation).
- Some of the above countries (PT, IE, FI, UK) have implemented a number of policies to try to counteract the perverse incentives of dual practice. One measure is to have doctors choosing between types of contracts, which involve either higher public wages and exclusive assignment to the NHS or a lower salary, associated with fewer working hours or even part-time for the public sector, allowing conducting private practice. A slightly different strategy is to have doctors that conduct private practice making an extra shift when not pursuing NHS practice only. Finally, as in Finland, in some countries public sector GPs can only work at the same time in the private

sector if granted permission by the public primary care authorities.

Table 3.7.6: **Dual practice in hospital acute care**

Country	Q35. Is dual practice allowed for inpatient specialists?
Belgium	Yes, always
Bulgaria	
Czech Republic	Yes, always
Denmark	Yes, always
Germany	Yes, but in some circumstances only
Estonia	
Ireland	
Greece	Yes, but in some circumstances only
Spain	Yes, but in some circumstances only
France	Yes, always
Italy	Yes, always
Cyprus	
Latvia	
Lithuania	
Luxembourg	No
Hungary	
Malta	
Netherlands	Yes, but in some circumstances only
Austria	Yes, but in some circumstances only
Poland	Yes, but in some circumstances only
Portugal	Yes, but in some circumstances only
Romania	
Slovenia	Yes, but in some circumstances only
Slovakia	Yes, always
Finland	Yes, always
Sweden	No
United Kingdom	Yes, always

Source: Adapted from "OECD Health Committee Survey on Health system characteristics 2012".

3.8. ACCESS TO CARE AND QUALITY OF CARE

Background

Access to health care refers to the capacity of a health system to reach the population, without excluding part of it from receiving health care services. A necessary condition for good access to care is that a large proportion of the population is covered by the health system. Coverage is relatively high in most EU countries, although in some cases it can be an issue, as discussed in more detail in Section 3.3.

There is evidence that, despite most European countries having legislated universal health coverage, individuals with specific characteristics (low income, immigrants, unemployed and/or female) are more likely to feel unable to access care (Cylus and Papanicolas, 2015). An indicator frequently used to reveal barriers in access to health care is patient self-reported unmet needs for care based on surveys. Reasons given for not receiving a health examination (used as a proxy for all types of health care) include: excessive treatment costs, long waiting times, or having to travel too far to receive care (Graph 3.8.1). According to this indicator, in around 80% of all EU countries, less than 6% of the population reported unmet need for care. However, this is balanced with much higher proportions of people reporting unmet need for health care in countries like LV, EE, EL and RO. The most common barriers for access to healthcare were reported to be related to patients' inability and/or unwillingness to pay medical goods and services (particularly in LV, EL and RO), while in some countries waiting times (particularly in EE, LV, PL and LT) or, to a lesser extent, travelling distance were critical (particularly in HR, EE, BG and RO). Waiting times and travelling barriers could be signs of an access to healthcare that is also constrained by insufficient availability of healthcare infrastructure and health workforce, as well as inadequate spatial distribution or poor management of resources. The fact that unmet need for health care is self-reported means that comparisons across countries should be performed with caution ([70]).

Affordability

One way of contextualising unmet need for care is to look at the difference between the unmet need expressed by people on the lowest income quintile versus the highest (Graph 3.8.2**).** Indeed, this difference seems to be significantly higher for countries with high reported unmet need for health care. The fact that the self-reported unmet need for care is related to income suggests that there is worse access to health care for relatively poor people, whether that is due to inability to pay co-payments, travel, or other issues.

This indicator of unmet medical needs should also be contextualised by objective measures of the use of an expenditure on healthcare, such as the level of public, private and "out of pocket spending" on health care. These variables also provide information related to the financial protection of the population against the risks of ill-health, as well as on the actual use of health services.

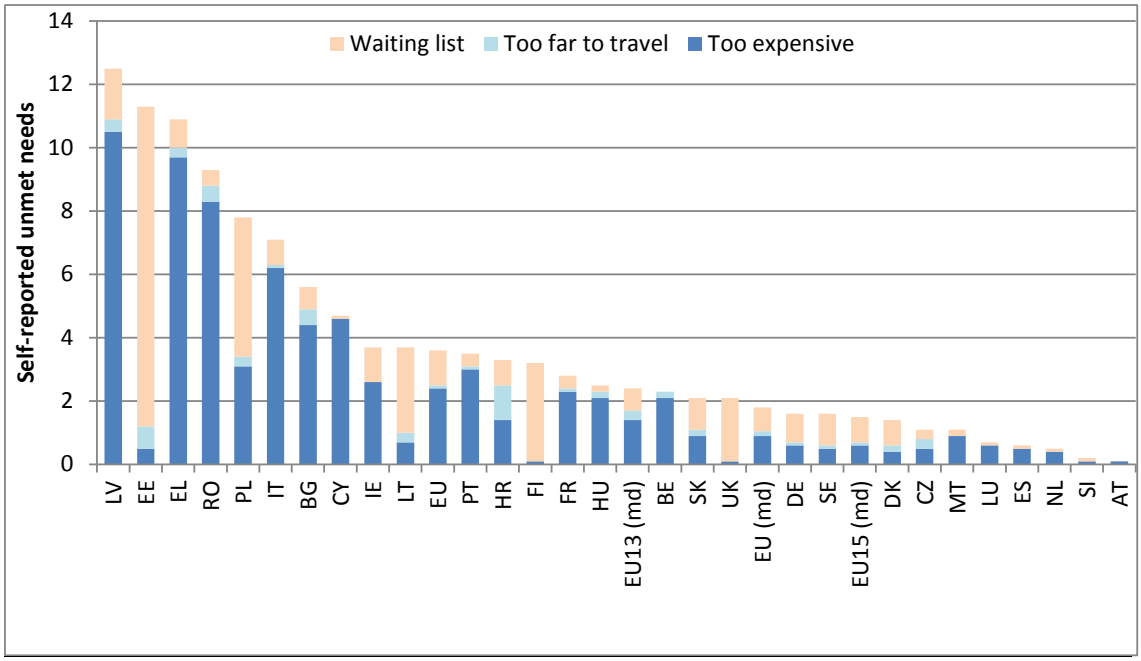
Out-of-pocket expenditure is affected by the co-payments as part of public statutory health insurance (discussed in more detail in Section 3.3), but also by a range of other factors that are more difficult to control, such as patient choices to use private health providers, purchase treatments not covered by the public sector or even choose originator medicines rather than cheaper generic medicines.

Graph 3.8.3 shows that the correlation between high out-of-pocket expenditure on health care and the quintile difference in self-reported unmet need for health care of the population is positive but relatively moderate ([71]). This suggests that, while the design of cost-sharing arrangements can have (as would be expected) an influence on the inequality in access to care, other explanatory factors may also be relevant. This result may also be due to the inherent limitations of the unmet need for health care indicator. As it refers only to access to health examinations, it leaves out

([70]) The Expert Panel on effective ways of investing in Health's recently published opinion on access to healthcare (EXPH 2016b) summarises currently available indicators on access to healthcare as well as a clear and comprehensive framework of analysis on the issue of access to health services in the EU.

([71]) The correlation has an R-squared of 0.1839. The correlation between out-of-pocket payments and unmet need for a health examination due to the health examination being too expensive was also calculated and gave an R-squared of 0.2252.

Graph 3.8.1: **Self-reported unmet needs for medical examination because of cost, waiting time and travelling distance**



Source: EU-SILC (2014) and Commission services (DF ECFIN) computations.

important areas of healthcare, such as inpatient and pharmaceutical care. Finally, the out-of-pocket expenditure as a proportion of all health expenditure indicator may itself be too coarse, as it does not reflect the actual impact of out-of-pocket payments on the finances of households.

Waiting times and travelling distance

Waiting times for health care interventions are an important aspect related to access to care. This aspect is difficult to compare across EU countries, due to differences in the way statistics are compiled (Viberga et al., 2013) and the fact that this information is not systematically collected and published in several EU countries. The OECD publishes comparable figures for several elective hospital operations for 10 EU countries, which shows considerable variation (though the sample size is small).

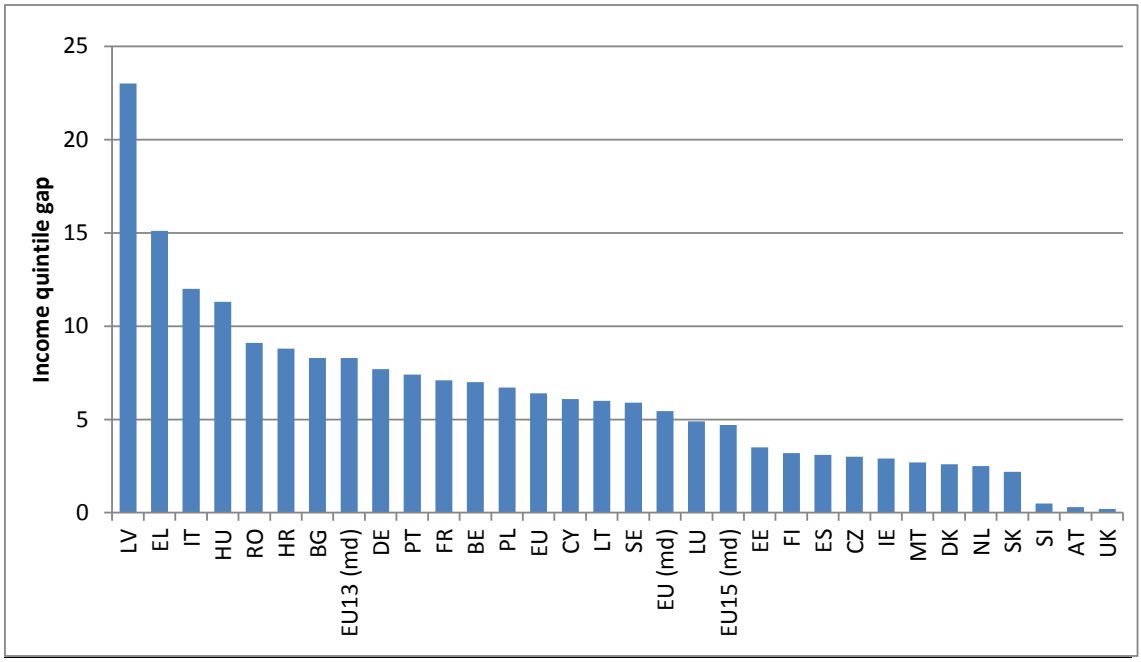
Data availability is even lower with regard to travelling times to receive health care, an aspect on which it will be difficult to establish comparable statistics. However, several studies suggest that remoteness and rurality can be affecting access to health care (WHO Europe, 2010).

Long waiting and travelling times can be a sign of lack of capacity in the system, inefficient spatial distribution where local supply of health care does not match local demand for health care (discussed further in Section 3.7), inefficient demand management, for example if referral systems do not incentivise a cost-effective use of health care (further discussed in Section 4.11).

Cultural and socio-economic barriers

Beyond the barriers explicitly indicated in the "Unmet need for health care" indicator, there are other less tangible but equally significant cultural and socio-economic barriers to access. For example, specific socio-economic and cultural groups may be less likely to seek medical help or register with a GP. A good example is cancer screening programmes, as these are often made available to all at little or no cost. However, even in this case, uptake varies among socio-economic groups. This may be partly linked to geographic barriers such as travelling distance or availability of screening facilities. However, there is evidence, for instance, that women with low incomes or from minority groups are likely to have lower levels of awareness of cervical cancer screening programmes, symptoms or risks, leading to less

Graph 3.8.2: **Income quintile gap for self-reported unmet need for medical care, 2014**



(1) All reasons; difference expressed in percentage points.
Source: Eurostat, EU-SILC and Commission services (DG ECFIN) computations.

utilisation of available services (OECD, 2012b). Other studies have suggested that barriers to accessing cancer screening programmes may be wider than lack of awareness and include fear of the outcome, lack of a supporting network and other life struggles that may leave the members of the population little time to tackle additional problems (EXPH 2016). Cultural barriers may also be caused by shared cultural assumptions by specific population groups and/or the way the health workforce interact with these groups and may lead to some groups not feeling comfortable or welcome in such settings.

Unlike financial, spatial or capacity barriers to access, these factors are more difficult to tackle effectively. These are likely to require initiatives to detect which sections of the population may be under-utilising available health care services, as well as provide an interpretation of the reasons they may be doing so. Stratification of the available health care use and health outcomes data by dimensions such as gender, socio-economic background, ethnic origin, disability, location, etc. can help identify existing shortcomings and be the first step to tackling these issues (further discussed in Section 4.10).

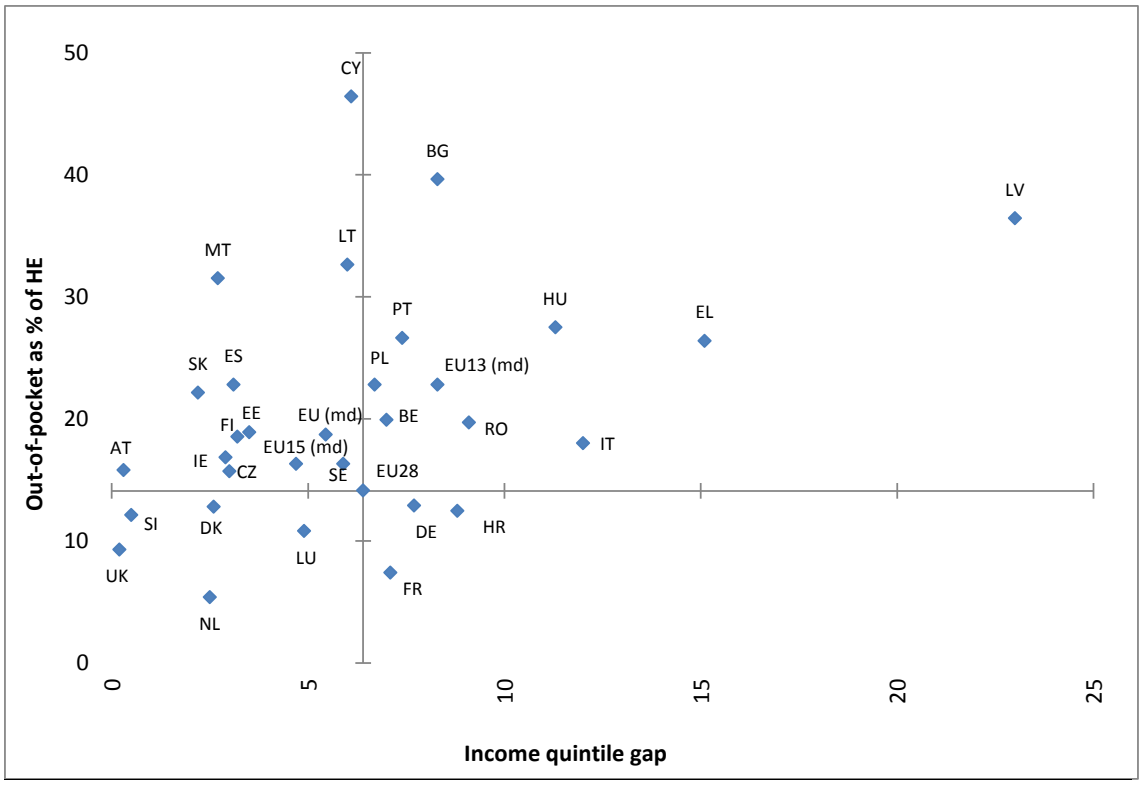
Once specific groups having difficulty accessing healthcare and specific barriers have been identified, tailored programmes can be set up to improve access. For example, in the UK, Public Health England has provided guidelines to their staff to ensure that their screening programmes are available in such a way as to be approachable to specific hard to reach groups (Public Health England, 2013).

Quality of care

Good access to health care needs to be linked to the quality of the care provided. Quality of care is a crucial factor for EU health systems, although it is often difficult to define, as it encompasses many different aspects. According to the OECD, good quality care is care that is effective, safe, and patient-centred. The WHO proposes the following working definition comprising six dimensions:

- Effectiveness: delivering health care that is adherent to evidence base and results in improved health outcomes for individuals and communities, based on need;

Graph 3.8.3: **Household out-of-pocket expenditure as % of total current health expenditure vs Income quintile gap for self-reported unmet need for medical care vs.**



(1) Income quintile gap is defined as the difference between the unmet need expressed by people on the highest income quintile versus that expressed by people on the lowest income quintile.
Source: Eurostat, OECD, EU SILC and Commission services (DG ECFIN)computations.

- Efficiency: delivering health care in a manner which maximises outcomes per resource used and avoids waste;

- Accessibility: delivering healthcare that is timely, geographically reasonable, and provided in a setting where skills and resources are appropriate to medical need;

- Patient-centeredness: delivering health care which takes into account the preferences and aspirations of individual service users and the cultures of their communities, thus reflecting the extent to which they are well informed about treatment alternatives, are involved in the decision-making process of their own care, and they are treated with empathy and respect;

- Safety: the degree to which health care processes avoid, prevent and ameliorate adverse outcomes or injuries that stem from the processes of health care itself;

- Equity: delivering health care which does not vary in quality because of personal characteristics such as gender, race, ethnicity, geographical location, or socio-economic status.

EU countries have launched initiatives to measure the quality of health care and use this information to improve the performance of their health systems. Recently, the Expert Group on Health Systems Performance Assessment (HSPA) surveyed the range of practices and indicators in the EU by examining submissions sent by nine volunteer countries (Belgium, Finland, France, Germany, Italy, Malta, Norway, Portugal, and Sweden) (European Commission, 2016).

Most Member States have developed a conceptual framework on this, but are using different approaches and dimensions. For instance in Italy, the schemes include issues such as prevention that relate to public health rather than healthcare itself.

In contrast, in Germany, efficiency and inequity are covered only partially in the existing framework, as they are considered to be separate policy areas. However, overall, the different approaches are broadly covered by the areas set out in the WHO definition.

Indicators used vary according to whether they focus on the process (in what way are medical procedures carried out), the volume (how many procedures take place) or the outcome (what is the impact on the health status of the patient). The outcome indicators measure the result of a process of care in terms of clinical outcomes (e.g. mortality, morbidity, complications, and hospitalisation). The process indicators measure the adherence of the care process to the standards of best clinical practice based on evidence; they can be considered proxies of health outcomes. Volume indicators measure health interventions or clinical conditions for which there is scientific evidence of association between volume of care and clinical outcomes. Volume indicators related to population also measure appropriateness (e.g. geographic variation).

In some countries, quality indicators were used to assess quality in hospitals and set up incentive mechanisms for quality improvement or organisational improvement. This is discussed further in Section 3.11. In some cases, quality indicators have been used to assess the quality of primary care, such as in the UK with the Quality and Outcomes Framework, an annual reward and incentive programme detailing GP practice achievement results.

Quality indicators used to assess quality of primary or secondary care can also be aggregated within regions to provide aggregate regional indicators and at national level to provide national indicators. Similarly, quality indicators have been used to make cross-country comparisons as a means of placing performance in a given area of health care into a broader context. While these comparisons highlight variations between countries, it is often difficult for practitioners and policy makers to interpret what a country ranking means in terms of performance and what policy action should be taken in order to improve performance ([72]). Section 4.4 discusses this issue in more detail.

([72]) See European Commission, 2016 for strategies used by EU Member States to measure quality of health care.

3.9. PURCHASING, CONTRACTING AND REMUNERATION MECHANISMS

Payments to health-care providers: physicians

In a labour intensive sector, remuneration is important to attract, retain and motivate staff and therefore ensure access and quality of care. However, payments for health professionals are one of the largest costs in the provision of health services and goods. Consequently, it is crucial to understand the incentives associated with different payment mechanisms. It is important to ensure that payment schemes are used to their best in order to achieve policy objectives of improved access, quality of care, cost containment.

The most common modes of paying physicians have traditionally been: salary, capitation and fee-for-service. Payment schemes vary substantially across countries, across staff types and across private and public provision. These payment methods carry different characteristics and different incentives. In addition to the traditional schemes, in more recent years, growing importance has been recognised to payment mechanisms rewarding performance, the so-called Pay-For-Performance (P4P).

Payment by salary implies an agreed amount of money paid for working a certain amount of hours. The salary level is normally linked to seniority and/or experience. This payment is independent of activity volumes, i.e. the number of patients treated or the price of services. However, this method is not entirely disconnected from activity, as it may be paired with payments for overtime. This mechanism carries no activity incentives though, and, as such, it may encourage referrals to other levels of care. As a result, it may be that this tool manages to control volume and costs at the level of primary care, but this may increase the costs in secondary care.

Capitation refers to an amount of money corresponded to a physician for each patient registered over a set period of time. The period of time typically corresponds to the year and it is adjusted to the amount of care provided to each patient (e.g. patients with chronic diseases and /or multi-morbidities may need care more often, so the per capita payment is adjusted accordingly). The remuneration of a doctor under capitation depends on the number of patients that are on his/her list and the amount provided per patient. It is mostly used in primary care settings to encourage patients to register with a family doctor/GP and to encourage these to accept patients and follow their care needs, although often a ceiling on the number of patients is applied to ensure quality of care.

Fee-for-service (FFS) is the payment of a price for each service provided. The remuneration level of physicians is affected by the number and type of service provided. Fees are often negotiated between the Ministry of Health or heath purchasers and the providers, although providers can, in some cases such as France, set fees for their patients. Fees can vary across regions or purchasers ([73]). In IE, NL, SE and EL, the fees are set unilaterally by the central government (IE and NL) or by strategic buyers (EL and SE). In addition, in Greece, this is based on a Resource-based relative value scale (RBRVS) ([74]). Purchaser-provider negotiations at central level are used in CZ, DE and UK (which do not apply a RBRVS), and in BE, FR, EL and SK (no RBRVS in this case). Lastly, negotiations at regional level take place in AT and DK.

Each payment mechanism implicitly creates incentives that have the potential to affect, activity, quality and costs. FFS type of remuneration can be problematic in an expenditure-control perspective, resulting in a higher number of visits/contacts, than a capitation or salary system. In other words, a FFS system increases activity/volume of services and may result in supply-induced demand and unnecessary care. Capitation or salary systems, on the contrary, do not necessarily induce more activity where they are applied, so they are often used as a tool to reduce unnecessary care and to better control costs, however they could increase costs at other levels of care. Interestingly, for instance, although a FFS system may result in a larger number of visits, it may also lead to fewer hospital referrals as

([73]) See for example, "The remuneration of general practitioners and specialists in 14 OECD Countries: What are the factors influencing variations across countries?", Rie Fujisawa and Gaetan Lafortune, Health Working Papers No.41, OECD, 2008.

([74]) Resource-based relative value scale (RBRVS) is a formula used to establish how much providers should be reimbursed based on their activity and it is used by Medicare in the United States. RBRVS defines a relative value for medical procedures, cost-adjusted by geographic. The final level of payment is then derived by multiplying this figure by a conversion factor which is updated on a yearly basis. One of the main criticisms is that it rewards effort and not performance.

physicians have an incentive to see patients in their primary or specialist outpatient settings. Salary and capitation systems, on the contrary, may over-refer patients to other sectors. In addition, due to the incentive to increase the number of visits, an FFS system can result in higher community outreach and compliance with a recommended number of visits, especially relevant where continuity of care is essential, like in the case of patients with chronic diseases.

Payment-for-performance (P4P) schemes, are explicitly designed to improve performance by rewarding particular activities. The rationale behind P4P rests on the principal-agent theory ([75]) and it explicitly targets performance improvements, though each of the traditional payment mechanisms has an implicit impact on performance. P4P typically complements the overall payment mechanism design in the form of a quality bonus linked to activities or the provision of services that require or deserve a stronger set of incentives due to their particular relevance and contribution to overall system performance. The success of this mechanism relies on many factors: information, a well-conceived financial reward, the provider's motivation and other contextual information. It is key to have information to measure performance, be it in the form of an absolute or relative score, both to link the reward to the right variable and to be able to assess results. In addition, setting the right level of the reward is challenging as its level may trigger behavioural responses that are undesirable ([76]). Trying to induce behaviours that are not in line with professional motivation may be ineffective. Similarly, besides context-related issues such as market or regulatory features, one key element is that of sound governance ([77]).

Typical targets of P4P relate to the following areas: preventive care, management of chronic patients, patient satisfaction and efficiency. At EU level, there are different examples of the application of P4P that can be distinguished based on the type of participation, i.e. "voluntary with conditions or voluntary open". In the case of primary care, both in France and Portugal, participation to P4P schemes is voluntary with conditions ([78]), and the domains include preventive care management of chronic patients and efficiency. All of the EU countries for which information is available ([79]) (FR, PT, CZ, HU, UK, ES and SE) include preventive care and all, except CZ, include the domain of efficiency and management of chronic patients in their P4P schemes in primary care. Patient satisfaction is only used in PT, SE and UK.

Some Member States provide practical examples of P4P implementation. Among these are the Quality Bonus System (QBS) in Estonia, and the Quality and Outcomes Framework (QOF) in the UK. In Estonia, the system is based on three domains (prevention, chronic disease management and additional activities) and it uses 62 indicators of performance. The latter are chosen to capture performance in each specific domain through key activities required of family physicians and nurses in each area of interest. In the case of Estonia, the domain of prevention includes subdomains of services such as child vaccination (9 indicators), children's preventive check-ups (5 indicators) and CVD prevention (4 indicators); the domain of chronic disease management looks at the managements of type 2 diabetes, hypertension, myocardial infarction and hypothyreosis, with indicators unevenly distributed across subdomains. The domain of additional activities looks at issues ranging from staff training to the quality of surgical and gynaecological activities and of maternity care. Each subdomain is attributed a score that will contribute to the overall performance assessment, based on weighting

([75]) The agent acts on behalf of the principal, and rewarding good performance is a way to ensure that the interests of the two subjects are aligned. In other words, the principal (the patient/user) wishes to have the best quality/cost combination and will set a financial reward for the agent (the health care provider) so that the latter will find it attractive enough to make the effort to increase quality.

([76]) There is, for instance, evidence suggesting that too high a reward may induce negative effects on performance, because it alters the perception of the difficulty of the task. In addition, returns of money to performance improvement are marginally diminishing.

([77]) OECD and WHO. (2014), *Paying for Performance in Health Care: Implications for Health System Performance and Accountability, Open University Press* - McGraw-Hill, Buckingham.
DOI: http://dx.doi.org/10.1787/9789264224568-en.

([78]) Conditions may be set to specify a target volume for the provision of the service, beyond which a penalty may be imposed to avoid over-treatment.

([79]) Questions 37, OECD Health System Characteristics Survey and Secretariat's estimates. Information as of April 2014. Notably, also EE and NL use P4P, but no information is available.

Table 3.9.1: **Predominant modes of physician payment by sector**

	Primary care physicians payment	Out-patient specialists payment	In-patient specialists payment	
BE	FFS/Capitation	FFS	FFS(1)	**BE**
BG				**BG**
CZ	FFS/Capitation	FFS	Salary	**CZ**
DK	FFS/Capitation	Salary	Salary	**DK**
DE	FFS	FFS	Salary	**DE**
EE	Capitation/FFS/ combination of some more	Salary	Salary	**EE**
IE	FFS/Capitation	Salary	Salary/FFS mix	**IE**
EL	FFS	FFS	Salary	**EL**
ES	Capitation	Salary/FFS	Salary	**ES**
FR	FFS/ combination of some more	FFS/ combination of some or more	Salary/FFS	**FR**
HR				**HR**
IT	Capitation	Salary/FFS	Salary	**IT**
CY				**CY**
LV				**LV**
LT	Capitation/FFS/Bonus	Episode	Salary	**LT**
LU	FFS	FFS	FFS(1)	**LU**
HU	Capitation	FFS(2)		**HU**
MT				**MT**
NL	FFS/Capitation	FFS	FFS(1)	**NL**
AT	FFS	FFS	Salary	**AT**
PL	Capitation	Salary/FFS	Salary	**PL**
PT	Salary	Salary	Salary	**PT**
RO			Salary	**RO**
SI	Salary or Capitation/FFS (3)	Salary or Capitation/FFS(3)	Salary	**SI**
SK	FFS/Capitation	FFS	Salary	**SK**
FI	Salary /FFS	Salary	Salary	**FI**
SE	Salary	Salary	Salary	**SE**
UK	Salary/Capitation/FFS combination of some more	Salary	Salary	**UK**

(1) Information on remuneration available for self-employed.
(2) FFS for comparability. Classified as P4P in national context.
(3) Private providers with primary care concessions are remunerated based on a mix of capitation and FFS. Salary is used for public servants.
Source: "Health systems institutional characteristics: a survey of 29 OECD countries". Health working paper No50, OECD 2010, Paris V., M. Devaux and L. Wei. updated with data available at http://www.oecd.org/els/health-systems/paying-providers.htm, accessed 27/05/2016. Albreht T et al. Health Systems in Transition, 2016. Chapter 3.7.

coefficients, if each domain scores above the minimum threshold to qualify. In Estonia, the first two domains determine the basic payment. Domain 3 activities can increase this payment provided that performance in domains 1 and 2 exceeds minimum standards. In the UK, QOF is similarly based on four domains (clinical care, organisational, patient experience, additional services) and on 142 indicators, clinical or process-related, each associated to a maximum amount of points. Each GP practice is awarded a flat rate for each received point which is capped at a maximum of 1000 points per practice.

Other examples can be found across EU Member States. Payment for public health objectives in FR is also based on 4 domains (prevention, chronic patients management, organisation and cost-effective prescribing), but it is more parsimonious, with only 29 indicators used. The quality award makes use of a baseline performance level by physician. An intermediate objective is given by the average score of physicians for the specific indicator, above which the physician qualifies for half of the maximum points for that indicators. The target objective is based on the law, national guidelines, or international comparisons, and can earn physicians the maximum amount of points that can be earned for that indicator. This approach is designed not to penalise providers which make a marginal improvement due to being already high performers. In Germany, P4P originated from the need to compensate sickness funds for the additional burden represented by enrolees with chronic conditions, protecting sickness funds form an inadequate reimbursement based on case mix and protecting patients from the risk of cream-

skimming by sickness funds. Sickness funds can design their own programs, but they all must include a core set of common elements: definition of enrolment criteria and process; evidence-based treatment; quality assurance (e.g. feedback to physicians, patient follow-up); physician and patient education; electronic-record documentation and evaluation.

Predominant remuneration strategies of physicians rely on a mix of tools. Table 3.9.1 shows the remuneration systems adopted by EU Member States by sector. Only Luxembourg uses a pure formula based on FFS to pay for both primary care physicians and outpatient specialists. ES, IT, HU and PL use a pure capitation system to pay primary care physicians, whereas BE, CZ, DK, EE, IE, NL, SK and UK use capitation combined with at least another mechanism, typically FFS. To pay for outpatient specialist services, there is a substantial balance between FFS and salary, whereby roughly an equal number of countries reporting information on this adopt the two mechanisms and ES, IT, SI and PL report a combination of the two ([80]). PT and SE pay primary care physicians on a salary basis. They also pay a salary to outpatient and inpatient specialists. The large majority of inpatient specialists are salaried in the EU, with the only exception, within the publically employed, of IE which uses a mix of salary and FFS. NL, BE and LU also report FFS, but these refer to self-employed specialists. Interestingly, a number of countries are now using a combination of systems to pay physicians in at least one setting, typically either primary care or outpatient care. This is not the case for DE, EL, LU, HU, AT, PT, SI and SE, which apply only one remuneration system to each sector.

Payments to health-care providers: hospitals

As with payments for physicians, Member States vary in the way they pay hospitals with several countries using a mix of payment types (see Table 3.9.2**).** Hospital funding mechanisms, i.e. the way hospitals are paid, is key aspect of health system structure, as hospital care typically represents the largest share of health expenditure. It is often a crucial point in healthcare reforms as this has a potentially large impact on the overall performance of the system. Just as with physician remuneration, the method used to pay hospitals can impact on hospital activity and can be a tool to achieve health policy objectives set by national authorities. Certain types of payments might induce activity beyond necessary levels, while others reduce inputs used to provide care, and other still may give rise to gaming, cost-shifting and administrative burden. The key objective is to create the right set of incentives that ensure equitable access to necessary care and high quality, while ensuring an effective and efficient use of resources, maintaining cost control and providing the correct use of types of care among patients. The four most common payment methods are described in what follows.

1. **Prospective global budgets.** These refer, in a simplistic way, to an overall spending limit or target often paired with the use of strategic purchasing, whereby the buyers of care contract with providers for the provision of services. These arrangements, typically prospective, define the volume of service that is to be delivered and its total price for a defined time period (i.e. the fiscal year). Many countries with publicly funded health systems have adopted prospective global budgets as their key funding block. Global budgets aim to improve public sector performance in an efficiency-oriented perspective. This tool can combine administrative simplicity (especially with only one or few buyers of care) with incentives for performance enhancements, in that it directly constrain both the level and rate of increase of hospital care costs. Global budgets may also help to control some of the FFS incentives to supply-induced demand when physicians are paid on an FFS system ([81]). However, global budgets require accurate information on activities for planning to ensure resources are commensurate to needs and are not allocated inequitably, causing an imbalance between available funding (revenues to the health sector) and demand. Further, there is an incentive to improve the

([80]) In the case of Slovenia pay public servants are paid on a pure salary basis and private providers with concessions on a combination of capitation and FFS.

([81]) See Hospital Global Budgeting, Robert Dredge, Health, Nutrition, and Population Family (HNP) discussion paper, World Bank's Human Development Network, 2004. The WB suggests that prospective global budget can deliver real progress in a cost-effective way.

Table 3.9.2: **Hospital payment schemes**

	Hospital payment scheme 2010	Hospital payment scheme 2016 [1]	
BE	Payment per case (45%) + Payment per procedure (41%) + payments for drugs (14%)	Prospective global budget	BE
BG			BG
CZ	Prospective global budget (75%) + per case (15%) + per procedure (8%)	DRG	CZ
DK	Prospective global budget (80%) + Payment per case/DRG (20%)	Prospective global budget	DK
DE	Payment per case/DRG	DRG	DE
EE	Payment per DRG (70%) + payment per FFS (30%) up to the ceiling	DRG	EE
IE	Prospective global budget (60%) + Payment per case/DRG (20%) + per diem (20%)	Prospective global budget	IE
EL	Per diem and retrospective payment of costs	DRG	EL
ES	Line-item budget	Line-item budget	ES
FR	Payment per case/DRG	DRG	FR
HR			HR
IT	Payment per case/DRG	Prospective global budget	IT
CY			CY
LV			LV
LT	Payment per case/DRG	Payment per case/DRG*	LT
LU	Prospective global budget	Prospective global budget	LU
HU	Payment per case/DRG	DRG	HU
MT			MT
NL	Adjusted global budget (80%) + Payment per case/DRG (20%)	DRG	NL
AT	Payment per case/DRG / Retrospective reimbursement of costs	DRG	AT
PL	Payment per procedure/service	DRG	PL
PT	Prospective global budget + payment per case (DRG)	Prospective global budget	PT
RO		#N/A	RO
SI	Payment per case/DRG (66%), prospective global budget (12%), per service/item (22%)	DRG	SI
SK	Payment per case/DRG	Payment per case/DRG*	SK
FI	Payment per case/DRG	DRG	FI
SE	Payment per case/DRG (55%) + global budget	Prospective global budget	SE
UK	Payment per case/DRG (70%) + global budget (30%)	DRG	UK

(1) Information based on http://www.oecd.org/els/health-systems/paying-providers.htm, accessed 27/05/2016.
Source: In "Health systems institutional characteristics: a survey of 29 OECD countries". Health working paper No50, OECD 2010, Paris V., M. Devaux and L. Wei.

input mix but there may still be under-provision of services to avoid the risk of exceeding the budget, rather than an increase in efficiency to stay within the ceiling.

2. **Activity-based payments.** Also called case-based payment, these are hospital payments based on the number and type of services provided to each patient receiving hospital care. Hospitals are paid a pre-determined fixed rate for each treated hospital case. Typically, the number and type of services are based on a definition of cost-clusters – often the so-called Diagnosis Related Groups (DRGs) ([82]). This system is attractive for its relative simplicity (once the cost-groups have been defined) and, because it encourages activity, improves the input mix and reduces hospital length of stay, which expands the capacity to increase activity. In some cases it has been used with the aim of reducing waiting with similar precautionary measures, the method is used to induce hospital activity and productivity. Activity-based payments may not fully cover the whole cost of providing each service for each provider, as they reflect average costs. DRGs implicitly create a standard, such that, if hospitals do not recoup the full cost from a DRG, they will have an incentive to produce that service more cost-effectively or to specialise in profitable activities. This underlying idea supports the potential for DRGs to increase system efficiency. However, as a response to lower prices paid per case, providers may have an incentive, rather than to improve efficiency, to classify patients in higher cost groups, the so called "up-coding", or to treat simple cases rather than complex ones, the so called "cherry picking", or to discharge patients prematurely. Inflated activity aside, this may also have the effect of

([82]) A classification of hospital case types into groups that are clinically similar and are expected to have similar hospital resource use. The groupings are based on diagnoses, and may also be based on procedures, age, sex and the presence of complications or comorbidities.

increasing costs through increased in readmissions.

3. **Per-diem (per day) payments.** This is based on a daily rate used to pay for services. This system can lead to an increase in the number of beds and in the number of days (number of admissions but especially an increase in the length of stay of each patient). To reduce the incentive to increase length of stay some countries reduce the per diem after the first day or days.

4. **Line-item payments.** With this method, a prospective budget is given to providers for specific lines of services. In general, rules limit the transfer of resources across line-items. In this case, there is not necessarily an incentive to improve the input mix and there may be an incentive to spend the full budget in each and every line. This may result in under-provision in some lines.

Trends in models of remuneration

A number of countries have moved towards a combination of remuneration systems in the primary care and outpatient specialist context. In addition, as seen above, a number of countries have introduced a performance-related payment or bonus. Such mixed remuneration system, especially in primary care, is aimed at getting a better balance of incentives, as well as encouraging the provision of specific types of services (such as promotion and prevention and the management of chronic diseases). In some countries that use a FFS system, some other mechanisms are used to reduce unnecessary care. These include treatment guidelines and monitoring systems, as well as, in DE, the establishment of morbidity-related remuneration budgets based on price and quantitative trends previously agreed and, thus, restricted at federal level between the national associations of service providers and sickness funds.

As shown in Tables 3.9.1 and 3.9.2 , the fact that each system has powerful but contradictory incentives led several countries to use a mix of payment modes. For instance, within the German DRG system, the law allows hospitals and sickness funds to negotiate the reimbursement for additional costs as a certain share of the respective DRG to be added or subtracted from the normal payment in order to respond to the full diversity of facility-based services and patient types. In SE, NL, DK, PT, SI, IE and CZ, for instance, hospital payment combines a global budget adjusted with activity-based payments.

Payment mechanisms and impacts on activity

Table 3.9.3: **Number of outpatient consultations with a physician per capita**

	2003	2010	2013
Belgium	7.8	7.4	:
Bulgaria	5.4	5.4	:
Czech Republic	13.0	11.0	11.1
Denmark	7.9	4.6	4.6
Germany	7.6	9.9	9.9
Estonia	6.2	6.1	6.4
Ireland	:	3.8	:
Greece	4.2	:	:
Spain	9.5	:	:
France	7.4	6.7	6.4
Croatia	:	6.1	6.1
Italy	:	:	6.8
Cyprus	1.9	2.3	2.4
Latvia	4.8	5.9	6.2
Lithuania	6.5	7.3	8.1
Luxembourg	6.3	6.4	6.5
Hungary	12.2	11.6	11.7
Malta	2.3	:	:
Netherlands	5.5	6.6	6.2
Austria	6.7	6.9	6.8
Poland	6.1	6.6	7.1
Portugal	3.7	4.1	:
Romania	5.6	5.0	4.8
Slovenia	6.9	6.4	6.5
Slovakia	12.4	11.6	11.0
Finland	4.2	4.3	2.6
Sweden	2.8	2.9	:
United Kingdom	5.2	:	:
European Union	7.0	7.4	7.6
Euro Area	7.4	7.8	7.7
European Union (median)	6.2	6.4	6.5
EU15 (median)	6.3	6.4	6.4
EU13 (median)	6.2	6.2	6.5

Source: Eurostat, OECD and WHO health data and Commission services computations.

Outpatient consultations vary significantly across Member States. This is possibly a result of incentives set by different payment mechanisms, The number goes from around 11 per capita visits in 2013 for CZ, HU and SK, many of these with a strong component of FFS, down to less than 3 in FI, with a predominant salary-based payment, and CY (see Table 3.9.3). In general, the ones with values above average, CZ, LT, HU, DE and SK, tend to be characterised by a strong activity-based system. It is nonetheless important to note that overall labour costs and outpatient activity depend not only on the remuneration system but also on the number of physicians, their working hours and

whether they are self-employed, population size, gender and age structure, disposable income, insurance coverage, cost-sharing and the degree of gatekeeping, as well as patients' cultural habits and expectations.

Table 3.9.4: **Hospital day case discharges as a share of all hospital discharges**

	2003	2010	2013
Belgium*	37	:	50
Bulgaria	:	:	:
Czech Republic	1	2	3
Denmark	20	:	:
Germany	:	3	3
Estonia	7	26	29
Ireland	42	59	60
Greece	:	:	:
Spain	:	38	39
France	33	37	39
Croatia	2	24	34
Italy	29	28	26
Cyprus	8	17	18
Latvia	:	:	30
Lithuania	2	8	10
Luxembourg	20	30	36
Hungary	:	6	:
Malta	:	35	36
Netherlands*	44	52	55
Austria	13	17	20
Poland	9	21	21
Portugal	:	36	49
Romania	:	18	28
Slovenia	:	12	:
Slovakia	:	:	:
Finland	20	23	24
Sweden	8	8	12
United Kingdom	44	54	56
European Union	29	28	29
Euro Area	31	26	24
European Union (median)	20	23	28
EU15 (median)	29	33	36
EU13 (median)	5	18	28

Source: Eurostat database and Commission services calculations.
*Latest available figure 2012.

The combination of available resources (staff and beds), the method used to pay physicians and the method used to pay hospitals can impact on hospital activity. For example, in the EU, the number and the share of hospital day case interventions vs. inpatient interventions is increasing in many countries. There is still a large variation across member states from no more than a 10% share of hospital day case discharges out of all hospital discharges in CZ, DE, LT and HU to 60%, 56% and 55% in IE and NL and UK respectively, to almost 50% in BE and PT (see Table 3.9.4). In addition, within the group of countries that show a limited use of day surgery, some have large numbers of inpatient discharges, while others show a relative smaller number of hospital discharges overall. In DE, the number of day discharges is several times lower than in other EU countries, because a legal possibility has been created for hospitals in the area of outpatient care to provide outpatient services in the treatment of certain diseases.

Table 3.9.5: **Hospital Average Length of Stay (ALOS)**

	2003	2010	2013
Belgium	7.5	7.2	:
Bulgaria	:	:	:
Czech Republic	:	7.0	6.6
Denmark	3.6	:	:
Germany	9.3	8.1	7.7
Estonia	6.4	5.5	5.5
Ireland	6.5	6.0	5.7
Greece	6.0	5.3	:
Spain	6.9	6.3	6.1
France	5.6	5.2	:
Croatia	8.4	7.2	6.9
Italy	6.7	6.7	6.8
Cyprus	5.5	5.4	5.7
Latvia	7.9	6.2	5.8
Lithuania	7.5	6.3	6.3
Luxembourg	7.3	7.5	7.4
Hungary	6.7	5.4	:
Malta	4.6	5.0	5.3
Netherlands	7.9	5.6	:
Austria	7.2	6.6	6.5
Poland	:	7.3	6.7
Portugal	7.1	7.1	7.2
Romania	:	6.5	6.3
Slovenia	6.1	5.5	6.3
Slovakia	7.4	6.6	6.2
Finland	7.1	7.0	6.8
Sweden	6.5	5.9	:
United Kingdom	7.1	5.9	5.9
European Union	7.2	6.5	6.7
Euro Area	7.3	6.6	6.9
European Union (median)	7.0	6.3	6.3
EU15 (median)	7.1	6.5	6.8
EU13 (median)	6.7	6.2	6.3

(1) Data in this table comes from Eurostat dataset Hospital discharges and length of stay for inpatient and curative care [hlth_co_dischls].
Source: Eurostat database and Commission services calculations. ALOS is for all causes of diseases (A00-Z99) excluding V00-Y98 and Z38.

Average length of stay (ALOS), this has gone down over the decade. This, again, varies substantially across Member States (see Table 3.9.5) ([83]). Variation is not as marked as for the share of day cases though. The highest value is recorded for DE (almost 8 days) and the lowest for Malta (5.3 days) ([84]), HU and MT (right above 5 days) and EL (with a latest value of 5.3 days for 2010). When looking at the level of hospital average length of stay (ALOS), one should keep in mind that it cannot be considered in isolation as it may be indicative of both

([83]) A word of caution is needed here when comparing ALOS across countries as it is not necessarily computed in the same way across Member States (i.e. it does not always adjust for case-mix and considers all hospitals).
([84]) Lowest based on the latest data available.

efficiency and under-treatment and premature discharge. A very low ALOS, paired with the DRG system, may in fact indicate a pattern of premature discharges to be able to increase activity, i.e. the number of treated people.

3.10. HEALTH SYSTEM GOVERNANCE

Governance in health systems corresponds to how a system is steered toward its goals, ensuring coordination, cooperation and alignment under national health strategies based on explicit goals and targets and sound regulation. Governance of a system includes a very broad spectrum of concepts, but can be approximated by the organisational structure, including decision–making and participating entities, their functions and the attribution of roles and accountability between them, paired with the available monitoring and enforcement tools. The model of governance will depend on the specific context to which it applies, but it will typically involve, in different ways, a wide set of actors ranging from governments (national or local), social insurance funds and professions, private companies, NGOs, agencies and other entities, which are called to either formulate or accept a health policy strategy.

Good governance means higher quality of services and better public perception. Governing bodies set the strategies and direction formulating health policy by identifying objectives and major policy issues. They define priorities, the role of public and private sectors in financing and provision and policy instruments (regulation, incentives) to make providers and users meet the objectives i.e. setting the rules and ensuring compliance. They must build consensus and inform people. In this respect, the share of citizens expressing confidence/satisfaction in the area of health care varies widely across countries. In AT, BE and LU about 90% of the population report confidence or satisfaction with their health care system and its governance, as opposed to EL, where less than 40% reported such perception (OECD, 2014). As for the perception of the situation in health care provision as it emerges from the Eurobarometer (latest available data on this question is from 2008), the highest shares of population reporting a very good perception, between 32% and 40%, are to be found in NL, LU and BE, followed by Sweden, between 24% and 32%, and UK, AT and DK, with between 16% and 24% ([85]). A more recent example is provided by a Eurobarometer survey on antimicrobial resistance. Effective public action in the area of building consensus and patient information is reflected in the high share of respondents who change their opinion and, likely, future behaviour in light of publicly provided information on antibiotics and antimicrobial resistance ([86]).

The impact of organisational structure and system features

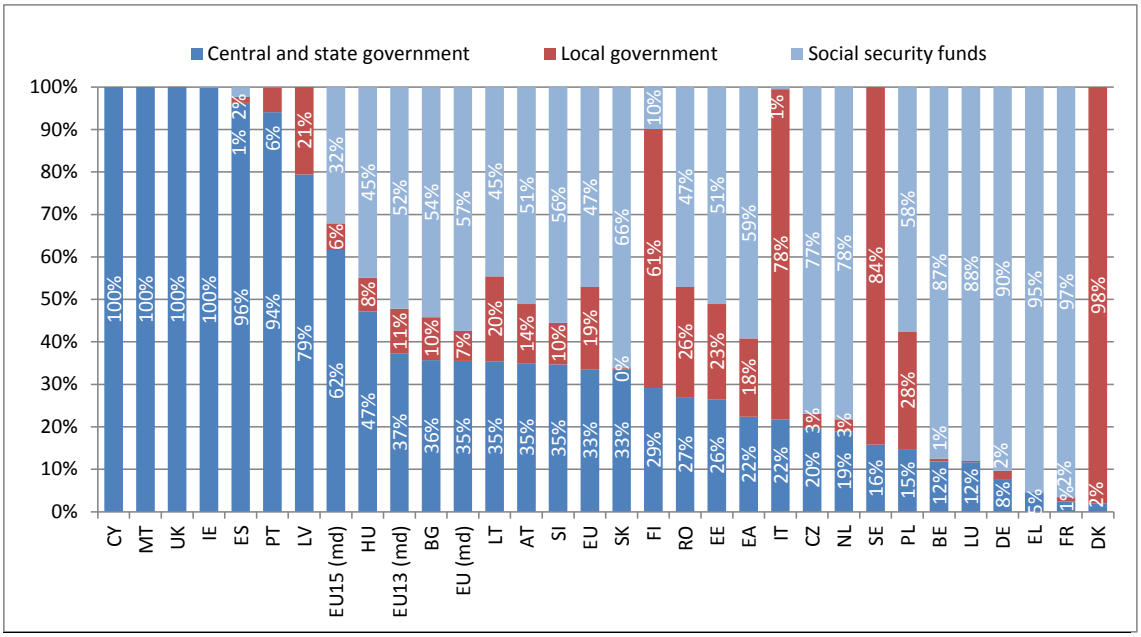
The attribution of roles, tools, capacity and accountability set by the model of governance is crucial to how a system performs. Whether responsibilities are assigned in a consistent and efficient manner and whether the necessary tools are or can be put in place to achieve a goal are both drivers of success. They both translate into higher quality in decision-making and in policy implementation. Accountability, resting on a well-developed information and monitoring system (see also Section 11), is itself a key driver as it shapes the incentives of governing bodies, which will ultimately be called to justify their actions to deliver the system's goals. Tightly linked to the monitoring system, transparency is also influenced by the governance model, and it is typically of a higher degree within systems with lower organisational complexity, fragmentation and bureaucracy.

Integration between and within organisational structures affects successful governance and its challenges. Member States differ in terms of whether public institutional provision is integrated at an area level and whether different hospital providers are organisationally distinct entities from other health services. The degree of fragmentation in service delivery, together with a weak flow of information, can increase the difficulty to promote transparency, accountability, and effective participation, as is often the case with different entities (governing bodies, providers, professions) with overlapping competencies. In addition, even within healthcare organisations, due to their complexity, various governance processes coexist in addressing multiple facets, such as, for instance, the corporate and the clinical. While these should ideally be interlinked and integrated to achieve

([85]) Original question posed: How would you judge the current situation in each of the following? Health care provision in (our country). Answers: very good, rather good, rather bad, very bad, DK - Don't know.

([86]) Special Eurobarometer 445 - April 2016 ,"Antimicrobial Resistance", Report, Survey requested by the European Commission, Directorate-General for Health and Food Safety and coordinated by the Directorate-General for Communication.

Graph 3.10.1: **Share of public expenditure on health by level of government, 2013 or latest**



(1)Data include capital investments and research and development in health.
Source: Eurostat. Based on General government expenditure by function (COFOG) (gov_a_exp) and Commission services calculations.

organisational goals, this is not always the case in practice, and friction between governance processes has emerged in many healthcare organisations due to their varying agendas and functional models.

A wider set of stakeholders without decision-making power have an impact on governance. Health system reforms changing investment, provider remuneration, reimbursement and prescription methods for medicines often meet the resistance and lobbying of the medical or the wider industry or the general public. Political interests may also play an important role in allowing or resisting change. These include lobbies, political parties, and the media. Adequate policy capacity can help gain consensus and wide participation in the implementation of health systems reforms, which can be met with resistance and intensive lobbying from staff and their representatives. In addition, a high degree of transparency and clear accountability will support system's goals delivery against external pressures.

Different institutional settings can encourage different models of governance. One of the key issues is the distribution of responsibility for setting and implementing health policy, targets and standards. In addition, the degree of local autonomy in the definition and allocation of expenditures, whether these can be locally determined or are centrally mandated and locally executed and the local ability to raise revenue, are key determinants of the model of governance. Shifting some responsibilities for expenditures and/or revenues to lower levels of government is normally easier in federal governments**.** Unlike federal governments, unitary countries have multiple sub-levels of the same government (e.g. central, provincial, district), rather than actual sub-national governments with decision-making powers over a specified range of government functions and services (although this is not necessarily the case for all federal states).

Box 3.10.1: **Governance models in public health**

From an organisational point of view, there is no standard EU approach to public health and centralised and decentralised models co-exist. ([1]) In the decentralised model (AT, BE, FI, DE ([2]), IT, ES, SE, UK, DK) many aspects of public health organisation and responsibilities are delegated to sub-national levels of government. Other countries are more centralised (BG, CY, CZ, EE, FR, EL, HU, IE, LV, LT, LU, MT, NL, PL, PT, RO, SK, SI), with most public health powers remaining at the national level. ([3]) Clearly established responsibilities are a key driver of successful policy action. In general, on top of the intuitive differentiation across different member states, the scope and quality of public health service delivery can vary substantially across regions and municipalities within the same country. For instance, in Italy, regions exercise their autonomy very differently, due to underlying differences in political and socio-economic factors and in health systems and northern regions appear more successful in establishing effective structures for public health, programme delivery and health monitoring as compared to regions in the south.

Countries differ in terms of the governance tools in place, though in most countries, many important public health functions are carried out by the medical health sector. Almost all member states have established a responsible authority held accountable on a public health-related mandate. Only five countries have fully developed processes for carrying out national and regional assessments of health needs. Only seven reported fully developed systems for incorporating the views and expertise of relevant experts, and at times academic capacity is not fully exploited in policy-making.

([1]) Decentralisation is hereby intended in the broadest sense, including both distribution of competences across different administrative levels and solutions that spread central competences across self-governing local agencies.
([2]) It is worth mentioning that Germany qualifies as a non-standard model of decentralisation.
([3]) Responsibilities mostly refer to formally established and acknowledged tasks for public health. As such, these may not reflect how the responsibilities are de facto managed.

Governance through decentralisation

In policy setting and budgeting, models of governance can be either centralised or decentralised. Fiscal and administrative decentralisation has gained increasing popularity. It is currently under debate whether they contribute to an increase in health spending due to higher administrative costs or induce savings in addition to higher quality of services ([87]). Decentralisation implies a change in the role of central decision-makers, which get to regulate and monitor rather than being directly involved in the provision of most services. This arrangement can lead to more targeted programmes and to a better match between users needs and the set of services provided, improving the integration of public and private agencies and strengthening inter-sectorial cooperation. However, it places more managerial responsibilities at the lower levels of government and therefore requires specific abilities on health policy that are often lacking at local level. Although it can induce greater accountability of local health services providers and local decision-makers vis-à-vis the population they serve, it also increases their exposure to lobbying. It is worth mentioning that there is not a unique model of decentralisation. In the case of Germany, for instance, this model is characterised by a corporatist system based on subsidiarity, pluralism, self-government and competition. Governance, in such a system, is radically different from a typical decentralised model in a federalist sense, which also implies different strengths and weaknesses relative to other models. Many health systems in the EU have seen a decentralisation trend (albeit to different degrees and in different ways), especially in the last two decades, although there are examples in the opposite direction. Some efforts towards recentralisation have been observed in recent years, for instance in DK, PL and EE, with ongoing discussions and/or recent initiatives in this sense in SE and FI. In the latter, for instance, the government has decided that 18 provinces would be in charge of providing social welfare and health

([87]) See Crivelli, Leive and Stratmenn (2010) IMF working paper; Saltman R., Bankauskaite, V. and Vrangbaek, K. (2007) "Decentralisation in health care: strategies and outcomes".

care services from 2019 onwards instead of municipalities.

Greater decentralisation of health care spending is becoming a reality in a significant number of EU countries (see Table 3.10.1). Sub-national governments are increasingly becoming the main responsible subject for health care spending, which is particularly common in federal, quasi-federal and North European countries. As a means to alleviate the growing pressure on the budget of central governments, the devolution of spending responsibilities is not always accompanied by an equivalent transfer of financial resources. Paired with increasing health care costs, this has put pressure on sub-national government budgets over the last decade, resulting in a significant and generalised increase in the budget share allocated to health care (Box 3.10.1). In the medium-to-long term, this imbalance may pose a threat to the sustainability of public finances at sub-national level, and generate difficulties in public service provision (OECD, 2015a).

Effective governance of decentralised systems poses several challenges. Decentralisation requires the clear and explicit setting of national overarching priorities and goals for the health system, coupled with strong coordination mechanisms (between central and sub-national governments and across sub-national governments) and monitoring systems. It requires adequate and clear financing mechanisms between central and sub-national governments and across sub-national governments, supported by the definition of minimum provision requirements and centralised standard-setting. For complex and decentralised decision-making structures to work, they require managerial capacity and experience, and therefore appropriate training of staff involved in health policy making. In addition, they need proper budgeting and accounting procedures, as well as transparency and accountability mechanisms for those in charge and good information flows across levels of decision-making.

3.11. INFORMATION AND MONITORING

Available data determine the ability to perform system diagnostics and shape effective policies for cost containment and to improve the performance of the healthcare sector. Given limited resources and growing demand for care, it is important that what is publicly provided/ funded is safe, effective in achieving the objective of better health and cost-effective. To this end, successful governance relies on effective monitoring, to drive the system towards its goals in the most efficient way. Regular and comparable data is necessary to ensure coherence in governance. Monitoring should be comprehensive to the extent possible. However, there is a trade-off in data collection, as collection of information increases administrative costs.

The importance of data for effective governance

Different kinds of data are needed to control health expenditure and improve the value for money of health service provision and to understand which tools support these goals. Specifically, key data needs relate to: i) health status, health outcomes and unmet health needs; ii) data for assessing future developments in terms of burden of disease and expenditure iii) inputs such as money spent, human and physical resources utilized; iv) outputs, such as on the performance of health service providers, as in performance assessment tools, and cost-effectiveness data, such as provided through health technology assessments.

1. Data on health status, health outcomes, and unmet health needs is key with respect to defining priorities for health policy and for defining budgets. Data on health status is still not always routinely available and comparable within and across countries. Knowledge on determinants of health, underlying risk factors, disease patterns and burden of disease, unmet health needs can be improved. These issues with the data make it more challenging to define health policy priorities and to establish the budget to meet the health needs of the population. Consequently, cost control is more difficult, as without good knowledge of the health status and improvements in health status, it is difficult to quantify needs for additional funding.
2. Data for assessing future developments in terms of burden of disease and expenditure is crucial for projections. Authorities need disaggregated data to support projections and enable forward-looking policies. Projection methodologies rely on data availability to accurately project health needs and, accordingly, future health expenditure. Disaggregated macro-level data is currently difficult to obtain, and, importantly, its availability is not uniform across member states. This, in turn, constrains its potential utilisation. Authorities need information on current and projected prevalence of conditions and comorbidities, patterns of disease evolution, including probabilities and costs related to different stages of disease evolution.
3. Authorities need timely and comprehensive information on inputs, such as money spent, human and physical resources utilized. Fiscal authorities, but also Ministries of Health and providers of health services, rely on effective financial information channels monitoring cash flow and unpaid bills to monitor whether financial targets can be met, and to avoid disrupting the provision of medical services and goods. These information channels need to be as timely as possible (possibly in real time). Information on the overall and geographic distribution of health providers is necessary to understand if there is over or under capacity or if resources are well distributed. Information on health service prices can help identifying whether services are priced fairly, providing an additional input for cost control measures.
4. Authorities need information on outputs and outcomes to assess whether inputs are being used in a cost-effective manner or can produce a better value, using tools such as health technology assessment (HTA). Tools like health-technology assessments (HTA) assess the additional value of a medicine relative to treatment alternatives and contributes to evidence-based decisions by identifying those interventions which offer the highest value for money.

In addition, data availability on output, outcomes and performance can enhance efficiency through public purchasing and

Table 3.11.1: **Hospital benchmarking tools**

Country or region	Project name	Indicator dimensions
Denmark	International benchmarking of the Danish hospital sector	Health systems and health status, expenditure, personnel, capacity and activity, patient and hospital service, use of resources and quality of care
Germany	G-BA, Hospital quality reports, 2005; RWI-Essen: Hospital Rating Report	Structural, Clinical effectiveness, financial performance
Spain	IASIST Top 20 Hospitals	Quality, Functioning, Clinical practice
France	COMPAQHPST (2003)	Clinical effectiveness, staff orientation, patient centeredness
	Scope-santé	Clinical operations, quality, safety, patient experience
	HospiDiag	Activity, quality, organisational features, human resources and financial indicators
Italy	The National Outcome Evaluation Programme and Regional Performance Evaluation Systems	Quality, efficiency,
Netherlands	Reporting of performance in Dutch hospitals, 2003	Clinical effectiveness, patient-centeredness, safety, efficiency
Sweden	Performance assessment registers (national quality registers) in Sweden	Quality, efficiency
United Kingdom	National Health Services (NHS) Choices Hospital Scorecard; NHS foundation trust rating	Efficiency, Clinical effectiveness, patient Experience; financial performance
European Union	Joint Assessment Framework in the Area of Health; Identifying fiscal sustainability challenges in the areas of pension, health care and long-term care policies	Access, quality, resources
	Health at a Glance: Europe	Quality, access, costs
	Health Consumer Powerhouse	Efficiency, responsive governance, patient centeredness
	ECHI - European Core Health Indicators	Demography and socio-economic situation, Health status, Determinants of health, Health interventions: health services, Health interventions: health promotion
	ECHO – European Collaboration for Healthcare Optimization	Utilization, Effectiveness, Quality & Safety, Efficiency (societal), Efficiency (productivity), Equity in access
International	Performance Assessment Tool for Quality Improvement in Hospitals (PATH), 2003	Clinical effectiveness, efficiency, Staff orientation, responsive governance, safety, patient centeredness

(1) The table is not aimed at giving a comprehensive overview of all available tools. It aims at providing oversight of the variety of tools available.
Source: SCHWIERZ, C., Cost containment policies on hospital expenditure in the European Union (forthcoming).

through informed patient choice. If authorities want to improve providers' performance through contracting based on activity and quality of care and/or through performance-related remuneration, they need to ensure that they, or buyers/purchasers of care acting on their behalf, have access to information on activity and quality so that contracting can encourage good performance. For many, improving the purposeful use of data remains a priority for the near future. If authorities wish to encourage improvement in the quality of health services through free patient choice of provider, comparable and reliable information on providers' activity should be publicly available to patients. This way, patients are able to exercise choice and choice plays the incentive role it is expected to play (see Section 3.5). In addition, if authorities want to improve patient follow-up and coordination between types of health care and between health and social care, they also need to have mechanisms in place so that information can flow across providers.

Measuring performance: sector vs system level

Many countries monitor performance at hospital-sector level, and both national and international benchmarking tools are available. For this purpose, statistical indicators, typically both process and outcome measures, are being used to develop various benchmarking tools, which can be used to compare ratings within and sometimes across countries. There are several national and international hospital benchmarking tools available, with different goals and different composition (see Table 3.11.1). Hospital rankings can be used to show how individual hospitals rank within a country, based on specific metrics, such as quality of care. Hospitals can also be ranked cross-nationally to compare the performance of

individual hospitals or hospital sectors across countries. Both approaches can be informative for policy-makers ([88]).

Alongside the tools measuring hospital sector performance, by far the most widespread, other tools support the diagnosis of the health systems in different ways. In the UK, a wide range of sectorial assessment tools has been developed to measure strengths and weaknesses in primary care. Although the tools differ, their purposes can be summarised as: transparency, accountability, commissioning support, patient choice, improvement, performance and, to a lesser extent, research. These include the General Practice Outcomes Standards (GPOS), the Care Quality Commission (CQC) Intelligent Monitoring Reports and rating of general practices, the Quality and Outcomes Framework (QOF) and many others, which intends to assess the performance of primary care providers all over the country based on a mix of outcome and process-based indicators ([89]). Another example to diagnose a health system sector is the Public Health Capacity Assessment Tool ([90]), capturing the following dimensions of public health capacity: leadership and governance, organisational structures, financial resources, workforce, partnerships, and knowledge development, further divided into 21 sub-domains, based on a wide range of quantitative indicators. This tool was intended to provide an assessment of strengths and weaknesses of member states in the evolving area of public policy.

Performance at system-level, i.e. system efficiency, is difficult to capture and challenged by data availability, as there is no well-defined set of outcome measures at the system-level. This can be a key issue of concern when trying to choose the right policy instrument, since additional information could reverse conclusions. For example, in the case of the UK, one of the countries with the most developed tools, average recorded health status, paired with relatively low health care spending as a share of GDP, were suggesting high efficiency of the NHS. This assessment changed in light of new data showing relatively low cancer survival rates and high waiting times for elective surgery. This change in perception was followed by announcements of reforms to the delivery of health services, paired with an increase in spending, based on the consideration that suboptimal outcomes had emerged due to previous underfunding (Department of Health, 2000) ([91]). To measure such a wide dimensions, a strong trade-off exists between comprehensive approaches, more rich in detail and less manageable, and synthetic approaches, focusing on fewer selected indicators with easier interpretation.

In recent years, there have been significant improvements in health system performance assessments at national and EU level. Aiming at more fiscally sustainable, effective, accessible and resilient health systems ([92]), the European Commission is working together with Member States on tools for health system performance assessment. To this aim an Expert Group on Health Systems Performance Assessment (HSPA) was set up in 2014 to identify tools and methodologies to support national policy makers in assessing areas such as quality (see Section 3.8) and integration of care ([93]). In addition, the Commission works towards the development of the joint assessment framework of health systems in the Social Protection Committee (SPC) ([94]). These initiatives use EU-wide comparable data, mostly from the Joint Questionnaire (Eurostat-OECD-WHO) on health care statistics. Similar

([88]) For instance, in the Netherlands benchmarking tools are used by insurers. Moreover, in France, the PQE (Programme de qualité et d'efficience) related to health care expenditure includes a list of efficiency indicators which appear in the Social Security Financing bill.

([89]) http://www.health.org.uk/sites/default/files/IndicatorsOfQualityOfCareInGeneralPracticesInEngland.pdf.

([90]) Aluttis CA, Chiotan C, Michelsen M, Costongs C, Brand H, on behalf of the public health capacity consortium (2013). Review of Public Health Capacity in the EU. Published by the European Commission Directorate General for Health and Consumers. Luxembourg, 2013. ISBN 978-92-79-25023-1.

([91]) Hurst,J. (2010), "Effective Ways to Realise Policy Reforms in Health Systems", *OECD Health Working Papers*, No. 51, OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/5kmh377l4n9x-en.

([92]) In a Communication adopted last April, the Commission laid out an EU agenda for making Europe's health systems fit in face of current challenges. It highlights numerous EU initiatives to help Member States make their health systems more effective, accessible and resilient: http://ec.europa.eu/health/healthcare/docs/com2014_215_final_en.pdf.

([93]) http://ec.europa.eu/health/systems_performance_assessment/policy/expert_group/index_en.htm.

([94]) http://ec.europa.eu/social/BlobServlet?docId=13723&langId=en.

initiatives have well advanced databases, such as the OECD Health Care Quality Indicators Project, and allow for comparing the performance of health care sectors. In the OECD Health Care Quality Indicators Project, a set of indicators focuses, among others, on potential preventable hospital admissions for chronic diseases, excess mortality for patients with schizophrenia or bipolar disorders and a core set of patient experience questions. Another approach to assessment of health systems performance, with a focus on efficiency gains, is the horizontal assessment framework (HAF) used by the European Commission (DG ECFIN) to identify structural-fiscal reforms to support fiscal sustainability at member state level (see Box 3.11.1 below).

Getting more value for money: the example of Health Technology Assessment (HTA)

For medical goods and services, effectiveness data can be used to make more informed, evidence-based and transparent decisions on coverage and reimbursement. HTA is mostly used to evaluate pharmaceuticals, although medical devices, clinical procedures and public health interventions are increasingly subject to HTA. This system can promote the shift from supply to demand driven reimbursement systems, by specifying the willingness to pay and taking into account the national ability to pay.

Because of its widely-acknowledged benefits, some form of HTA is used in virtually all EU member states. Moreover, its introduction as a systematic tool is being prepared in most countries where it is currently not adopted. For example in the UK, the National Institute for Health and Clinical Excellence (NICE) is an independent organisation responsible for providing national guidance on promoting good health and preventing and treating ill health ([95]). In Germany, the Federal Joint Committee (G-BA) assesses new methods of medical diagnosis and treatment following a standardised procedure according to the principles of evidence-based medicine. At the European level, EUnetHTA ([96]) - a cooperation of European HTA agencies on the production of joint clinical assessments, early dialogues and evidence generation - provides a platform for exchange of information and best practices in HTA, elaborating internationally accepted standards for HTA. In addition, the Health Technology Assessment Network ([97]) in accordance to Article 15(2) of Directive 2011/24 supports cooperation between national authorities or bodies responsible for HTA. However, many pharmaceuticals currently being reimbursed have not undergone any or a proper HTA.

HTA consists of an assessment and an appraisal process, based on therapeutic benefit, cost-effectiveness, the availability of alternatives and budget impact of the assessed medicine. HTA is done by review agencies, which may be closely related to the government ([98]). There is great variation amongst HTA agencies in terms of their institutional setting, i.e. whether or not they qualify as independent or attached to Health Ministries or insurance agencies. HTAs are also not always based on cost-effectiveness analysis and other economic evaluation methodologies, and there are wide differences in mandate (inform decision making, issue practice guidelines, horizon scanning, accreditation). Lastly, assessment can be based on evidence provided exclusively by the manufacturer or it can be complemented by literature reviews and own analyses. Importantly, HTAs should be paired with a regular revision, due to uncertainty intrinsic in the assessment and the potential of more cost-effective treatment becoming available. Revision practices are implemented in AT, BE, FR, DE, the NL and SE, however, these are not done systematically.

Recent trends in data management

The growing understanding of the importance of data availability is reflected by initiatives such as Open Government Data (OGD). These initiatives, taken at different levels of government in the past decades in several countries worldwide, are based on the philosophy that government data should be transparent and promote transparency,

([95]) On their website, NICE presents a set of guidelines that can induce/have induced substantial cost savings in the sector: http://www.nice.org.uk/usingguidance/benefitsofimplementation/costsavingguidance.jsp . NICE also produces the "do not do" guidelines to improve cost-effective delivery of services.

([96]) http://www.eunethta.eu/

([97]) http://ec.europa.eu/health/technology_assessment/policy/network/index_en.htm

([98]) For more cross-country information on this issue see also: http://www.ispor.org/PEguidelines/COMP1.asp

accountability and value creation by making government data available to all. The availability of plans to make platforms of OGD a reality varies considerably across EU countries. Based on OECD analysis ([99]), while many countries have a national OGD portal in place, not in all cases data are available in a machine readable format, nor are metadata systematically provided, with impacts on their potential for use and analysis. Based on a pilot index capturing the degree of public data availability, the OECD assesses countries based on data availability on the national portal, its accessibility on national portal and governments' support to innovative re-use and stakeholder engagement ([100]). According to the current construction of the index, FR, UK and ES have achieved high rankings, while PO, the SK, IT and IE rank on the low side ([101]).

There is growing interest to develop the use of electronic health records. Another way in which information could help to improve cost containment and to rationalise expenditure is through the systematic creation and use of interoperable health electronic records. This tool, if linked to guidelines and protocols, could provide better access to quality information to patients, physicians and insurers. It could help in understanding, for example, if treatment guidelines are being implemented. In addition, it could re-enforce the rationalisation of expenditure by real-time monitoring of prescriptions and referrals to secondary care, promoting adequate incentives for physicians, pharmacists and patients to prescribe, dispense and use medicines adequately in consideration of volume and prices (through, for example, information and prescriptions guidelines). This is supported at the EU level, with a goal to enable citizens' electronic access to their medical records anywhere in Europe. In addition, the Commission produced a report assessing Member States' legal framework on electronic health records in order to make recommendations on legal aspects of their interoperability ([102]).

In general, the use of eHealth is being strengthened and broadened in many countries. This is especially relevant in a situation characterised by high and increasing rates of chronic condition in the population, paired with a general increase in life expectancy, and made possible by the rapid growth in mobile device use by people of all ages. eHealth and mHealth ([103]) can improve access to care, providing the possibility to self-manage one's conditions and support and transform traditional care. These tools have the potential to make the health sector more efficient by improving prevention, diagnosis, treatment, monitoring and management of health conditions. eHealth and mHealth enable information and data sharing between patients and health service providers, hospitals, health professionals and health information networks; electronic health records; telemedicine services; portable patient-monitoring devices, operating room scheduling software, robotised surgery and blue-sky research on the virtual physiological human ([104]). Based on an aggregated indicator capturing deployment of eHealth, DK, EE, SE, FI, UK, NL, AT, BE, ES, IE, IT and MT performed above average on the aggregated domains of infrastructure, application and integration, information flow and privacy and security ([105]).

([99]) OECD (2015), "Open government data", in Government at a Glance 2015, OECD Publishing, Paris.

([100]) The perspective of data improving governance is not captured by the current indicator, but this will be part of a future extension.

([101]) As important efforts have been undertaken by Switzerland, the Netherlands, Estonia, Finland and Sweden to improve their OGD central/federal portal in the recent past, their performance may be not accurately captured in the calculation of the index for 2014 ad may only show up in the future.

([102]) http://ec.europa.eu/ health/ehealth/docs/ laws_report_recommendations_en.pdf.

([103]) Mobile eHealth applications.

([104]) http://ec.europa.eu/health/ehealth/policy/index_en.htm.

([105]) European Hospital Survey - Benchmarking Deployment of eHealth services (2012-2013). https://ec.europa.eu/digital-single-market/en/news/european-hospital-survey-benchmarking-deployment-ehealth-services-2012-2013.

Box 3.11.1: **Age-related fiscal sustainability challenges: a horizontal assessment framework for health care**

In order to provide policy advice to countries in a comparable manner, Commission services (DG ECFIN) use a horizontal assessment framework (HAF) to identify structural-fiscal reforms that are deemed necessary to address fiscal sustainability challenges in the Member States. [(1),(2)] The framework is discussed and reviewed annually in the Economic Policy Committee (EPC) to inform about DG ECFIN's work in this area. On this basis, the framework is updated and improved. From the overarching point of view of enhancing fiscal sustainability, a logical starting point is the sustainability indicators used in EU budgetary surveillance. The sustainability indicators show the extent to which there is a need for large policy adjustment now or in the future (of fiscal or structural nature or a combination of the two). On this basis, it is necessary to analyse the main causes of the sustainability gap and how they should be addressed. Hence, this process entails two steps: i) identifying the extent to which there is an important fiscal sustainability challenge; ii) establishing the nature of the challenge so as to devise appropriate policies to remedy the situation.

First, for the purposes of establishing whether on the basis of current policies a large adjustment in policy is required to ensure fiscal sustainability, we look at the sustainability indicators (the S1 and S2 indicators used in budgetary surveillance in the EU) (see Section 2.1). Countries with high S1 or S2 values are classified to be at medium/high risk. Second, once a medium or high sustainability gap is identified, it is necessary to pinpoint the nature of it. This is done by looking at the relative importance of future spending pressures in the EU countries in the fields of health care and long-term care, respectively (also pensions, but not discussed here), based on projections from the 2015 Ageing Report.

In addition to the first step, which analyses whether a fiscal sustainability challenges is related to health care, one can use a broad set of indicators to look at the performance of the health care system across several of its dimensions, based on standard international databases, such as provided by Eurostat, OECD and WHO, and as used in this publication. A comparative analysis of these indicators can help understanding what are the possible and more specific areas of health care provision where policy could be adapted to address the sustainability challenges, taking duly into consideration the country-specific circumstances in the health care field.

The HAF covers the main dimensions of public expenditure on health and the main areas of health care provision: inpatient care, outpatient care, pharmaceuticals, administrative spending and preventive care. In addition, indicators of the efficiency of health systems, the quality and access to health care and health status indicators are considered. An indicator value which is clearly an outlier or is out of line with country peers may suggest a need for improving the performance in the respective areas of health care provision or improving health status. It is important to mention that the framework looks at the system from a macro-perspective and cannot capture the complex relationships between input, outputs and outcomes. Additionally, the framework validity is limited by data availability. Therefore, such an analysis does not replace a more careful country-specific analysis of the respective health care system, which may lead to a more specific definition of challenges and a more specific flagging of reform policies.

(1) This framework has been presented to the Economic Policy Committee in the note "Age-related fiscal sustainability challenges: a horizontal assessment framework for pension, health care, long-term care policies for the 2016 European Semester" (Ref. Ares(2016)807124 - 16/02/2016).

(2) A previous version of the framework is presented in: Eckefeldt, P. et al. (2014), Identifying fiscal sustainability challenges in the areas of pension, health care and long-term care policies, European Economy. Occasional Papers 201. October 2014. Brussels.
http://ec.europa.eu/economy_finance/publications/occasional_paper/2014/pdf/ocp201_en.pdf.

(Continued on the next page)

Box (continued)

Overview of possible policy areas for improvement in health care

	Public expenditure in 2013, as % of GDP		Main spending areas of public health care										Health system related performance indicators				
			Inpatient care (1)		Outpatient care (2)		Pharmaceutical spending (3)		Administrative spending (4)		Prevention and public health (5)		Health status (6)		Health system efficiency (7)	Quality and access of care (8)	
BE	6.0	(11)	0.0	(21)	0.5	(19)	0.4	(9)	0.8	(5)	1.2	(27)	-0.5	(19)	Med	-	BE
BG	4.0	(25)	0.9	(3)	-0.6	(2)	-1.2	(28)	0.0	(13)	1.0	(26)	0.8	(6)	Low	Consistently low	BG
CZ	5.7	(15)	0.7	(6)	0.8	(23)	0.1	(13)	0.5	(6)	-0.3	(13)	0.0	(13)	Low	-	CZ
DK	8.1	(1)	-0.4	(25)	1.1	(27)	-1.2	(27)	-0.1	(14)	0.5	(21)	0.0	(14)	Med	-	DK
DE	7.6	(5)	0.9	(1)	0.4	(16)	1.0	(4)	2.0	(2)	0.8	(24)	0.0	(12)	Med	-	DE
EE	4.4	(22)	0.0	(18)	0.3	(11)	-0.3	(20)	-0.6	(20)	0.1	(16)	0.7	(7)	Med	Probably low	EE
IE	6.0	(11)	-1.2	(28)	0.6	(21)	1.3	(2)	0.0	(11)	-0.7	(7)	-0.8	(24)	Med	-	IE
EL	6.6	(9)	0.4	(10)	-0.7	(1)	1.9	(1)	-0.1	(15)	-0.9	(5)	-0.5	(18)	Med	-	EL
ES	5.9	(14)	-0.3	(24)	0.4	(17)	0.4	(7)	-0.7	(23)	-0.1	(15)	-1.0	(27)	High	-	ES
FR	7.7	(4)	0.0	(19)	0.3	(12)	0.7	(5)	1.4	(3)	-0.5	(9)	-0.8	(23)	High	-	FR
HR	5.7	(15)	0.1	(16)	0.3	(13)	1.1	(3)	0.0	(12)	-0.2	(14)	0.7	(8)	Low	Probably low	HR
IT	6.1	(10)	0.1	(15)	1.1	(28)	0.0	(14)	-0.6	(19)	0.7	(22)	-0.5	(20)	Med	-	IT
CY	3.0	(28)	0.0	(20)	-0.3	(5)	-0.9	(23)	2.4	(1)	-1.6	(1)	-0.9	(25)	High	-	CY
LV	3.8	(26)	0.1	(17)	-0.4	(4)	-1.1	(26)	-0.2	(16)	0.4	(18)	1.8	(1)	Low	Consistently low	LV
LT	4.2	(23)	0.7	(4)	-0.1	(8)	-1.0	(24)	-0.5	(18)	-1.0	(4)	1.1	(4)	Low	Probably low	LT
LU	4.6	(21)	0.3	(13)	0.6	(20)	0.4	(8)	-1.1	(28)	-0.4	(12)	-0.6	(21)	Med	-	LU
HU	4.7	(20)	0.4	(11)	-0.2	(7)	0.2	(11)	-0.6	(22)	-0.6	(8)	0.9	(5)	Med	Probably low	HU
MT	5.7	(15)	-0.5	(26)	0.5	(18)	-0.6	(22)	0.2	(8)	0.1	(17)	-1.3	(28)	Med	-	MT
NL	7.2	(6)	0.9	(2)	0.2	(9)	-0.1	(18)	1.0	(4)	0.4	(19)	-0.2	(15)	Med	-	NL
AT	6.9	(7)	0.7	(5)	0.4	(15)	0.2	(10)	0.1	(10)	-0.5	(11)	-0.3	(16)	Med	-	AT
PL	4.2	(23)	0.6	(9)	-0.2	(6)	-1.1	(25)	-1.0	(27)	-0.5	(10)	0.4	(9)	Med	Probably low	PL
PT	6.0	(11)	-0.3	(23)	0.8	(24)	-0.1	(17)	-0.9	(26)	-1.3	(2)	-0.3	(17)	Med	-	PT
RO	3.8	(26)	0.3	(12)	-0.6	(3)	-0.1	(16)	-0.8	(25)	2.9	(28)	1.3	(2)	Low	Consistently low	RO
SI	5.7	(15)	0.6	(7)	0.3	(14)	0.0	(15)	-0.3	(17)	0.5	(20)	0.2	(10)	Med	-	SI
SK	5.7	(15)	0.6	(8)	0.3	(10)	0.7	(6)	0.3	(7)	-1.0	(3)	1.2	(3)	Low	Probably low	SK
FI	7.8	(2)	-0.2	(22)	1.1	(26)	-0.3	(19)	-0.7	(24)	1.0	(25)	0.0	(11)	Med	-	FI
SE	6.9	(7)	0.1	(14)	0.9	(25)	-0.5	(21)	-0.6	(21)	0.8	(23)	-0.9	(26)	Med	-	SE
UK	7.8	(2)	-0.6	(27)	0.7	(22)	0.1	(12)	0.1	(9)	-0.7	(6)	-0.6	(22)	Med	-	UK

Source: Commission services (DG ECFIN).
Notes: Each composite index is calculated as a weighted average of the individual indicators, as specified in Eckefeldt, P. et al. (2014). Values in (1) to (5) show value of composite index and corresponding country ranking. Purple colour signals outliers in terms of being worse by at least one standard deviation than the EU average. Blue colour signals 14 worst performers.
A higher ranking corresponds: in 1) to a combination of higher inpatient expenditure and lower hospital activity; in 2) to a combination of lower expenditure on outpatient care, lower numbers of GPs per 100 000 inhabitants, lower ratio of GPs and nurses to physicians and lower outpatient activity; in 3) to a combination of higher expenditure on pharmaceuticals, higher pharmaceutical price levels and a lower share of generic medicines in volume; and in 4) to a higher expenditure on administration and insurance; in 5) to a worse health status; in 6) to lower health system efficiency; and in 7) to lower access and quality of care.

(1) Inpatient care index composed of:
- Public inpatient expenditure as % of GDP
- Public hospital expenditure as % of public CHE
- Acute hospital beds per 1 000 pop
- Acute care bed occupancy rates
- Average acute care length of stay in days**
- % of day in total discharges

(2) Outpatient care index composed of:
- Public outpatient care expenditure as % of GDP
- Public exp. on outpatient care as % of public CHE
- Number of GPs per 100 000 inhabitants
- Share of GPs in total number of physicians
- Ratio of nurses to physicians
- Ratio of outpatient to inpatient contacts per capita

(3) Pharmaceutical spending index composed of:
- Public outpatient pharmaceutical expenditure as % of GDP
- Public exp. on outpatient pharmaceuticals as % of public CHE
- Public as % of total expenditure on pharmaceuticals
- Expenditure in per capita PPS
- Generic market shares in volume

(4) Administrative spending index composed of:
- Public administrative expenditure as % of GDP
- Public exp. On administration and insurance as % of public CHE

(5) Prevention spending index composed of:
- Prevention and public health expenditure as % of GDP
- Prevention and public health expenditure as % of total CHE

(6) Health status index composed of:
- Life expectancy birth for males and females
- Healthy life expectancy birth for males and females
- Amenable mortality
- Perinatal mortality rate per 1 000 life births

(7) Health system efficiency derived from a series of models based on data envelopment analysis and country clustering. Health system outputs are life expectancy, healthy life expectancy and amenable mortality rates. Inputs include (per capita) expenditure on health care, physical inputs and environmental variables. Clustering: "Low" = Countries with consistently low efficiency scores across the models; "Med"= Countries with efficiency scores within the interquartile range or results; "High" = Countries with consistently high efficiency scores across the models.

(8) Quality and access of care: Based on initially 21 indicators and a number of models, countries were selected, which show a consistently low relative performance in quality and access of care. "Consistently low" = Reaching lowest values in quality and access of care irrespective of the model/indicators used; "Probably low" = Achieving low values in quality and access of care in most model/indicators used, but results not conclusive. "-" = not recognised as an underperformer.

Based on the comparative approach, as outlined above, one way to summarise the potential policy challenges in each of the areas of health care provision is to use composite indices. These composite indices capture correlations between the various individual indicators in each of these

(Continued on the next page)

Box (continued)

areas using standard statistical methods. ([3]) Values obtained in the composite indices may indicate a specific need to improve the performance in the respective domain relative to other EU Member States.

The table summarises the results based on a comparison of countries carried out using composite indicators. Cells highlighted in purple correspond to a particular challenge in the respective domain, such as: in 1) to a combination of higher inpatient expenditure and potentially lower inpatient efficiency; in 2) to a combination of lower expenditure on outpatient care, lower numbers of GPs per 100 000 inhabitants, lower ratio of GPs and nurses to physicians and lower outpatient activity; in 3) to a combination of higher expenditure on pharmaceuticals and a lower share of generic medicines in volume; in 4) to a higher expenditure on administration and insurance; in 5) to too low investment in prevention and public health; in 6) to a worse health status; in 7) to lower health system efficiency ([4]); and in 8) to lower access and quality of care.

As indicated, these results are based on a broad framework and screening device for detecting possible policy challenges in the area of health care. The results developed here should be considered as an initial analytical tool only and do not replace a careful country-specific analysis of the respective health care system. A more detailed assessment based on additional pieces of information, not reviewed in the current framework analysis, may lead to more specific or additional/different policy challenges.

([3]) See OECD (2008) "Handbook of Constructing Composite Indicators".
([4]) http://ec.europa.eu/economy_finance/publications/economic_paper/2015/ecp549_en.htm

Finally, big data, the use of clinical analytics based on large quantities of data are gaining increasing popularity to get insights with the potential to improve the value of patient care. A recent study applied to the US context suggests that there are at least six typical examples in which the use of big data would help to contain expenditure. These are high-cost patients, readmissions, triage, decompensation, adverse events and treatment optimisation for diseases affecting multiple organ systems. In the case of readmissions, for instance, the authors advocate the health care organisations base interventions on tailored algorithms predicting the likelihood of readmission. In addition, the authors claim many adverse events with associated high rates of morbidity and mortality (renal failure, infection and adverse drug events) are largely predictable making use of big data, which would result in reduction of costs. The ability to predict the trajectory of chronic conditions with multi-organ impacts would support better targeting of therapies, which is particularly relevant in a cost-containment perspective, as these conditions are some of the costliest to manage ([106]). However, while big data has great potential, there are also high concerns related to the use of data to discriminate between patients.

([106]) D. W. Bates, S. Saria, L. Ohno-Machado, A. Shah, G. Escobar. Big Data In Health Care: Using Analytics To Identify And Manage High-Risk And High-Cost Patients. Health Affairs, 2014; 33 (7): 1123 DOI: 10.1377/hlthaff.2014.0041.

3.12. HEALTH STATUS, HEALTH BEHAVIOUR AND PUBLIC HEALTH POLICIES

Health status, life expectancy and expenditure

The health status of a population cannot be captured by a single metric and it is determined by many factors outside of the health systems. Health status is usually described by life expectancy, healthy life expectancy and the burden of disease approximated by death rates by causes of mortality. These are broad indicators that are influenced by many factors besides the provision of health services, namely a wide range of environmental and socio-economic variables, such as air pollution, education, income, working conditions and lifestyle. However, in relation to health systems, the interest of policy makers lies often with indicators of health status that are more closely related to health system performance, such as preventable and amenable mortality.

A poor health status may result in higher demand for health services and therefore higher spending. Low health status flags the need to improve health, which may require health promotion and disease prevention policies and policies outside the health care sector, such as those related to food safety, environmental health and schooling (i.e. suggesting a more holistic "Health in All Policies" approach to improving health). In addition if a country is also underperforming in certain areas of health care service provision, then there might be scope for reforms, improving health with the same spending.

Life expectancy at birth rose rapidly during the last century in the EU all Member States, but there are still major differences between countries. This is due to a number of factors, including reduction in infant mortality, rising living standards, improved lifestyles and better education, as well as advances in healthcare and medicine. Life expectancy at birth in the EU28 was estimated at almost 81 years in 2014, with significant cross-country variation. For instance, the lowest male life expectancy in 2014 was recorded in Latvia and Lithuania (around 69 years) and the highest in Cyprus and Italy (above 80 years), with a gap of more than 10 years between groups.

In the past, the increase in life expectancy has been accompanied by an increase in healthy life years ([107]) (HLY). However, a large gap between life expectancy and healthy life years at birth remains. In 2014, the number of healthy life years at birth was estimated at 61.4 years for men and 61.8 years for women in the EU; this represented approximately 79% and 74% of total life expectancy for men and women. The path of future health expenditure will also depend on whether future increases in life expectancy will be spent in good health or not (see Section 2).

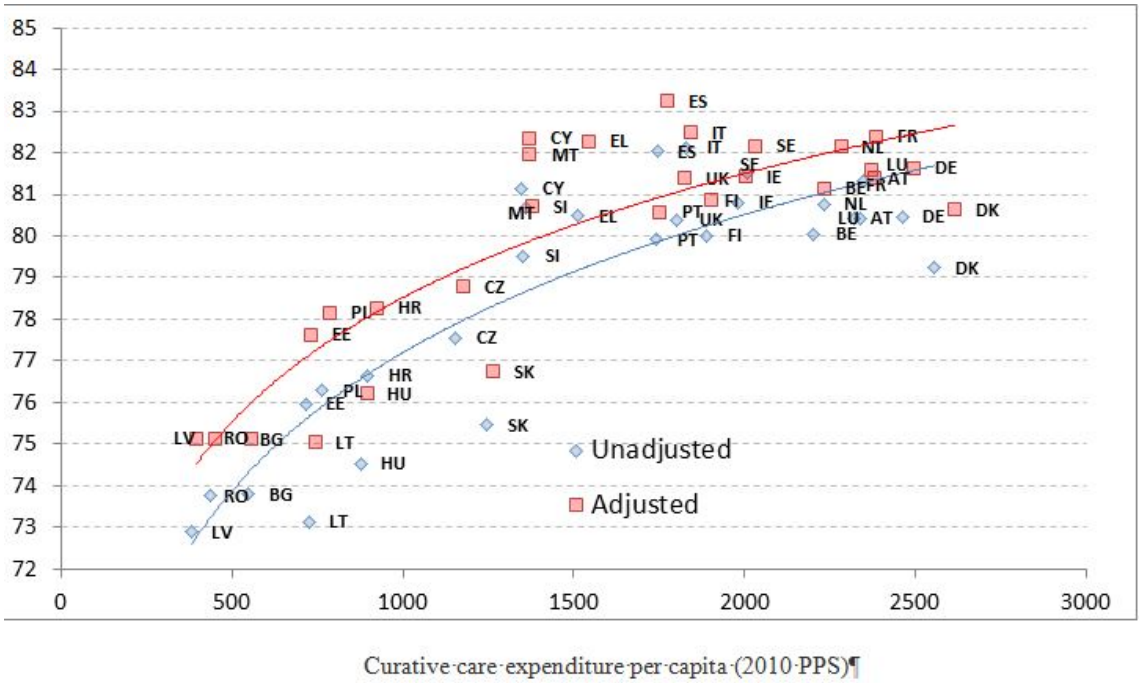
Health status and system efficiency

Health status measures of amenable and preventable deaths are often used to describe a closer link to health system performance ([108]). In 2013, deaths from potentially avoidable causes (amenable deaths) in the EU amounted to 578,000.

([107]) HLY is an overarching indicator for monitoring the European Strategy for social inclusion and social protection. Within the new Europe 2020 strategy (2011-2020), HLY has become an indicator in the Pilot European Innovation Partnership on Active and Healthy Ageing (EIPAHA), which aims to increase the healthy life expectancy for everyone in Europe by an average of two years by 2020 (ECHIM, 2013a). The interest in the indicator lies in its simplicity, the availability of its basic data, and its independence of the size and age structure of the population. However, cultural differences in reporting disability can influence the HLY indicator (Eurostat, 2013b). http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:Healthy_life_years). Eurostat calculates information relating to healthy life using mortality statistics and data on self-perceived activity limitations. Mortality data come from Eurostat's demographic database, while self-perceived activity limitations data come from a European health module that is integrated within the data collection EU statistics on income and living conditions (EU-SILC). The HLY indicator is derived from self-reported data so it is, to a certain extent, affected by respondents' subjective perception as well as by their social and cultural background. The indicator does not cover the institutionalised population, for example, people living in health and social care institutions who are more likely to face limitations than the population living in private households. It is therefore likely that, to some degree, this data source under-estimates the share of the population facing limitations. Furthermore, the implementation of EU-SILC was organised nationally, which may impact on the results presented, for example, due to differences in the formulation of questions.

([108]) According to Eurostat, a death is amenable if, in the light of medical knowledge and technology at the time of death, all or most deaths from that cause could be avoided through good quality health care. A death is preventable if, in the light of understanding of the determinants of health at the time of death, all or most deaths from that cause could be avoided by public health interventions in the broadest sense. http://ec.europa.eu/eurostat/statistics-explained/index.php/Amenable_and_preventable_deaths_statistics#cite_note-6.

Graph 3.12.1: **Life expectancy and estimated life expectancy adjusted for lifestyle factors**



(1) Association between curative healthcare spending (2010 EUR, PPS) and life expectancy (years) unadjusted and adjusted for lifestyle behaviour (assuming smoking, drinking and BMI drop to the lowest level observed across the EU). The association between health expenditure and life expectancy cannot be taken as a causal relationship but only as statistical correlation.
Source: European Commission (2015c).

Among EU Member States, the lowest amenable mortality rates are found in France, Spain, Italy and the Netherlands (Eurostat). On the other end of the spectrum are Bulgaria, Lithuania, Romania and Latvia with high rates of potentially amenable deaths. As far as preventable deaths are concerned, potentially, 1 million deaths in the EU could have been prevented by public health interventions. The Member States with the lowest preventable mortality rates are Cyprus, Italy, Spain and Greece, while Member States with the highest levels of potentially preventable deaths are Romania, Hungary, Latvia and Lithuania.

The differences in health status across countries provide grounds to investigate how effective and cost-effective health systems are in their role to promote population health and prevent disease. High spenders do not necessary rank high in terms of health status of their population, also taking into account lifestyle differences between countries (see Graph 3.12.1) ([109]). For instance, Spain records the highest life expectancy, but is a median spender compared to other EU countries. Conversely, Belgium and Denmark rank among the high spenders, but reached only average levels of health outcomes. Also, indicators which are more closely related to health system performance, such as healthy life years at age 65 and amenable mortality rates, show larger differences in outcomes for the same level of spending than life expectancy, probably because the former are more affected by variables outside the control of health systems. This cross-country variation in outcomes is often interpreted as an indication of potential health system inefficiency.

Public health policies as cost-effective tools to increase efficiency

Evidence suggests that public health policies can be cost-effective tools to increase efficiency. Differences in health spending per capita and

([109]) Due to the unmeasured effect of confounders, association between health expenditure and life expectancy cannot be interpreted as a causal relationship but only as statistical correlation, therefore results should be interpreted with caution especially when formulating policies based on the conclusions.

health status suggest that countries vary in their ability to translate inputs into better health outcomes, such that there is a considerable potential for efficiency improvement. While the exact size of the possible efficiency gains is a subject of controversy, estimates suggest a considerable potential for improvement. Joumard et al. (2010) estimates that average life expectancy could increase by about 2 years for the OECD as a whole, if resources were used more efficiently. For the EU, Medeiros et al. (2015) estimate that, on average, life expectancy at birth could be increased by 1.8 years (1.2 years at age 65) when moving from current positions to the efficiency frontier. Conversely, holding health outcomes at current levels, while increasing efficiency to the level of the best performing countries, could free-up a considerable amount of resources. Changes in lifestyles could significantly increase life expectancy at birth in all EU countries, with little impact as such on healthcare budgets (see Graph 3.12.1), also hinting at the very cost-effective nature of policy interventions targeting lifestyle patterns as key drivers of mortality and increased curative and rehabilitative care costs (European Commission, 2015).This could be potentially achieved by a greater focus placed on public health policies, including health promotion and disease prevention reaching all segments of the population, which would indeed deliver a longer time span in healthy life.

The impact of lifestyle patterns on health status is well documented and, while health status has improved in the EU in the past, continuously high levels of bad lifestyles may impact negatively on this trend, as key drivers of non-communicable diseases (NCDs). Non-communicable diseases (NCDs) are represented by chronic diseases that typically last long periods of time and are characterised by a slow evolution. Obesity, diet, alcohol consumption, smoking and lack of exercise are associated with NCDs, such as cardiovascular disease, cancer and dementia the main causes of mortality and morbidity in the EU.

Public health programmes, policies and health services availability and quality can influence the likelihood of preventing, delaying, overcoming and avoiding mortality from both non-communicable and communicable diseases. A public health programme involves the design and development of a complex set of coordinated actions to respond to current and future public health threats through activities of prevention, management and surveillance. These range from the identification of current and prospective health threats, the definition of goals based on identified norms and standards, the generation of the knowledge and evidence-based appropriate responses, to the implementation of policies to achieve them, paired with a regular monitoring of health trends ([110]). Alongside NCDs, public health programmes typically target communicable diseases, which include epidemic-prone diseases (infections caused by bacteria, parasites, viruses etc), and their drivers, such as, for instance, antimicrobial resistance; foodborne diseases and other accidental or deliberate outbreaks.

The EU landscape of public health initiatives: some examples

National systems' responses to public health challenges differ across countries although all EU member states have implemented or planned National disease strategies. In 2014, the vast majority of Member States – 24 out of 28 - met the target of producing a National Cancer Control Plan (NCCP) before 2013([111]),with the remaining being underway. The UK provide another example of good practice with the Cardiovascular Disease Outcomes Strategy. As a further example, most EU countries reports having a diabetes strategy in place. Lastly, other examples include strategies to promote mental health (ES, PT and UK), as well as to tackle communicable diseases such as HIV/AIDS (LV, EE).

All countries have to some extent addressed some or all of the main risk factors associated with the development of NCDs. Almost 80% of Member States have developed a NCD unit or department within the Ministry of Health, or equivalent. Although most Member States have developed an operational policy, strategy or action plan to tackle one of the main risk factors of NCDs, harmful use of alcohol, physical inactivity, tobacco use, unhealthy diet, less than 30% have developed a multi-sectorial plan addressing

([110]) World Health Organization. The role of WHO in public health, accessed 17 May 2016.

([111]) http://ec.europa.eu/health/major_chronic_diseases/docs/2nd_implreport_cancerscreening_co_eppac_en.pdf, accessed 25/5/2016.

multiple NCDs through shared risk factors (CZ, FI, IT, LT, MT, PT, ES, UK).

Virtually all Member States report prevention policies tackling the main risk factors driving diabetes. Apart from Romania, for which information is not available, all EU countries report to have in place a prevention policy on obesity and overweight, the promotion of healthy food and diet and physical activity, directly or indirectly linked to diabetes. The only gaps appear in the case of BG and MT, which do not report prevention policies specific to the harmful use of alcohol ([112]). In addition, other implemented campaigns include health care provision in mobile health units, allowing to specific population groups with financial restrictions and difficulties in accessibility to have access to health care services (Portugal), education improvements regarding self-medication, anti-self-medication campaigns and the adaptation of packages to each dose prescription (Spain), and guidelines for healthy nourishment (Latvia).

Member States have unanimously adopted the European Vaccine Action Plan 2015-2020 (EVAP) in 2014. This represents an unprecedented commitment in this area, whereby immunisation is put as a priority and a key quality driver for the whole health system. The goal is to eradicate all vaccine-preventable diseases by implementing strong immunisation programmes, promoting access to vaccines and immunisation services that are high-quality, safe and affordable ([113]).

Governments have adopted a wide range of policies to address harmful alcohol use, but with great variation across countries. These policies range from the application of taxes to alcoholic beverages, common in most countries, to other regulatory measures to correct behaviours, such as maximum levels of blood alcohol concentration (BAC) for drivers and regulation on alcohol sales, typically with a minimum age for legal purchase and, more rarely, with restrictions to time and place of legal sale. Most countries have regulated the advertising of alcoholic beverages, but regulation appears to be weaker in other forms of promotion (e.g. sponsorships and product placement).

Although most member states have a strategy in place for one or more risk factors associated with NCDs, tools in place for management, monitoring and surveillance of public health are not equally developed in the EU. Whereas almost 90% of member states have established a national registry for cancer, only 60% of member states report having developed guidelines and protocols for the management of NCDs at primary care level, which could substantially improve cost-efficient management of this kind of conditions. Lastly, only slightly more than 30% have developed a reporting system to monitor progress against the nine global NCD targets ([114]).

Despite the activity in many areas, policies targeting other health drivers, such as socio-economic conditions, are still underdeveloped and call for the development of multi-sectorial policies. There are many socio-economic determinants of health. These include a whole range of living and working conditions, which can affect health through direct and indirect physical and psychological mechanisms, one which is unemployment. According to a joint report by the WHO and University College London Institute of Health Equity (IHE), unemployment can affect physical and mental health, through material deprivation and low pay especially linked to inequity (like when the pay is perceived as unfair, but, more generally, when employment pays too little to enable a healthy life). In addition, there is supporting evidence that depression is higher amongst the unemployed, including younger adults ([115]). In this context, actors from several other areas, such as social services, but also non-traditionally health-related ones like urban planning and environmental protection, are reported as relevant stakeholders. Therefore, multi-sectorial public health policies are key with regard to improving the health of the population.

([112]) http://www.idf.org/regions/EUR/policypuzzle, accessed 26/06/2016.

([113]) http://www.euro.who.int/__data/assets/pdf_file/0008/276659/EVAP-factsheet.pdf, accessed 25/5/2016.

([114]) World Health Organization - Noncommunicable Diseases (NCD) Country Profiles, 2014 http://www.who.int/nmh/countries/en/.

([115]) McGee RE, Thompson NJ. Unemployment and Depression Among Emerging Adults in 12 States, Behavioral Risk Factor Surveillance System, 2010. Prev Chronic Dis 2015;12:140451. DOI: http://dx.doi.org/10.5888/pcd12.140451.

Box 3.12.1: **Public health funding in Latvia**

An example of underfunding may be provided by Latvia, which has seen a downsizing of the public health sector. The leading organisation for health, the Public Health Agency, was closed in 2009, based on the necessity to cut expenditure and re-allocate resources to follow different political priorities. Following this step, in 2010, the state announced its intention to stop public health promotion activities. Currently the public health system is substantially downsized, and the share of GDP that Latvia devotes to prevention activities was the lowest in the EU in 2013**.**

In general, public expenditure on "prevention and public health services" constitutes a very low share of total public health expenditure. This accounted for 2.8% out of total public expenditure and for 0.2% as a percentage of GDP in 2013. One of the reasons for which this area tends to be neglected is that the long time needed for the outcome to be recognised does not match with the shorter political cycles. Most of the expenditure on prevention and public health services is public, although in the case of NL and FI private expenditure is also significant. In the case of FI this is perhaps related to widespread occupational health offered by private companies. Cross-country variation is very limited when looking at expenditure as a share of GDP: total expenditure on prevention and public health services is 0.3% of GDP in DE, BE, DK, IT, FI and SE, but only 0.1% of GDP or less in CZ, ES, LT, HU, PL, PT and SK. In terms of share of total current health expenditure, which somehow indicates the relative importance of expenditure on prevention and public health services in relation to other types of care, greater variation appears, although only marginally. Public expenditure on prevention and public health services ranges from 4.3% of total public health expenditure in FI, to only 1% in PT. Countries with a below-average share of public spending are: CZ, EL, FR, LV, LT, HU, NL, AT, PL, PT and SK (see Table 3.12.1) ([116]).

Public health and capacity building

Wide debate on capacity building in the EU has taken place and led to projects and studies inside and outside the EU. Public health capacity is described as the pool of organisational, human, financial and other resources that enable to protect and improve public health, as a goal in itself and as a key driver of economic growth. A study to assess existing capacity has been carried out in light of the new challenges in public policy design due to its evolving nature. Indeed, public policy has seen a change in goals (from reduction of disease to prevention), approaches (from top-down to a collaborative, inter-sectorial and participatory approach) and actors (from national professional experts and decision-makers to multidisciplinary groups including a variety of stakeholders). The existing capacity at EU presented some challenges mainly concerning financial and human resources. There is a reported generalised need for additional human and financial resources, for the underdevelopment of stakeholder partnerships and a general need to strengthen information systems in the area of public policy ([117]).

([116]) It is possible that part of expenditure on prevention activities may be captured by other functions.

([117]) Aluttis CA, Chiotan C, Michelsen M, Costongs C, Brand H, on behalf of the public health capacity consortium (2013). Review of Public Health Capacity in the EU. Published by the European Commission Directorate General for Health and Consumers. Luxembourg, 2013. ISBN 978-92-79-25023-1

Table 3.12.1: **Public expenditure on prevention and public health services as a % of GDP and of current health expenditure (CHE)**

	As a % of GDP		As a % of CHE	
	2003	2013	2003	2013
Belgium	0.2%	0.3%	2.7%	4.1%
Bulgaria	0.3%	:	5.8%	:
Czech Republic	0.1%	0.1%	2.1%	2.4%
Denmark	0.2%	0.3%	2.7%	2.9%
Germany	0.3%	0.3%	3.6%	3.2%
Estonia	0.1%	0.2%	2.4%	3.5%
Ireland	0.2%	:	4.0%	:
Greece	:	0.1%	:	1.7%
Spain	0.2%	0.2%	3.3%	2.8%
France	0.2%	0.2%	1.8%	1.8%
Croatia	:	:	:	:
Italy	0.0%	0.3%	0.6%	3.7%
Cyprus	0.0%	:	1.1%	:
Latvia	:	0.0%	:	1.2%
Lithuania	:	0.1%	:	2.0%
Luxembourg	0.1%	:	2.2%	:
Hungary	0.3%	0.1%	4.6%	2.4%
Malta	:	:	:	:
Netherlands	0.2%	0.2%	4.0%	2.6%
Austria	0.2%	0.2%	2.0%	2.0%
Poland	0.2%	0.1%	4.6%	2.7%
Portugal	0.1%	0.1%	2.0%	1.0%
Romania	0.3%	:	7.5%	:
Slovenia	0.2%	0.2%	3.9%	3.7%
Slovakia	:	0.1%	:	1.5%
Finland	0.2%	0.3%	4.1%	4.3%
Sweden	0.2%	0.3%	3.0%	3.1%
United Kingdom	:	:	:	:
European Union	0.2%	0.2%	2.7%	2.8%
Euro Area	0.2%	0.2%	2.6%	2.8%
European Union (r	0.2%	0.2%	3.0%	2.6%
EU15 (median)	0.2%	0.3%	2.7%	2.9%
EU13 (median)	0.2%	0.1%	4.3%	2.4%

Source: Commission services computations based on Eurostat and OECD health data.

3.13. SUMMING UP

Health care systems in the EU aim at providing timely access to good quality health care, ensuring that the need for healthcare does not lead to poverty or financial strain. Against a background of rising demand for healthcare services and goods and constrained public finances, the need to increase the cost-effective provision of care, the resilience of health systems and their financial sustainability has been recognized as key to ensure achieving the aforementioned goals. Health care goals can be achieved by a number of tools, which are analysed in this report along with the main elements being budgeting practices, institutional arrangements and specific policy tools for health system design.

Challenges of health care systems

Increasing costs due to demographic ageing, the challenge of financing spending due to demographic ageing, as well as the related increasing population expectations for better care services, are perceived as challenges of health care systems by government officials. When deciding on whether to allocate more money to health care, government authorities are concerned with the quality of information about the value for money of investments, competing fiscal pressures, changing policy priorities and also the existence of fraud or corruption. Containing costs on hospital and pharmaceutical care is regarded as important by virtually all EU Member States. Investments in outpatient care, primary care and health promotion activities are ranked as important areas for investment by most EU Member States. Member States use a wide range of policy tools for improving the functioning of health care systems, but usage could be more widespread. The perceived importance of the specific policy tools in many cases is close to their actual usage. As regards the modes of cooperation between Ministry of Finance and Ministry of Health on specific policy tools for improving the functioning of health care systems, co-decision is reported as the most frequent mode, but lone decisions making is also common.

Coverage and expenditure

Health insurance coverage is universal or almost universal in all EU Member States. Although health expenditure has also increased over time, in recent years the link between the two has become weaker, as there are relevant cross-country differences with regard to what is covered, actual access to care and the quality of care received.

Public health expenditure represents the largest part of total health expenditure in almost every EU country, although there is great cross-country variation. Out of pocket-payments are partly linked to cost sharing, which is widely used in western EU health systems to moderate demand and/or raise revenue. While this tool can promote greater efficiency and be effective in reducing inappropriate health care, it should be used with caution as it can also reduce appropriate use of health care. Private insurance plays a relatively small but growing role in EU health systems, which may raise efficiency and equity concerns if not appropriately regulated. Finally, informal payments for healthcare are prevalent in several EU countries, with negative implications for access to health care and efficiency of the system.

Health financing

Different features of the systems, directly linked to revenue generation, pooling and collection, will have a direct impact on how the health system performs in reaching its policy objectives. In addition, other related features, such as the size and features of the national economy and political priorities will be a major determinant of final performance. Building on observation of past trends, it is not possible to define a one-size-fits-all model. However, some characteristics such as a broad revenue base, the capacity for countercyclical spending, efficient and transparent revenue collection, broad pooling of resources, paired with redistribution, have the potential to support help the system deliver a stable financing to ensure affordable, sustainable and equitable healthcare.

Budgeting practices

As part of fiscal governance, sound budgeting practices contribute to the fiscal sustainability and efficiency of health care spending. This is conducive to advising policymakers on the realism of specific budget proposals, both from a macroeconomic and efficiency perspective. In most EU Member States there is considerable scope for improvement of budgetary processes.

Due to the complexity of budgeting processes, in most EU countries some form of cooperation between mostly the Ministry of Finance and the Ministry of Health is standard to defining what is the finally enacted budget for health care. Regional stakeholders/governments play also a key role in budgetary processes in a number of countries.

Budgetary planning for health care expenditure is based on forecasted expenditure and revenues in most EU Member States. Early-warning mechanisms for budget overruns are used in roughly half of all EU countries. Spending targets and ceilings on health are used in most countries at various levels to promote accountability in public spending. Performance based budgeting and spending reviews are perceived as important tools for improving the quality of health care spending, and could be used in more EU Member States. Tools dealing with unexpected increases in health expenditure are used more rarely than other budgetary tools. Finally, reportedly, only half of the EU Member States seek to improve the financing mix for health care. The perceived importance of these tools relatively to their actual use is high. The varied use of budgetary tools indicates untapped potential to increasing fiscal sustainability of health care systems by activating sound budgetary practices.

Health service providers

In a labour-intensive sector such as health care an adequate workforce is an important necessary condition for a well-performing health system. There is large variation across the EU in terms of the number and relative proportions of practising physicians, GPs and nurses, which can impact on the cost-effectiveness and adequacy of the system. As the current medical workforce retire, the importance of ensuring a smooth inflow of medical graduates into the sector is likely to increase.

There is a large cross-country variation in the number of hospital beds per capita in the EU. This is hinting at potential inefficiencies in health service provision. The long-term decreasing trend in the number of hospital beds is being reversed in some EU countries. The interaction with private sector hospital beds varies across EU member States and can lead to perverse incentives, which has led some Member States to adjust their policies in this respect.

Access and quality of care

Ensuring universal and equitable access to good quality health care is a key objective for EU countries' health systems. Barriers to access include affordability, waiting times and travelling distance, as well as socio-economic and cultural factors. The average level of unmet needs for medical examination in the EU is relatively low, but there is a considerable variation across Member States. This signals that adequate access to care is an issue particularly, but not exclusively in lower income countries. The quality of the care to which the population has access matters and is necessary to make access effective. In order to measure the quality of care provided, EU members have developed a range of indicators. This data can be used to compare different care providers within and across regions and countries. International comparisons are useful in contextualising performance, although they require taking into account national differences.

Purchasing, contracting and remuneration systems

How services are purchased and how providers are reimbursed has an impact on incentives driving provider activity and, in turn, on outcomes in terms of quality and cost. Payment mechanisms also have the potential to attract high quality workers, which can in its own right have an impact on efficiency and cost containment.

No single payment mechanism is flawless and each has a potential to set perverse incentives. A trend has emerged across EU countries to adopt mixed solutions that can exploit the positive incentives of different mechanisms and contain potential distortions. Payments should be designed to promote activity in primary care, to strengthen the gatekeeping and its cost containment potential. To this end, a growing number of countries have adopted mechanisms of pay-for-performance (P4P) in primary care, explicitly rewarding signals of good performance such as prevention activities. The extent to which hybrid payment mechanisms and P4P solutions have been adopted varies across EU countries, leaving room for efficiency gains.

Market mechanisms

In the context of health care, pure market solutions are not desirable and regulation must be in place to protect patients, promote quality outcomes and efficient solutions. Out of the possible tools, competition, under appropriate regulation, can steer the system in this direction by lowering prices, as in the case of generics in pharmaceuticals, and promoting quality and efficiency. One other important ways in which competition can support cost containment is through competitive tenders. Member States have adopted these solutions to different extents so far. Though it's not possible to establish a clear link between competition and cost containment at system level, some areas in which competition has greater potential of increasing efficiency can be defined and may deserve greater attention from policy makers, especially where market solutions have not been explored yet.

Health system governance

Governance corresponds to a broad set of actors, actions and tools that embody the way in which a system is steered towards its goals. Several attributes of organisations determine whether governance can be considered effective, including clear and coherent attribution of roles and accountability. Decentralisation, including that of health care spending, is becoming a reality in a growing number of Member States. Decentralised solutions offer benefits but also additional challenges to governance as they require strong coordination and monitoring systems, clear financing mechanisms between central and sub-national as well as transparency and accountability tools. These features appear in different ways across Member States and this should be strengthened, especially when opting for decentralisation, but also as principles of good governance. Broad principles such as clear identification of roles, transparency and accountability can avoid the duplication of tasks and excessive administrative structures which result in additional costs to the sector.

Information and monitoring

Given limited resources and growing demand for care, it is important that what is publicly provided/ funded is safe, effective in achieving the objective of better health and cost-effective. Available data determines the ability to perform system diagnostics, design appropriate policies and implement effective governance. Growing attention has been devoted to the issues of quality and availability of data, and evidence-based policy making, such as that based on HTAs is increasingly adopted across Member States to achieve greater efficiency and cost containment. To the same end, another way to rationalise expenditure is the systematic creation of electronic records, and, more in general, through the use of eHealth solutions. There are differences across Member States on the degree of development of these tools, which suggests there is further scope to increase efficiency across EU systems.

Public health policies

Life expectancy has risen in all EU Member States, and the path of future health expenditure will depend on whether future increases in life expectancy will be spent in good health or not. The differences in health status and spending point at public health policies as a cost-effective tool to achieve efficiency gains. All Member States have to some extent implemented public health policies. However, debate on capacity building has highlighted how public policy often suffers from low funding and weak governance. This suggests there is further scope to increase the efforts in the field of public health, especially in under current and future projections of increasing pressures on national budgets.

4. POLICY OPTIONS TO IMPROVE THE SUSTAINABILITY OF HEALTH CARE SYSTEMS

4.1. ADDRESSING THE CHALLENGES OF HEALTH CARE SYSTEMS

This section highlights selected challenges of health care systems, as perceived by EU Member States. Results draw on the data from the country survey, introduced in section 3.2, and from the section on challenges in the country-specific documents included as part of this report ([118]). Ways to address these and other challenges are presented in the following sections to this chapter. This list of measures is intended as a menu of possible policy options from which Member States can choose to improve the sustainability of their health systems. Which measure or combination of measures to implement remains a policy choice for the Member State.

The survey demonstrates that all EU Member States ([119]) see a need addressing the substantial challenges that health care systems are facing (Table 4.1.1 ([120])). As described in Section 3.2, the extent towards which government authorities cooperate between ministries varies, which may be sub-optimal in terms of good governance. In addition, the extent of effective employed policy tools varies, and this could have implications for the ability of governing officials to steer the efficiency of spending. If countries do not effectively employ all policy tools to increase spending efficiency, there is room for improvement. Also, lack of quality information, the existence of fraud and/or corruption, as well as budget overruns on health spending are considerable concerns for government authorities (see Section 3.2). This leads to the following important policy conclusions:

- **Continue increasing the efficiency of health care spending**. This is needed in order to adequately respond to the increasing health care expenditure over the coming decades, which poses risks to the long-term sustainability of public finances. Currently, this is perceived as a particular challenge by 16 EU Member States.

- **Improve the cooperation between government authorities.** The institutional set-up relates to the cooperation on budgeting for health care spending and the cooperation on tools related to health care system design. In many cases, budgeting officials and officials in charge of the health care system do not have the same set of information, nor the same incentives, which makes it more difficult to find the most cost-effective solutions for improving the sustainability of health care system. Also, decision making on budgeting processes is done often by one government authority, while decisions on how to run the system are done by another. Better governance could mean more consultation or even more co-decision between the ministries in charge. In many EU Member States, decision making is still divided in ministerial silos. Currently, it seems that cooperation between budgeting officials and officials in charge of the design and implementation of health systems could be improved in around half of the EU Member States (see Section 3.2).

- **Widen the spectrum of policy tools effectively used to ensure the fiscal sustainability of health care spending**. Many EU Member States use a restricted set of policy tools and could profit from using a wider range of tools, such as introducing impact assessments of policy reforms, improving reimbursement mechanisms, enhancing provider competition, defining strategic objectives of the health sector and using eHealth tools. This could positively contribute to efficiency gains in the sector. Currently, only a minority of EU countries seems to use a comprehensive set of policy tools.

- **Improve the quality of information about the value for money of health care spending.** Inadequate or insufficient information on the

([118]) Challenges from the country-documents were categorised and summarised by policy area in order to be comparable across countries.

([119]) Germany did not fill out part of this survey but provided information on challenges on a qualitative basis in the country documents to this report.

([120]) Table 4.1.1 summarises this qualitative information in a necessarily simplified manner. More detailed information on the challenges for each Member State can be found in the country-specific documents included as part of this report.

Table 4.1.1: **Addressing selected country-specific challenges of health care systems**

	Addressing the challenges of health care systems	Reduce risk to the long-term sustainability of public finances	Widen the spectrum of tools used*	Improve the quality of information	Tackle the existence of fraud/corruption	Eliminate budget overruns which are a concern for additional investments	Improve cooperation between budgeting officials and officials in charge of the health care system**	
BE	**x**	x	12	x		x	x	**BE**
BG	**x**		14	x	x	x	x	**BG**
CZ* **	**x**	x	4	x				**CZ*** **
DK	**x**	x	11					**DK**
DE** **	**x**	x	1					**DE**** **
EE	**x**		13	x	x	x		**EE**
IE	**x**		9			x	x	**IE**
EL	**x**	x	13	x	x	x	x	**EL**
ES	**x**		3				x	**ES**
FR			16				x	**FR**
HR	**x**	x	15	x	x	x		**HR**
IT	**x**	x	14	x				**IT**
CY	**x**	x	8	x		x		**CY**
LV	**x**		15					**LV**
LT	**x**		9	x	x	x		**LT**
LU	**x**		11	x			x	**LU**
HU	**x**		12					**HU**
MT	**x**	x	11				x	**MT**
NL	**x**	x	12	x		x		**NL**
AT	**x**	x	12	x		x		**AT**
PL	**x**	x	14				x	**PL**
PT	**x**		15	x	x	x	x	**PT**
RO	**x**	x	14		x	x		**RO**
SI	**x**		15	x	x	x		**SI**
SK	**x**	x	2	x	x	x	x	**SK**
FI	**x**		12					**FI**
SE	**x**	x	9				x	**SE**
UK	**x**	x	14					**UK**
EU	**27**	16	27	15	9	14	12	**EU**
EA	**18**	9	18	12	6	11	9	**EA**
EU15	**14**	9	14	7	2	6	8	**EU15**
EU13	**13**	7	13	8	7	8	4	**EU13**

(1) Based on country survey.
(2) The first category (Addressing challenges) is signalling a challenge if any of the sub-categories flag a challenge.
* Summarising the number of policy used, which are being used by the government authorities in charge of the HC system. The maximum number is 17. For some countries, the tools are used on the local/regional level, as in BE, ES and SE.
** Countries are flagged, which report to have predominantly little cooperation/co-decision making between budgeting officials and officials in charge of HC system design.
*** In the Czech Republic, many of the policy tools are used by the Ministry of Finance, while the survey was answered from the perspective of the Ministry of Health.
**** Germany did not provide information on this section of the survey.
Source: Commission services (DG ECFIN).

reasons why more funding for health care is needed is perceived as a challenge for half of the EU countries.

- **Tackle the existence of fraud/corruption that is a concern for additional funding.** This is perceived as a challenge in every third EU Member State. Improving governance systems to tackle this issue may be an important

catalyser for increasing the efficiency of spending on LTC, and improving the willingness of government authorities to finance the sector more extensively.

- **Eliminate budget overruns, which are a concern for additional investments.** Budget overruns, and the implied unpredictability of the actual level of spending, are perceived as a challenge by roughly a third of all EU Member States and in half of the EU13 countries. Employing sound budgeting practices (see Section 3.6) has the potential to remedy this situation.

4.2. ENSURING SUSTAINABLE FINANCING

Drawing a strategy to ensure sustainable financing of healthcare provision must start from an assessment of the current situation. Relevant dimensions to look at are the level of financial risk protection, the level of access, system efficiency, characteristics and capacity and other external relevant factors ([121]). Aside from the features of the health care system, the wider political context plays a relevant role in determining whether policies are actually implementable, which should be accounted for when designing a financing strategy.

To respond to future fiscal pressure and improve the resilience of the health system governments must improve their financing mix. The large majority of member states acknowledge that ensuring sustainable financing is one of the main challenges their health care system needs to tackle at present. A well-designed financing mix can ensure stable funding, which allows for effective investment planning and continuity in organising and managing care delivery, thereby improving the resilience of the health system ([122]). Almost half of member states acknowledge the need to adjust the financing mix to ensure greater sustainability (Table 4.2.1). This can be achieved through several tools. This list of measures is intended as a menu of possible policy options from which Member States can choose to improve the sustainability of their health systems. Which measure or combination of measures to implement remains a policy choice for the Member State.

MORE VALUE FOR MONEY

Good policies to ensure sustainable financing should focus on the quality of spending. Getting more value for money is key in ensuring financial sustainability, access and quality. By encouraging policies realising better value for money governments, can achieve greater efficiency, which enables overall sustainable financing. Although this may not be always sufficient on its own, it is the primary step that Member States should take, as the necessary condition to achieve and maintain fiscal sustainability in the longer term. Indeed, sustainability cannot be achieved with a spending policy that accommodates regular expenditure increases, even when there is financial scope to do so, wherever there is further room to improve efficiency of spending in health care systems.

Centralised models of collection increase efficiency and available revenues. Multiple revenue collection points may be problematic when enforcing payments, as it may be easier to evade payments to individual insurance funds. Further, with single funds setting contribution rates, it may be challenging to ensure effective reallocation through risk adjustment, as actual redistribution of funds often concerns only a share of the total revenues collected by individual funds, thereby limiting allocative efficiency. This de facto constrains the overall availability of resources to match need ([123]).

Reducing fragmentation in pooling unlocks additional resources ([124]). Pooling can be centralised or fragmented, and reducing fragmentation refers to the creation of a lower number of larger pools, or of one single pool. Widening the pool increases ceilings of each individual pool on resource availability. Therefore,

([121]) Financial risk protection captures characteristics such as available funds compared to needs and sources, as well as to government spending priorities. How much individuals need to pay out-of-pocket and what consequences this has on their finances, as well as the distribution of spending and the system coverage. This should be paired with a careful analysis of health system characteristics and capacity, developing a comprehensive understanding of the flow of funds within the system and of the availability, distribution and use of resources in the system (facilities, workforce and other inputs such as medicines). Lastly, the analysis should capture demographic factors, disease evolution projections, and the regulatory and legislative context (such as the decision-making powers across different administrative units and spending autonomy of hospitals. World Health Organization (2010) Health systems financing: the path to universal coverage. Geneva: WHO. Available: http://www.who.int/whr/2010/en/index.html. Accessed 21 October 2010).

([122]) European Commission (2014), 'Communication from the Commission on effective, accessible and resilient health systems' http://ec.europa.eu/health/healthcare/docs/com2014_215_final_en.pdf.

([123]) Thomson, S., Foubister, T., Mossialos, E. (2009), Financing health care in the European Union: challenges and policy responses, European Observatory on Health Systems and Policies, Observatory Studies Series. http://www.euro.who.int/__data/assets/pdf_file/0009/98307/E92469.pdf.

([124]) Pooling refers to the accumulation of funds that users pre-paid, by organisations that are often, though not always also in charge of purchasing services on behalf of patients. Pooling is not the same as collecting and even fragmented ore decentralised collection of funds can then be pooled centrally to support the purchasing function. Kutzin J. (2001), A descriptive framework for country-level analysis of health care financing arrangements. Health Policy; 56:171-204.

Table 4.2.1: **Country-specific challenges for ensuring sustainable financing for health care**

	Ensuring sustainable financing	Improve financing mix	Reduce out-of-pocket payments and ensure universal coverage	Adjust cost-sharing to promote efficiency	
BE	x	x		x	**BE**
BG	x	x	x		**BG**
CZ	x	x		x	**CZ**
DK					**DK**
DE					**DE**
EE	x	x	x	x	**EE**
IE	x			x	**IE**
EL	x	x	x	x	**EL**
ES					**ES**
FR	x			x	**FR**
HR	x	x		x	**HR**
IT	x	x			**IT**
CY	x	x	x		**CY**
LV	x	x			**LV**
LT					**LT**
LU					**LU**
HU	x				**HU**
MT					**MT**
NL	x				**NL**
AT	x	x		x	**AT**
PL	x	x			**PL**
PT					**PT**
RO	x	x	x	x	**RO**
SI					**SI**
SK					**SK**
FI					**FI**
SE	x			x	**SE**
UK					**UK**
EU	17	12	5	10	**EU**
EA	10	7	3	6	**EA**
EU15	8	4	1	6	**EU15**
EU13	9	8	4	4	**EU13**

(1) Based on challenges as identified in the country documents to this report. For each sub-category, challenges differ by country ranging from the improvement of a tool (or practice) to its introduction. Full details are available within each country's section on challenges.
(2) The first category (Ensuring sustainable financing) is signalling a challenge if any of the sub-categories flag a challenge.
Source: Commission services (DG ECFIN).

although the overall amount of resources stays the same, the improvements in redistributive capacity eliminate waste and increase the overall available amount. A lower number of pools can also increase the purchasing power of payers, which is maximum in single-payer mechanism, and decreases with the number of buyers, thereby potentially leading to better purchasing.

MOBILISING ALTERNATIVE FINANCING RESOURCES

Mobilising public finance

In the current strained public finance conditions in most countries, it appears difficult that governments could allocate a larger share of public spending to health. Furthermore, increasing expenditure on health should be linked

with policies to eliminate sources of inefficiencies, as injecting additional public funds into a system subject to unresolved inefficiencies is hardly a source of sustainable financing.

Diversification of sources of financing should support public revenue raising. Governments can generate additional health care funds by taxation, diversifying sources of revenue with or without earmarking. This can be achieved by introducing new taxes, or introducing or increasing a specific earmarking for health, though this may not be feasible due to an overarching goal not to increase, or even to decrease, the tax wedge. Alternative ways to raise health revenues can build on complementary sources of financing.

- **The levy base for contributions could be extended to non-wage earnings.** Broadening the levy base, as opposed to increasing contribution rates or changing or removing contribution ceilings, seems better to promote sustainable financing, especially in light of the delinking between entitlement and contributions due to universal coverage and of ageing trends. In addition, increasing typical wage-based contributions represents a cost to employers, which can have a negative impact on the labour market.

- **Sector-specific taxes**: a sector-specific special levy on large and profitable companies, such as, for instance, the Bank Levy in the UK, may be an option to generate revenues. In a favourable context, this may have a high fund raising potential.

- **Taxes on financial transactions:** targeting financial transactions may generate non-negligible additional funds, but this is politically sensitive and has so far been strongly opposed ([125]).

- **Taxes on specific goods**: the so-called sin taxes, i.e. taxes levied on the consumption of harmful products, are an increasingly popular way to generate revenues, which also encourages a healthier lifestyle and has the potential to improve health ([126]). Another form of item-specific tax may be that on luxury goods.

Earmarking does not guarantee additional health care revenues. Earmarked taxes, one of many tools, are designed and applied for a specific purpose, with the aim to achieve greater stability of flows to certain spending items. However, earmarked taxes may de facto be offset by decreases in flows from other sources of the budget. In addition, earmarking may be a tool not suitable to certain tax systems and, so it does not necessarily represent a viable policy option. It therefore appears preferable to strengthen the government's commitment to a stable share of public spending for health care.

Automatic stabilisers should be used to increase stability and resilience. Automatic stabilisers create the potential to expand health revenues to respond to shocks and ultimately increase system resilience. Typical options are drawing from reserves, which should be systematically accumulated over time, and adopting or adjusting countercyclical spending formulas.

Mobilising private finance

Voluntary Health Insurance (VHI) could also be explored but should have a minor role in health financing. VHI may have some limited value as a tool to address gaps in coverage for the less well-off. However, it increases fragmentation and promote an inequitable redistribution of resources. This can include covering co-payments, services not included in the benefits package and higher-quality services, like consultations with specific professionals or a fast-track access to services with waiting lists ([127]).

([125]) Currency transactions are often associated global pooling and redistribution, with implementation in high income countries, where the majority of transactions take place. Although the introduction of financial transaction taxes in specific countries would be possible, it is less supported as deemed less efficient than a coordinated solution.

([126]) Excise taxes on tobacco products, alcohol and unhealthy food (high-fat and/or high-sugar) exist in many countries, but there is further scope to increase this kind of taxation.

([127]) Some argue in favour of its role to protect against the financial consequences of ill health, especially when it covers potential sources of out-of-pocket payments. Sagan, A., Thomson, S. (2016), Voluntary health insurance in Europe: role and regulation. Observatory Studies Series, World Health Organization, Denmark. ISBN 9789289050388.

Reducing public expenditure

Cost sharing should support the containment of public spending, while preserving access. This tool can be applied in various forms to contain the (unnecessary) demand of services ([128]). It also supports cost-containment in shifting part of the expenditure to the private. To this end, it should be paired with some sort of protection of vulnerable categories ([129]). However, its effectiveness is debated, as well as its impact on access and coverage. Accordingly, some Member States report reducing the role of out-of-pocket payments and ensuring universal coverage amongst their challenges. This also captures the broader issue of containing private expenditure to ensure financial protection of the more vulnerable. Aside from the equity-based arguments, one of the sources of criticism towards this tool is that user charges affect the number of visits but not the intensity of care, which may counteract the expected positive impact on cost containment. Another concern is that, unless properly designed, cost-sharing can reduce both unnecessary and necessary care.

Public expenditure can be contained by adjusting the benefits package. Typical tools to regulate the scope of coverage are positive lists, i.e. what is included in the package, and negative lists, i.e. what is excluded ([130]). Policies in this direction should ensure that services that are left out of the basic coverage are not essential and cost-effectiveness criteria should be used ([131]). The political sensitivity of adjustments to the benefits package is reflected in the fact that only one Member State, the Czech Republic, specifically reported it as a policy option. However, Member States may choose to put it in place as part of the broader tool of "improving the financing mix", which captures a larger set of potential initiatives (Table 4.2.1).

Reducing the scope of coverage can also come from rationing. Reducing "non-core" attributes, or, in other words, non-medical components of health care provision can be seen as a way to achieve savings ([132]). However, there is a threshold beyond which even non-medical components may have spillover effects on the core service, for instance by generating excessively long waiting lists resulting in an increased likelihood of adverse health outcomes.

Adjusting the benefits package should be based on evidence on cost-effectiveness. The benefits package should be updated reimbursing services according to cost-effectiveness, accounting for recent advances in treatment options, which should be selected if they deliver better value. This can be implemented, for instance, by the inclusion of a newly developed test that has high potential in strengthening prevention, which may have scope to increase cost-effectiveness, or suspending coverage for services or pharmaceutical treatment as newer and more cost-effective alternatives become available.

The use of breadth of coverage to moderate expenditure should be minimised. Another option is to adjust the breadth of coverage, i.e. who is covered by the system, and to limit the availability of services, or components thereof, to a

([128]) The first type is co-insurance, whereby the insured person pays a share of the cost of the medical service (e.g. 10%). The second type is co-payment, which differs from co-insurance in that it is a fixed sum. The third option is that of deductibles, either general or by service category, usually defined over a set period of time, which are lump sum thresholds below which expenses are paid out-of-pocket before insurance coverage kicks-in. Lastly, especially in the context of pharmaceuticals, the term 'extra billing' refers to OOP (out-of–pocket payments) that the consumer bears when purchasing a medical good which is priced above the reimbursed reference price. Different tools carry slightly different incentives, but they all represent options to manage demand.

([129]) This can be achieved through exemptions based on financial vulnerability (defining a minimum income/assets level, i.e. means-testing) or need-based grounds (categorical targeting) or, lastly, setting a ceiling on private expenditure (caps on user charges). This can be used, for instance, for patients with severe and/or chronic conditions, who are likely to incur more frequent and higher expenditures than the average.

([130]) A negative list requires to "opt-out" from the provision of a new, potentially costly, service and may require frequent updates, but it is easier to define with respect to a positive list. A similar trade-off applies when comparing positive list aggregate categories (hospitalisation) vs disaggregated items (electrocardiogram). An incremental approach can be used to decompose services in sub-parts and ensure coverage for the "core" part. For instance, filling a dental cavity would be the core part, while the increased cost from a white filler vs a grey one could be accessory.

([131]) To the extent possible, one should ensure that current inefficiencies are not accounted for (average costs may be higher where there is overcapacity) and some inputs may be shared by several services, which makes costing more challenging.

([132]) The appropriateness of this option strongly depends on the starting point, and on how much scope there is to further increase waiting lists for a selected set of services.

subset of the existing beneficiaries. This option is highly politically sensitive and can result in limited access to services perceived as necessary and inequity. As such, it should be limited as much as possible.

Cost-sharing should be value-based. Cost sharing should be designed in a way to encourage the use of high value services, like setting a system with fees on specialist visits and no fee for primary care. It should also be used to discourage unwarranted use of public services, for instance, with a co-payment on hospital visits for patients that have not been referred. Many Member States report an efficiency enhancing use of cost-sharing as a policy in their national health system (see Table 4.2.1).

Reducing production costs could be another option to implement cost-containment. Typical targets should be the prices of medical goods, both durables (medical and diagnostic equipment) and consumables (pharmaceuticals). Another possible tool is to reduce the cost of health workers, with changes in salary, and payments to providers, and administrative and overhead costs with system reorganisations. These should be done so as to avoid distortions to the incentives for productivity and quality.

4.3. ENSURING GOOD BUDGETING PRACTICES

Sound budgeting practices are an important component to ensure the fiscal sustainability and efficiency of health care spending. Sound budgeting supports policymakers in realising both fiscal and health system objectives. The survey results, as discussed in Section 3.5, demonstrate that there is considerable scope for improvement of budgetary processes in many EU countries.

Many EU Member States use only a subset of available budgeting tools. Increasing the wider use of specific budgetary tools could be beneficial to the sustainability of public financing, as well as to support the attainment of health system goals. This applies to planning and monitoring tools, budgetary constraints, tools aiming at the quality of health care spending, tools dealing with unexpected increases in health expenditure and tools defining the financing mix. Table 4.3.1 summarises which tools for ensuring good budgeting practices are not used in each EU country. A specific cell is flagged (with a cross), if one of the possible tools in a specific category appears not being used by the responsible budgetary authority. On this basis, the following policy options seem warranted ([133]):

- **Introducing a wider spectrum of budgetary planning tools for health care**. Budgetary planning is a core element of sound budgetary processes, and should, as a norm, include also revenue forecasts (which is not the case in BE, IE, ES, HR and RO), as well as multiannual budgeting (not available in HU).

- **Using performance-based budgeting and spending reviews for improving the quality of health care spending.** These tools could be used in more EU Member States. In fact, only a minority of EU countries use both tools (BE, DK, FR, HR, LV, LT, HU, AT, RO and UK), while other countries are using either one or none of those (CZ, DE, EE, CY and PL).

- **Introducing budget buffers, early-warning mechanisms and/or automatic stabilisers for exerting more control on potential health care budget overruns.** Using at least one of these tools may considerable inform policy makers about potential fiscal risks in health care spending, enabling them to take early remedial action. Using none of the tools leaves policy makers with little information, and may trigger a higher need for short-term cuts in spending, which may not be efficiency enhancing. Reportedly, on the one extreme only CZ, DE, ES, SK and FI do not use any of those tools. On the other hand, only Luxembourg reports using all of these tools. Thus, for most EU countries there is an untapped potential to improve budgetary mechanisms to safeguard spending levels by introducing budget buffers and to enable policy makers taking more informed decisions on budgetary reallocations, if needed and warranted.

- **Improving the financing mix.** Reportedly, only half of the EU Member States seek to improve the financing mix for health care. It seems that relative inaction in this domain is particularly concentrated in EU13 countries, as eleven of them do not report to currently undertake this activity.

- **Introducing spending targets and/or ceilings on health care.** Most EU Member States report having introduced either a budgetary target or ceiling. Over time, more countries have applied budget ceilings or targets for expenditure on health and these ceilings have become more and more binding over time. This is because in the past soft budget constraints on the level of health systems have partly contributed to the rise of health care spending. Overall, budget controls are perceived as having positive impact on cost containment. The Czech Republic, Slovakia and Finland could enhance the fiscal sustainability of health care spending by introducing spending targets and/or ceilings.

([133]) This list of tools is intended as a menu of possible policy options from which Member States can choose to improve the budgeting of their health system. Which measure or combination of measures to implement remains a policy choice for the Member State.

Table 4.3.1: **Country-specific options for ensuring good budgeting practices in health care**

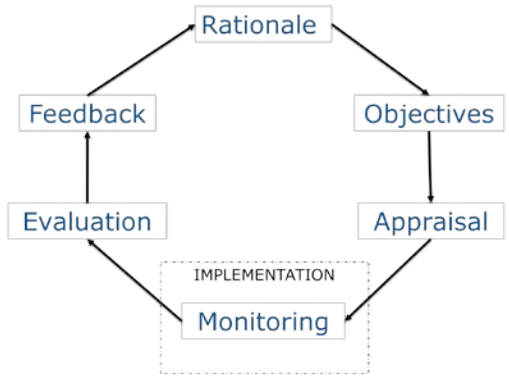
	Introduce expenditure/revenue forecasts and/or multiannual budgeting	Use of performance based budgeting and spending reviews	Introduce budget buffers, early warning mechanisms and/or automatic stabilizers	Seek to improve the financing mix	Introduce budget target/ceiling	
BE	x		x	x		**BE**
BG		x	x			**BG**
CZ		x	x	x	x	**CZ**
DK			x			**DK**
DE		x	x		x	**DE**
EE		x	x	x		**EE**
IE	x	x	x	x		**IE**
EL		x	x	x		**EL**
ES	x	x	x	x		**ES**
FR			x			**FR**
HR	x		x			**HR**
IT		x	x			**IT**
CY		x	x	x		**CY**
LV			x	x		**LV**
LT			x	x		**LT**
LU		x				**LU**
HU	x		x			**HU**
MT		x	x	x		**MT**
NL		x	x	x		**NL**
AT			x			**AT**
PL		x	x	x		**PL**
PT		x	x			**PT**
RO	x		x			**RO**
SI		x	x			**SI**
SK		x	x	x	x	**SK**
FI		x	x		x	**FI**
SE		x	x	x		**SE**
UK			x	x		**UK**
EU	6	18	27	15	4	**EU**
EA	3	14	18	11	3	**EA**
EU15	3	10	14	7	2	**EU15**
EU13	3	8	13	8	2	**EU13**

(1) Based on country survey.
Source: Commission services (DG ECFIN).

4.4. EVALUATING REFORMS SYSTEMATICALLY

Evidence-based policy reforms are necessary in order to improve the performance of the health system and ensure that it remains fit for purpose in a changing context. Policy makers planning health sector reforms should make use of the available evidence in formulation, implementation and evaluation of their policies (WHO Europe, 2004).

Graph 4.4.1: **ROAMEF policy cycle**



Source: HM Treasury (2015).

Evidence-based health policy reforms need to consider the problem to be solved, the objectives of public intervention, the available options, how to monitor implementation, evaluate the impact and feed the results back to the policy-maker. This can be framed through the ROAMEF (Rationale-Objectives-Appraisal-Monitoring-Evaluation-Feed-back) policy cycle, shown in Graph 4.4.1. The cycle can be explained as follows.

- The **Rationale** constitutes the reasoning behind the policy reform (for instance, capacity in hospital emergency departments may be struggling to cope with the volume of demand, and there is evidence that a number of admissions may be avoidable).

- The **Objectives** are the specific outcomes aimed at as a result of the policy reform (for instance, a reduction in emergency admissions for chronic conditions that do not require hospitalisation).

- **Appraisal** consists of an ex-ante impact assessment of the available policy options (including the do-nothing option) according to their costs and benefits in terms of health outcomes, public expenditure and any other relevant dimension. For example, policy options that could be considered and compared include requiring patients to register with local GPs, tightening access to emergency services or launching screening programmes for conditions such as diabetes or asthma.

- **Monitoring** of the outcomes should take place once a policy option has been selected and implemented, according to relevant metrics related to the objectives (for example, what has been the evolution of emergency admissions since the policy was implemented).

- The data collected through this process should be used to **Evaluate** ex-post the effectiveness of the policy (for example by answering the question "has the chosen policy option reduced emergency admissions?").

- This evaluation should **Feed back** into the policy-making process and, if necessary, provide the rationale for further policy reforms. The ex-post evaluation should provide the necessary information to re-focus or abandon the policy reform.

Health-policy reforms need to be assessed and evaluated in a systematic and formalised manner to ensure consistency and to ensure that decisions are made on the basis of robust evidence. Analysis should be proportionate to the costs and benefits of the reform. Beyond improving the quality of policies, this can help improving the quality of the policy debate by (ex-ante) laying out clearly the rationale for choosing a particular policy option and (ex-post) by setting clear outcomes and deliverables that clarify the success or not of the policy. Policy assessment itself has costs (sometimes referred to as administrative burden) for the public (and sometimes the private) sector and there is a trade-off between the detail of the analysis and its cost. The depth of analysis should therefore be proportionate to the potential costs and benefits of the reform being considered.

Consultation is a key part of the policy cycle both in terms of political accountability and buy-in, as well as in terms of improving the

evidence base for the policy. Both the appraisal and feedback stages can be enriched through public consultation.

Member States should perform ex-ante evaluation or Impact Assessment of health sector reforms in order to establish the evidence base and reasoning for choosing a suitable policy option. The main analytical problem when performing an Impact Assessment is that, as an ex-ante analysis, the impact needs to be estimated using available data. In some cases, it may be advisable to pilot chosen policies in order to obtain direct evidence of the impact of specific policy options. It is also very important that the "do-nothing" option is considered.

An Impact Assessment should include the following elements:

- broad policy context, including policy actors and key stakeholders;
- description of the problem to be addressed (it should state clearly what the problem is and why government intervention is necessary to address it);
- a description of the objectives of the health policy reform being considered, including if possible, the key outcomes that should be used to assess its success;
- a list of available options (including a do-nothing option) that could be taken to achieve the objectives and an assessment of the estimated impact (including an explicit consideration of the timing and distribution of costs and benefits) of the main options being considered on:
  - the stated policy objectives;
  - key dimensions of the health system (coverage, equity, efficiency, quality of care, resources, sustainability);
  - public expenditure;
  - administrative burden.
- trade-offs implicit in the impact of specific options on different health system objectives should be made explicit;
- a reasoned explanation based on the analysis presented above of which is the preferred option, where all assumptions used are made explicit;
- a description of the metrics that will be used to assess whether the reform is successful and a calendar for post-implementation evaluation.

Member States should perform ex-post evaluation of health policy reforms in order to determine the degree of effectiveness and cost-effectiveness of implemented policies. Appropriate monitoring of reform impacts is a necessary condition for effective evaluation of policies. Once appropriate metrics have been chosen, their evolution can be tracked in order to see whether they have improved following policy implementation.

Ex-post evaluation requires expertise and capacity building in government departments. Choosing the appropriate monitoring and ex-post evaluation strategy is a technically-demanding process that requires good analytical capacity in the responsible Government Department (whether it performs the analysis or commissions it). The main analytical problem involved in evaluation is to distinguish between changes in the outcome measures that are caused by the reform itself versus changes that are caused by other factors. A range of statistical strategies are available in order to help isolate the impact of the reforms being evaluated. Methodologies such as Randomised Controlled Trials, where the policy is implemented for a portion of the population ("the treatment group") but not for another portion of the population ("the control group") have attracted a great deal of attention in the last few years. This method allows to a great extent the isolation of the impact of reforms. However, due to practical or ethical concerns, this methodology may not be suitable for every type of health policy reform (Bonell et al. 2009) and alternative methods may be more appropriate.

4.5. MONITORING AND BENCHMARKING OF HEALTH SYSTEM PERFORMANCE

The importance of measuring performance ([134])

Measuring performance means monitoring progress towards system goals. From a normative point of view, system goals are often defined in abstract terms as health, responsiveness and equitable financial protection ([135]). Monitoring performance implies identifying and measuring concrete outcomes that reflect actual progress in their direction, as assessment frameworks aim to do.

National assessment frameworks should trigger improvements in the health system towards national targets and assist and support national efforts. To support the provision of healthcare and the organisation of health systems by each Member States, assessment frameworks measuring performance can offer insights through monitoring and evaluation of key indicators. Highlighting potential criticalities at system level, such frameworks can offer a valuable tool to increase public information and .ensure health topics remain high on the political agenda. Alongside their relevance at country level, assessment frameworks can promote the exchange information and best practices with a view to improving the sustainability and efficiency of member states' health systems.

Measuring comparative performance should set the scope for improvement and guide policy making. Countries should also be able to assess their performance against that of peers and, based on results, assess their scope for improvement. Having a quantified measure of relative gaps can inform policy makers on the direction of necessary change. The possibility to do this relies on available frameworks and measurements. To this end, having an array of indicators of performance highlighting potential issues by area may be key. Choosing which variables to use and whether and how to aggregate them constitutes one of the most difficult challenges in measuring performance at system level.

Agenda to improve performance assessments

Measuring performance should strike the balance between synthesis and comprehensiveness. There is broad consensus that the assessment of performance should be based on several domains. Though most examples include efficiency and effectiveness, the chosen domains and their number differ in each methodological approach. A balance should be found between what can be considered enough to provide a representative picture and the need to be synthetic for the sake of tractability.

Performance should be measured controlling for confounders. Outcomes are the joint result of factors that reflect performance and factors that are related to the specific socio-economic context, for instance environmental factors or cultural traits that affect behaviour. What is to be considered an external factor depends on the definition of the health system and its boundaries, based on which some health care determinants will fall outside the scope of the health care sector ([136]). Though a number of statistical techniques are available and used to isolate the effect of exogenous factors, there is further scope for improvement in this area.

When looking at performance by domain, assessments should account for wider system-level effects. As for many systems, performance is not just the sum of its parts. Positive outcomes in some dimensions may have negative spillovers in other. There are inter-linkages between sectors, and improvements in one area do not necessarily imply system-wide performance improvements, as may be the case when improvements for a subset of the population are achieved at the expense of distributional issues.

Indicators on outcomes in terms of population health should be further developed. Many

([134]) The list of measures in this section is intended as a menu of possible policy options from which Member States can choose to improve the sustainability of their health systems. Which measure or combination of measures to implement remains a policy choice for the Member State.

([135]) Kutzin, J., (2013) Health financing for universal coverage and health system performance: concepts and implications for policy, Bulletin of the World Health Organization; 91:602-611. http://www.who.int/bulletin/volumes/91/8/12-113985/en.

([136]) Whether or not smoking rates should be considered an external factor depends on the scope of the health care system. If mortality rates are higher and the scope of health care is limited to the medical component, then performance should be adjusted to account for smoking rates as an exogenous factor. If part of the scope of healthcare is to influence those factors, then, in principle, these should be included in performance.

assessments of system performance try to proxy health status with indicators such as healthy life expectancy, which may disguise differences between age groups or genders. Measures on equity and financial protection are not well developed. Indicators of amenable mortality serve the purpose of a system-level assessment. These should be complemented by disease-specific outcome measures, which are more telling in terms of where specific improvements in quality of care may be more warranted ([137]).

Measures of outcomes should be broadened to include a wider set of dimensions. Alternative measures of performance can be obtained as service-specific outcomes, which are often complex and multidimensional. In addition, the currently available set of indicators is focused on indicators such as mortality rates, safety and complications (flagged by readmissions and avoidable admissions) ([138]). However, these often represent quite crude approaches to the measurement of performance and capture only a partial view. Further efforts should be made to capture additional nuances, such as those offered by patient experience, as is the case for the data on patient-reported outcome measures (PROMs) ([139]) and to complement information on outcomes with process-related indicators of efficiency.

Measurements should be developed to account for policies with delayed impacts. It is often the case that current results are due to the inputs of previous periods. Not only does this lagged effect result in an inaccurate measurement of outputs relative to inputs, but it also hides the direction of change followed by the health care system. Indeed, for current expenditure, items that display effects only with a time lag (like investment in capital or in prevention) cannot be captured in the same period in which measures are implemented. A way to address this issue is to compare current indicators that are, based on evidence, expected to deliver future improvements in performance.

Aggregate indicators such as synthetic indicators and multidimensional assessments should be developed to support policy making and communication. The use of synthetic number aggregating several domains it is currently not yet well developed. Aggregation emphasises the aspect of communication and dissemination, such as having the potential to prioritise performance on the political agenda, supported by a stronger exposure to public scrutiny and to a consequent greater accountability. On the other hand, greater ease of communication may come at the price of misrepresentation, when critical areas with performance issues are cancelled out by positive results in other areas. Multidimensional assessments currently offer a better chance of accuracy and efforts should be furthered in this area.

Indicators should be developed consistently with country-specific data collection systems to ensure broad coverage. Unlike national assessment frameworks, which can be set-up according to the need to capture country level nuances, international comparisons and benchmarking rely on availability of data with high, and ideally full, coverage across countries. As it stands, there are important country level differences in data availability, but the trend should be towards homogeneity. Focusing on indicators that are not compatible with the data governance practices and capabilities of some, or many, countries, may hinder this convergence. As a result, a key aspect when choosing indicators must be whether they are affected by coverage gaps, especially when these are due to technical difficulties in the collection of the required data in many countries. To this end, the international standardisation of definitions and data requirements has the potential to increase the uniformity of comparisons and to contain the administrative burden from data collection.

([137]) Resulting from the recent efforts to pin down health care performance, the concept of amenable mortality tries to identify the instances in which deaths should have not occurred if the system had been working well. Amenable mortality is defined as “premature deaths that should not occur in the presence of timely and effective health care”.

([138]) Papanicolas, I., Smith, P. C. (2013), Health system performance comparison An agenda for policy, information and research, Open University Press. http://www.euro.who.int/__data/assets/pdf_file/0009/244836/Health-System-Performance-Comparison.pdf?ua=1.

([139]) Patient reported outcome measures (PROMs) assess the quality of care from the point of view of the patient. The methodology calculates the health gain through patient surveys, measuring health status based on self-completed questionnaires, conducted before and after surgery in four procedures (hip replacements, knee replacements, groin hernia and varicose veins). http://www.hscic.gov.uk/proms.

The role of international comparisons

Efforts should be made on the further development of a shared international framework. Having a common international framework would facilitate international comparisons. Being able to compare performance internationally would be a strong tool to promote good practice and improvement, through imitation or innovation. Most health systems share similar goals and challenges given the need to face the increasing costs coming from an ageing population. In this light, international comparison, despite diversities across countries, represents an invaluable learning tool, as the basis for further analysis and a deeper understanding of the necessary policy action to improve health systems ([140]). However, this tool should not force countries into common objectives that may not fully reflect each country's priorities, social preferences and criticalities. Country comparisons based on international standards should thus not be the only criterion when assessing performance.

International comparisons could support cross-border health in the EU. Building on the efforts to create a legislative framework to make the implementation of cross-border healthcare for the EU citizens a reality, international comparisons can and should promote a transparent flow of information to EU citizens regarding the features of health care in other countries. As much as the organisation and provision of health care remains a national competence, a commonly adopted set of indicators, as that pursued by the European Core Health Indicators (ECHI) project ([141]), has the potential to improve the system for users and for national authorities. In both cases, this may be the product of better informed choices by the patients, or by the payers, on their behalf, that will have better oversight of what they may be called to reimburse.

National assessment frameworks should accompany and support the international ones. As the definition of an international standard for comparisons poses several limitations to the ability of a framework to depict the reality of a local system, national frameworks should be developed to reflect country specificities. The construction of a national assessment framework should not be seen as an end in itself, but as a useful tool to promote quality and efficiency, signalling strengths and weaknesses in terms of outcomes and/or processes, improving accountability of governments.

([140]) Expert Group on Health Systems Performance Assessment, (2016), 'So What? Strategies across Europe to assess quality of care. http://ec.europa.eu/health/systems_performance_assessment/docs/sowhat_en.pdf'

([141]) European Core Health Indicators (ECHI) are sets of data (tables, graphs, maps) on health status, determinants and care in EU member countries and other European countries. They allow for monitoring and comparison, and serve as a basis for policy-making. http://ec.europa.eu/health/indicators/echi/index_en.htm.

4.6. ENSURING AN ADEQUATE HEALTH WORKFORCE

Workforce planning is necessary in order to ensure an adequate health workforce ([142]). The effective functioning of the health systems of EU Member States requires a sufficient workforce with the right mix of skills. Medical professionals typically require several years of training, which means that their supply is inherently inelastic in the short run. This means that any staff shortages or skill imbalances are difficult to correct in the short run and often a strategic long-term approach is necessary.

EU Member States need to proactively manage the health workforce through its intake and retention. Most EU Member States (see the country documents of this report) are able to regulate the health workforce through numbers trained and curricula, licensing, recruitment and career development, wages and, in some cases, location. In view of retirement dynamics, dropout rates, migration, uneven distribution of physicians, and the inelastic supply, it appears that there is room for proactive and long-term strategies in relation to staff. These could include a more proactive use of existing regulation, and adjustments to regulation if necessary, in order to address current and future challenges. In a labour intensive sector, training, recruiting, retraining and retaining sufficient numbers of well distributed staff across skills and geographic areas, as well as devising compensation and staff performance assessment schemes in the systems, is a challenge faced by all Member States.

Proactive management of the health workforce requires improving the availability and comparability of data. There are a number of countries for which there are no periodic statistics on the number of different types of physicians and nurses, on practising and licensed physicians, or on the number of graduating physicians. In addition, the values for the overall number of physicians or nurses (practising or licensed) or their breakdown across specialties vary across international databases for a number (albeit small) of countries. However, having accurate and comprehensive information is key to understand what the current and future situations are likely to be. This is a must for devising a correct human resources strategy that ensures sufficient numbers and an adequate skill-mix. In general, ensuring sufficient numbers of staff and a balance between specialties should be a shared responsibility between the government and the relevant professional associations.

As set out in Section 3.7, currently available data shows that EU Member States are facing a number of issues relating to their medical staff. Table 4.6.1 summarises some of the main observations from the data and Table 4.6.2 summarises some of the challenges reported by Member States in the country documents included in this report, including potential physician shortages (indicated as relatively low physician density or number of practising physicians as a proportion of all licensed physicians proportion), GP shortages (indicated by low GP density), skill imbalances (indicated by relatively low proportion of nurses) and potential future physician shortages (indicated by relatively older physician workforces).

Low numbers of practising and licensed physicians can be addressed through a number of policies, for example:

- **in the short run, it might be possible to recruit migrant physicians**. Professional regulations may limit the extent to which this could be done, so it may require clarifying the equivalence of the curriculum (basic medical training and general practitioner training are automatically recognised throughout the EU, but not all specialist degrees are). However, it is also necessary to consider what the impact might be on the country of origin and design the programme appropriately to avoid negative effects ([143]).

- **in the medium and long-run it is possible to train more staff**. Most EU countries have a *numerus clausus* system through which the number of medicine students is constrained. *Numerus clausus* should not be a static tool but a dynamic one, to be adjusted up (lax) and down (strict) and across specialties as needed to ensure sufficient numbers of physicians and a balanced skill-mix.

([142]) The list of measures in this section is intended as a menu of possible policy options from which Member States can choose to improve the sustainability of their health systems. Which measure or combination of measures to implement remains a policy choice for the Member State.

([143]) The WHO Global Code of Practice on the International Recruitment of Health Personnel (WHO 2010c) is a useful reference on the elements to be taken into account.

Table 4.6.1: **Country-specific challenges in the medical workforce**

	High	Low
Physician density	EL, AT, LT, DE and SE	PL, RO, SI, UK, IE and LU
Practising/Licensed physicians	LT, FI, UK, ES and LU	BE, LV, PL, IT, HU and DK
GP density	FR, FI, BE, LT and LU	PL, EL, SI, HR, PT and BG
Nurses mix	DK, SE, DE, IE, and NL	EL, BG, LV, CY and PL
Physician Ageing	IT, LU, LV, FR and DE	UK, MT, IE, RO and NL

Source: OECD, Eurostat and Commission Services (DG ECFIN).

- **using existing staff regulation (e.g. incentives for staff location) as a more effective human resources planning device** adjusting numbers to ensure sufficient supply across different specialities and regions over time.

- **adjust monetary (wages, bonuses) and non-monetary incentives (working conditions, working hours, flexibility, career development opportunities, training)** in order to retain and motivate staff, as well as make the profession more attractive to prospective students.

- **Long-term workforce planning, with a focus on the training of future staff, is necessary to address future shortages** caused by the long-term demographic dynamics of the medical workforce.

EU Member States should use a range of suitable tools, including remuneration, benefits, and working conditions in order to improve recruitment and retention in the health workforce. In addition, the regulations of professions, which for instance define licencing requirements and impact on the supply of medical workforce, including on the geographical shortages or uneven distribution of the workforce, can be reviewed. In some cases, the number of practising physicians may be low, while the number of licensed physicians is relatively high. In this case, it is important to investigate what lies beyond the difference, i.e. why many licensed physicians and nurses are not attracted to practice or leave the sector. There may be a range of push and pull factors, including working hours, working conditions and wages. The policies that could be implemented in this situation relate to career development opportunities, the attribution of responsibilities, using monetary and non-monetary incentives (wages, working conditions) so as to retain and attract staff back into the sector. High numbers of practising and licensed physicians are not in principle problematic per se, although this can often be linked to specialty imbalances.

EU Member States should define strategies to tackle the imbalance in specialities, particularly shortages of GPs. GPs deliver primary care to the population and sufficient numbers of appropriately spatially distributed GPs are key to the appropriate functioning of the health system. In countries that show both low numbers of practising physicians and GPs, a similar policy response as for low numbers of practising physicians should be considered. However, in situations where low numbers of GPs coexist with a relatively high physician density, the policy response should be aimed primarily at rectifying the imbalance across specialties. In this case, policies such as adjusting the relative monetary and non-monetary incentives across specialities may be necessary, as pay for GPs is traditionally lower than for medical specialists. Effectively managing the *numerus clausus* should also be considered in order to favour the training of GPs vs other specialities. Finally, in the short-run it may be possible for specialists to deliver primary care on a part-time basis as a way of alleviating GP shortages.

EU Member States should give attention to the specific issues of the nurse and midwife workforce, taking into account its specificities, including its greater flexibility and the possibility to broaden its role. The supply of nurses and midwives needs to be considered and, to a great extent, shares many of the characteristics of the physician workforce, albeit requiring fewer years of training, which makes their supply somewhat more elastic. Despite that, several EU countries show very low numbers of nurses. The role of nurses is complementary to that of doctors, which suggests active policies (such as those

Table 4.6.2: **Country-specific challenges for ensuring an adequate workforce**

	Ensuring an adequate health workforce	increase primary care staff through a comprehensive human resources strategy	define a comprehensive human resources strategy	ensure sufficient numbers of staff	increase ratio of general practitioners to specialists	tackle spatial/regional disparities	ensure a balanced skill-mix	
BE								BE
BG	x	x					x	BG
CZ	x	x						CZ
DK	x						x	DK
DE								DE
EE	x		x	x			x	EE
IE	x						x	IE
EL	x	x			x	x	x	EL
ES	x		x					ES
FR	x	x				x		FR
HR	x					x	x	HR
IT	x				x	x	x	IT
CY	x		x					CY
LV	x		x					LV
LT								LT
LU								LU
HU	x	x				x		HU
MT								MT
NL								NL
AT	x	x		x		x		AT
PL	x		x	x	x	x		PL
PT								PT
RO	x		x	x		x	x	RO
SI								SI
SK	x						x	SK
FI								FI
SE	x	x	x			x		SE
UK	x	x		x		x	x	UK
EU	19	8	7	5	3	10	10	EU
EA	10	3	4	2	2	4	5	EA
EU15	9	5	2	2	2	6	5	EU15
EU13	10	3	5	3	1	4	5	EU13

(1) Based on challenges as identified in the country documents to this report. For each sub-category, challenges differ by country ranging from the improvement of a tool (or practice) to its introduction. Full details are available within each country's section on challenges.
(2) The first category (ensuring adequate health workforce) is signalling a challenge if any of the sub-categories flag a challenge.
Source: Commission services (DG ECFIN).

described above) to increase their numbers could improve the cost-effectiveness of the health system by freeing up doctors to concentrate in the areas in which they add most value. Additionally**,** it may be possible to broaden the scope of their role by substituting doctors for certain interventions. In this way, nurses can help alleviate some of the shortage of physicians across specialities and in terms of special distribution (OECD 2010).

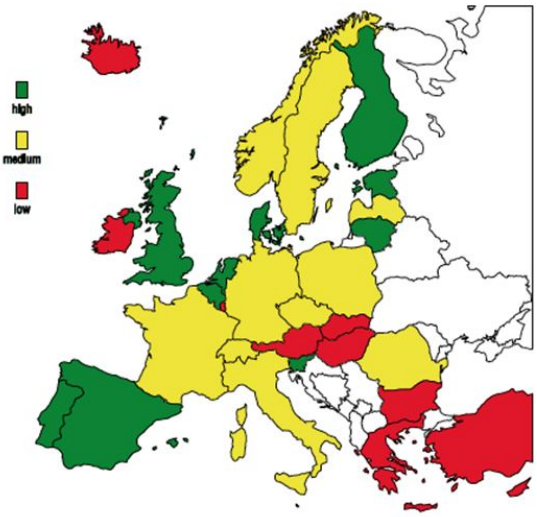
4.7. IMPROVING THE PERFORMANCE OF PRIMARY CARE SYSTEMS AND FOSTERING INTEGRATED CARE

Strong primary care systems tend to reduce unnecessary hospitalisations, increase population health, lower socio-economic inequalities in self-assessed health, and slow down growth in health care expenditure. To achieve these goals, the strengthening of integrated care and better access to primary care are key policies. The lack of integrated care can lead to problems including harming the patient, e.g. via parallel prescription of contraindicating medication, duplicated treatment and diagnostic testing. The rising share of patients with chronic conditions and multimorbidity increases the inefficiencies related with weak primary care systems and fragmented care.

There is a wide diversity of strengths and weaknesses of primary care systems in the EU. Most EU countries have some potential to improve primary care systems. Key dimensions of the performance of primary care are accessibility, continuity and coordination of care (WHO, 2015) ([144]). Denmark and Spain have a high accessibility of primary care, as well as high levels of continuity and coordination. Countries where accessibility, continuity and coordination and comprehensiveness of primary care are by far less consistent are Bulgaria, Italy, Luxembourg, Romania, Greece, Ireland and Malta. The remaining countries have some weaknesses in particular dimensions, which could be improved.

Summing up these dimensions of care, it appears that countries where primary care is relatively strong are: Portugal and Spain, Belgium, the United Kingdom, the Netherlands and Denmark, Slovenia, and Lithuania, Estonia and Finland. Primary care systems in central Europe are relatively weak, in particular in Slovakia, Austria and Hungary, Ireland, Bulgaria and Greece (Graph 4.7.1).

Graph 4.7.1: **Variation in the overall strength of primary care in Europe**



(1) Green = High; Yellow = Medium; Red = Low
Source: WHO (2015).

The need to improve the performance of primary care systems is perceived as an important challenge by a majority of EU Member States (Table 4.7.1) ([145]). To face this challenge, there are several measures available to strengthen primary care systems, such as ([146]):

- **Improve integrated care.** Currently, improving integrated care is perceived as an acute policy challenge in 17 EU Member States (Table 4.7.1). There are many good examples, on how to do so. In Spain, all regions encourage integrated and continuous care between healthcare providers (García-Goñi et al., 2012; García-Goñi et al., 2016). In Finland, the New Healthcare Act 2011 established the rights of patients to guaranteed continuity of treatment paths and all public primary care

([144]) Accessibility means an adequate volume and type of care services, low financial barriers, such as co-payments, but also the remoteness of services and availability, e.g. through after-hours care arrangements. A typical obstacle is shortages of general practitioners particular in rural areas, limited access to home visits, limited functioning of gatekeeping systems, the predominance of solo practices, which are less favourable for coordination, and limited collaboration between GPs and medical specialists. Continuity of care captures the relationship continuity between doctor and patient and management continuity. The coordination function reflects the level of coordinated care between primary and other levels of health care, which are impacted e.g. by gatekeeping and collaboration between providers of different care levels.

([145]) Performance assessment of primary care is one of priorities set by the Expert Group on Health Systems Performance Assessment (HSPA) for which this will be the priority topic for 2017: http://ec.europa.eu/health/systems_performance_assessment/docs/ev_20160407_mi_en.pdf

([146]) This list of measures is intended as a menu of possible policy options from which Member States can choose to improve the sustainability of their health systems. Which measure or combination of measures to implement remains a policy choice for the Member State.

providers and hospitals must publish their plans and results. In Poland, the General Practitioner Cancer Centre provides care to cancer patients from prevention to treatment and palliative care. In Estonia, family doctors send referrals to hospitals and vice versa the hospitals send clinical reports to family doctors. In Slovenia, a National diabetes prevention and care development programme has been implemented to improve the integration and continuity of care for patients with diabetes type 2. In the Netherlands, the hospital pharmacist shares information with the local pharmacist and delivers information to the patient. In a number of countries, primary care practices could be better equipped to conduct very basic surgical interventions so that patients would not have to be sent to hospitals. Countries should learn from these examples and translate best-practices into national context.

Table 4.7.1: **Country-specific challenges for improving the performance of primary care systems**

	Improving the performance of primary care systems and fostering integrated care	Improve care integration	Enhance primary health care services	Enhance incentives for GPs to provide adequate levels of services	Make the referral system more effective	
BE	**x**	x	x	x	x	**BE**
BG	**x**		x	x		**BG**
CZ	**x**	x	x			**CZ**
DK	**x**	x				**DK**
DE	**x**	x	x			**DE**
EE	**x**		x			**EE**
IE	**x**			x	x	**IE**
EL	**x**	x	x	x		**EL**
ES	**x**	x		x		**ES**
FR	**x**	x			x	**FR**
HR	**x**	x		x		**HR**
IT	**x**	x	x		x	**IT**
CY	**x**	x	x			**CY**
LV	**x**	x			x	**LV**
LT						**LT**
LU						**LU**
HU	**x**	x		x		**HU**
MT	**x**	x	x	x	x	**MT**
NL	**x**	x	x		x	**NL**
AT	**x**	x		x	x	**AT**
PL	**x**		x		x	**PL**
PT	**x**		x			**PT**
RO	**x**	x	x		x	**RO**
SI						**SI**
SK	**x**	x	x	x	x	**SK**
FI						**FI**
SE	**x**			x	x	**SE**
UK	**x**	x	x			**UK**
EU	**24**	17	15	11	12	**EU**
EA	**15**	12	9	7	9	**EA**
EU15	**13**	10	8	7	7	**EU15**
EU13	**11**	8	7	4	5	**EU13**

(1) Based on challenges as identified in the country documents to this report. For each sub-category, challenges differ by country ranging from the improvement of a tool (or practice) to its introduction. Full details are available within each country's section on challenges.
(2) The first category (Improving the performance of primary care systems) is signalling a challenge if any of the sub-categories flag a challenge.
Source: Commission services (DG ECFIN).

- **Improve the purchasing and payment arrangements for primary care.** A cost-effective contracting should be pursued based on population health needs, an according planning of a provider network, and logically linking contracting with planning. Contracts should promote quality of care.
- **Strengthen primary care systems with regard to gatekeeping and referral.** Gatekeeping requires primary-care physicians to pre-authorise hospital service use by patient. Gatekeeping systems are operational in only a quarter of the EU countries, with partial gatekeeping system in place in others (WHO, 2015). 12 EU Member States are currently of

the view that referral systems should become more effective in their country (Table 4.7.1).

- **Remuneration for primary care physicians should combine capitation and fee-for-service at the base ([147]).** It should ideally be supplemented with incentives for productivity and quality. As an example, England has a systematic system for bonuses, including Clinical Excellence Awards for employed specialists and a defined Quality and Outcomes Framework for General Practitioners (GPs). Latvia links bonuses to quality of care. In addition, GPs should be attributed the role of a care coordinator. GPs or primary care practices could then be partly rewarded for this role through a mix remuneration system that puts a wage premium on health promotion, disease prevention, disease management or treatment of vulnerable groups, for example. This would improve the incentives for GPs to provide adequate levels of care, which is seen as a policy challenge in 10 EU Member States (Table 4.7.1).

- **To support care coordination, invest in cost-effective ICT and eHealth options** (e.g. electronic medical file/record, e-prescribing). However, such investment is costly in the short-term so that, under the present economic circumstances, the introduction of such systems remains a challenge for a number of countries.

([147]) Remuneration can typically differ between the public and the private sector. In Malta, fee-for-service and, in some cases, capitation are available only in the private sector. In the public sector, all GPs are effectively civil servants and, as such, they are salaried.

4.8. INCREASING THE SUSTAINABILITY OF HOSPITAL CARE

With hospital care being the biggest part of health systems in terms of service delivery and costs, political focus on successful reform policies is continuous. Some of the key objectives of successful hospital reforms are: hospital efficiency, improved governance and quality of health services, economic sustainability (cost containment). Many countries have failed to implement sufficiently bold reforms to prepare hospitals and health systems to meet the challenges of an ageing patient population. This is despite the much stated consensus among researchers and policy makers that moving health care out of the resource intensive hospital sector towards more cost-effective primary and ambulatory care services, and providing a bigger role for disease prevention and health promotion can improve the value for money of public health funding.

Increasing the sustainability of hospital care is perceived as a major challenge by a majority of EU Member States (Table 4.8.1). Major intermediate goals in this respect are: 1) shifting excessive activity of acute inpatient to outpatient care services (11 EU Member States); 2) reallocating resources from inpatient to outpatient care (8 EU Member States), and; 3) improving the cost-efficiency of hospitals (11 EU Member States). There are numerous potential policies to help achieving these goals. These can be grouped under the headings of improving financing, reducing operational costs and pursuing structural reforms of the hospital sector ([148]):

Improving Financing

- **Combine activity-based payments with global budgets and pay-for-performance schemes.** This toolbox for financing hospitals sets incentives for cost control and motivate hospital managers to bring medical services to patients adequately and in high quality. Aiming at cost-control, over time more and more countries have applied budget ceilings or targets for expenditure on health. Alongside global budgets, activity-based financing such as diagnosis-related groups (DRGs) are most important financing tool and used in most EU countries. DRGs encourage activity, efficiency and allow for comparing costs and quantity of care across and within countries.. With DRGs being the main source of financing, hospitals are getting supplemental funds for teaching, research and innovation, emergencies, psychiatry, certain rehabilitation services. The Ministry of Health estimates potential expenditure based on volume data and costs, and may use this estimate to change the amount of DRG funding sources to meet budget constraints across all hospitals. Also, a part of funding is held back and only released if actual service volume exceeds expectations. The desired goal of this more flexible and discretionary policy setting is to incentivise targeted efficiencies through structural reorganisation of hospitals rather than aiming at a balanced budget only. However, a lack of quality assurance mechanisms within DRG-payment schemes may lead to lower-than-expected quality gains. Therefore, moving toward pay-for-performance schemes, whereby payment is linked to specific attainment of health outcomes, as well as bundled payments, whereby "care groups" receive bundled payments to manage chronic conditions (Netherlands), seem a promising way forward to address well known deficiencies in more traditional financing tools.

Reducing operational costs

- **Reducing operational costs is an important aspect of cost-efficiency of hospital, which is perceived as a challenge by nearly half of EU Member States (Table 4.8.1).** Operational costs include costs paid for hospital consumables and the wage bill for health professionals. Operational costs may be reduced by improving the staff mix and increasing staff performance. Operational costs may also be reduced by increasing the proportion of care provided on a day-case basis, which is perceived as a challenge in the CZ, HR, AT, PL and RO. Reducing operational costs was targeted by many EU countries in recent years. While this has led to cost savings in the short-term, access to care may have been compromised by a focus on short-term policies aiming to reduce costs only (EXPH, 2016). While increasing the cost-efficiency of hospital care by reducing operational costs is an

([148]) This list of measures is intended as a menu of possible policy options from which Member States can choose to improve the sustainability of their hospital system. Which measure or combination of measures to implement remains a policy choice for the Member State.

Table 4.8.1: **Country-specific challenges for increasing the sustainability of hospital care**

	Increasing the sustainability of hospital care	Shift excessive activity of acute inpatient to outpatient care services	Reallocate resources from inpatient to outpatient care	Improve the cost-efficiency of hospitals	
BE					BE
BG	x	x			BG
CZ	x	x		x	CZ
DK					DK
DE	x	x		x	DE
EE					EE
IE	x	x	x		IE
EL	x	x	x	x	EL
ES	x	x			ES
FR					FR
HR	x			x	HR
IT	x	x	x	x	IT
CY	x			x	CY
LV	x			x	LV
LT					LT
LU					LU
HU	x			x	HU
MT					MT
NL					NL
AT	x	x	x	x	AT
PL	x	x	x	x	PL
PT	x		x		PT
RO	x	x	x	x	RO
SI					SI
SK	x			x	SK
FI					FI
SE	x				SE
UK	x	x	x		UK
EU	18	11	8	11	EU
EA	10	6	5	5	EA
EU15	9	7	6	4	EU15
EU13	9	4	2	7	EU13

(1) Based on challenges as identified in the country documents to this report. For each sub-category, challenges differ by country ranging from the improvement of a tool (or practice) to its introduction. Full details are available within each country's section on challenges.
(2) The first category (Increasing the sustainability of hospital care) is signalling a challenge if any of the sub-categories flag a challenge.
Source: Commission services (DG ECFIN).

important goal, this should be accompanied by a systematic ex-ante evaluation of potential reform impacts.

- **Optimise purchasing strategies of medical and non-medical goods**. Extending and improving public procurement procedures for medicines and other hospital consumables plays an important role in balancing the benefits of modern medical goods with budgetary constraints. In particular, tendering has a high potential to generate savings in European health systems, while sustaining a high level of quality of care. It is estimated that up to 25% of public procurement spending (including on pharmaceuticals) is lost to corrupt practices and fraud (Sorenson and Kanavos, 2011). To increase the performance of public procurement, problems related to lack of transparency on procurement outcomes, procurement irregularities, including corruption and fraud and the low number of tenders used to purchase equipment, should be tackled.

Structural reforms

- **Planning hospital capacities with a whole system perspective from primary to highly specialised care, as well including social care is likely to be beneficial for improving health outcomes at a lower cost.** The rising share of patients with chronic conditions and multi-morbidity increases the inefficiencies related with fragmented care. Optimising patient flows seems important from the point of view of quality of care, and also cost containment. Based on the country documents in this report, Cyprus, Portugal and Romania could benefit

from implementing a comprehensive reform of the public hospital sector.

- **Improve the deployment of eHealth.** eHealth plays a growingly important role for timely sharing of information, and may increase quality of service and create savings of resources in hospital care as well as in health systems overall. More than 70% of acute European hospitals have electronic patient records, an integrated system for billing management, an electronic appointment booking system and electronic clinical tests. However, only 4% of hospitals provide their patients with online access to their personal health records and only 8.7% provide tele-monitoring services (Codagnone and Lupiañez-Villanueva, 2011). There is lots of room to increase the deployment of eHealth in acute care hospitals contributing more to service quality, but also to reducing operating costs.

- **Exploit the positive effects of competition to increase productivity and reduce costs**. Positive effects of competition may be enhanced by higher hospital autonomy, including private hospitals in which hospital managers have more leeway to push for organisational change, boosting productivity and lowering costs (Duran and Saltman, 2015). However, there is some degree of uncertainty of the effects which depend on many factors and are hard to predict, and may even conflict with the goals of hospital reform. Based on the country documents to this report, Cyprus and Greece could benefit from increasing autonomous decision making by public hospitals. As the preconditions for functioning competition are not optimal in health care markets, they require a good deal of regulation and market oversight (EXPH, 2015). As such, Poland should carefully monitor the impact on care related to the transformation of public into corporate hospitals.

- **Measure and compare hospital performance as a pre-condition for improving the sector's performance**. There seems to be huge potential in learning from current and past initiatives, particularly in terms of a potential tool for hospital system performance across EU countries (see Section 3.10). Benchmarking tools reporting on fiscal parameters are promising and should gain more prominence in this respect. The National Health Service (NHS) foundation trust rating in the UK is providing policy makers with an assessment of the financial risks of each NHS foundation trust. If a specific trust has high financial risks, a government agency may start an investigation and then take regulatory action if needed. Clearly, data about the financial situation of hospitals is highly relevant for policy makers, as many hospitals are publicly owned and financed by public money.

- **Deploy policies to reduce the demand for emergency care services and divert inappropriate visits away from emergency care units (ECU).** A key policy in this regard is extending access to primary and community care services. The development of after-hours options for primary care services and of community care centres substitutes for emergency care services. Fast-track systems, as in the United Kingdom and France can also redirect non-urgent patients to more appropriate outpatient settings. Finally, financial incentives for providers (such as in England) might also improve the efficiency of ECU.

- **Consider introducing cost-sharing for inappropriate emergency care use and reduce/eliminate payments for primary care visits**. Cost-sharing for inappropriate emergency care use has been introduced e.g. in Belgium, Cyprus, Finland, Italy, Ireland, Portugal and low/no payments in primary care are a fact e.g. in Denmark, Italy, Poland, Spain, the United Kingdom and Germany. In Cyprus, Panagiotis (2015) demonstrates that overuse of the ECU after the introduction of cost-sharing was reduced, while vulnerable patient age cohorts proved inelastic to this measure, concluding that the introduction of co-payment has proven its efficacy in Cyprus' primary ECU department.

4.9. IMPROVING THE EFFICIENCY AND AFFORDABILITY OF MEDICINES

Public and private payers increasingly grapple with how to afford the rising number of new and often expensive medicines. This creates a challenge for guaranteeing access to effective and cost-effective medicines at an affordable cost, while ensuring innovation and sustainability of public spending. New medicines are improving survival rates of patients and creating new demand in chronic disease areas, but the associated financing needs create a substantial burden for payers. In the EU, on average public and private outpatient pharmaceutical spending accounts for roughly a 15% of total health care expenditures and 1.5% of GDP. On top of this comes expenditure on medicines in hospitals, which accounts for roughly 20-30% of hospital expenditure.

Public spending on outpatient pharmaceuticals varies considerably between EU countries. It ranges from 0.3% of GDP in Denmark and Cyprus to 1.9% of GDP in Greece in 2013 (EU: 1.0%) (Eurostat). Next to income and health care needs, it is the regulatory framework of pharmaceutical markets which determines the level and quality of pharmaceutical spending. There are many different regulations across the EU, but despite national idiosyncrasies, there is a basket of core pharmaceutical policies common to many EU Member States, which allows for drawing policy recommendations (Carone et al., 2012).

There are good reasons to believe that it will be harder to contain cost growth for the new generation of medicines. Over the next years, savings opportunities based on more traditional pharmaceutical policies will be reduced dramatically in the EU and this for a number of reasons. First, the number of patent expiries will go down substantially, reducing the potential of cost-containment based on traditional "genericisation" of medicines. Second, a high number of new medicines are forecast to be launched in the next years, creating higher financing needs compared to the last decade (IMS, 2014). Third, the nature of new medicines is gradually changing, as innovations are based on relatively costly biopharmaceuticals rather than small molecule medicines, and increasingly target smaller populations (orphan medicines, specialty medicines) ([149]).

Close to half of all EU Member States perceive it as a challenge to improve the efficiency and affordability of medicines. Based on the challenges as identified in the country documents to this report, these are: BE, CZ, IE, EL, FR, HR, IT, MT, RO and SK. Some of the key policy opportunities in this area are: 1) improving the rational prescribing and usage of medicines; 2) incentivising the uptake of generics; 3) improving access to cost-effective new medicines; 4) using joint/cross-border/centralised procurement procedures; 5) introduction of HTA to inform on coverage and funding; and, 6) measuring cost-effectiveness and sustainability of pharma expenditure.

On the basis of past experience and cases studies, the following broad guidance for policies contributing positively to health system objectives can be drawn ([150]):

- **The decision to pay for a medicine with public money should be transparent and based on relevant criteria**. Health-technology assessment (HTA) contributes to evidence-based decisions and identifies those medicines which offer the highest value for money. Whilst many countries already define explicit objective assessment criteria in line with HTA criteria and procedures, in practice, the decision-making process is often not

([149]) For biologics, it seems more difficult to achieve cost-savings via traditional competition mechanisms, as biosimilars are expected to reduce prices to a lesser degree than small-molecule generics (Mulcahy et al., 2014) and substitution of originator biopharmaceuticals by bio-similars is not as straightforward as that between originators and generics for small molecule medicines. Also, some of the recently introduced medicines, such as for treating cancer, have been criticised for not having proven their value-for-money, creating often only marginal improvements in survival rates (Robertson et al., 2015). Finally, for specialty medicines targeting relatively small patient numbers, it seems more complex to prove their effectiveness, as the possibility for clinical trials is limited and evaluation of their effectiveness ideally requires their evaluation in real patient settings.

([150]) This list of measures is intended as a menu of possible policy options from which Member States can choose to improve the sustainability of their health systems. Which measure or combination of measures to implement remains a policy choice for the Member State.

transparent and could be substantially improved (Le Polain et al. 2011).

- **Budget impact analysis should play a standard role in the impact assessments of medicines**. Medicines with high budget impact put new emphasis on the role of economic evaluations (Vogler et al., 2016). Even highly effective medicines can become unaffordable, if the budget impact is very high, as recently experienced by many EU countries in the case of new treatments for Hepatitis C. This stresses the importance of distinguishing efficiency and affordability.

- **Reimbursement decisions for pharmaceuticals should be revisable**, as there is risk that, over time, with development of new pharmaceuticals and based on additional empirical evidence, cost-ineffective medicines remain reimbursable, generating expenditures with no or little value added for the treated patients.

- **Countries should seek ways to promote the availability of low price medicines**. An increasing number of countries, particularly low and middle-income countries, have more limited access to 'old' off-patent medicines with low prices, as these no longer produced and marketed (Vogler et al., 2016). These medicines are often considered as essential medicines, which do not seem to be attractive any more for production, but have an established effectiveness and good value-for-money.

- **Pricing policies, such as external reference pricing (ERP), internal reference pricing, rebates, clawback and payback policies give the authorities a tool to control prices and thus to set one key parameter of expenditures (besides volume).** Price control should, nevertheless, be supplemented by other policies, including demand-side policies promoting the rational use of medicines. Also, they should keep an eye on potential detrimental effects on access.

- **Promoting faster access to effective medicines should be conditioned on a clear set on requirements**. Currently, the European Medicines Agency (EMA) is trying out mechanisms such as conditional authorisation and ´adaptive pathways´. The adaptive pathways approach is intended for a prospectively planned lifecycle approach which allows exploring the development pathway for a medicinal product and potentially accelerate patients' access to medicines to the through a procedure for scientific advice, for example on the design of the trials. For these medicines it may be difficult to collect data through traditional routes. The adaptive pathway is based on three principles: interactive development; gathering evidence through real-life use to supplement clinical trial data; early involvement of patients and health-technology assessment bodies in discussions on a medicine's development. Clear requirement should thus be developed conditioning their market access and reimbursement. These may include supplemental research regarding data on effectiveness and cost-effectiveness, budget impact and the definition of an eventual exit strategy, if the medicines does not live up to their promises. Similarly, a thorough and continued post-launch evaluation of managed-entry agreements should be undertaken.

- **Encouraging the use of generics and biosimilar medicines.** With the availability of generics and biosimilars, the original patented drug has competition. This can lead to significant savings, while not compromising on quality. In order to enhance the use of substitutable medicines, granting marketing authorisation and pricing and reimbursement decisions should be accelerated. Directive 2001/83/EC already provides a framework for speeding up the registration and marketing authorisation of generic products. Pharmacies should be allowed to operate generic substitution, and biosimilars substitution under the supervision of a health care provider. This policy leads to savings both for the patient and the public payer while preserving the same level of quality of the medical product. Cost-sharing may improve the rational use of medicines as patients are made more cost-aware and therefore demand substitutable medicines with zero or low cost-sharing. Cost-sharing has to be well designed to ensure the use of cost-effective medicines, while

exempting the most vulnerable and avoid regressive financing of the system.

- **Enhanced ways of international cooperation should be explored.** Due to the limited size of national markets, cooperation in areas which can promote fast and less costly access to innovative medicines, but also guarantee affordability and increase transparency among member countries seems useful. The current fragmentation of European markets has led to major differences among the Member States in patients´ access to medicines. Parallel trade of patented pharmaceuticals may aggravate those differences. Parallel trade is an arbitrage between patent medicine prices in different countries which are negotiated between governments and the pharmaceutical industry. Parallel trade is controversial, because of its potential to create shortages of medicines in EU countries with low pharmaceutical prices ([151]). Appropriate regulatory mechanisms at EU level could help addressing the issues of availability and accessibility of medicinal products in EU countries. Member States could consider strengthening their cooperation on a voluntary basis; in particular through existing tools such as a European medicine price data base (such as Euripid). Exploring possible strategies on voluntary joint price negotiations ([152]) in coalitions of Member States can be important to promote a higher affordability and better access to medicinal products ([153]). In addition, better cooperation in the area of HTA as the basis for reimbursement decisions, such as via the European Network on HTA (EUnetHTA), is fruitful.

- **Tendering is a well-established and successful tool for purchasing pharmaceuticals in the hospital setting, but also more and more so in outpatient setting.** Though relevant only for medicines already off-patented, where alternative producers exist, it has a substantial cost-containment potential, thereby improving affordability and accessibility of medicines. Several EU Member States could make a more systematic and extensive use of tendering procedures. Furthermore, there is opportunity for international procurement on specific medicines, which is currently explored by a number of EU countries.

- **Aim at improving prescribing behaviour.** Combining different policies, such as electronic prescription, monitoring and guidelines linked with electronic systems and providing feedback to physicians appears an effective way of improving prescription behaviour. In addition, education and information tools should be enhanced where possible both to patients/users and health professionals/ prescribers. INN (active substance) prescription and prescription quotas, possibly coupled with target budgets and financial incentives have been shown to be effective tools for cost-containment purposes. This may reduce the risk of over-prescription and wrong co-medication.

- **Pre-launch and post-launch activities should be used more systematically.** As suggested by the WHO Review on Access to New Medicines in Europe (WHO, 2015), in addition to basic policies in pricing and reimbursement policy-makers should employ pre-launch activities that provide a forward-looking perspective on new medicines in development and post-launch activities that address the value-for-money and the rational use of medicines.

([151]) The European Commission accepts that parallel trade is lawful based on the principle of the free movement of goods, provided that it does not pose a threat either to public health or to industrial and commercial property.

([152]) http://ec.europa.eu/health/preparedness_response/joint_procurement/index_en.htm.

([153]) http://www.consilium.europa.eu/en/press/press-releases/2016/06/17-epsco-conclusions-balance-pharmaceutical-system/

4.10. IMPROVING HEALTH SYSTEM GOVERNANCE

Good governance is a necessary condition for efficiency and, through that, for cost-containment policies to be aligned with ultimate policy objectives. 'Governance is about well-defined responsibilities in running the health system and its main components, together with strong leadership, sound accountability mechanisms and a clear organisational structure. This enables systems to adapt quickly to new objectives and priorities and enhances their ability to respond to major challenges by identifying and putting in place the measures necessary to support smart investment decisions' ([154]). Strengthening governance means strengthening the system potential to realise cost containment firstly through efficiency gains and then to guarantee the highest possible quality is delivered for any given level of expenditure, thereby promoting the best use of available resources to achieve sustainable financial protection and high service quality.

Policies to strengthen governance ([155]) should focus on five key attributes: i) accountability, ii) transparency, iii) participation, iv) integrity, v) policy capacity ([156]). These are not just ends in themselves, but means to an end. For instance, strong accountability can promote managerial flexibility, building on learning by doing and promoting efficiency and stronger transparency and participation can improve the quality of policy design. Integrity, defined as stable and clear attribution of roles and duties within an organisation, supports alignment in different parts of the system, providing a clear organisation identity and key goals. Lastly, organisations with insufficient policy capacity frequently turn to outsourcing analysis, often with high costs and suboptimal use of resources as external consultants may lack local expertise and organisational knowledge. Thus, these should be considered as key dimensions to evaluate and focus on when designing or rethinking governance processes at system level or at a lower scale. However, these attributes should not be indefinitely increased as, when excessively strong, they may pose obstacles as well as increase costs. Thought the status quo model of governance tends to be "sticky" and full implementation of radical changes may require longer time horizons, many shorter-term improvements are feasible on a narrower scale.

Many policies can be adopted to promote accountability. Accountability embodies the link between system performance and users' (or buyers') response, which is expected to be negative in case of dissatisfaction. The possibility of a sanction for not meeting the targets or not acting in conformity with the mandate is a key feature of accountability, without which what remains is a concept similar to transparency. Ways in which accountability can be promoted are through transparent contracts and payment mechanisms, the use of competitive bidding ([157]), regulation, including on conflict of interest, clear definition of roles and responsibility definition, codes of conduct, quality standards. Enforcing accountability is fundamental to substantiate incentives, and lack of enforcement may hinder the achievement of a goal by weakening rewards or penalties. A clear example is provided by prevention, in which the lack of enforceability has produced underinvestment and a suboptimal level of effort. This comes as a consequence of the typically large lags between implementation and its impact on public health, which means policy assessments are only possible in the longer term, thereby compromising accountability.

Many policies can be adopted to promote transparency. Greater transparency can be achieved through the institution of surveillance bodies, such as watchdog committees and inspectorates, which also promote accountability, through the use of regular reporting, the establishment of Freedom of Information

([154]) European Commission (2014), 'Communication from the Commission on effective, accessible and resilient health systems' http://ec.europa.eu/health/healthcare/docs/com2014_215_final_en.pdf.

([155]) This list of measures is intended as a menu of possible policy options from which Member States can choose to improve the governance of their health systems. Which measure or combination of measures to implement remains a policy choice for the Member State.

([156]) Greer, S., Wismar, M., Figueras, J., & Vasev, N. R. (2015). Policy lessons for health governance. In S. L. Greer, M. Wismar, & J. Figueras (Eds.), Strengthening health system governance: better policies, stronger performance. Part I; chapt. 5. Open University Press. http://www.euro.who.int/en/about-us/partners/observatory/publications/studies/strengthening-health-system-governance-better-policies,-stronger-performance.

([157]) When conducted transparently, competitive bidding makes it easier to detect and sanction practices of cronyism, i.e. the exercise of partiality in awarding contracts in a non-meritocratic way.

legislation (FoI) ([158]), performance assessment and, in general, through publicity and availability of information, which must be available in a clear and usable format. There is a clear link between this dimension and the need to strengthen data availability, as seen in previous chapters. It is key that transparency creates the possibility for policy making to be monitored and challenged. However, it is also essential that transparency does not create obstacles to policy making. Aside from higher administrative costs, disclosure of detailed information has potential negative sides and it may strengthen the means of powerful lobbies to engage in obstructionist behaviour. This may be especially important where there is no balance in interest group representation.

Many policies can be adopted to promote participation. Tools to improve participation are the most traditional forms of stakeholder involvement, such as election or appointment of representatives, consultations, advisory committees and surveys; forums; legal remedies; choice mechanisms; partnerships joint budgets, workforce, and participatory budgeting. Effective participation from the entire spectra of stakeholders can ensure that there is better take-up of planned and implemented policies. In addition, through the participative process of several stakeholders, useful information can reach decision makers. Gaining insights from stakeholders may help in the redesign of a sector or service.

Several mechanisms can be implemented to promote and support integrity. Organisational integrity refers to the existence and observation of a well specified set of rules that allow all members of a system to understand and predict the attribution of roles and responsibilities and the governing processes. These include well-defined and solid human resource management tools that incentivise staff to improve their performance within the organisation, as well as allowing to attract and retain the right candidates (for instance clear hiring policies and career paths). In addition, tools like auditing, both internal and external, a clear legislative mandate, including budget allowances, procedures and role definitions contribute to the integrity of governance as they provide both operational guidelines and, through robust personnel policies and auditing, the tools to apply them and monitor their application.

Many options are available to improve policy capacity. These should promote capacity building in policy design and evaluation, both in terms of processes and outcomes, to ensure that the chosen policies are producing the intended outcomes. Promoting policy capacity also requires tools to interpret results and provide guidelines and operational targets, such as internal analytical tools and procedures to incorporate expert opinions into policy making. Moreover, appropriate staff training to ensure that the organisational skill mix matches the system's needs is also important.

Policy options to improve governance

Patient choice should be strengthened to increase accountability and participation. By exercising choice, patients expose organisations and operators to the consequences of good or poor management and performance, thereby enforcing accountability. The related incentives provide the rationale for competition to drive higher quality and more efficient management and performance. One way to exploit this mechanism is, for instance, to design competitive bidding with multiple awards allowing patients to choose providers. In addition, choice can also represents a channel for participation, in that it provides information on whether or not a provided service meets the needs of its users, who are expected to opt-out, should that be not the case. Notably, though, this mechanism may suffer from behavioural biases, as users are often reluctant to switch in practice, especially if the 'choice menu' is not well designed and easily accessible for end-users.

Measuring performance must be strengthened to improve transparency and capacity. Regular and effective measurement of performance can reveal whether organisations are de facto acting to promote the declared goals and how well they are

([158]) Freedom of Information laws (FOI laws) allow the general public to access data held by national governments, through administrative procedures that differ by country. Article 42 CFR and Article 15 TFEU give "[a]ny citizen of the Union, and any natural or legal person residing or having its registered office in a Member State, [...] a right of access to documents of the institutions, bodies, offices and agencies of the Union, whatever their medium." It follows from Article 15 TFEU that this right is "subject to the principles and the conditions to be defined" in legislation. Currently, some form of FOI legislation is present in most Member States, including BE, BG, HR, CZ, DK, EE, FI, FR, DE, EL, HU, IE, IT, LV, MT, NL, PL, RO, SK, SI, SE, UK.

operating. Ideally, the measurement of performance would be based on a logic model linking inputs and outputs to strategies and goals defining an ideal set of outcomes (see Section 4.5). Linking results to an ideal set of outcomes is an enabler of transparency, as it allows for the creation of synthetic information. Measuring outputs, outcomes and performance has also a strong link with the possibility of the organisation to adjust policies if results do not match the objectives, thereby being a driver of effectiveness for policy making. In addition, having process related intelligence, i.e. a set of tools to measure and monitor organisational processes, enables organisations to assess whether the right tools are in place for a social policy target to be achieved. This also creates the opportunity to adopt the necessary adjustments, going from changes in staff mix, strengthening of staff competences or informed decisions on whether part of the activity should be outsourced.

Good budgeting must be developed to promote organisational integrity. Having good budgeting practices reflects and clarifies some organisational choices. It can serve to highlight strategic priorities or their change, which can be inferred by the amount of resources that is devoted to specific items. In addition, the necessary steps to quantify a budget should be ideally grounded on the evidence-based assessment of past resource utilisation and future needs, to ensure the budget is sufficient to respond to shocks. In a transparent system, organisations can be judged on resource allocation, and this can re-enforce the incentive to operate in line with targets and rules to achieve them.

Good governance lessons for decentralisation

The importance of good governance increases with the complexity of the systems to manage. In the previous chapters, it's been highlighted that in the case of decentralised models, some features are of crucial importance for the system to function efficiently. As a general principle, decentralised models should be supported by transparency and accountability mechanisms for those in charge, and complemented by additional features, which affect the key attributes of governance discussed in this section:

- adequate and clear financing mechanisms between central and sub-national governments and across sub-national governments, which promote accountability, transparency and integrity;
- the definition of minimum provision requirements and centralised standard-setting, as a tool to increase transparency, accountability and, by setting measurable standards, policy capacity;
- managerial capacity and experience, both drivers of organisational integrity and policy capacity;
- proper budgeting and accounting procedures, as drivers of accountability, transparency and integrity;
- good information flows across levels of decision-making and across the system, which is cross-cutting and is strongly linked participation, transparency and accountability, as well as providing tools to support integrity and policy capacity.

4.11. IMPROVING DATA COLLECTION AND INFORMATION CHANNELS

Data collection is a key requirement for the good functioning of the health system ([159]). It is a necessary condition in order to evaluate health policies (see Section 4.4), monitor and benchmark health system performance (see Section 4.5) and, finally, support the governance of the health system (see Section 3.10 and Section 4.10).

Health systems produce a great deal of data, but this data is not always collected and organised so as to facilitate its use. Health systems produce data as part of their operational activities. Additionally, health managers and departments organise surveys and collect additional data in order to measure of health services and benchmark performance. However, this data is often fragmented, held by different actors (for example, hospital data may not be linked with primary care data) and often in different information systems.

EU Member States need to improve the collection and usage of health systems data. As already stressed in the "2010 Joint Report on Health Systems" (European Commission, 2010), there seems to be untapped potential in data availability and usage. Authorities should improve data collection by health system managers and health authorities, make better use of data: to understand the cost-effectiveness of health interventions and identify health interventions that produce most gains (health benefits) from available resources (costs), compare in a transparent way to encourage change (using public reporting for accountability, and foster the implementation and use of ICT for sharing patient information (electronic health records).

While there have been recent improvements in data collection and use, challenges remain. As explained in Section 3.11, there is a current move across EU countries to improve data collection and management. This includes the improvement in data availability to citizens by initiatives such as Open Government Data (OGD), development of electronic patient records, eHealth tools and big data solutions. This is supported by developments in IT technology and data analysis methodologies.

([159]) This list of measures is intended as a menu of possible policy options from which Member States can choose to improve their data systems. Which measure or combination of measures to implement remains a policy choice for the Member State.

The country fiches included in this report summarise a number of recent and planned policy reforms in this direction (for instance BG, CZ, FI, EL, IT, LT, PL, SK and ES), as well as areas where there are challenges and scope for improvement, as summarised on Table 4.11.1 All EU Member States, with the exception of ES, LT, LU, SI, and FI report challenges in this area:

- **Improving the systems for data collection and monitoring to inform regular performance assessment.** Inadequate systems for data collection and monitoring are perceived as a challenge by half of the EU28 countries.

- **Effective implementation of eHealth tools to ensure effective referral and improve care coordination.** This perceived as a challenge by 8 EU Member States.

- **Promoting the use of ICT in the gathering, storage and exchange of health information.** This is perceived as a challenge by over a third of EU Member States.

- **Increase the use of cost-effectiveness information to determine basket of goods and extent of cost-sharing.** This is perceived as a challenge by just over half of the EU Member States.

Collection and use of health data can also carry significant risk for privacy. Therefore a data governance framework should be used to maximise the benefits and reduce the costs of increased data collection, clarifying and making explicit the existing rules and safeguards. The previous section outlined the potential benefits of increased data collection. However, it can also carry risks to society. Health data is considered confidential in the EU, being disclosed only to the patient and the health personnel treating them. The development of large linked databases on health status and health service usage can give rise to privacy risks if the data is not appropriately managed (for example if this data is accidentally made public) or if the authorities make use of it in a way that is perceived to be unethical by the population. A coherent data governance framework can help deal with these concerns while

Table 4.11.1: **Country-specific challenges for improving data collection and information channels**

	Improving data collection and information channels	improve the systems for data collection and monitoring to inform regular performance assessment	effective implementation of eHealth tools to ensure effective referral and improve care coordination	promote the use of ICT in the gathering, storage, use and exchange of health information.	increase the use of cost-effectiveness information to determine basket of goods and extent of cost-sharing	
BE	x	x				BE
BG	x	x	x	x	x	BG
CZ	x	x			x	CZ
DK	x	x				DK
DE	x			x		DE
EE	x				x	EE
IE	x			x	x	IE
EL	x		x	x	x	EL
ES						ES
FR	x	x				FR
HR	x	x	x		x	HR
IT	x		x	x	x	IT
CY	x	x			x	CY
LV	x	x			x	LV
LT						LT
LU						LU
HU	x		x	x		HU
MT	x	x		x	x	MT
NL	x		x			NL
AT	x	x			x	AT
PL	x				x	PL
PT	x	x			x	PT
RO	x	x	x	x	x	RO
SI						SI
SK	x	x		x		SK
FI						FI
SE	x				x	SE
UK	x	x	x	x		UK
EU	23	14	8	10	15	EU
EA	14	8	3	6	9	EA
EU15	12	6	4	5	6	EU15
EU13	11	8	4	5	9	EU13

(1) Based on challenges as identified in the country documents to this report. For each sub-category, challenges differ by country ranging from the improvement of a tool (or practice) to its introduction. Full details are available within each country's section on challenges.
(2) The first category (Improving financing arrangements) is signalling a challenge if any of the sub-categories flag a challenge.
Source: Commission services (DG ECFIN).

helping realise the potentially large benefits of increase data collection and monitoring.

In order to ensure that the use of health data is optimal for society, eight key data governance mechanisms have been identified ([160]):

1. The health information system supports the monitoring and improvement of health care quality and system performance, as well as research innovations for better health care and outcomes. This requires the use of data safety and ethical protocols within the health system, with training being provided to officers.

2. The processing and the secondary use of data for public health, research and statistical

([160]) OECD (2015b).

purposes are permitted, subject to safeguards specified in the legislative framework for data protection.

3. The public are consulted upon and informed about the collection and processing of personal health data. This is necessary in order to promote transparency, and accountability.

4. A certification/accreditation process for the processing of health data for research and statistics is implemented. This helps limit undue use of the data.

5. The project approval process is fair and transparent and decision making is supported by an independent, multidisciplinary project review body.

6. Best practices in data de-identification are applied to protect patient data privacy. This is particularly important for health data, given its sensitive nature.

7. Best practices in data security and management are applied to reduce re-identification and breach risks.

8. Governance mechanisms are periodically reviewed at an international level to maximise societal benefits and minimise societal risks as new data sources and new technologies are introduced. As technologies advance, the parameters of data production and analysis are likely to change. Any health data system therefore requires in-built flexibility to be reviewed over time in order to accommodate new complexities and issues.

Elements of each of these factors do currently exist in most EU member countries, but implementation of good practice is uneven (as shown in the country fiches). The OECD itself mentions Denmark, Finland, Sweden and the United Kingdom as EU countries with health information systems that have the greatest data availability, maturity and use.

It is therefore necessary for EU Member States to ensure that data is used appropriately and that the data system can respond to future innovations and changes, as well as improving the collection and analysis of health data. However, data collection and analysis itself has costs (sometimes referred to as administrative burden) for the public (and sometimes the private) sector and there is a trade-off between the resources used to analyse and collect data, on the one hand, and the benefits deriving from this collection and analysis, on the other. The extent of the collection and analysis of data should therefore be proportionate to the potential costs and benefits of doing so.

4.12. ALIGNING INCENTIVES IN THE SYSTEM

A comprehensive approach is needed to aligning incentives among different actors in view of effectively achieving the objectives of health systems ([161]). When actors pursue goals that are to some extent conflicting and where they do not promote the wider system's ultimate goals, those incentives are misaligned. Health care providers, insurers, governments and individuals pursue different goals. Aligning these incentives in an efficiency oriented way will improve the overall system's performance.

Tools to support active purchasing

A strong public purchasing function should align incentives of different actors of the health sector. Indeed purchasers act as both the public and the government's agents, and represent the principal in the agency relationship with providers. The goal of purchasing is to design contracts that capture individual preferences and health needs and health policy objectives and to steer providers behaviour to meet them while pursuing efficiency and cost containment.

Passive purchasing leads to provider-led systems and cost-escalation. According to evidence ([162]), policies aimed at correcting incentives and regulating the supply side are far more powerful a policy tool that those solely targeting demand-side. This is because of the strong information asymmetries characterising the health care markets, in which providers have the power to influence choices and induce demand as well as to steer it. The role of purchasers is fundamental, as the way providers are rewarded influences their activity, outputs and largely outcomes. There are several policy options to support active purchasing, including financial incentives, adjusting the benefits package strategically with evidence based purchasing, managing choice through licencing and accreditation, and selective contracting.

Financial incentives should be used as a tool to steer providers. More than half of the Member States that acknowledge a policy challenge in aligning incentives in the system consider enhancing the current payment systems as a policy option to address the challenge. A broader strategy aimed at strengthening the role of active purchasing is also reported in some cases (see Table 4.12.1).

Financial incentives should account for possible spillover effects and for system-level impacts. As discussed in Section 3.9, a payment scheme may be good in a single sector perspective, reducing unnecessary care and controlling costs, but it may shift activity, and costs, to other sectors. To contain the unwarranted consequences of frictions between payment mechanisms, or simply to account for the way in which broader context-related characteristics can modify those incentives, a growing number of new payment models have emerged. To this end, payment for performance (P4P) seems promising and should be further explored (see Section 3.8 on remuneration systems).

The benefits package should be set and reviewed on evidence. Assessments of health care needs, health policies and priorities as well as regulation on the appropriate models of care constitutes the basis for a purchasing strategy that contracting should implement. The importance of evidence-based purchase of health care goods and services has been highlighted in the previous chapters in the context of assessing cost-effectiveness, such as through HTA.

Market-entry contracts can be used to set a quality threshold. Tools such as licensing, certification and accreditation of providers specify a set of characteristics that a provider must possess to be eligible for contracting. They are typically defined over several years, and combined with activity based contracts, so-called process contracts, into selective contracting. This kind of regulatory approach allows purchasers to buy services from a subset of existing providers, with positive impacts on efficiency and innovation ([163]).

([161]) This list of measures is intended as a menu of possible policy options from which Member States can choose to improve the incentive structure of their health systems. Which measure or combination of measures to implement remains a policy choice for the Member State.

([162]) http://www.euro.who.int/__data/assets/pdf_file/0004/98428/E86300.pdf.

([163]) This form of contracting, though promising, poses two sets of challenges. The first is the regulatory aspect: a clear framework defining rules and procedures for contracting must be in place, and this is often not the case. Secondly, this kind of contracting faces strong opposition, from

Policies should promote competition. Competition in the market is an important determinant of provider behaviour. It is according to the degree of competition, or of its absence, that providers respond to purchasing. The lack of many alternatives weakens the bargaining power of purchasers and the effectiveness of many tools to incentivise performance and quality. Where patients are assigned to hospitals based on catchment areas, hospitals develop a local quasi-monopoly. Conversely, as the contestability of the market increases, bargaining power of purchasers increases too.

Purchasing from private providers should be explored. It could improve performance and productivity by increasing the degree of competition felt by public providers and enabling or increasing patient choice, provided that coordination between public and providers does not lead to duplications and a wasteful use of resources which features as a relevant policy issues for all those countries recognising improved competition([164]). This could benefit the system in a situation of low productivity, high costs, low responsiveness to patient needs and low quality. Alternatively, private commissioning can be beneficial when public capacity is insufficient.

Policies on strategic purchasing should be supported by an appropriate regulatory framework. Strategic purchasing should be made taking a system-wide approach to ensure consistency. Setting a payment system rewarding performance may be ineffective if there is lack of supporting regulation or managerial capacity in place. Effectively aligning incentives requires a systematic approach.

Provider incentives

Providers should be able to retain part of the generated profit. If providers are able to retain and re-invest savings internally, they will face a stronger incentive for cost-efficiency. However, often purchasers cannot exploit these incentives due to the broader regulatory framework to which they are subject when designing contracts. The relation between autonomy and the materialisation of incentives suggests that models allowing for greater managerial and organisational flexibility may operate more efficiently. In line with recent trends, autonomous and corporate models, as well as commissioning from private providers, as models offering a higher potential in terms of autonomy, could be further explored to deliver greater efficiency ([165]).

Information on providers should be made available to purchasers. Information asymmetries influence the leverage of purchasers on providers in two ways. On the one hand, one important factor is whether or not providers are better placed to judge on patient's needs, in which case they may be less responsive to purchasing. Another factor is the extent to which their actions are hidden from the purchasers, which may drive opportunistic behaviour exploiting the lack of monitoring tools.

System and end user perspective: the role of governments and patients

Regulation should support the purchasing function. Regulation is the tool to ensure that purchasing pursues policy objectives. It is through clear regulation, which must be consistent with policy objectives, that governments can play their role of stewardship. As seen in the previous paragraphs, regulation may be inconsistent with policy objectives in ways that are not evident, for instance by constraining providers' managerial autonomy, thereby limiting their responsiveness to purchasers.

healthcare professionals, who strongly advocate in favour of collective contracting.

([164]) Expert Panel on effective ways of investing in Health (EXPH), Report on Best practices and potential pitfalls in public health sector commissioning from private providers, 3 May 2016. http://ec.europa.eu/health/expert_panel/opinions/docs/014_publichealthsector_privateproviders_en.pdf.

([165]) Preker, Alexander S.; Harding, April. 2003. Innovations in Health Service Delivery: The Corporatization of Public Hospitals. Health, Nutrition, and Population;. Washington, DC: World Bank. https://openknowledge.worldbank.org/handle/10986/15145

Table 4.12.1: **Country-specific challenges for aligning incentives in health care systems**

	Aligning incentives in the system	Promote fair competition to increase efficiency	Tackle opportunistic behaviour of public providers	Eliminate waste from lack of public-private coordination	Enhance payment systems	Strengthen the role of active purchasing	
BE							**BE**
BG							**BG**
CZ							**CZ**
DK							**DK**
DE							**DE**
EE							**EE**
IE	x	x		x	x	x	**IE**
EL	x			x	x		**EL**
ES	x	x					**ES**
FR	x				x		**FR**
HR	x				x	x	**HR**
IT							**IT**
CY	x	x		x			**CY**
LV							**LV**
LT							**LT**
LU							**LU**
HU	x				x		**HU**
MT	x					x	**MT**
NL							**NL**
AT	x				x	x	**AT**
PL	x		x				**PL**
PT	x					x	**PT**
RO							**RO**
SI							**SI**
SK	x				x		**SK**
FI							**FI**
SE	x				x		**SE**
UK							**UK**
EU	13	3	1	3	8	5	**EU**
EA	9	3	0	3	5	4	**EA**
EU15	7	2	0	2	5	3	**EU15**
EU13	6	1	1	1	3	2	**EU13**

(1) Based on challenges as identified in the country documents to this report. For each sub-category, challenges differ by country, ranging from the improvement of a tool (or practice), to its introduction. Full details are available within each country's section on challenges.
(2) The first category (Aligning incentives in the system) is signalling a challenge if any of the sub-categories flag a challenge.
Source: Commission services (DG ECFIN).

The government needs to formulate a clear health care strategy. Responsibility for the management of the budget and for setting premiums, as well as autonomy in the management of profits, may lead purchasers to pursue profit maximisation as the main goal. In turn, this may

result in a stronger cost-containment than optimal from a system point of view of from that of the covered population, especially in a context of strong competition. Setting a clear strategy through national policy plans sets the direction that purchasers should follow, and many countries make use of them to set directions by defining targets in terms of ratios of beds or equipment per capita population by geographic area, or to set volumes of health care services available to eligible population.

An array of regulatory tools can be used to steer purchasers. Typical tools are regulation of purchasers' budget, risk and compensation, and reporting duties and, regulation of consumer information and participation. In addition, the government typically sets the framework and rules for contracting, the benefits package and exerts control through participation on boards of purchasers ([166]).

Demand-side incentives can steer patients towards cost-efficient options. Cost-sharing has already been introduced in relation to financing, with a reference to its potential for demand-management (see Section 4.2). The way in which the demand side of a health care system can be reached is typically subject to its ability to choose. In that case, the role of incentive-design is to steer use towards the most efficient and cost-effective solutions whenever patients get a choice between alternatives. A higher level of cost-sharing can be applied when unnecessary use needs to be moderated and, conversely, services that need to be promoted will have lower or no co-payments.

Informed patient choice should promote quality and efficiency. As introduced in previous sections, by "voting with their feet", patients can drive competition between health care providers, the pre-requisite being having a choice. However, for patients' incentives to be optimally aligned, it is essential that patients have a fair perception of both quality and of the importance of choice. Indeed, in many cases patients do not have enough information to make choices, and not infrequently there is a preference to rely on professional advice, with chronic patients being the ones more likely to be engaged ([167]). To support patients making informed choices, efforts to improving quality measurement, strengthening data availability and its communication to patients need to be made.

([166]) Framework contracts between governments, purchasers, providers and medical associations can be are often are used, but the government can also directly take part in the negotiations. In addition, contracting can be regulated to specify the scope of what can be negotiated and how this must take place, as well as the rules governing litigation between payers and providers.

([167]) Eurobarometer Qualitative Study on patient involvement (2012) http://ec.europa.eu/health/systems_performance_assessment/docs/eurobaro_patient_involvement_2012_en.pdf.

4.13. FOSTERING PUBLIC HEALTH POLICIES

Rebalancing towards health promotion and disease prevention can contribute to increasing cost-effectiveness of health systems ([168]). The structure of health expenditure suggests that countries still pay relatively little importance to health promotion and disease prevention compared to curative care. Increasing the weight of spending and strengthening the action on cost-effective preventive care may represent an improvement in how cost-effectively the health system operates.

More focus on health promotion does not need to come with higher costs. For some health threats, such as non-communicable diseases (NCDs), it is possible to identify a set of interventions that deliver significantly positive public health impacts in an easily implementable, cost-effective manner and at a low cost. This set of feasible, low-cost and high effectiveness. "Best buy" interventions ([169]) includes tax increases, bans on advertising and promotion, restricting access to risk factors (tobacco use and harmful alcohol use), public awareness campaigns (tobacco use and unhealthy diet and physical inactivity), counselling and drug therapy (cardiovascular disease), hepatitis B immunisation and screening (liver and cervical cancer respectively), which can be implemented in many different settings (at work, in school, in health institutions) and reduce premature deaths due to NCDs.

Improving public health policy

Public health policies should account for the wider socio-economic determinants of health and health behaviour, including health inequalities. A well designed public health strategy should targets several sectors and stakeholders to ensure the greatest potential effectiveness and ensure to target young age groups ([170]). For instance, campaigns of public awareness on the risks related to tobacco consumption could be undermined by the high availability of places selling tobacco with no restriction to access. Another example is policies promoting healthy eating habits for children may be ineffective if families do not lead (or support) a similar lifestyle or if schools do not offer appropriate alternatives to high sugar and high fat foods. Health inequalities should also be addressed as part of the wider socio-economic determinants to improve health outcomes.

Public health policies should be developed as integrated multi-sectorial and multi-stakeholder initiatives. Partnership approaches and multi-sectorial collaborations should become the new way of approaching public health. Key stakeholders to this end are governments, citizens, NGOs, industry, professional bodies and media. Models of collaboration such as partnerships are expected to improve access to resource and their use, by fostering the development of innovative solutions and better policy design, building on the different strengths coming from different partners. In addition, these are expected to increase accountability and ownership from different actors.

Policy making in other sectors should take into account the likely impacts on public health. The strong multi-stakeholder and multi-sectorial trait of public health is reciprocated by the fact that policies developed to target issues that are specific to other areas are often likely to have spillover effects on public health. Acknowledging this issue, a framework to systematically take into account the health implications of decision making in all sectors has been developed within the initiative Health in All Policies ([171]).

Curricula for public health professionals should be redesigned and strengthened. Public health

([168]) This list of measures is intended as a menu of possible policy options from which Member States can choose to improve the sustainability of their health systems. Which measure or combination of measures to implement remains a policy choice for the Member State.

([169]) WHO (2014), Global status report on non-communicable diseases. http://apps.who.int/iris/bitstream/10665/148114/1/9789241564854_eng.pdf?ua=1 http://www.who.int/nmh/publications/who_bestbuys_to_prevent_ncds.pdf

([170]) Targeting young people and their families offers the best chance to raise awareness and induce a change in behaviour, or, in the best cases, to prevent the onset of a potentially harmful behaviour, but it also offers the best chance to prevent the onset of a condition. For instance, the evidence suggests that this is the case for alcohol consumption, as early starters and excessive drinkers are more likely to experience negative health impacts.

([171]) This initiative calls for a commitment from governments to health and as a political priority. In addition, governments should ensure that adequate resources, processes and structures are in place and create capacity within the Ministry of Health and in other institutions to actively engage other sectors of the government. http://ec.europa.eu/health/health_policies/health_in_eu_initiatives/index_en.htm.

professionals should possess, or be trained to develop, a set of core competences ([172]). Alongside analytical and managerial skills, professionals involved in public health care should possess strong communication skills, as well as strong knowledge of the social context. These should be completed by sound policy development and program planning skills.

Financing plans should be consistent with policy timelines. Not only are prevention and health promotion often given insufficient attention, but there is also a general trend towards short term budgeting practices, which conflicts with the longer term need to plan and implement policies that deal with prevention and health promotion. Budgeting plans in this area should involve longer term planning.

Monitoring frameworks should be developed to support programme evaluation carried out systematically. Programme evaluation is especially useful for policies with a longer time horizon, such as public health policies, to monitor progress toward goals and determine whether policies are having the expected effect on outcomes, both qualitatively and quantitatively. Timely evaluation gives the opportunity to re-target efforts in light of results and increase the quality of interventions, or to re-direct resources, thus ensuring that only effective programs are continued ([173]). Importantly, a systematic evaluation can be used to help maintain public health policies, requiring resources for longer term results, high on the political agenda providing evidence to advocate for additional funding.

Communication efforts should be strengthened as an asset to disseminate evidence-based public health programs and messages. Communication can help translate the potential effect of programs into actual results by encouraging users to adhere to new ways of behaving factoring in the messages emerging from the available evidence. Communication strategies embracing advocacy as well as marketing could be used, acknowledging the importance of networks and individual and shared culture ([174]).

Policy making in public health should incorporate behavioural insights. According to a growing body of evidence, taking into account behavioural insights, that is, the way individuals make actual choices, may increase the effectiveness of policy making in public health. Nudging is a way to influence individual behaviour based on positive reinforcement and indirect suggestions to achieve compliance while preserving choice. This tool is advocated to be at least as effective as conventional tools to change behaviour such as rational persuasion, coercion, financial incentives and bans ([175]).

The role of fiscal policy instruments on public health policy and prevention

Evidence should be strengthened on direct and indirect impacts of taxes on health status. Empirical evidence is not available and impacts are often assessed through modelling. Based on these simulations, there seems to be consensus that policies increasing the price of tobacco and alcohol would lead to fewer deaths. Less clarity characterises messages concerning a price increase in food and other (non-alcoholic) beverages ([176]). Lastly, an indirect effect, like producers' reformulation of the commodities as a reaction to the new, or higher, tax, should be further analysed.

([172]) Across different levels, the competences can be synthesised into eight domains: these range from the more technical, such as analytical and public health science skills, to some that are more managerial, like leadership, financial planning and management skills. http://www.cdc.gov/stltpublichealth/nphii/nphiimeeting/metingdocs/workforce/workforce%20development_bialek_2011.pdf.

([173]) http://www.cdc.gov/eval/guide/cdcevalmanual.pdf. In addition, monitoring progress can contribute to raising awareness by disseminating results, contributing to stronger political commitment.

([174]) http://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-7-88.

([175]) Alemanno, A., Garde, A. (2015), Regulating Lifestyle Risks: The EU, Alcohol, Tobacco and Unhealthy Diets, Cambridge University Press. Matjasko, J.L , Cawley, Baker-Goering, M. M, Yokum, D.V., (2016), Applying Behavioral Economics to Public Health Policy : Illustrative Examples and Promising Directions, American Journal of Preventive Medicine, Volume 50, Issue 5, Supplement 1, Pages S13–S19.

([176]) Some studies point at the combination of deterring unhealthy options and promoting healthy ones, such as taxes on high sugar and/or fat foods combined with subsidies on fruit and vegetables, as a driver of significantly positive health impacts. Sassi, F., A. Belloni and C. Capobianco 2013), "The Role of Fiscal Policies in Health Promotion", OECD Health Working Papers, No. 66, OECD Publishing, Paris.DOI: http://dx.doi.org/10.1787/5k3twr94kvzx-en.

Other fiscal measures incentivising individual behavioural should be explored. Commodity subsidies could be further explored ([177]). In addition, consumption of healthy options could be subsidised and subsidies financed by taxing unhealthy options. To ensure a stronger link between the money spent and the induced behaviour change, conditional cash benefits, positively associated with the uptake of prevention in other countries, should be the preferred form. Lastly, the example provided by Canada suggests that linking tax credits to promoting healthier lifestyles, such as registering young children into programmes of physical activity, generate a positive uptake and is expected to have a positive impact on the future prevalence of obesity.

([177]) Though these have mostly been used for non-health-related goals, some studies have estimated a positive impact on people's diets, such as lower prices for fruit and vegetables.

5. LONG-TERM CARE SYSTEMS IN THE EU AND THEIR RELATION TO LONG-TERM EXPENDITURE

5.1. OBJECTIVES AND POLICY TOOLS

Driven by population ageing, the big challenge of long-term care (LTC) systems is to meet the needs of a growing number of older people at risk of suffering from frailty and disability, while keeping costs affordable and public finances sustainable. Increasingly LTC is facing three basic challenges. First, over the next five decades the number of Europeans aged over 80 and at risk of needing LTC is expected to increase significantly. In old age, people often become frail and develop multi-morbidity conditions, which cause them to need both medical and social care on a continuing basis. Second, one can foresee a shift from informal care towards formal care-giving as typical caregivers get more involved in the labour market and the new family structures and size may imply less informal support to the older generations. Thus, it is less likely that family members will be able to provide the informal, home-based care which is currently a corner stone of LTC provision. Third, LTC represents a non-negligible and growing share of GDP and of public and total (i.e. including private) spending (See Chapter 2). As such, LTC puts a considerable challenge to the long-term sustainability of public finances, as well as to private spending. This needs to be addressed to allow for the needed increase in formal coverage of LTC services in the EU at adequate standards of quality of care.

The increasing need for care will have to be addressed through a mix of policies, which will be analysed in this report. These might require, for instance, addressing the governance mode and collaboration between different Ministries. Other policy tools are changing working arrangements in the formal care sector, but also arrangements for a better work/life balance to make the provision of informal care easier, including a better (public) support to informal carers, the development of respite care ([178]) and investments in ICT solutions. In the short to medium term, this ultimately means more public expenditure as well. Other policies might address socio-economic determinants of health, the patterns of LTC provision (organisation and financing of the system and essentially the extent to which Member States rely on formal, paid care and informal care) and human resource availability. Policies supporting economic growth also play a role, as also the development and use of new technologies and medical progress.

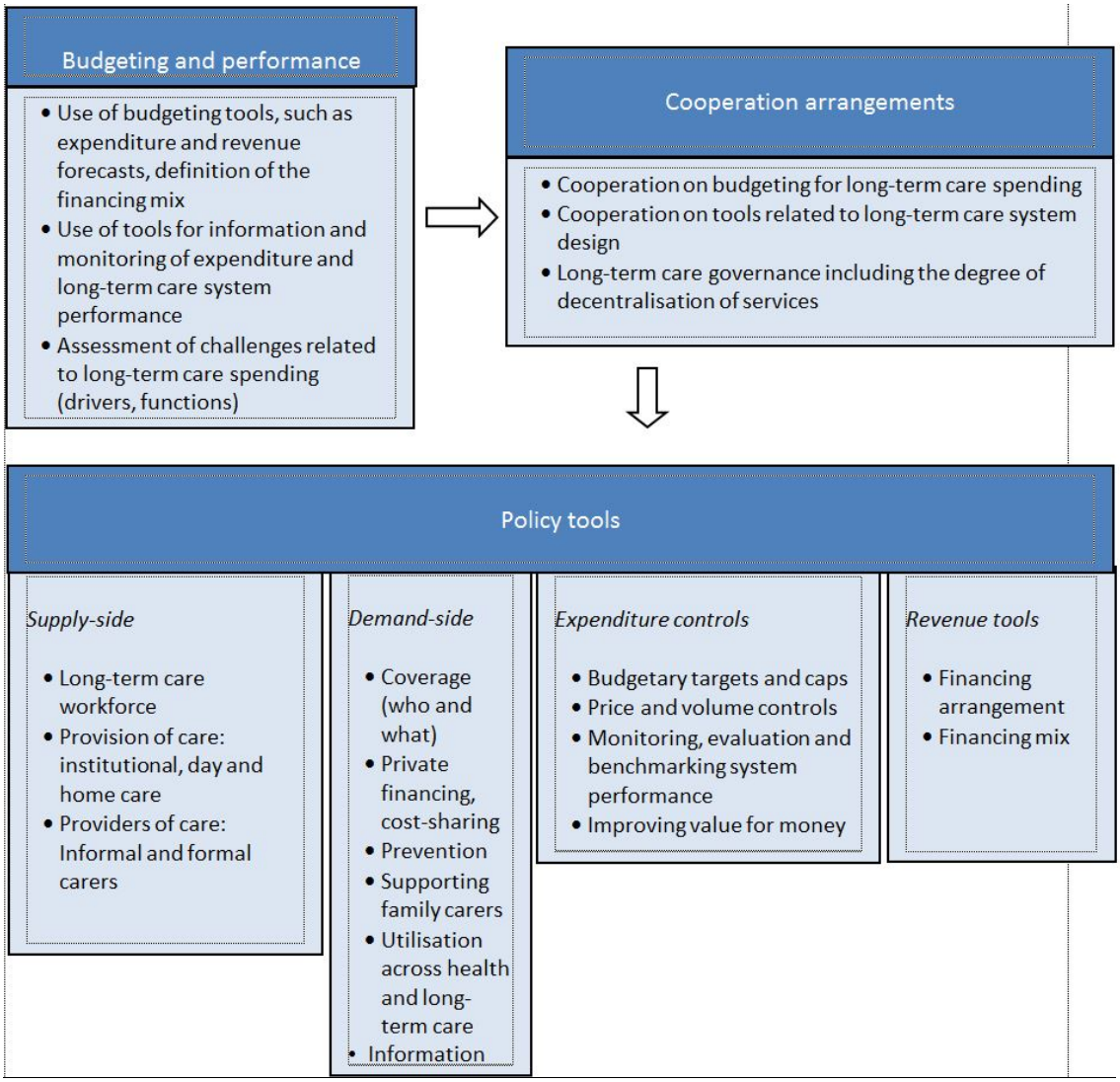
The main policy elements of interest here can be framed in the categories of budgeting and performance assessment, institutional arrangements and specific policy tools for LTC system design (Graph 5.1.1). First, undertaking sound budgeting and assessing the performance and related challenges of long-term care systems can serve as diagnostic steps for potential policy action. This includes: i) the use of budgeting tools, such as expenditure and revenue forecasts and the definition of the financing mix; ii) the use of tools for information and monitoring of expenditure and system performance; and iii) an assessment of challenges related to long-term care spending (drivers, spending functions).

Second, the political and institutional set-up in terms of cooperation and decision-making will determine the type and scope of action by the respective stakeholders. These relate to: i) the cooperation on budgeting for long-term care spending; ii) the cooperation on tools related to long-term care system design; and iii) system governance, including the degree of decentralisation of long-term care services.

Third, based on the budgeting and institutional arrangements, policy makers have specific tools that can be employed to secure the greater attainment of long-term care policy objectives. These can be categorised into: i) supply-side policies, including those related to the long-term care workforce, the provision of care in institutional and home settings and providers of care, both informal and formal; ii) demand-side policies, including coverage (who and what), private system financing (cost-sharing), prevention policies, support for family carers, utilisation of services across health and long-term care boundaries and information policies; iii) expenditure controls, including budgetary targets and caps, price and volume controls and

([178]) Respite care is the provision of short-term care (i.e. institutional, home or day care). This is temporary relief family carers, who as an alternative might require permanent placement of the dependent person in a facility outside the home.

Graph 5.1.1: **Elements for analysing the fiscal sustainability of long-term care systems**



Source: Commission services (DG ECFIN).

monitoring, evaluation and benchmarking of system performance and improving value for money; and iv) revenue tools including deciding on the level of system financing and the financing mix.

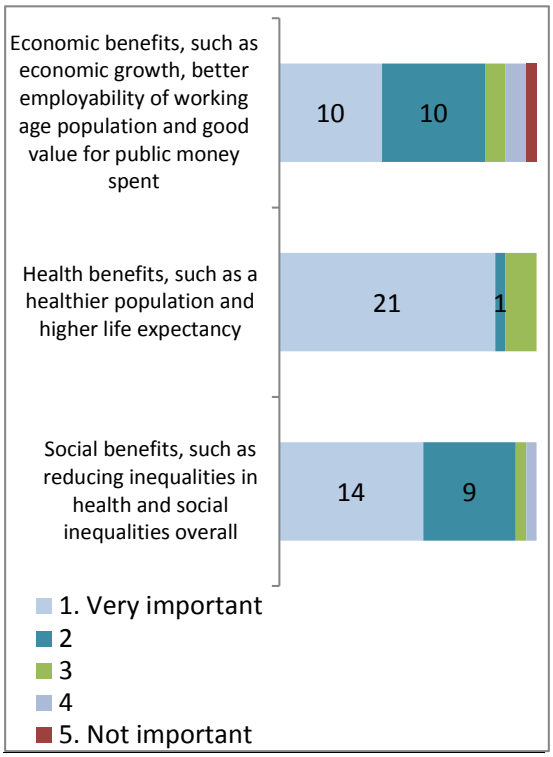
The following Sections 5.2 to 5.7 will describe the characteristics of long-term care systems in terms of perceived challenges of LTC systems, coverage, financing arrangement, budgeting for long-term care spending and the provision of care (institutional versus home and informal (such as family members) versus formal carers). Based on this analysis, section 6 discusses the strengths and limits of present LTC approaches, mostly from the perspective of sustainability of public finances, and draws conclusions on policy options.

5.2. CHALLENGES OF LONG-TERM CARE SYSTEMS

This section highlights selected challenges of LTC systems, as perceived by EU Member States. Results draw from data of the country survey as introduces in Section 3.2. In addition, the section provides an example, how Commission services (DG ECFIN) identify challenges in long-term care systems based on a cross-country (horizontal) assessment framework (Box 5.2.1).

Budgeting officials expect economic, health and social benefits from LTC systems (Graph 5.2.1). Health benefits relate to a healthier population and higher life expectancy. Equal importance is given to social benefits, such as reducing inequalities in health and social inequalities overall. Economic benefits, such as economic growth, better employability of carers in working-age and good value for public money spent, play also an equally important role.

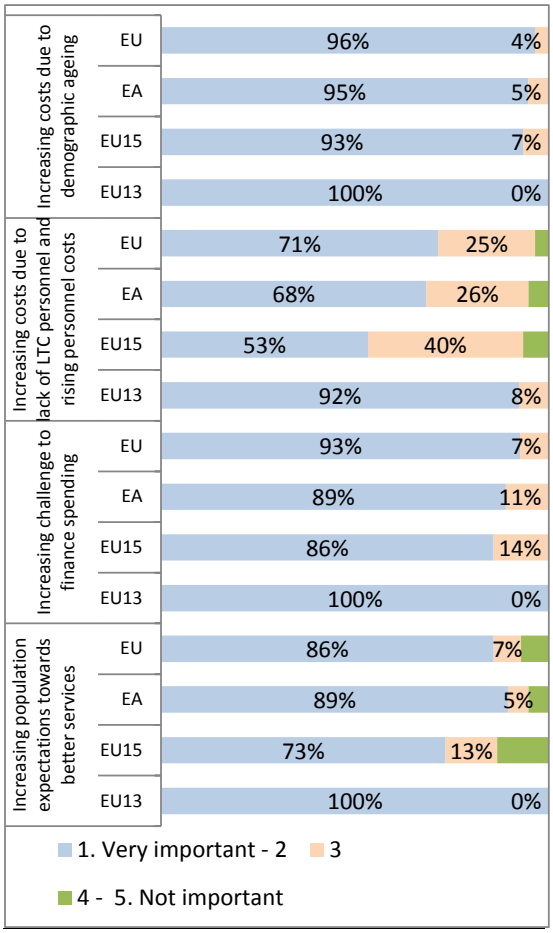
Graph 5.2.1: **Perceived benefits of long-term care systems as expected by budgeting officials, EU**



(1)Based on survey results.
(2) Numbers show how many countries answered with yes in corresponding category.
Source: Commission services (DG ECFIN).

Increasing costs due to demographic ageing are but one major perceived challenge for the long-term fiscal sustainability of long-term care spending by budgeting officials (Graph 5.2.2). An equally important challenge is financing spending due to demographic ageing, as well as the related increasing population expectations for better care services, which are a driver of expenditure. Increasing costs due to lack of long-term care personnel and associated rising personnel costs are perceived as a higher concern in the EU13 than in the EU15.

Graph 5.2.2: **Perceived challenges of long-term care systems as expected by budgeting officials**

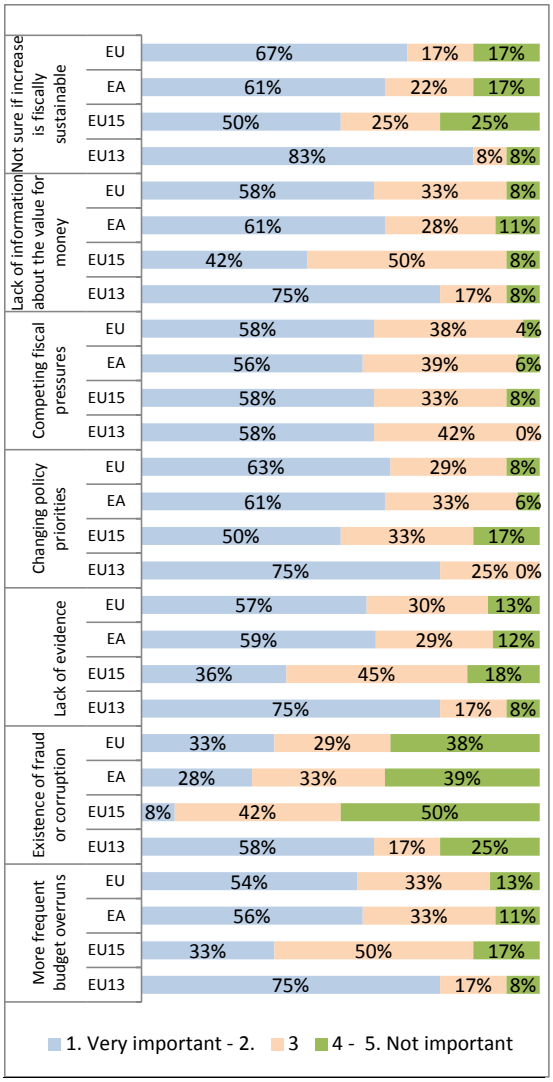


(1) Based on survey results.
(2) Numbers show how many countries answered with yes in corresponding category.
Source: Commission services (DG ECFIN)..

When deciding on whether to allocate more funds to long-term care, government authorities have various substantial concerns. These concerns relate to uncertainty, whether the increase is fiscally sustainable both from a financing as well as from the expenditure side. Other causes are the

lack of information about the value for money of the additional investment, which is more of a concern in the EU13 than in the EU15. Competing fiscal pressures stemming from various Ministries, changing policy priorities and a lack of sufficient evidence on why more money is needed are additional concerns. The existence of fraud or corruption in the long-term care sector seems to be a cause for worries particularly in EU13 countries. Finally, more frequent budget overruns on long-term care spending is another important reason, why government authorities may be cautious about increasing LTC spending.

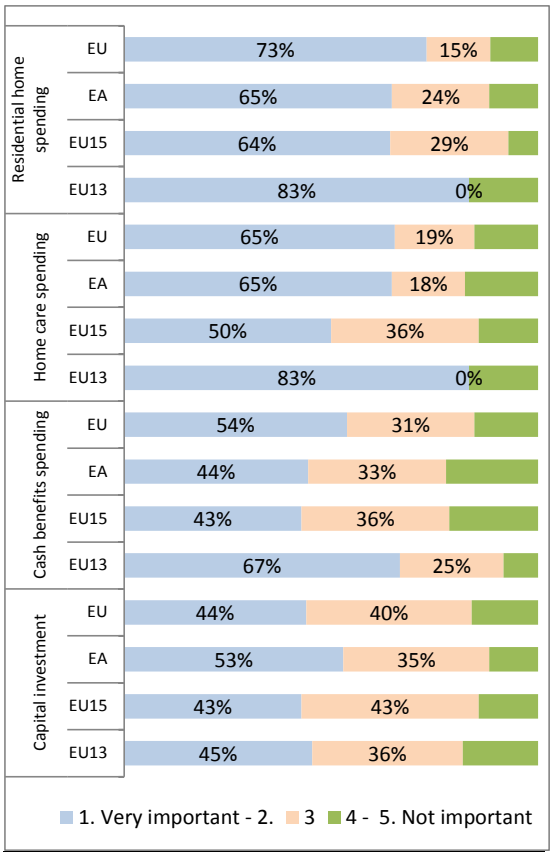
Graph 5.2.3: **Causes of concerns for fiscal sustainability of long-term care when deciding on whether to allocate more money to health**



(1) Based on survey results.
Source: Commission services (DG ECFIN).

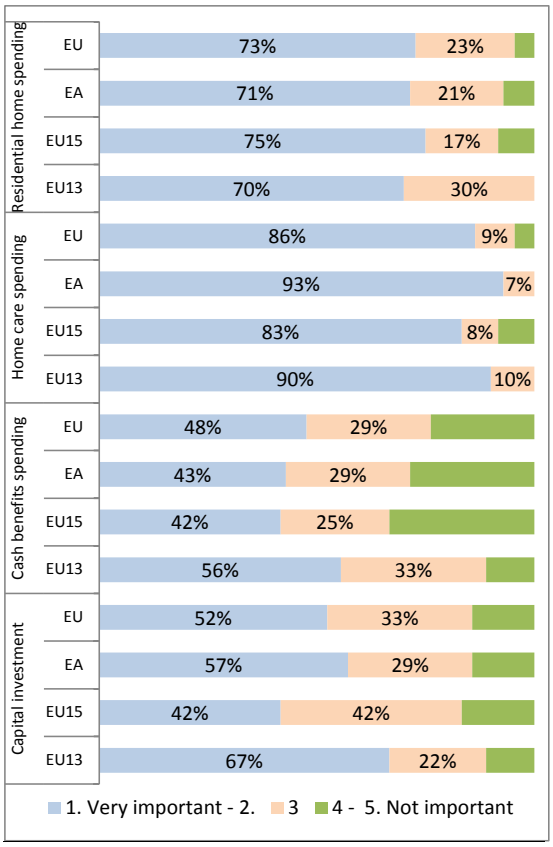
Both cost-containment and investment in LTC are perceived as important by a majority of EU Member States (Graphs 5.2.4 and 5.2.5). According to the survey results, all functions of spending, i.e. spending on residential care, home care and cash benefits deserve policy attention in terms of cost containment. Also, controlling costs of capital investments seems to deserve some policy attention, although to a lower degree than the other functions of spending. Overall, containing costs is perceived as particularly important in the EU13.

Graph 5.2.4: **Function of LTC spending that deserves policy attention in terms of cost-containment**



(1) Based on survey results.
Source: Commission services (DG ECFIN).

Graph 5.2.5: **Function of LTC spending that deserve most investment**



(1) Based on survey results.
Source: Commission services (DG ECFIN).

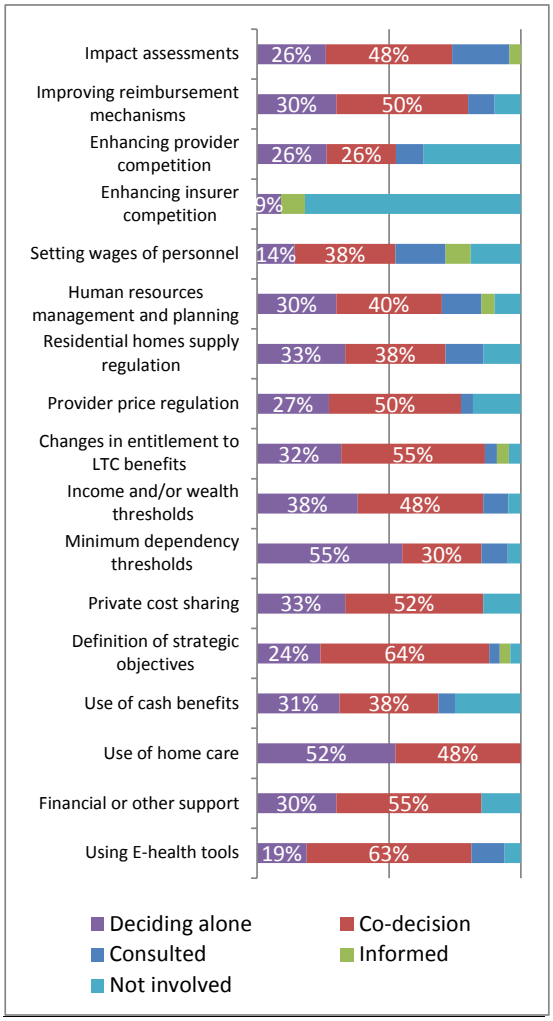
On the other hand, from the perspective of government officials allocating more funds to LTC is important. Here, the allocation of more resources to residential and home care take the lead, but also allocating more money to cash benefits and fostering capital investments get some attention in this perspective. The fact that both cost-containment and additional resources are perceived as important, signals that there might be scope for substantial improvements in efficiency of LTC systems, which may be achieved by containing costs (via policies which produce efficiency gains) and allocating resources in such a way that value-for-money of the investment is increased.

Member States use a wide range of policy tools for improving the functioning of LTC systems, but usage could be more widespread (Graph 5.2.7, left part). Government authorities in most EU countries assess the (potential) impacts of proposed policy reforms, and are involved in improving reimbursement mechanisms, setting wages of LTC personnel, manage and plan human resources, regulate the capacity of residential care, regulate prices of provider of care, change entitlement in LTC benefits, define income/wealth thresholds for eligibility for public LTC benefits, define minimum dependency thresholds, regulate private cost-sharing for LTC services, define the strategic objectives of the LTC system, try to improve the use of home care, foster the use of cash instead of in-kind benefits and implement eHealth solutions.

In the received responses the perceived importance of the specific policy tools is always

higher than its actual usage. For instance, while 63% of answers suggest that authorities try to improve provider reimbursement mechanisms, 80% of the countries think this tool is important (Graph 5.2.7, right part). The high rates in terms of perceived importance of policy tools indicate that there may be scope to increase the use of these tools in many EU countries.

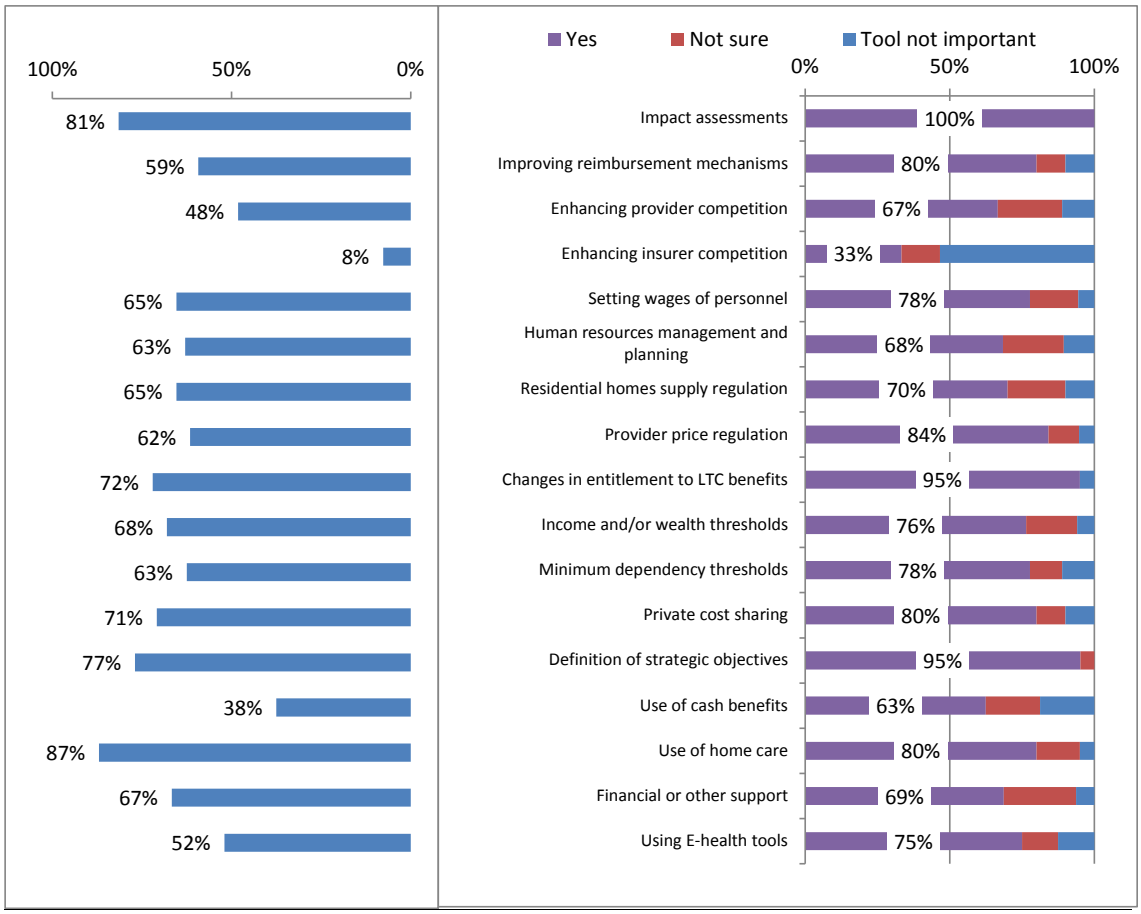
Graph 5.2.6: **Modes of cooperation of government authorities on specific tools for the design of LTC systems, EU**



(1) Based on survey results.
Source: Commission services (DG ECFIN).

As regards the modes of cooperation on specific policy tools for improving the functioning of LTC systems, co-decision is reported as the most frequent mode, but lone decision-making is also common (Graph 5.2.6). Co-decision is the predominant form of decision making for most of the policy tools. This is linked to the fact that, in many countries public long-term care is funded by a number of ministries and authorities at different levels of government. Still, in some cases, the authority in charge is deciding alone. The reasons why co-decision is more prevalent with one policy tool than with another are not self-evident, and do not seem linked to a particular category of policy tools. The modes of cooperation most probably depend on the historically determined institutional set-up of LTC governance as well as the degree of centralisation and regional devolution and not so much on the level of development of formal LTC services.

Graph 5.2.7: **Usage and perceived importance of tools for ensuring the fiscal sustainability of long-term care spending in the EU**



(1) Based on survey results.
Source: Commission services (DG ECFIN).

Box 5.2.1: **Age related fiscal sustainability challenges: a horizontal assessment framework for long-term care**

As is the case for health care (see corresponding Box in Section 3.10), in order to provide policy advice to countries in a comparable manner, Commission services (DG ECFIN) use a horizontal assessment framework (HAF) to identify structural-fiscal reforms that are deemed necessary to address fiscal sustainability challenges in long-term care. The framework is discussed and reviewed annually in the Economic Policy Committee (EPC) to inform about DG ECFIN's work in this area. On this basis, the framework is updated and improved. Also in case of LTC, the overarching point is the sustainability indicators used in EU budgetary surveillance. On the basis of the fiscal sustainability indicators (step one as in health care), the analysis entails establishing the nature of the challenge related to more specific parameters in long-term care.

The HAF employs a broad set of indicators to look at the performance of the LTC systems. A comparative analysis of these indicators can help understanding, what are the areas of LTC provision, where policy could be adapted to address the sustainability challenges. The framework covers the main dimensions of public expenditure on long-term care, indicators that measure need for care and coverage for LTC care, the distribution of LTC spending and the unit cost of care. It is important to mention that the framework looks at the system from a macro-perspective and cannot capture the complex relationships between input, outputs and outcomes. Additionally, the framework validity is limited by data availability. Therefore, such an analysis does not replace a more careful country-specific analysis of the respective LTC system, which may lead to a more specific definition of challenges and a more specific flagging of reform policies.

The table below summarises the results based on a comparison of countries. Cells highlighted in the table correspond to a particular challenge in the respective domain, such as: (1) the need to monitor high current expenditure levels; (2) the need to improve health status and to lower care needs; (3) the need to improve efficient distribution of resources; (4) the need to review the coverage of LTC, and; (4) the need to monitor unit costs of care. As indicated, these results are based on a broad framework and screening device for detecting possible policy challenges in the area of health care. The results developed here should be considered as an initial analytical tool only and do not replace a careful country-specific analysis of the respective LTC system. A more detailed assessment based on additional pieces of information, not reviewed in the current framework analysis, may lead to more specific or additional/ different policy challenges.

(Continued on the next page)

Table 1: Overview of possible policy areas for improvement in long-term care

	Expenditure						Care need	Spending distribution				Coverage						Unit costs						
	In 2013, in % GDP		Increase until 2060 (pp) - Reference scenario		Increase until 2060 (pp) - Risk scenario		High disability	% of spending on institutional as part of formal in-kind spending		% of formal in-kind spending in total spending		% of population receiving LTC benefits		% of dependents receiving LTC benefits		Increase in number of dependents 2013-2060, in % of 2013		Institutional care per recipient, as % of GDP per capita		Ratio of unit costs per recipient in institutional to home care		
BE	2.1	(5)	1.5	(5)	2.5	(20)	(21)	60%	(12)	98%	(7)	8%	(1)	100%	(1)	53	(5)	99	(8)	7.8	(4)	BE
BG	0.4	(26)	0.2	(27)	2.5	(19)	(27)	31%	(25)	100%	(2)	2%	(21)	43%	(8)	4	(25)	60	(17)	3.2	(11)	BG
CZ	0.7	(18)	0.7	(19)	5.2	(1)	(23)	82%	(4)	37%	(27)	4%	(4)	56%	(5)	40	(12)	7	(27)	1.2	(21)	CZ
DK	2.4	(4)	2.0	(3)	2.6	(17)	(22)	46%	(19)	95%	(9)	3%	(10)	36%	(13)	27	(17)	135	(5)	2.0	(16)	DK
DE	1.4	(11)	1.5	(8)	3.1	(11)	(2)	57%	(14)	69%	(18)	2%	(19)	17%	(22)	2	(26)	52	(18)	0.6	(25)	DE
EE	0.6	(22)	0.7	(18)	3.2	(10)	(4)	90%	(2)	39%	(24)	2%	(20)	20%	(20)	14	(23)	18	(24)	3.8	(10)	EE
IE	0.7	(20)	0.7	(17)	2.3	(21)	(25)	35%	(22)	100%	(4)	2%	(18)	43%	(10)	60	(4)	39	(21)	1.3	(20)	IE
EL	0.5	(23)	0.4	(21)	0.8	(28)	(14)	26%	(26)	8%	(28)	0%	(28)	5%	(28)	14	(21)	26	(22)	0.8	(23)	EL
ES	1.0	(15)	1.4	(9)	2.9	(12)	(20)	74%	(7)	68%	(19)	2%	(14)	43%	(9)	51	(6)	76	(13)	6.4	(5)	ES
FR	2.0	(6)	0.8	(16)	2.7	(15)	(7)	69%	(9)	90%	(11)	3%	(9)	34%	(14)	39	(13)	94	(9)	2.8	(13)	FR
HR	0.4	(25)	0.5	(20)	1.1	(25)	(16)	62%	(11)	89%	(12)	1%	(24)	16%	(23)	8	(24)	64	(15)	1.7	(17)	HR
IT	1.8	(7)	0.9	(13)	1.1	(26)	(18)	45%	(20)	53%	(23)	2%	(17)	27%	(17)	41	(10)	87	(11)	2.1	(15)	IT
CY	0.3	(27)	0.2	(26)	1.8	(24)	(10)	9%	(28)	39%	(25)	1%	(26)	11%	(26)	90	(2)	2	(28)	0.1	(28)	CY
LV	0.6	(21)	0.1	(28)	2.7	(14)	(1)	93%	(1)	85%	(15)	1%	(23)	14%	(24)	-17	(27)	92	(10)	11.4	(2)	LV
LT	1.4	(12)	0.9	(14)	3.5	(6)	(17)	56%	(15)	65%	(20)	5%	(3)	55%	(6)	-24	(28)	24	(23)	1.4	(19)	LT
LU	1.5	(8)	1.7	(4)	3.3	(8)	(26)	58%	(13)	93%	(10)	2%	(11)	42%	(11)	157	(1)	100	(7)	2.8	(12)	LU
HU	0.8	(17)	0.4	(23)	4.2	(3)	(5)	53%	(16)	100%	(2)	2%	(22)	20%	(21)	23	(18)	41	(20)	0.7	(24)	HU
MT	1.1	(14)	1.2	(11)	2.6	(18)	(28)	75%	(6)	82%	(16)	2%	(13)	65%	(3)	66	(3)	243	(1)	20.3	(1)	MT
NL	4.1	(1)	3.0	(1)	3.5	(5)	(13)	87%	(3)	100%	(1)	6%	(2)	75%	(2)	39	(14)	156	(4)	9.2	(3)	NL
AT	1.4	(10)	1.3	(10)	2.8	(13)	(6)	73%	(8)	38%	(26)	3%	(6)	37%	(12)	47	(9)	45	(19)	6.2	(6)	AT
PL	0.8	(16)	0.9	(12)	1.9	(23)	(8)	81%	(5)	56%	(22)	1%	(25)	14%	(25)	32	(16)	164	(3)	6.0	(7)	PL
PT	0.5	(24)	0.4	(24)	2.1	(22)	(19)	32%	(24)	99%	(5)	1%	(27)	7%	(27)	14	(22)	67	(14)	0.3	(26)	PT
RO	0.7	(19)	0.9	(15)	3.2	(9)	(12)	12%	(27)	99%	(6)	2%	(16)	29%	(15)	22	(19)	9	(26)	0.1	(27)	RO
SI	1.4	(9)	1.5	(7)	2.7	(16)	(15)	67%	(10)	65%	(21)	3%	(8)	28%	(16)	21	(20)	60	(16)	3.8	(8)	SI
SK	0.2	(28)	0.4	(22)	4.4	(2)	(3)	43%	(21)	77%	(17)	2%	(12)	24%	(19)	47	(8)	9	(25)	1.0	(22)	SK
FI	2.4	(3)	2.1	(2)	3.3	(7)	(9)	34%	(23)	86%	(14)	4%	(5)	56%	(4)	34	(15)	77	(12)	1.6	(18)	FI
SE	3.6	(2)	1.5	(6)	3.8	(4)	(24)	50%	(17)	96%	(8)	3%	(7)	51%	(7)	50	(7)	194	(2)	2.4	(14)	SE
UK	1.2	(13)	0.4	(25)	1.1	(27)	(11)	47%	(18)	89%	(13)	2%	(15)	26%	(18)	40	(11)	128	(6)	3.8	(9)	UK
EU avg	1.6		1.1		2.4			61%		80%		2%		30%		36.1		90.4		2.0		EU avg
EU med	1.1		0.9		2.7			56%		85%		2%		31%		36.1		65.4		2.3		EU med

Source: Commission services (DG ECFIN).
Notes: Values in brackets refer to the country ranking position in terms of health status from high (1) to low (28). Purple shaded observations signals outliers in terms of being worse by at least one standard deviation than the EU average. Blue colour signals 14 low performers.

Expenditure: Projected 2013 values as in the Ageing Report 2015, excluding long-term nursing care.

Care needs index: Composite indicator based on indicators of expected years in sickness or disability over life time, expected years in sickness or disability from age 65 onwards, people having a long-standing illness or health problem (in % of pop.) and self-perceived severe limitations in daily activities (in % of pop.). This composite indictor is a combination of the life expectancy and mortality indicators and is calculated using principal components analysis. A higher ranking (highest ranking equals 1) means a combination of lower life expectancy and higher mortality.

Spending distribution: A higher ranking corresponds to a higher share of formal in-kind in total spending and a higher share of institutional in formal in-kind spending.

Coverage: A higher ranking means higher coverage by formal in-kind LTC within the population or dependents (indicators 1 and 2). Indicator 3 provides the projected increase in the number of dependents up to 2060 (highlighted values point at a higher increase).

Unit costs: A higher country ranking position signals higher costs. The ratio of unit costs per dependent in institutional to home care shows how much more expensive it is to treat an individual in institutional care relative to home care.

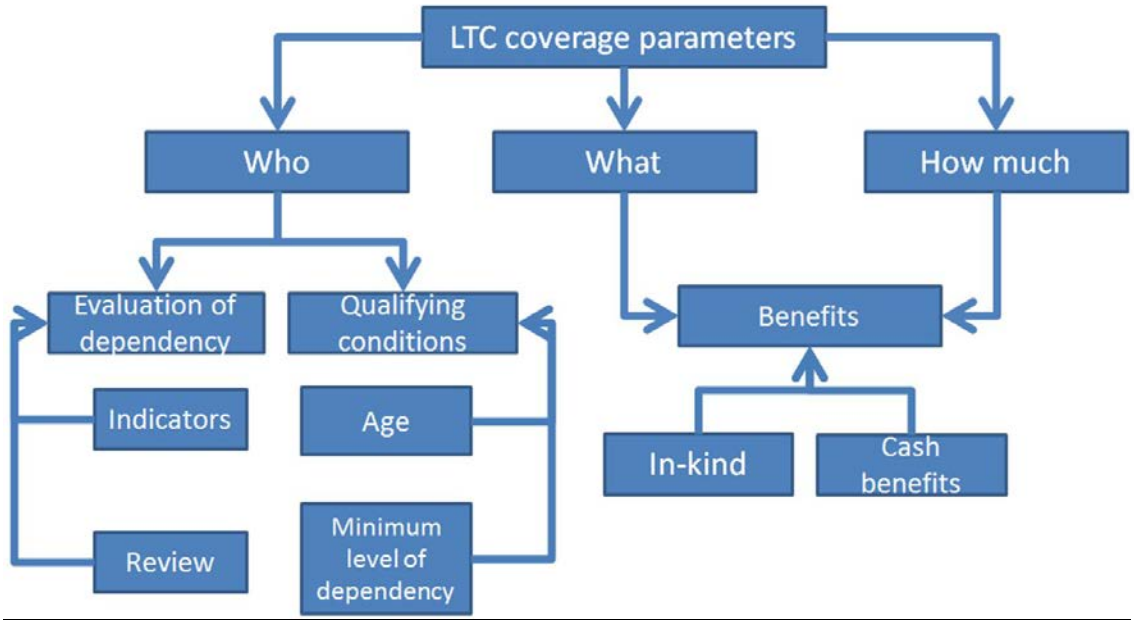
5.3. EXPENDITURE AND COVERAGE

Long-term care encompasses a range of services required by persons with reduced degree of functional capacity (physical or cognitive). These people are often dependent on help for an extended period of time for basic and/or instrumental activities of daily living (ADL). Basic Activities of Daily Living (ADL) or personal care services are frequently provided in combination with help. Without access to adequate LTC, the dependent's wellbeing and health are at risk. Access is broadly determined by the extent of public coverage of LTC services and the private cost of purchasing LTC services, which can exceed the regular income of the person in need. Costs of LTC may represent a high financial burden for those in need of care, as well as for their family carers. This is one of the main rationales for setting up functional social protection for LTC.

Long-term care is covered by different arrangements that vary in the extent of public financial coverage and the availability of formal care resources. Informal care is provided by informal carers, such as relatives, spouses, friends and others, typically on an unpaid basis and in the home of the care recipient**.** Formal LTC services are supplied under a contract, either in the public or private sector, typically by professionally qualified assistants, such as nurses, although it can be provided as well by unqualified assistants.

How comprehensive coverage is can be assessed with regard to three dimensions, i.e. who, what and to what extent services are covered (Graph 5.3.1**).** These dimensions reflect the eligibility rules (universal versus means-tested systems), the basket of services covered (breadth of coverage) and the extent of private cost sharing on public coverage (depth of coverage). All EU countries have eligibility rules setting the care-dependency status and, in means-tested system, the income/assets levels triggering eligibility to public LTC support. Eligibility is determined on the basis of a care-need assessment, based on specific indicators and sometimes a review of care needs, as well as qualifying conditions, such as age and a minimum level of dependency. Health and/or social-care professionals are involved in the assessment process. For eligible people, the benefit amount is normally adjusted to the need. A means-test may also be done to determine private cost sharing or the level of the public subsidy.

Graph 5.3.1: **Long-term care coverage parameters**



Source: Commission services (DG ECFIN).

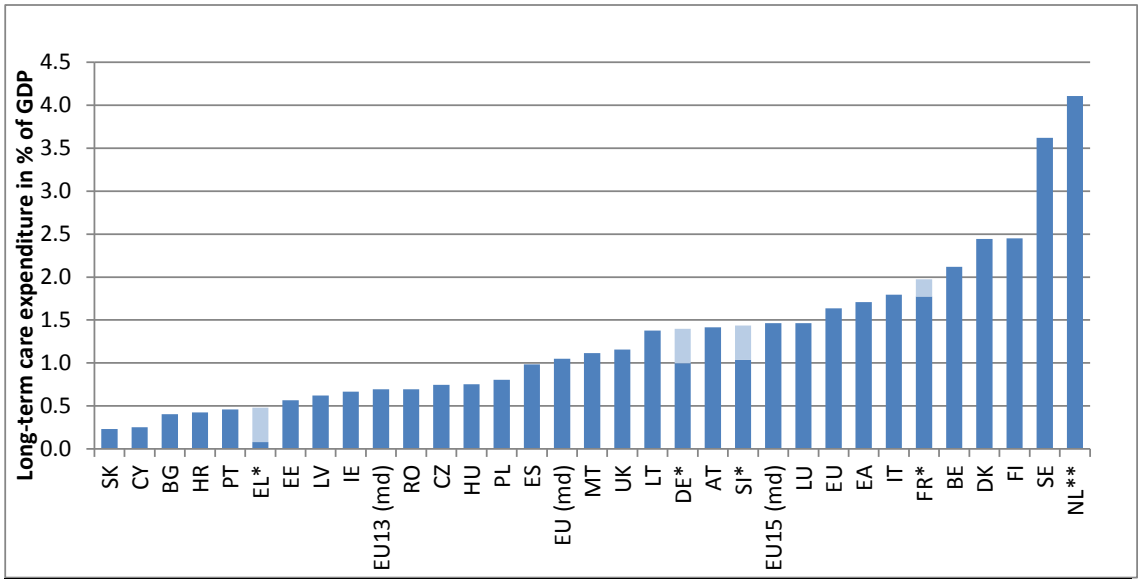
Table 5.3.1: **Coverage rules of long-term care systems in the Czech Republic, Denmark, Greece, Latvia and Spain**

	Czech Republic	Denmark	Greece	Latvia	Spain
Which risk are covered	No precise definition of long-term care. Health care provided to patients who need systematic long-term care. Social Care: The social services are provided for persons in an unfavourable social situation.	The aim of the assistance is twofold: on the one hand, to maintain physical or mental skills, and, on the other, to remedy the most serious consequences of impaired physical or mental function or special social problems.	Invalidity and old-age insurance: Permanent need for care and support by a third party due to certain illnesses.	Inability of a person to take care of herself/himself and perform everyday activities due to their age, and health problems.	Situation of a person who, on account of age, disease or incapacity, and linked to lack or loss of autonomy, requires assistance from (an)other person(s) or other forms of support for their personal autonomy.
Who is covered	Elderly people, people with disabilities and people with chronic illnesses who are limited in self-care and independence or in need of a higher level of care.	All residents who cannot perform the basic personal and practical activities autonomously, so as to allow them to stay in their home as long as possible and to prevent further loss of physical and mental health.	Invalidity and old-age insurance: Persons affiliated to social insurance funds. No voluntary coverage. Social welfare: Permanent residents.	Social care services are provided to permanent citizens with personal identity according to an assessment of the individuals need for care. Health care at home: Provided for those who are eligible for health care services.	Spanish citizens and foreigners legal residents who are in a situation of dependency, who have been residing in Spain for at least 5 years, 2 of which must immediately precede the date of submission of the application.
Conditions: Qualifying period	No qualifying period.	No qualifying period.	Invalidity and old-age insurance: 4,050 days of insurance. Social welfare: No qualifying period.	No qualifying period.	No contribution period required, but at least 5 years of residence in Spain.
Conditions: Minimum level of dependency	Minimum level of dependency for the Care Allowance: need of everyday assistance with or supervision of at least 3 out of 10 testing basic needs.	No specific minimum level of dependency.	No minimum level of dependency.	No minimum level of dependency.	Situation of a person who, at least once a day, requires help to carry out the most essential daily activities.
Conditions: Age	No age limit for in-kind services, minimum age for Care Allowance is 1 year.	No age conditions. The law also provides for care of children.	No specific age conditions. Certain age limits apply for very short periods of affiliation.	No age conditions.	No age conditions. Special provisions for children under three years of age.
Evaluation of dependency - evaluators	Dependency assessed by a social worker from the Labour Office and by a medical doctor of the Medical Assessment Service.	Evaluators are not formally trained, but have experience in the care sector and are hired by the municipality.	Centres for Certifying Incapacity comprised of specialised doctors.	Social care: Team composed of a general practitioner and a specialist social worker.	Evaluation board of the Autonomous Communities. The board is composed of health and social professionals.
Evaluation of dependency - review	The level of dependency or need for care is not reviewed on a regular basis.	The assistance shall be adapted periodically to the specific needs of the recipient. Regular review at least once a year.	The committees certify the incapacity for a specific period, after which it needs to be reviewed, or they certify life-long incapacity.	No regular review of dependency.	Review undertaken in case of change of the level of need or mistake in the application of the scale. There is no legal regular periodic review.
Cost sharing for benefits in kind	Means-test applies.	Personal and practical assistance is free of charge.	Cost-sharing applies.	Social care: There is no cost sharing in case of specific patient categories. Health care at home: No cost sharing.	Cost-sharing applies, based upon a means test.
Means test of cash benefits	No means test.	No means test.	No means test.	Not applicable (no cash benefits).	Means test applies.

(1) Based on MISSOC.
Source: Commission services (DG ECFIN).

While the general dimensions of comprehensive coverage are good guiding principles, the complexity of real LTC systems makes it difficult to compare actual comprehensiveness of coverage across countries. To specify this, Table 5.3.1 presents coverage rules for the Czech Republic, Denmark, Greece, Latvia and Spain, which represent different types of LTC systems. All countries differ in the basic definition of which risks and which population is covered. While the

Graph 5.3.2: **Public expenditure on long-term care as percentage of GDP in 2013**



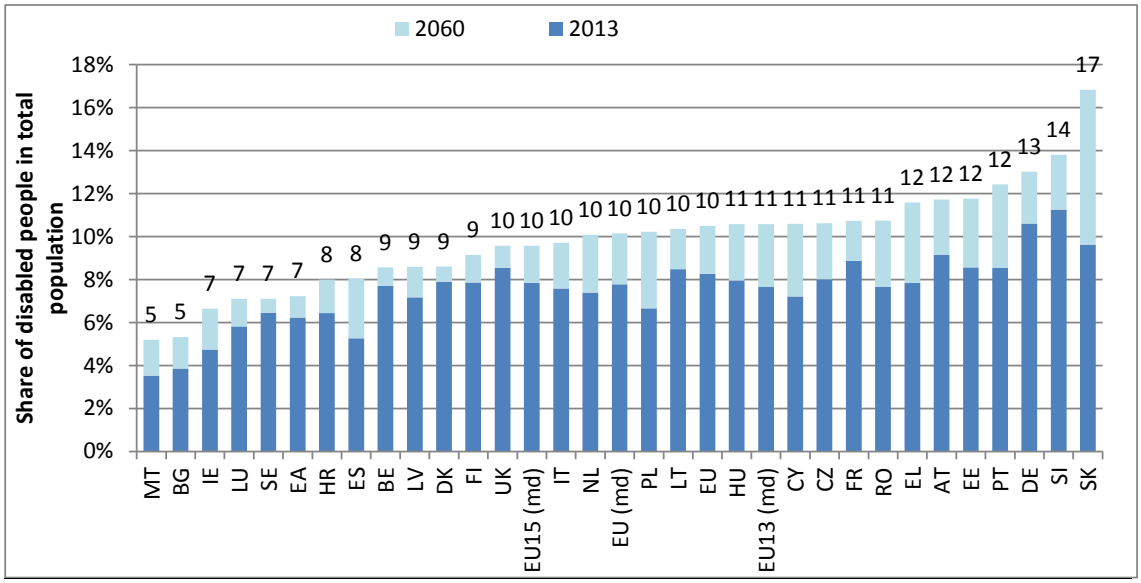
(1) Based on data from Ageing Report 2015 (European Commission (DG ECFIN)-EPC (AWG), 2015).
*Due to agreements taken with the Member States delegates in the AWG-EPC, definition of LTC expenditure may deviate from expenditure levels as reported in other publications. Specifically, cash benefits include period economic integration of handicapped from ESSPROS disability function, and are projected with age specific probability. Expenditure on this item amounts to 0.2% of GDP for France, 0.4% of GDP for Germany, Greece and Slovenia. The level of expenditures in 2013 is the first year of projected expenditure based on latest available data.
** As documented in the 2015 Ageing Report, the impact of the reform of the long-term care system in the Netherlands on the (projected) level of expenditure has been taken into account.
Source: Commission services (DG ECFIN).

Czech Republic offers no specific definition, Spain refers to a quite specific care definition based on a couple of criteria linked to loss of autonomy. Countries apply different qualifying conditions, defining a minimum level of dependency (CZ, ES) or not (DK, EL, LV). The process, indicators and criteria for the evaluation of dependency can be quite complex in the detail and are basically country-specific. While all five countries reimburse benefits in-kind, the extent of cost-sharing varies based on a means-test (all except DK). Similarly, this applies to cash benefits, which may be offered or not (all except LV) depending on a means test (only Spain). As such, the coverage and ability of LTC systems to provide comprehensive services and financial protection of those in care needs are neither easily quantifiable, nor comparable across countries. This means that the adequacy of the levels of care cannot be easily assessed.

Roughly, coverage can be approximated by public expenditure levels on LTC, which represent a non-negligible share of GDP. On average, public spending on LTC currently stands at 1.6% of GDP in the EU in 2013 (Graph 5.3.2). Generally, public expenditure on LTC is significantly lower in the Member States that accessed the EU after 2004 (EU-median: 1.1% of GDP; EU13-median: 0.7% of GDP; EU15-median: 1.5% of GDP). Public spending on LTC as a share of GDP ranges by more than a factor 14 in the EU. It stands at 4.1 % of GDP in the Netherlands and 0.3% of GDP in Slovakia and Cyprus. Six Member States spend between 2 % and 4.1 % of GDP (FR, BE, DK, FI, SE, NL), nine countries spend between 1 and 2% of GDP (ES, MT, UK, LT, DE, AT, SI, LU and IT) and the remaining countries spend less than 1% of GDP.

Private spending on LTC makes up a significant share of total LTC spending, but it is difficult to capture it fully due to under-reporting. Expenditure on the health care component signals that 16% of the health care component in the EU (weighted average) is borne by private means (See section 5.4). Total private expenditure for health and social care is collected under the System of Health Accounts, but this figure captures only private expenditure related to

Graph 5.3.3: **Share of dependent people in total population in 2013 and 2060, AWG reference scenario**



(1) As explained in the Ageing Report 2015, the numbers of dependent people are measured by the proportion of individuals reporting a "strong limitation due to health problems for at least the last 6 months", as surveyed by the EU-SILC, reported to the numbers of individuals in each age group as projected by Eurostat (see EUROPOP2013). The relatively small increase in Germany is due to the projected population decrease and the fact that only the publicly insured population is taken into account in the projection, which implies a reduced burden of ageing within the social health insurance.
Source: Commission services (DG ECFIN).

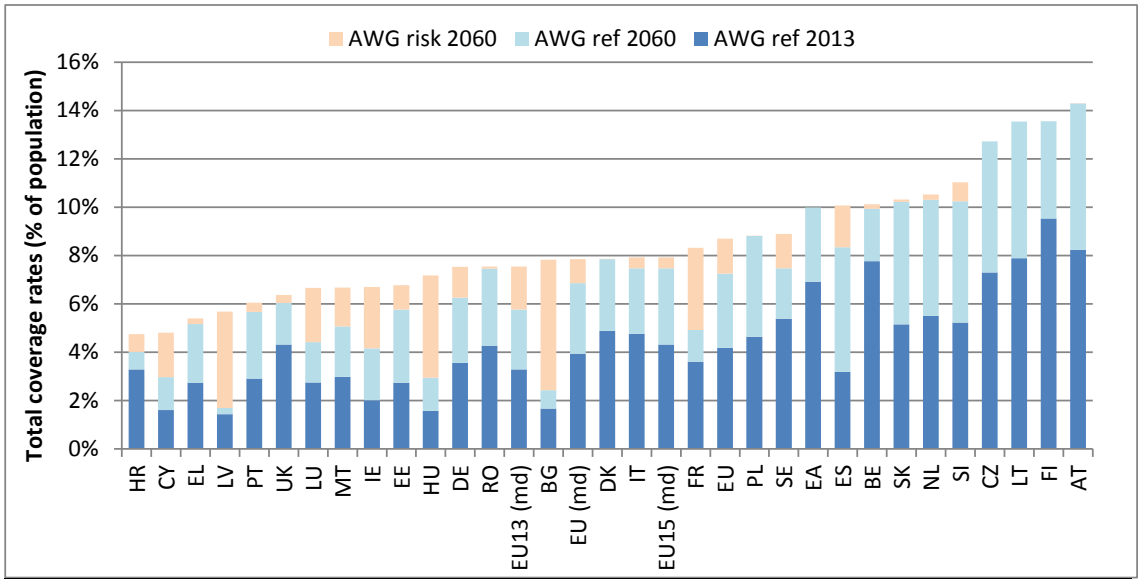
the formal care component of LTC, and does not include more significant out-of-pocket payments, borne by informal carers and not captured by official statistics. Some Member States rely heavily on the informal provision of LTC and their expenditure on formal care is small (e.g. BG, CY, EE, LT, LT, LV, MT, RO and HR). Especially in countries with low public spending levels and low coverage, private financing of LTC can be expected to be significant.

Private cost-sharing for LTC services is the rule in most EU countries. Most countries apply some degree of means-testing by income or assets (based on MISSOC) ([179]). For the great majority of countries, beneficiaries in institutional care contribute with a significant share of their income (e.g. pensions) to fund care or the cost of board and lodging. The differences between countries relate to the extent to which cost-sharing depends on an asset-test (e.g. FR, AT, HU, LT). Convertible assets (such as housing) can frequently be claimed for the purpose of paying for LTC (e.g. HU, IE, LT, ES, UK). Relatives are sometimes also given the responsibility to contribute to the payment of care of their older relatives (e.g., AT, BE, CZ, DE, EE). Recipients are requested to contribute with their pension income, and typically beneficiaries are only guaranteed a minimum remaining amount for personal expenses. Some countries established caps on the amount of co-payments required from users (e.g. NL, SE). It is not possible to say, from available international data, to what extent coverage of LTC risks is providing adequate social protection. Thus, it is not possible to establish whether existing rules are adequate in terms of balancing the need for containing public LTC expenditure and providing social protection.

When assessing the coverage LTC systems, it is informative to look at indicators reflecting the potential need for care services. Expected years in sickness or disability, the percentage of people having longstanding illness or health problems and the percentage of the population having self-perceived severe limitation in daily activities are some of the indicators that can point to the potential need for LTC. In the case of LTC

([179]) The EU's Mutual Information System on Social Protection (MISSOC) provides detailed, comparable and regularly updated information about national social protection systems in English, French and German. http://ec.europa.eu/social/main.jsp?catId=815&langId=en

Graph 5.3.4: **Country-specific coverage rates of long-term care recipients, as % of total population**



(1) AWG ref = AWG reference scenario; AWG risk = AWG risk scenario; Based on the Ageing Report 2015 (European Commission (DG ECFIN)-EPC (AWG), 2015).
Source: Commission services (DG ECFIN).

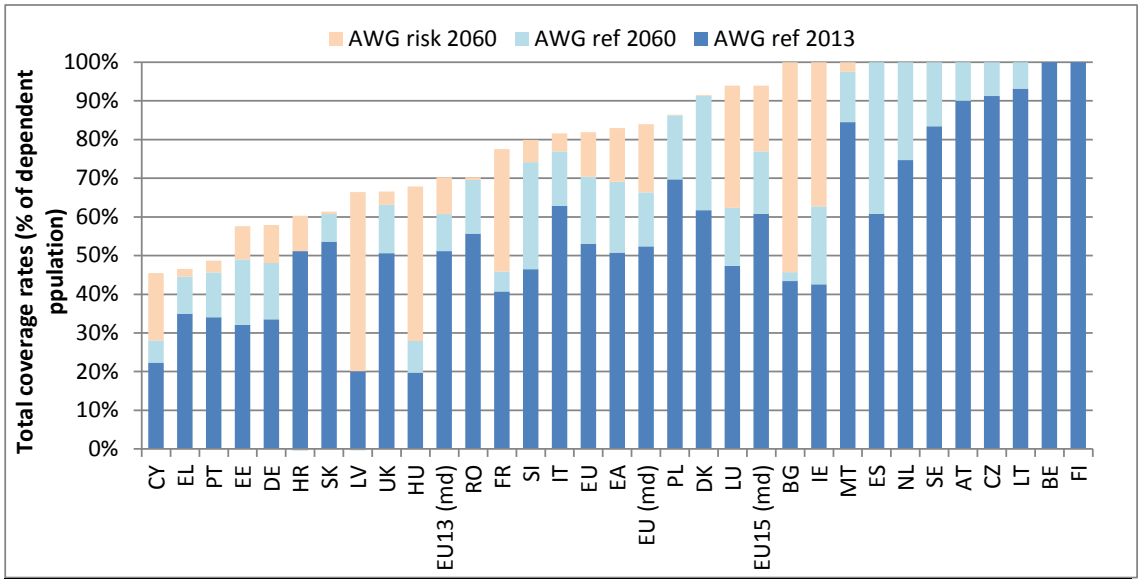
systems, the potential need for care may indicate the pressure on LTC systems to provide sufficient/additional coverage, which may translate into a fiscal sustainability challenge for LTC systems. While the exact level of care needs will depend on the specific definition of care needs in each country, a comparable source is EU-SILC, which measures the proportion of individuals reporting a "strong limitation due to health problems for at least the last 6 months" ([180]). Based on this figures, the total number of dependent people can be estimated.

The number of people in potential need of LTC services in the EU is estimated to increase by 30% between 2013 and 2060. This is based on the assumption of the AWG reference scenario (see Section 2.4) that one half of future gains in life-expectancy will be spent in good health and the other half in disability. This projected development varies strongly between countries. A decrease of persons in need of care is expected in Lithuania and Latvia, driven by population shrinking, while a very high increase is expected in Cyprus, Ireland, Malta and Sweden. Overall, the increase is expected to be higher in the EU15 (31%) than in the EU13 (26%). The increase in the number of people in potential need of LTC services will need to translate into a significant increase in the number of persons receiving formal care. Based on the AWG reference scenario, the increase is expected to be higher in the EU15 (77%) than in the EU13 (60%). For Ireland, Spain, Cyprus and Luxembourg more than a doubling of the number of recipients is projected. The increase in the absolute numbers of dependent population also means that the share of the potentially dependent in total population will increase from 8% to 10.2% in the EU (Graph 5.3.3). The increase is higher in the EU13 than in the EU15.

Current coverage rates of dependents vary strongly between EU countries. As a share of total population, coverage rates of LTC recipients vary between 1% in Cyprus and 10% in Finland (EU: 4%) (Graph 5.3.4). This has to do with differences in population structure and the

([180]) The EU survey on income and living conditions (EU-SILC) is the reference source for comparative statistics on income distribution and social inclusion in the European Union. Data from SILC are systematically used for policy monitoring within the "Open method of coordination (OMC)" on social protection and social inclusion and to monitor progress vis-à-vis the Europe 2020 targets on poverty for example. EU-SILC currently covers the 28 EU Member States and Norway and is implemented by means of a legal basis. The EU-SILC is based on a common framework consisting in common procedures, concepts and classifications and harmonised lists of target variables to be transmitted to Eurostat.

Graph 5.3.5: **Country-specific coverage rates of long-term care recipients, as % of dependent population**



(1) Note: AWG ref = AWG reference scenario; AWG risk = AWG risk scenario; Based on the Ageing Report 2015 (European Commission (DG ECFIN)-EPC (AWG), 2015). Coverage estimated as ratio between recipients and potentially dependent population; Recipient data, as provided by Member States; Coverage may be above 100%, as some recipients may receive cash benefits and in-kind benefits at the same time. Population of potentially dependent based on EU-SILC data on "self-perceived longstanding limitation in activities because of health problems [for at least the last 6 months]" is used.
(2) Please note that in the AWG reference scenario, coverage rates increase driven solely by increases in life-expectancy and the assumption that half of the projected gains in life expectancy are spent without disability.
Source: Commission services (DG ECFIN).

comprehensiveness of LTC coverage. Coverage rates also differ strongly as a share of the dependent population (Graph 5.3.5). Whereas in Cyprus, Estonia, Greece, Latvia, Hungary, and Portugal, less than 40% of the potentially dependent population is covered, coverage rates are above 80% in Belgium, Czech Republic, Lithuania, Malta, Austria, Finland and Sweden. It is important to note that high coverage rates do not say much about the other dimensions of coverage, that is what and to what extent services are covered, which are all key dimensions of financial protection of LTC systems.

Coverage rates in the EU are expected to increase from 53% in 2013 to over 80% in 2060, depending on specific assumptions (Error! Reference source not found.**).** In the AWG reference scenario, coverage and expenditure are driven by the combination of changes in the population structure and a moderately positive evolution of the health (non-disability) status. In this scenario, coverage rates of the population would increase from 4.2% to 7.2% in the EU (EU15: from 4.3% to 7.5%; EU13: from 3.3% to 5.8%) (Graph 5.3.4). Coverage of dependents would increase to 62% in the EU (EU15: 61%; EU13: 83%) (Graph 5.3.5). However, assuming the impact of additional cost drivers to demography and health status, i.e. the possible effect of a cost and coverage convergence, adds pressure in terms of higher coverage needs and expenditure (AWG risk scenario) ([181]). In this case coverage would need to increase much more in some countries. This is especially the case for countries with currently low (age-specific) coverage rates. In this scenario, Bulgaria, Ireland, France, Cyprus, Latvia, Hungary, Malta would need to increase coverage rates to a much higher extent.

([181]) The "AWG risk scenario" keeps the assumption that half of the future gains in life expectancy are spent with no care-demanding disability, as in the "AWG reference scenario". In addition, it combines it with the "cost and coverage convergence scenario" by assuming convergence of both total average cost and coverage to the EU average for those Member States below it.

5.4. FINANCING ARRANGEMENTS

As is the case for health care systems, financing arrangements for long-term care systems share a set of core functions. These functions are revenue raising, pooling, purchasing, benefit design and rationing policies and stewardship of the financing system (See Section 3.4). Financing arrangements should link to the objective to meet the needs of a growing number of older people at risk of suffering from frailty and disability, while keeping costs affordable and public finances sustainable. The financing mix is an important element of the sustainability of LTC systems in terms of contributing to predictability, counter-cyclicality and social protection. There is a wide diversity of financing arrangements in the EU, which is discussed in this section.

There are many ways, how LTC services are financed, including the public-private financing mix, sources of public funding and different levels of governments (Table 5.4.1). Let's consider Estonia as an example. In Estonia there is no single, discrete long-term care scheme. Benefits in kind are financed by general taxation, local authorities and private cost sharing. Nursing care (medical care) is financed by public health insurance with a cost sharing component. Residential care is financed by the patient or his/her family member(s) and the local government. In case the dependent person has no family members or if their means are insufficient, residential care is financed by the local government. As such, Estonia combines taxes, insurance, central and local government funds, public and private funds based on means-testing.

Other countries confirm this variety of possible financing approaches (Table 5.4.1). In Austria and Croatia, benefits are tax financed. In Germany, LTC is mainly financed via social contributions (insured persons and employers). In many countries, such as Belgium, Bulgaria, Cyprus, Hungary, Italy and Malta there is no single, discrete long-term care scheme. Consequently, financing is spread throughout different sources of public income. In Denmark, LTC is financed by local authorities as a part of health care and social services, whereas in Lithuania it is financed by the municipalities and State as a part of health care and social services. Countries differ in what, how much and whom they cover from public means. Therefore, also the amount of private payments, including out-of-pocket private payments, varies significantly according to the actual coverage of LTC. For health care a trend towards decreasing the reliance on social security funding based on payroll tax is visible, in favour of an increasing role of the government budget. However, it is not clear whether this is also the case for the financing of LTC services.

The extent of public and private financing varies highly between countries. For example a significant share of spending is still paid out-of-pocket by users (Graph 5.4.1). In Bulgaria, 85% of total LTC spending is privately financed via out-of-pocket payments, but the shares are also high in Spain, Estonia and Germany. In the Netherlands, Denmark and Sweden the share of public financing is comparatively high. It has to be kept in mind that comprehensive data on all financing sources is not available from international data sources. Private expenditure is in general reported, but as significant parts of private spending are not accounted for within public systems due to the high degree of informal care in many countries, there is significant under-reporting of private expenditure.

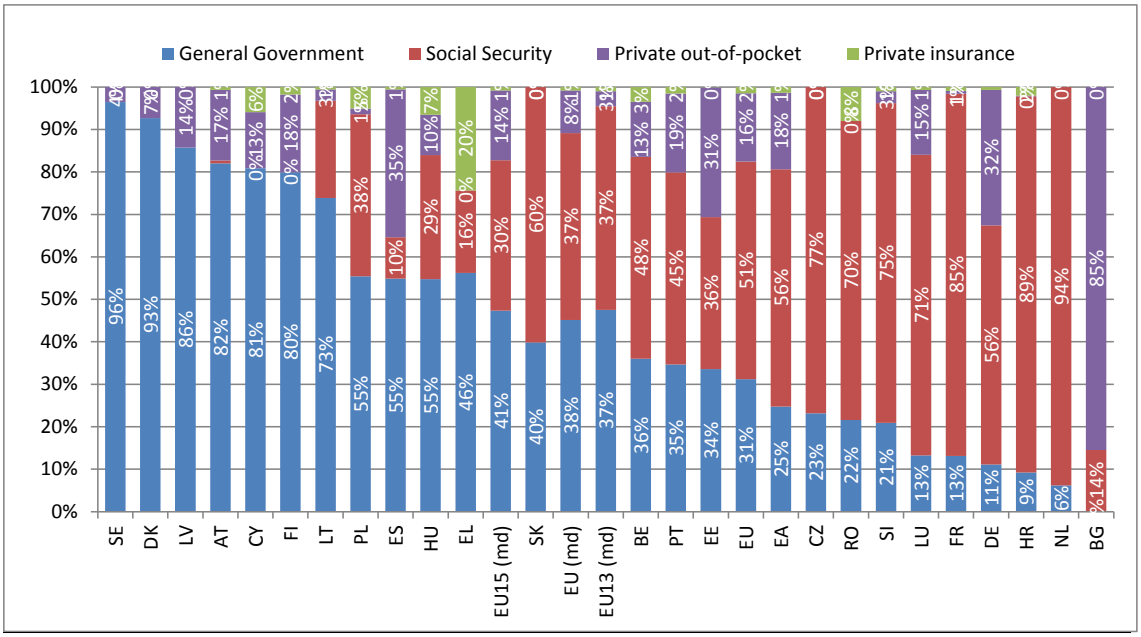
In terms of what is financed publicly, this basically differs by the type of service and where the service is delivered. There are three types of services, which matter here (Colombo et al., 2011): i) health/nursing care; ii) domestic care, practical help, assistive devices; and iii) board and lodging costs. Health/nursing care, are mostly covered under public health-financing arrangements. When coverage is under the health system, financing is often part of the public health insurance package, whereas when it is received in an LTC setting, financing differs according to the coverage scheme. Domestic care, such as cleaning and cooking, are often not financed publicly (but public coverage may be offered based on means-testing) apart from countries that offer comprehensive LTC, such as the Netherlands and Sweden. As to board and lodging costs for recipients of care in LTC institutions, these are mostly financed publicly for low-income people eligible to targeted assistance, i.e. public financing is mostly means-tested. As board and lodging cost are a high cost component of LTC, private financing means that cost sharing is a significant part of LTC financing.

Table 5.4.1: **Financing arrangements for long-term care**

Austria	Taxes.
Belgium	No single, discrete long-term care scheme.
Bulgaria	No single discrete long-term care scheme.
Croatia	Taxes.
Cyprus	No single, discrete long-term care scheme. Specific treatments are financed by the State budget.
Czech Republic	Health care is financed from the public health insurance system. Social care is financed by the State care allowance to persons, State and region grants to providers and pocket money.
Denmark	No single, discrete long-term care scheme. Financed by local authorities as a part of health care and social services. State pays a subsidy to municipalities for their social and health services.
Estonia	No single, discrete long-term care scheme. Benefits in kind financed by general taxation, local authorities and patient participation.
	Nursing care (medical care) is financed by public health insurance with a patient participation. Residential care is financed by the client or his/her family member(s) and the local government. In case the dependent person has no family members or if their means are insufficient, residential care is financed by the local government.
Finland	No single, discrete long-term care scheme. Financed by local authorities as a part of health care and social services.
France	No long-term care branch. Special contributions and public authorities' participation.
Germany	Contributions (insured persons and employers) and taxes. Since 1 January 2013, State support for private long-term care provision contracts to supplement the statutory long-term care insurance; payment of max. €60 per year for supplementary long-term care insurance.
Greece	No single, discrete long-term care scheme.
Hungary	No single, discrete long-term care scheme. Benefits in kind financed by (general and local) taxes.
Ireland	Mainly tax financed. Contributions for Carer's Benefit and Constant Attendance Allowance are included in the overall Social Insurance rates.
Italy	No single, discrete long-term care scheme.
Latvia	State or municipal budget. Long-term institutional care for elderly and for children deprived of parental care aged between 2 and 18, as well as home care are financed from the municipal budget.
	Long-term institutional care for persons (children and adults) with mental disorders and for children deprived of parental care aged up to 2 is financed from the State budget.
Lithuania	No single, discrete long-term care scheme. Financed by the municipalities and State as a part of health care and social services.
Luxembourg	Social contribution (insured persons) and State participation.
	Social contribution (insured persons): 1.4%, levied on professional income, alternative income and capital income. State contribution covers 40% of total long-term insurance expenditure. Special contribution from the energy sector.
Malta	Overall contributions from employers, employees, self-employed/self-occupied persons and the State.
	No single, discrete long-term care scheme. The risk is covered by the healthcare system.
Poland	No single, discrete long-term care scheme. Financed by State budget as part of health care and social security.
Portugal	Tax-financed.
Romania	No single discrete long-term care scheme.
Slovakia	No single, discrete long-term care scheme.
Slovenia	No single, discrete long-term care scheme, and mostly covered by health care and pension insurance.
Spain	Benefits are public and financed by the State, the Autonomous Communities (Comunidades Autónomas) with the collaboration of Local Institutions and the participation of beneficiaries where appropriate.
Sweden	No single, discrete long-term care scheme. Financed and administered by the municipalities as a part of health care and social services.
The Netherlands	Long-term care is not covered by a specific social security branch. Long-term care is partly provided under the Long term care act (Wet langdurige zorg (WLZ)) and partly provided by the municipalities. The WLZ is funded by premiums, government grants and the personal contributions.
United Kingdom	No single, discrete long-term care scheme. Social care for the elderly and disabled provided by local authorities, private and charitable organisations. Full cost of care benefits for severely disabled people (Attendance Allowance, Disability Living Allowance and Personal Independence Payment) financed by the State.

(1) Based on MISSOC.
Source: Commission services (DG ECFIN).

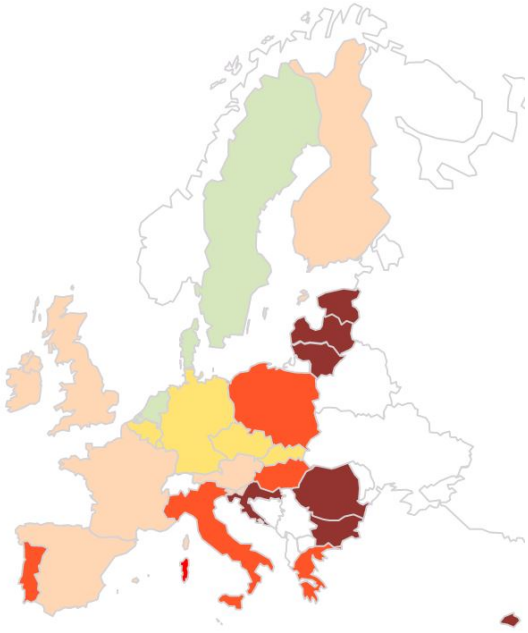
Graph 5.4.1: **Long-term care expenditures by sources of financing, 2013 or latest**



(1) Based on OECD and Eurostat data.
Source: Commission services (DG ECFIN).

In terms of how much is financed, all financing schemes require private cost-sharing. While the extent of cost-sharing differs, there is no country which provides full financial protection to all people eligible for care. In general, countries can be clustered into three groups. In the first group, cost sharing applies when the costs of LTC services exceed the publicly defined contribution, such as in Germany, Czech Republic, France, Italy and Austria. In the second group, flat cost sharing applies, i.e. users pay a predefined percentage of LTC cost, such as in Belgium. Upper ceiling for the private contribution may apply here. In the third group, cost sharing is defined related to the income and/or assets owned. For example, in Poland a patient's cost sharing depends on his income level. In Portugal, social and long term care recipients make co-payments for the social care received, while the Ministry of Labour, Solidarity and Social Security contributes according to the recipients' income or that of their relatives. In Finland, cost sharing applies to benefits in kind, based upon a means test. Pensioners' care allowance and disability allowance have three rates depending on the degree of strain or the need of assistance and additional expenses.

Graph 5.4.2: **Typology of LTC systems in the EU28: Spatial map**



(1) Based on European Commission (2013).
Source: Commission services (DG ECFIN).

Private insurance for LTC plays until now only a limited role. In many countries, there is no

Table 5.4.2: **Typology of LTC systems in the EU28: Legend**

Nature of the system	Countries	Characteristics
Cluster A	Denmark, the Netherlands, Sweden	Public provision of LTC financed from general revenue allocations to local authorities
Formal-care (FC) oriented provision, generous, accessible and affordable		High public and low private spending on formal care (FC)
		Low Informal Care (IC) use, high IC support
		Modest cash- benefits
Cluster B	Belgium, Czech Republic, Germany, Slovakia, Luxembourg	Obligatory social insurance against LTC risk financed from contributions
FC of medium accessibility		Medium public and low private FC spending
Some informal care (IC) orientation in provision		High IC use, high IC support,
		Modest cash- benefits
Cluster C	Austria, England, Finland, France, Slovenia, Spain, Ireland	Medium public coverage against LTC risk financed from contributions or general revenue
FC of medium to low accessibility		Medium public and private FC financing
Medium IC orientation in LTC approach		High IC use, high IC support
		High cash- benefits
Cluster D	Hungary, Italy, Greece, Poland, Portugal	Modest social insurance against LTC risks
Low FC accessibility		Low public and high private FC financing,
Strong IC orientation in LTC approach		High IC use, low IC support,
		Low cash- benefits
Cluster E	Bulgaria, Cyprus, Estonia, Lithuania, Latvia, Malta, Romania, Croatia	Little social insurance against LTC risks
Rather low FC accessibility		Very low public spending on FC
Almost exclusive IC orientation in LTC approach		Very high IC use, little to no IC support
		Modest/low cash- benefits

(1) Based on European Commission (2013).
Source: Commission services (DG ECFIN).

private insurance for LTC offered by the insurance companies, and often private insurance plays a niche role (Colombo et al, 2011). This may have to do with a series of factors related to market failure. Frailer people may opt more often for insurance, driving the insurance premium upwards. Insurance costs may become prohibitively high at older age due to a strong probability of developing a costly disability. This in turn may require people to start paying contributions to insurance products many years before the actual need for insurance, which, due to myopic behaviour, limited ability to pay and individual preferences, may not be an optimal consumption option for some individuals. This market failure provides an ideal case for state intervention in terms of trying to close this gap via public schemes (tax funded or insurance) or incentivising private insurance.

EU countries can be clustered on different dimensions to deliver a typology of LTC systems (Graph 5.4.2 and Table 5.4.2). The typology does not offer clear quantitative boundaries, but helps defining the different types of LTC systems based on the financing mode, the levels of spending and the extent of use of formal versus informal care (European Commission, 2013) ([182]). The dimension of formal/informal care is discussed further in Section 5.6:

- **Denmark, The Netherlands and Sweden** finance public provision of LTC by general revenue allocations to local authorities, have high public spending on formal care (FC) and low private spending on FC, offer modest cash-

([182]) This builds upon Kraus M. et al (2010), ANCIEN, A Typology of Long-Term Care Systems in Europe.

benefits and have low informal care (IC) use and high IC support;

- **Belgium, the Czech Republic, Germany, Slovakia and Luxembourg** provide for an obligatory social insurance against LTC risks financed from contributions. Their system is characterised by medium public FC spending and low private FC spending, high IC use and high IC support, and modest cash-benefits;

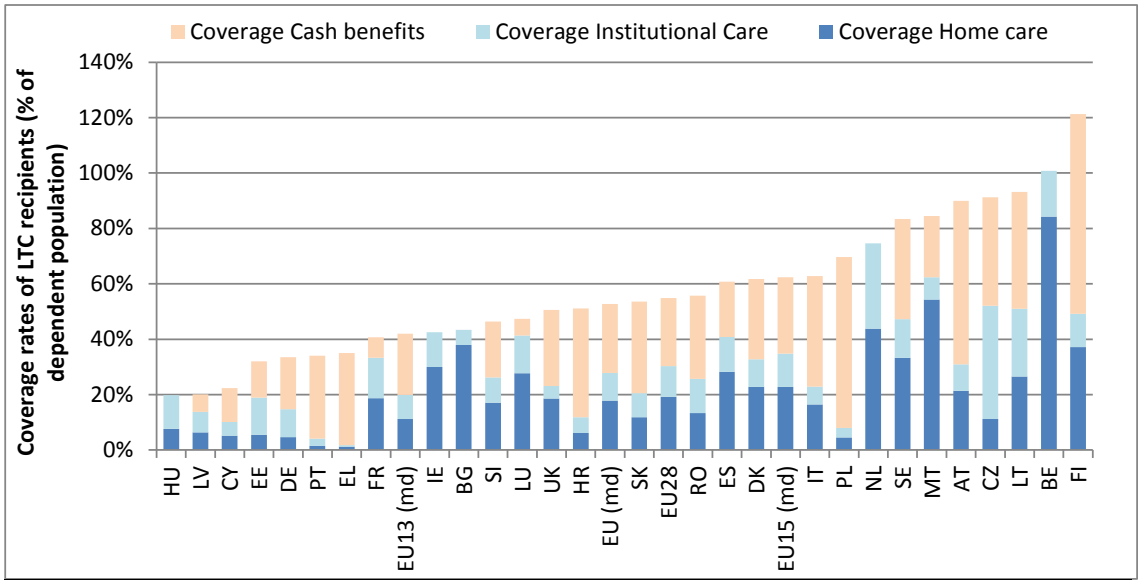
- **Austria, England, Finland, France, Slovenia, Spain and Ireland** have medium public coverage against LTC risks financed from contributions or general revenue. They are medium spenders in terms of public and private FC financing, have a high use and support for informal care, and high to moderate cash-benefits;

- **Hungary, Italy, Greece, Poland and Portugal** provide modest social insurance against LTC risks. They are low spenders in terms of public FC financing and high spenders in terms of private FC financing. The use of IC is high, while support for IC relatively low, as is the use of cash-benefits;

- **Bulgaria, Cyprus, Estonia, Lithuania, Latvia, Malta, Romania and Croatia** have little social insurance against LTC risks and correspondingly low public spending on FC. The use of IC is high and there is little to no IC support. Also, cash-benefits are modest/low.

5.5. PROVISION OF CARE (INSTITUTIONAL VERSUS HOME SETTINGS)

Graph 5.5.1: **Country-specific coverage rates of LTC recipients, as % of dependent population**



(1) Median coverage rates between 2009-2013 in the EU and Norway; Coverage estimated as ratio between recipients and potentially dependent population; Recipient data, as provided by Member States; Coverage may be above 100%, as some recipients may receive cash benefits and in-kind benefits at the same time, which is not corrected for in this graph. Population of potentially dependent based on EU-SILC data on "self-perceived longstanding limitation in activities because of health problems [for at least the last 6 months]" is used.
Source: European Commission (DG ECFIN)-EPC(AWG) (2015b).

Definitions

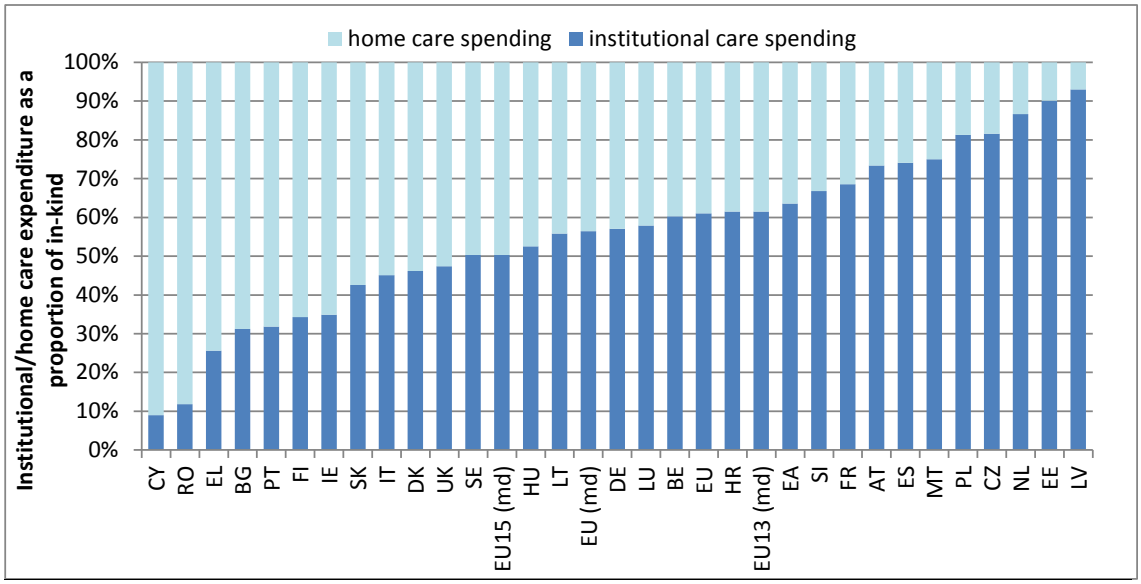
LTC can be provided in a variety of settings by different parties under a variety of financial arrangements. Informal care is provided by informal carers, such as relatives, spouses, friends and others, typically in an unpaid basis and in the home of the care recipient (see Section 5.7)**.** Formal LTC services are supplied under a contract, either in the public or private sector, typically by professionally qualified assistants, such as nurses, although it can be provided as well by unqualified assistants.

Formal LTC services can be provided in an "institutional setting", an institution which serves as residence for the recipient but which is distinct from their private home. As such, institutional care often includes arrangements where care is provided to a group of recipients in the same premises, with separate rooms but often sharing common living areas. They can also be provided as "home care" in the private home of the recipient (or as "day care", where the care is provided in an institution but the recipient continues to reside in their own home. In the discussion below, this is included in "home care"). This may be typically done by professional carers visiting the recipient to provide assistance and may encompass as well the use of IT devices that provide support to the recipient in their own home. It should be noted that "Home care" is more likely to be combined with some degree of informal care supplementing the care provided.

Member States finance formal LTC services "in-kind", i.e. by paying for care provided for eligible care recipients, or via "cash benefits". Cash benefits can be used to pay for LTC services, often provided by informal carers, such as family members. In that case there is some sort of "formalisation" of informal care, although the fact that these payments do not in most cases include a work contract, pension nor leave rights means that even in those cases informal carers are still distinct from formal carers.

Most EU countries finance the provision of LTC services to their citizens, including in-kind provision, where recipients receive home care or institutional care directly, but also cash benefits, where a sum of money is directly provided to the recipient, who can then choose amongst existing care providers according to their preferences. Cash

Graph 5.5.2: **Proportion of institutional/home care expenditure as a proportion of in-kind expenditure per country**



Source: European Commission (DG ECFIN)-EPC (AWG) (2015b).

benefits can also be used to pay for LTC services, often provided by informal carers, such as family members.

Care provision settings across the EU

The variations in public expenditure on long-term care discussed in Section 5.3 mainly reflect differences in the 'coverage' ([183]) of formal systems of home care and institutional care. The estimates of coverage shown in Graph 5.5.1 illustrate both the varying extent to which people with care needs receive formal LTC services and differences in the use of home care and institutional care. Some countries report little home care and also seem to have limited capacities of institutional care. Some countries like DK, LT, NL and SE show relatively impressive coverage rates in both types of provision (see cluster A of the typology of European LTC systems in Section 3.4), while a few rely predominantly on one or the other (see cluster D of the typology of European LTC systems in Section 3.4). In 2010, the UK, EL, IE, LU, AT, DE, FR and IT seemed to rely relatively more on home care, while institutional coverage rates, though moderate overall, were relatively higher in countries like CZ, BG, SI and HU.

Within in-kind care provision, the relative importance of institutional care versus home care varies substantially across Member States as well in terms of the distribution of expenditure. This is shown in Graph 5.5.2.

While traditionally in most EU Member States, formal LTC services were first and foremost provided in institutions, there is a growing trend to promote home care services for LTC patients.

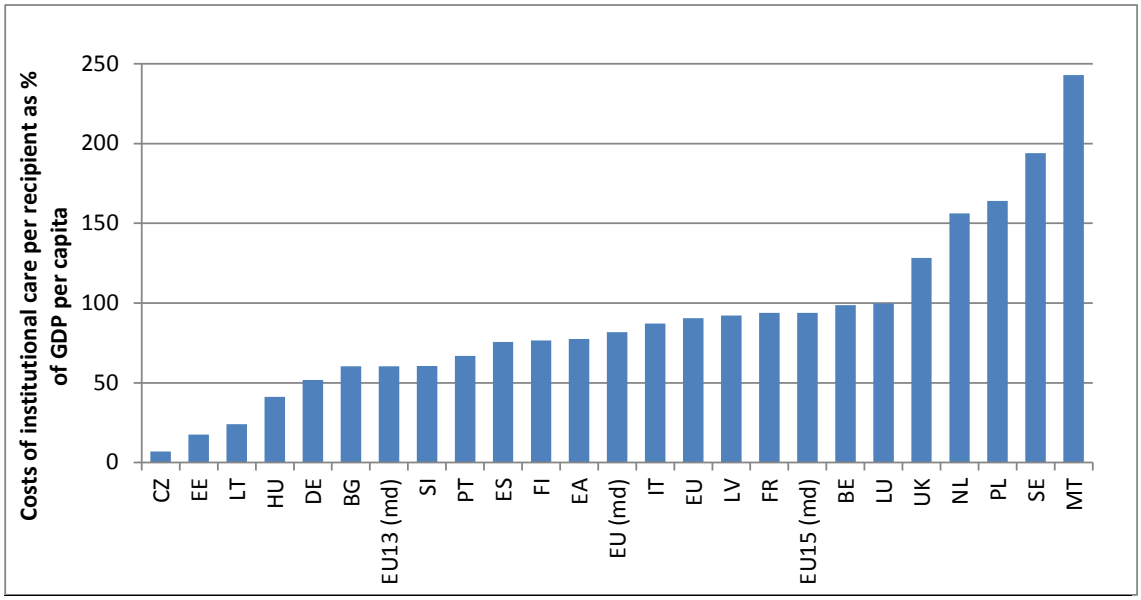
In the EU, around 61% of in-kind spending was directed towards institutional care and around 39% towards home care. Specifically, the CZ, EE, LV, NL and PL have particularly high shares of institutional expenditure. In contrast, CY, RO, EL and BG have relatively low shares of institutional expenditure.

Cost of providing care in different settings

As can be seen from Graph 5.5.1 and Graph 5.5.2, the volume share of home care is relatively larger than its expenditure share and the opposite holds true for institutional care.

([183]) In the Ageing Report 2015 a proxy for 'coverage' is constructed by calculating the number of recipients of formal LTC benefits in cash and in kind reported by Member States as a percentage of people with dependency needs as measured by EU-SILC. As people may receive both kinds of benefit, the number of recipients may involve some double counting.

Graph 5.5.3: **Institutional care per recipient as % of GDP per capita**



(1) As shown on table II.A4.2 of the 2015 Ageing Report, data on expenditure per type of service and/or the number of recipients was not provided by AT, DK, HR, CY, EL, IE, RO and SK, so these countries have not been included in this graph.
Source: European Commission (DG ECFIN) - EPC (AWG) (2015b).

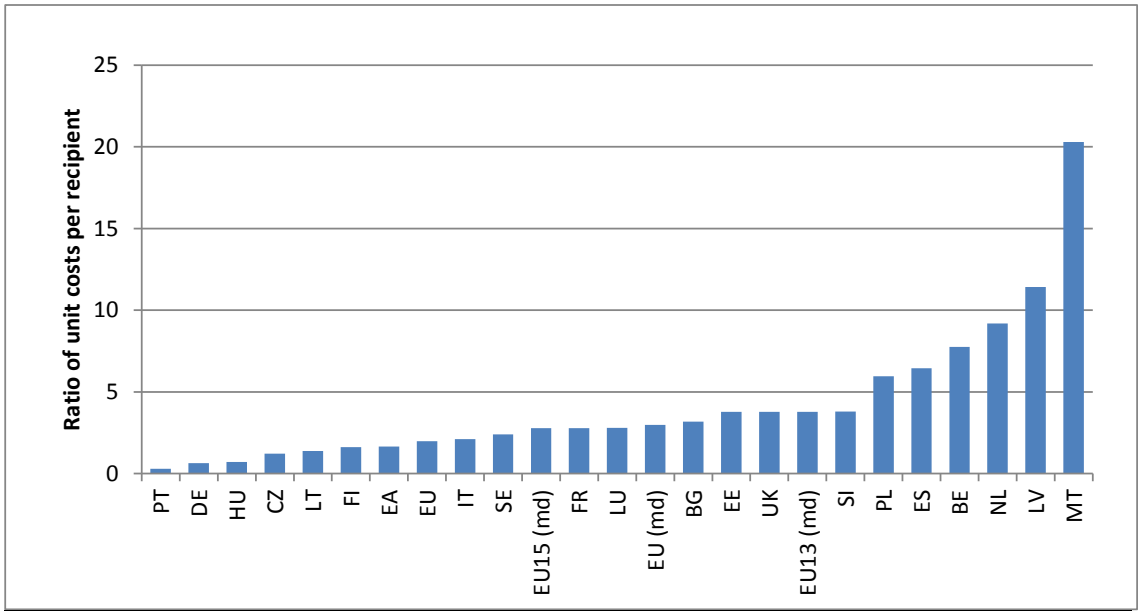
This is due to the differences in unit costs (cost per recipient) of each type of care setting. In principle, institutional care tends to have higher costs per recipient than home care. Graph 3 shows their level across EU countries as a proportion of GDP per capita as a way of showing the cost of care relative to the national income per capita. There is a great deal of variation across EU countries, with the highest values being possibly indicative of inefficient care delivery while the lowest values could reveal under-provision. Overall the unit costs are 90.4% of GDP per capita for the EU as a whole.

The higher cost of institutional care is partly explained by the fact that cases with higher care needs are more likely to be cared for in an institutional setting. Indeed, these settings are likely to be more appropriate for these cases, as they are more likely to have highly specialised staff and appropriately facilities. This will however also make this setting more expensive than home care even in cases where the need for care is equivalent and which could be treated in either. In addition, high unit costs may be related to inefficiencies, due to organisational or institutional shortcomings, wrong payment incentives for providers and suboptimal levels of care leading to high costs.

In contrast, home care will tend to have lower unit costs. A first factor is that accommodation does not need to be supplied, although the care will not always take place in the home of the recipient and may take place in day care centres or other facilities. The degree of dependency of recipients may be lower in their own home, particularly as they may benefit from support networks and in some cases additional informal care from family and friends. Tele-metric and IT solutions can also increasingly help provide care at home in an easier and more efficient way. In principle this makes home care more appropriate, in particular for cases with lower levels of dependency, also as a way to promote independent living and healthy ageing. However, home care may be less appropriate (and indeed cost-efficient) for providing care to recipients with higher levels of need (OECD 2011b).

The ratio of unit costs per dependent in institutional to home care on Graph 5.5.4 shows how much more expensive it is to treat an individual in institutional care relative to home care. For the EU, the ratio is 2. It varies widely

Graph 5.5.4: **Ratio of unit costs per recipient in institutional care to home care**



Source: European Commission (DG ECFIN) - EPC (AWG) (2015b).

across Member States, which suggests that the care setting may be influenced by more factors than simply need for care. Member States with high ratios (for example MT and LV) may reap cost-effectiveness gains by shifting care from institutions to homes.

Note that caution is needed when interpreting these figures. Indeed, while differences in unit costs per user in institutional and home care depend strongly on the profile of patients (i.e. the range of severity of the conditions) being treated in institutional care facilities versus those being treated through home care, data on unit costs data is not fully accurate or fully available for all Member States. Specifically, the unit cost figures for AT, HR, CY, EL, IE, RO and SK have been partially or fully imputed (on the basis of EU15 or EU13 average institutional recipients and expenditure data) due to a lack of data on the expenditure per type of service and the number of recipients.

Specifically, Malta, the Netherlands, Poland and Sweden have very high costs in institutional care, while Germany and Portugal have high costs in home care, potentially pointing toward the need to rationalise the respective care type.

5.6. PROVIDERS: INFORMAL AND FORMAL CARERS

Definitions and background

LTC can be provided in a formal or informal arrangement. Formal care is provided by paid professionals, whether in a home or institutional setting. Their level of skill can vary and can include nurses but also untrained care assistants. Informal care is provided, typically by spouses, relatives and friends. It does take place mostly in the home setting.

The balance between formal and informal care varies across EU countries, although the extent of informal care that takes place is difficult to measure, as, by definition, it does not require contracts or records. Using survey data the OECD have compiled a statistic on the proportion of the population aged 50 and over reporting to provide care (see Graph 1).

As explained in section 5.4, countries in Clusters C, D and E report relatively high proportions of informal carers, Cluster B countries report some informal care whereas countries in Cluster A report low levels of informal care.

Formal care workforce

The formal care workforce in the EU varies by country, but it consists of both a minority of nurses (typically with at least three years of training) and a majority of personal care workers (the status and training for which is different in each country, but who tend to be trained to a lesser extent than nurses and are, in many cases unqualified). Formal carers tend to be female and, in some EU member states, predominantly foreign-born. Wages tend to be relatively low, particularly for those workers without formal training.

Although there are no comparable figures for many EU countries, OECD data (2015) shows that the greatest density of formal care workers is usually found in Member States where LTC is financed from general taxation, set-up as a public service and delivered by public sector workers with some degree of training.

Wages tend to be relatively low, particularly in the home care sector and working conditions can be quite demanding (again, more so in the home care setting, given that private homes do not necessarily follow workplace best-practice in terms of health and safety) , leading to relatively high staff turnover (OECD 2011b).

Several EU member states have reported difficulties in recruiting LTC workers, mostly due to having a relatively small unskilled workforce. A Peer Review was organised in Berlin in 2013 to discuss the use of migrant workers in LTC. While this practice benefits the receiving countries, it could have negative consequences for the sending countries as it represents a workforce drain. EU member States such as DE have set up partnerships with several developing countries through schemes that provide training for the workers while allowing the sending countries to retain some of that human capital.

Other measures to expand recruitment of LTC workers have been attempted by EU Member States. DE has measures to encourage unskilled young people into LTC training and then jobs. DE also provides, as do other EU countries, financial support for re-training workers of declining industries as LTC carers. DE, NL and AT also have programmes to attract LTC workers who have left the sector. FI, NL and UK have re-activation measures aimed at the long-term unemployed and the economically inactive.

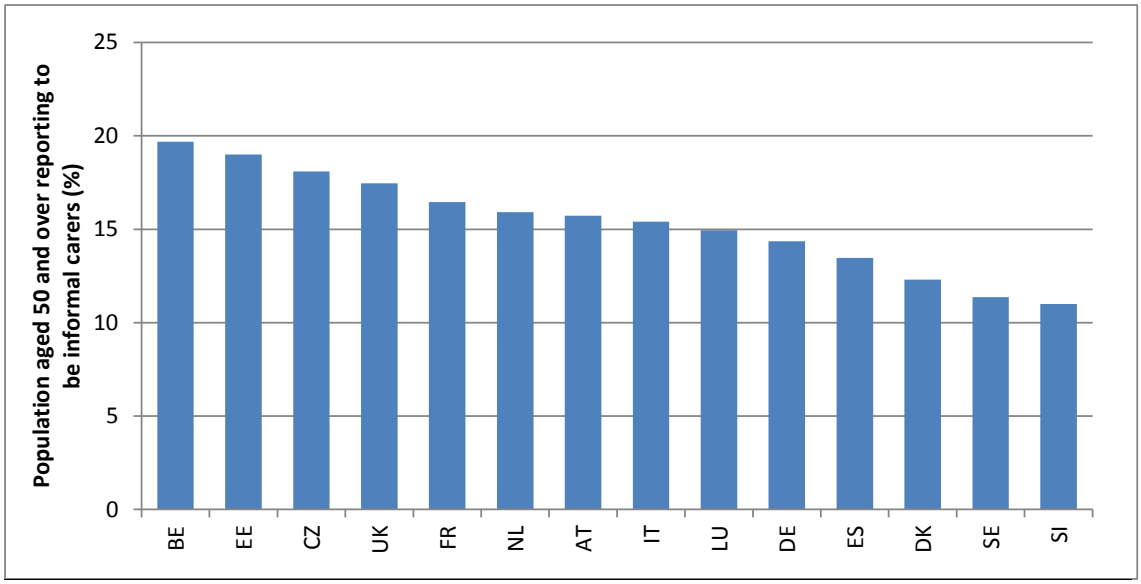
A greater professionalisation of LTC workers with more training is one of the methods that have been used to try to attract and retain workers. NL and DE (with the creation of "elderly care nurses" as a profession) have been relatively successful in this and their retention rates are relatively good. However, there is clear a trade-off with the flexibility and cost of the workforce, as skilled workers will be more expensive.

Informal care workforce

As set out in Section 5.4, there seems to be a negative correlation between public expenditure on LTC and the provision of informal care by relatives. This suggests that informal care is, to some extent, a substitute of publicly-funded care, where relatives provide the care that the state is not able to fund. However, in some cases, it can also complement the care that is publicly funded, particularly in the case of home care.

It should be noted that, being "informal" and provided by largely untrained relatives, this also

Graph 5.6.1: **Population aged 50 and over reporting to be informal carers, 2013 (or nearest year)**



Source: OECD (2015).

means that there is no way of ensuring the quality of the care provided, particularly if there is no institutional support.

Informal care represents an "informal economic sector" for EU Member States, which is estimated to range between 50 to 90 % of the overall costs of formal LTC provision (Triantafillou J. et al, 2010). Overall it has been calculated that, the total value of unpaid informal care could range between 20.1% and 36.8% of EU GDP (Gianelli et al, 2010). As such, it represents an important component of the provision of LTC and contributes to its sustainability.

However, although informal care does not have a direct fiscal cost (as it is provided without any payments), it can often have direct costs on the health status and economic wellbeing of carers, as well as an indirect fiscal cost due to this.

Caring can be a very strenuous activity for the carers, who may as well have to balance their caring duties with other work and family commitments without having received any training for doing so.

Prevalence of mental health issues among carers has been estimated as being 20% higher than among non-carers (OECD, 2011) and is particularly high for people who provide very intensive care (defined as more than 20 hours per week). Disorders associated with heavy caring duties include depression, anxiety, anger and hostility.

Carers can also be less likely to suffer a negative impact on their health outcomes, as the additional stress may encourage unhealthy habits and lifestyles (such as smoking, alcohol abuse, inadequate food habits and under-sleeping). Given the demands on their time, they may be less likely to act on their own health needs and may fail to take preventive health measures.

The time spent caring can also have a negative impact on the employment rate of carers, their financial well-being and, therefore, indirectly tax receipts. Informal carers may have to reduce the hours they work or stop working altogether. This puts them at higher risk of poverty, often through the reduced work and lower pension entitlements.

The importance of informal care to the sustainability and viability of the long-term care system as well as the need to avoid or minimise the negative impact on carers' financial and health-related wellbeing has led many EU member states to develop policies to support carers.

The use of cash benefits to finance LTC can be positive for carers. Cash benefits for the recipient can be therefore be used to compensate the informal carer for lost wages or covering caring expenses and can also be useful when the care is provided by a number of persons. However, there is no guarantee that the money will indeed be used to benefit the carer. There can also be cultural problems for the carer in accepting remuneration from the care recipient.

Carer's allowances are cash benefits that are given directly to the carer. In Scandinavian countries, carer's allowances are similar to remuneration, although representing relatively low wages. In the UK and IE, allowances are targeted to low-income carers, or carers who provide hours of care above a minimum threshold.

While cash benefits and carers' allowances can be useful instruments, their design needs to be carefully considered, as the payments' should compensate the carer while at the same time not discouraging the carer from participating in the labour market. Additionally, the interaction of the tax and benefit systems is often complex and can result in perverse incentives if not designed to take into account the impact on carers. Evidence from Finland (Määttänen and Salminen (2014)) in the first decade of the 2000s suggests that, in the Finnish LTC system the fiscal impact of informal care was less negative than that of formal care. However, the financial incentives for the care giver discouraged the provision of informal care.

Carers can also be supported through being given the legal right to care leave and flexible work arrangements. This can help them to provide care while remaining in employment, thereby reducing the negative financial implications of being a carer. Many EU member states have given statutory rights to carer's leave for those with such responsibilities. Some countries also offer some degree of paid leave (typically for less than one month, or limited to cases of terminal illness), although the pay tends to be low and take-up is limited. Again, there is a need to strike a balance between providing sufficient leave and not endangering the work prospects of the carers.

The right to flexible work conditions can allow carers to provide care while working part-time. The UK's experience in these arrangements seems to suggest that they are effective in minimising the loss in working hours due to caring. However, they are relatively rare across EU countries.

Respite leave from care is another way of supporting carers, by providing carers with a break from caring responsibilities. This is relatively prevalent amongst EU member states. In DK there is full financial support for respite. FI, DE and AT provide a legal right to funded respite. In CY respite leave is funded for low-income recipients.

Counselling can be an effective way of relieving the stress felt by carers and addressing any emerging emotional or mental health issues. SE, NL and IE provide counselling to carers, whereas DE provides a statutory right to have an individual care counsellor.

Finally, improving the quality of informal care is difficult, as it is difficult to monitor and act on. Information services, including one-stop shops for carers and dissemination of information on available public, private and voluntary services can help carers. SE and UK provide assessments of carers' needs as a first step towards identifying carers and advising them on available services.

5.7. BUDGETING FOR LONG-TERM CARE SPENDING

As part of fiscal governance, sound budgeting practices contribute to the fiscal sustainability and efficiency of long-term care spending. The objectives can be achieved, by constraining the behaviour of policy makers and promoting a more long-term oriented fiscal planning. This can help avoiding the short-term adjustments to spending (typically cuts in spending) that may make it harder to attain long-term care system objectives.

There are several important elements of a sound budgetary process. As for health care (see Section 3.6), these are transparency, multiannual budgetary planning, budgetary centralisation at the planning, approval and implementation stages, top-down budgeting, realistic economic assumptions and reserves and performance budgeting. As in Health Care, in most EU Member States there is considerable scope for improvement of budgetary processes.

This subsection summarises the key results from the questionnaire on budgeting practices for LTC spending. It is organised into four sections which cover respectively: budgetary planning, expenditure control tools and revenue tools, monitoring tools.

In most countries the main central budget authority in charge of LTC is most often one of or a combination of the Ministry of Finance, the Ministry of Health and the Ministry of Social Affairs, with involvement of regional government in some countries (Table 5.7.1). There are different modes of cooperation, and in many countries different ministries seem to be in charge of the budgetary process, although the extent of co-decision and what it exactly involved in practice could not be investigated in this survey. The fact that different ministries are in charge here is mostly related to the fact that due to the nature of long-term care spending, with one part linked to health care and the other to social care services, beside only part of it should be discretionary, while another part will be considered as an open-ended entitlement, which is demand driven. This makes in practice budget control more difficult and necessitates the engagement of ministries with different competencies. Additionally, as can be seen in the country documents, responsibilities for long-term care provision and funding tend to be more fragmented than is the case for health care. Historically long-term care systems have evolved from health systems as well as from social care systems, and in many countries these two strands are still separated. For instance, in the case of France (see France LTC country document) public provision of long-term care relies on a two-pronged system. The public health insurance scheme covers the cost of health care provided in an institutional setting to the dependent elderly or to disabled patients. It also finances long-term care units in hospitals, as well as nursing care provided in the patient's home. This is complemented by two schemes financed by local authorities that provide social benefits to the dependent elderly and to the disabled to help them meet some of the cost of care that is not covered by health insurance.

Almost all EU countries produce expenditure forecasts, while revenue forecasts are done less frequently (Graph 5.7.1). In addition, all EU Member States produce long-term forecasts for LTC spending in the "Ageing Working Group", which are reported in the Ageing Reports. However, revenue forecasts are not part of this work stream. This may also explain why revenue forecasts are less often used on the national level. The responsibility for carrying out forecasts lies mostly completely with the budget authority in charge of the dossier, and co-decisions on forecasting with other authorities are rather an exception. Most EU countries also produce multi-annual budgeting to gain a multi-year view on LTC spending.

Early-warning mechanisms for budget overruns are used in more than half of all EU countries. These mechanisms allow countries to closely monitor LTC expenditure through the year, and warn authorities when the risk of overspending is high. The usefulness of early warning mechanisms depends on the availability of timely and comprehensive data. Thus, currently mostly, but not exclusively lower income countries report that a formalised early warning mechanism is not available (CZ, DE, EE, ES, LV, LT, PL, SK and FI) ([184]).

([184]) It should be noted that these countries may instead monitor expenditure in a non-formalised manner. While Germany has a short-term early warning and monitoring mechanism, the time span of that mechanism is probably too short.

Table 5.7.1: **Responsibility for LTC budgeting**

Ministry responsable for LTC budgeting	Country
Ministry of Finance	Denmark, Italy, Finland
Ministry of Finance and Ministry of Social Affairs	Estonia, France, Portugal
Ministry of Finance, Ministry of Welfare and local municipalities	Latvia
Ministry of Finance, Ministry of Health, Ministry of Social Affairs and regional governments	Slovenia
Ministry for Finance, Ministry of Health, Ministry for the Family and Social Solidarity.	Malta
Ministry of Health	Czech Republic, Germany, Ireland, Croatia, Lithuania, Netherlands, Poland, Romania, Slovakia
Ministry of Health and regional governments	Greece, Cyprus, United Kingdom
Ministry of Health and Social Affairs	Hungary
Ministry of Social Affairs/Labour and social policy	Luxembourg, Bulgaria
Ministry of Social Affairs and regional governments	Austria
Regional governments	Spain, Sweden

(1) Based on country survey.
Source: European Commission (ECFIN).

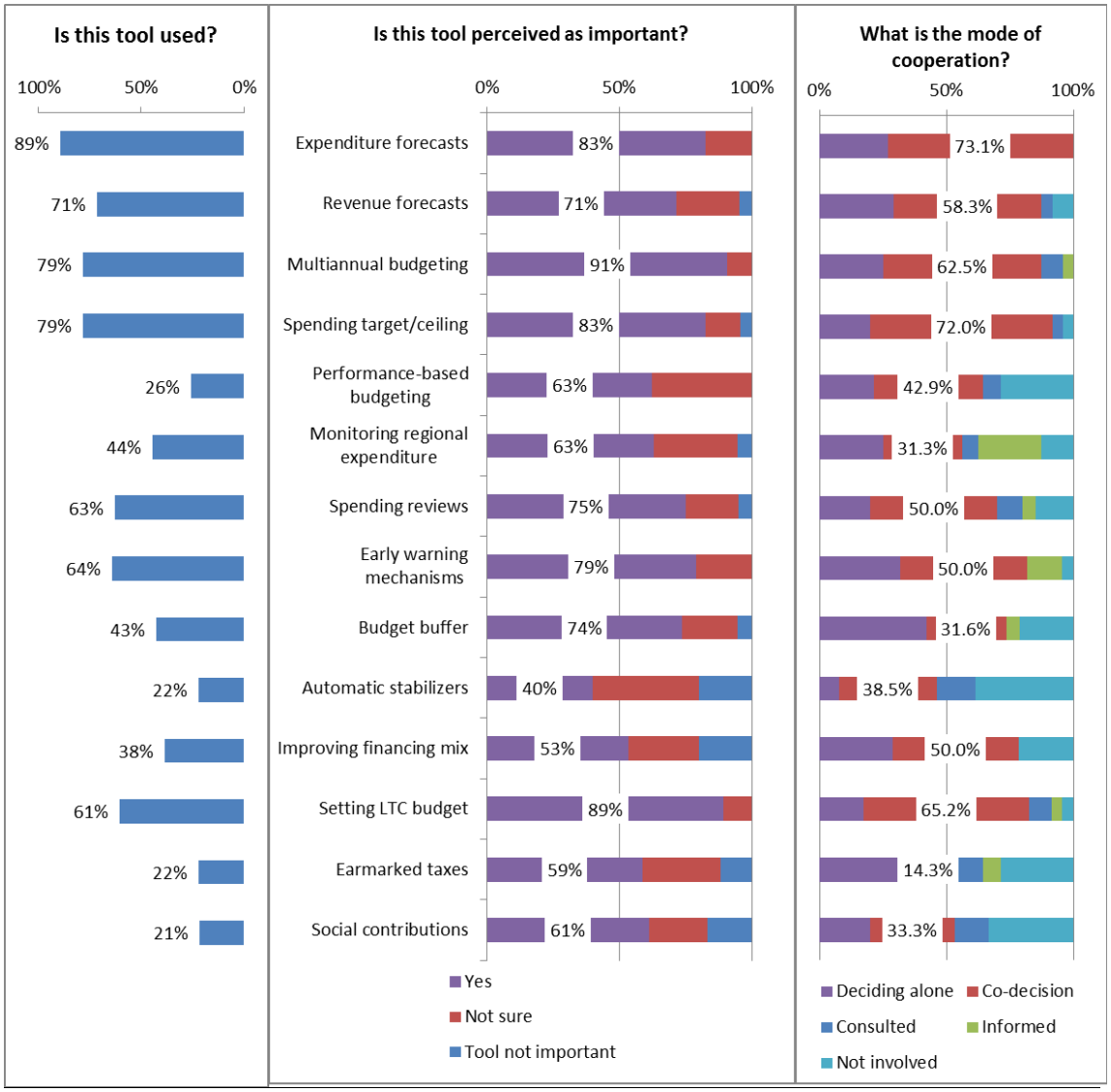
Spending targets or ceilings are a common tool to control LTC expenditure in EU countries and their use is perceived as important by 83% of EU Member States. Ceilings are defined in co-decision in most countries also. The setting of targets/ceilings is in many cases accompanied by the definition of a specific LTC budget with the same authority. However, this is not always the case. In Denmark, LTC expenditure is part of total spending ceilings for local budgets, as defined by the Ministry of Finance, but the budget allocated to LTC is done by the local authorities themselves. In Slovenia, the target is done by the Ministry of Finance, but also the Ministry of Labour and Ministry of Health, Municipalities decide on the budget envelope for LTC.

Spending reviews are perceived as important tools for improving the quality of LTC care spending, and could be used in more EU Member States. Spending reviews set out the distribution of funds across different policy areas over a given period of time in order to improve the quality of spending. Such reviews are currently not undertaken in BG, CZ, EE, ES, IT, CY, LV, PL, RO and SK.

Similarly, performance-based budgeting is perceived as important by 63% of EU Member States, but only used in 26% of them. This mechanism consists of developing budgets according to the relationship between program funding levels and expected results. This suggests that there may be scope to improve the cost-effectiveness of LTC expenditure in EU Member States by further exploring the use of this mechanism.

As is the case in HC (see Section 5.6), tools dealing with unexpected expenditure increases in LTC are less widespread than other budgetary tools. Budget buffers that withhold a portion of anticipated spending against the risk of a budget overrun are available in less than half of the EU Member States only. In contrast, they are perceived as important by 74% of countries, which suggests their use could and should be expanded. Automatic mechanisms which reduce/increase the LTC allocation in proportion to the available

Graph 5.7.1: **Budgeting practices for LTC in the EU**



(1) Based on country survey.
Source: European Commission (ECFIN).

funding are only used in 22% of countries. They are reportedly used by DK, IT, CY, LT, LU and PL. They are, overall, perceived as important only by about 40% of Member States. Automatic stabilisers are effective in preventing budget overruns if properly applied, but may be a blunt tool, as there may be legitimate actual reasons for expenditure increases, such as e.g. higher LTC needs of the population.

Mechanisms to adjust financing, such as improving the financing mix, use of earmarked taxes and social contributions are relatively rare. Only 38% of EU Member States seek to improve the financing mix. Earmarked taxes are used by 22% and social contributions by 21%. There may be scope for improvement in this, and indeed, each of these mechanisms is thought to be important by more than half of EU Member States. Appropriate revenue raising and collection is crucial in order to attain LTC system goals, such as equity and financial protection. This indicates there may be potential to improve the fiscal sustainability of LTC systems by improving LTC financing.

As indicated before, the responsibility for sound budgeting practices belongs to different ministries and authorities, working in cooperation (Table 5.7.1 and Graph 5.7.1). Co-decision is reported as the most frequent mode, followed by deciding alone, both in terms of overall responsibility and in terms of using specific budgeting mechanisms. This reflects the administrative complexity involved, but also the complexity of the challenges faced, requiring both fiscal and LTC expertise. However, it should be noted that deciding alone is the second most frequent mode and that the modes of cooperation vary from mechanism to mechanism.

5.8. SUMMING UP

Driven by population ageing, the big challenge of long-term care (LTC) systems is to meet the needs of a growing number of older people at risk of suffering from frailty and disability, while keeping costs affordable and public finances sustainable. The increasing need for care will have to be addressed through a mix of policies, which have been described in this chapter.

Challenges of long-term care systems

Increasing costs due to demographic ageing, the challenge of financing spending due to demographic ageing, as well as the related increasing population expectations for better care services, are perceived as challenges of LTC systems by government officials. When deciding on whether to allocate more money to long-term care, government authorities are concerned with the quality of information about the value for money of investments, competing fiscal pressures, changing policy priorities and also the existence of fraud or corruption. Cost-containment is perceived as important by a majority of EU Member States. Member States use a wide range of policy tools for improving the functioning of LTC systems, but usage could be more widespread. It is interesting to note, that the perceived importance of the specific policy tools is always higher than its actual usage. As regards the modes of cooperation on specific policy tools for improving the functioning of LTC systems, co-decision is reported as the most frequent mode, but lone decisions making is also common.

Expenditure and coverage

In the EU, LTC is covered by different arrangements that vary in the extent of public financial coverage. How comprehensive coverage is can be assessed on the dimensions of who, what and to what extent services are covered. While the general dimensions of comprehensive coverage are good guiding principles, the complexity of real LTC systems makes it difficult to compare actual comprehensiveness of coverage across countries.

Public expenditure levels on LTC represent a non-negligible share of GDP. Private spending on LTC makes up a significant share of total LTC spending, but it is difficult to capture it fully due to under-reporting. As the number of people in potential need of LTC services in the EU will increase significantly in the future, coverage rates in the EU are expected to increase also, leading to substantial increases in both public and private expenditure. To what extent expenditure will rise, ultimately depends on the comprehensiveness of coverage in terms of who, what and to what extent LTC services are covered by public means.

The need to increase public expenditure should be measured against the objective of LTC to provide adequate social protection. However, it is not possible to say from available international data, to what extent coverage of LTC risks is providing adequate social protection. Thus, it is not possible to establish whether existing rules are adequate in terms of balancing the need for containing public LTC expenditure and providing social protection.

Financing arrangements

There are many ways, in which LTC services are financed, including the public-private financing mix, the sources of public funding and the levels of governments involved in the financing of the services. The extent of public and private financing varies highly between countries. In terms of what is financed publicly, this basically differs by the type of service and where the service is delivered. In terms of how much is financed, all financing schemes require private cost-sharing. Private insurance for LTC has only played a limited role until now.

The typology of LTC systems shows that there are drawbacks and advantages to each of the systems. More than in health care, countries have different perceptions on whether LTC is an individual or collective responsibility. Universal tax-funded social care systems and systems relying on public/social insurance schemes provide relatively comprehensive coverage at the disadvantage of higher costs to the taxpayers. Countries providing little social insurance against LTC risks have, on the other hand, a low level of public spending on formal care, and little social protection.

Provision of care

All EU member states provide formal LTC services to their population. There is a great deal of variation in the distribution of recipients and expenditure by institutional or home care setting.

The variations in public expenditure on long-term care mainly reflect differences in the coverage of formal systems of home care and institutional care. Institutional settings have greater unit costs and are more appropriate for high levels of dependency. Home settings are cheaper to provide and can reduce dependency and encourage independent living. However, they may be most suitable for relatively low levels of dependency. Several EU countries report predominant use of either institutional care or home care. The unit costs of care also vary largely by country, both within and across care settings. This variation indicates different coverage of services, different care needs, but may be also indicative of inefficiencies in care delivery (e.g. because care is delivered in traditional hospitals rather than residential care institutes), as well potentially revealing under-provision of LTC.

Carers

Formal and informal care are both of high importance for the provision of LTC services in EU countries. Challenges linked to formal care relate to maintaining an adequate workforce while ensuring sustainability. Informal care has a lower direct fiscal impact than formal care, as it is provided without payment on a voluntary basis. By increasing the staff available to provide LTC it can have a positive impact on the sustainability of the LTC system. However, it can have indirect fiscal costs through the adverse impact it may have on the financial and health status of the carer. The quality of informal care is also difficult to measure and it can lead to adverse financial and health-status outcomes for carers. To remediate this, EU member states have set up a number of measures to support informal carers, including carers allowances, increasing giving carers the right to carers leave and flexibility of employment in order to keep them attached to the labour market, respite care, counselling as well as information and training.

Budgeting for long-term care spending

As part of fiscal governance, sound budgeting practices contribute to the fiscal sustainability and efficiency of long-term care spending. In most countries the main central budget authority in charge of LTC is most often one of or a combination of the Ministry of Finance, the Ministry of Health and the Ministry of Social Affairs, with involvement of regional government in some countries. Almost all EU countries produce expenditure forecasts, while revenue forecasts are done less frequently. Early-warning mechanisms for budget overruns are used in more than half of all EU countries. Spending targets or ceilings are a common tool to control LTC expenditure in EU countries and their use is perceived as important by a majority of EU Member States. Spending reviews are perceived as important tools for improving the quality of health care spending, and could be used in more EU Member States. Similarly, performance-based budgeting is perceived as important by a majority of EU Member States, but only used in some. As is the case in health care, tools dealing with unexpected expenditure increases in LTC are less widespread than other budgetary tools. Mechanisms to adjust financing, such as improving the financing mix, use of earmarked taxes and social contributions are relatively rare. As indicated before, the responsibility for sound budgeting practices belongs to different ministries and authorities, working in cooperation.

6. POLICY OPTIONS TO IMPROVE THE SUSTAINABILITY OF LONG-TERM CARE SYSTEMS

6.1. ADDRESSING THE CHALLENGES OF LONG-TERM CARE SYSTEMS

This section highlights selected challenges of LTC systems, as perceived by EU Member States. Results draw from data of the country survey as introduced in Section 5.2 as well as on the section on challenges in the specific country documents included as part of this report ([185]). Ways to address these and other challenges are presented in the following sections to this chapter.

The survey demonstrates that all EU Member States ([186]) see a need for continued increases in efficiency of LTC spending. While this message has been repeated in the current report several times, it is interesting to note some of the perceived drivers of inefficiencies. As described in section 5.7, the extent towards which government authorities cooperate between ministries varies, which may be sub-optimal in terms of good governance. In addition, the extent of effective employed policy tools varies, and this could have implications for the ability of governing officials to steer the efficiency of spending. Also, a lack of quality information, the existence of fraud and/or corruption, as well as budget overruns on LTC spending pose considerable concerns for government authorities (see Section 5.8). This leads to the following important policy conclusions ([187]) (Table 6.1.1 ([188])):

- **Continue increasing the efficiency of LTC spending**. This is needed in order to adequately respond to the increasing long-term care demand over the coming decades, which poses risks to the long-term sustainability of public finances. Currently, this is perceived as a particular challenge by 11 EU Member States.

- **Improve the cooperation between government authorities.** As in health care, in many cases, budgeting officials and officials in charge of the LTC system do not have the same set of information, nor the same incentives, which makes it more difficult to find the most cost-effective solutions for improving the sustainability of LTC. Currently, it seems that cooperation between budgeting officials and officials in charge of the design and implementation of LTC systems could be improved in around half of the EU Member States.

- **Widen the spectrum of policy tools effectively used to ensure the fiscal sustainability of long-term care spending**. Many EU Member States use a restricted set of policy tools and could profit from using a wider range of tools, such as introducing impact assessments of policy reforms, improving reimbursement mechanisms, enhancing provider competition, defining strategic objectives of the long-term care sector and using eHealth tools. This could positively contribute to efficiency gains in the sector. Currently, only a minority of EU countries seems to use a comprehensive set of policy tools.

- **Improve the quality of information about the value for money of investments.** Inadequate or insufficient information on the reasons why more funding for LTC is needed is perceived as a challenge in the majority of the EU13 countries, and in a couple of EU15 countries. Especially in the EU13, improving the quality of information may support the development of formal LTC services that will need more public investment.

- **Tackle the existence of fraud/corruption that is a concern for additional investments.** This is perceived as a challenge in every fourth EU Member State, and particularly so in EU13

([185]) Challenges from the country-documents were categorised and summarised by policy area in order to be comparable across countries.

([186]) Germany did not fill out part of this survey, but instead provided information on challenges on a qualitative basis in the country documents to this report.

([187]) This list of measures is intended as a menu of possible policy options from which Member States can choose to improve the sustainability of their LTC system. Which measure or combination of measures to implement remains a policy choice for the Member State.

([188]) Table 6.1.1 summarises this qualitative information in a necessarily simplified manner. More detailed information on the challenges for each Member State can be found in the country-specific documents included as part of this report.

countries. Improving governance systems to tackle this issue may be an important catalyser for increasing the efficiency of spending on LTC, and improving the willingness of government authorities to finance the sector more extensively.

Table 6.1.1: **Addressing selected country-specific challenges of long-term care systems**

	Addressing the challenges of long-term care systems	Reduce risk to the long-term sustainability of public finances	Widen the spectrum of tools used*	Improve the quality of information	Tackle the existence of fraud/corruption	Eliminate budget overruns which are a concern for additional investments	Improve cooperation between budgeting officials and officials in charge of the LTC system**	
BE	**x**	x	6			x	x	**BE**
BG	**x**		15	x	x	x		**BG**
CZ* **	**x**			x			x	**CZ*** **
DK	**x**		15					**DK**
DE** **								**DE**** **
EE	**x**		12	x		x	x	**EE**
IE	**x**		11	x			x	**IE**
EL	**x**		14				x	**EL**
ES	**x**		1					**ES**
FR			17				x	**FR**
HR	**x**		11	x	x	x		**HR**
IT	**x**		16	x				**IT**
CY	**x**	x	5	x	x	x		**CY**
LV	**x**		8			x		**LV**
LT	**x**	x	5	x	x	x		**LT**
LU	**x**	x	9	x		x	x	**LU**
HU	**x**		8					**HU**
MT	**x**	x	14	x		x	x	**MT**
NL	**x**	x	12				x	**NL**
AT	**x**	x	8			x		**AT**
PL	**x**	x	13				x	**PL**
PT	**x**		14	x	x	x		**PT**
RO	**x**		7		x	x	x	**RO**
SI	**x**	x	15	x	x			**SI**
SK	**x**		3	x	x	x		**SK**
FI	**x**	x	8				x	**FI**
SE	**x**	x	8				x	**SE**
UK	**x**		9				x	**UK**
EU	**27**	11	26	13	8	13	14	**EU**
EA	**18**	9	18	10	5	10	9	**EA**
EU15	**14**	6	13	4	1	4	9	**EU15**
EU13	**13**	5	13	9	7	9	5	**EU13**

(1) Based on country survey.
(2) The first category (Addressing challenges) is signalling a challenge if any of the sub-categories flag a challenge.
* Summarising the number of policy used, which are being used by the government authorities in charge of the LTC system. The maximum number is 17. For some countries, the tools are used on the local/regional level, as in BE, ES and SE.
** Countries are flagged, which report to have predominantly little cooperation/co-decision making between budgeting officials and officials in charge of LTC system design.
*** In the Czech Republic, many of the policy tools are used by the Ministry of Finance, while the survey was answered from the perspective of the Ministry of Health.
**** Germany did not provide information on this section of the survey but provided information on challenges on a qualitative basis.
Source: Commission services (DG ECFIN).

- **Eliminate budget overruns, which are a concern for additional investments.** Budget overruns, and the implied unpredictability of the actual level of spending are perceived as a challenge by roughly a third of all EU Member States, and in half of the EU13 countries. Employing sound budgeting practices (see Section 6.9) has the potential to remedy this situation.

6.2. IMPROVING FINANCING ARRANGEMENTS

The EU is characterised by a high variety of financing arrangements of LTC, as anticipated in Section 5.4. Cross-country differences refer to the public-private financing mix, the sources of public funding and the involvement of ministries and government levels.

More than with health care, countries have different perceptions on whether LTC is an individual or collective responsibility. Where LTC is perceived as a collective responsibility, public financing is higher and the organisation of LTC is more developed. Where LTC is, on the contrary, understood as a family issue, funding is more fragmented and targeted towards the poor and LTC programmes are less developed. The choice of LTC financing is strongly linked to the existing approaches to health care and the country's administrative structure (Ikegami, 2010). Countries with social insurance for health care use similar arrangements for LTC, and similarly the argument applies to the case of tax-based LTC models for instance. The question is what lessons can be learned from the variety of existing models and what guidance can be made to policy makers to improve system performance. This list of measures is intended as a menu of possible policy options from which Member States can choose to improve the sustainability of their LTC systems. Which measure or combination of measures to implement remains a policy choice for the Member State.

Countries relying on informal care provision have little direct financing of LTC and accordingly low public expenditure on LTC. However, indirect costs can be significant, especially for family carers in terms of foregone carers' working time and paid employment opportunities, as well as reduced accrual of social protection entitlements for informal carers, and associated risks of family impoverishment. There is, in this case, no pooling of LTC risks across the population, which is the main motivation for setting up social protection. Also, few tools are available to define standards of quality of care. Therefore, this type of model of LTC financing has indirect costs in terms of lower labour force participation, thus potentially lower GDP growth, and deficiencies in terms of quality and efficiency.

One option for countries with little provision of formal care is to organise financial and/or legal support for informal care. This may mean financial support via a cash allowance for care performed, or crediting of social protection entitlements, as well as training and care leave. Legal support can be offered to help reconcile informal care duties with formal employment for family carers. The advantage of this approach is a reduction of the indirect economic costs of informal care. The primary carer will leave employment with lower probability, especially if some formal respite care is available when necessary. Also, some quality assurance and monitoring that needs are in fact met can be put in place. The disadvantage is additional costs to public finances. Also, productivity improvements are likely to remain low, unless financial support is given to acquire assistive devices facilitating home care.

Countries which rely more heavily on formal care provision and general tax financing have relatively high public expenditure on LTC. This is the case in countries where LTC is largely financed from general tax revenues, organised as a public service and delivered by trained public sector workers. The main advantages of this model are: a relatively predictable financing base with full diversification of LTC risks across the population; an organised formal workforce; more advanced quality standards and monitoring of actual quality delivered and potentially lower indirect economic costs, as people with dependent elderly relatives can continue full-time employment. Also, potential productivity gains may be enabled through policies incentivising the productivity of the LTC sector. The main drawback is the far higher level of public spending on LTC and the burden for public finances. Public budget constraints can improve the sustainability of the system, but may lead to lower quality and the amount of care provided.

Countries with a strong emphasis on formal care based on the social insurance model generally ease the burden of care on families. Where social insurance is mandatory, it provides broad risk-pooling and predictable financing. Expenditure is covered by earmarked social security taxes and therefore entitlements may be more clearly defined and easier to enforce. The drawback is the usual tax distortions on employment associated with contribution-based systems. Also, contributions are levied on a narrower tax base than general revenue, and

Table 6.2.1: **Country-specific challenges for improving financing arrangements for long-term care**

	Improving financing arrangements	Consider tax-broadening	Consider fostering pre-funding elements	Explore private LTC insurance	Include assets in the means-test	Determine the extent of user-cost sharing	
BE							**BE**
BG	**x**		x	x			**BG**
CZ							**CZ**
DK							**DK**
DE							**DE**
EE	**x**	x		x		x	**EE**
IE	**x**			x		x	**IE**
EL	**x**				x		**EL**
ES	**x**		x	x		x	**ES**
FR	**x**						**FR**
HR	**x**				x		**HR**
IT	**x**				x		**IT**
CY	**x**	x	x	x			**CY**
LV	**x**			x		x	**LV**
LT	**x**			x		x	**LT**
LU	**x**	x	x				**LU**
HU	**x**		x	x		x	**HU**
MT	**x**		x	x			**MT**
NL	**x**		x				**NL**
AT	**x**		x				**AT**
PL	**x**	x	x	x			**PL**
PT	**x**	x	x	x		x	**PT**
RO	**x**	x	x	x			**RO**
SI	**x**		x				**SI**
SK	**x**	x	x	x			**SK**
FI	**x**			x		x	**FI**
SE	**x**		x	x	x	x	**SE**
UK	**x**		x				**UK**
EU	**24**	7	15	15	4	9	**EU**
EA	**17**	5	9	10	2	7	**EA**
EU15	**12**	2	7	5	3	5	**EU15**
EU13	**12**	5	8	10	1	4	**EU13**

(1) Based on challenges as identified in the country documents to this report. For each sub-category, challenges differ by country ranging from the improvement of a tool (or practice) to its introduction. Full details are available within each country's section on challenges.
(2) The first category (Improving financing arrangements) is signalling a challenge if any of the sub-categories flag a challenge.
Source: Commission services (DG ECFIN).

increases may become necessary in view of population ageing, further increasing the cost of labour.

Most EU countries could in fact benefit from improving their financing arrangements (Table 6.2.1). As from the challenges identified in the country documents to this report, 24 Member States could benefit from improving some parameters of their financing arrangements. While the balance of different policy goals makes it difficult to pinpoint to an ideal LTC system, there are a couple of concrete policy options that can be advanced here:

- **Explore ways for fostering predictable public financing of LTC expenditure, in a fiscally sustainable way.** This seems important given the disadvantages of limited means-tested safety-net approaches, which are mainly related to limited pooling of LTC risks and high indirect economic costs. The growing need for formalised care in the future exacerbates the need for a stable and predictable financing source. Countries heavily relying on family care are increasingly facing a challenge as to the sustainability of their care model. Expanding formal services would lead to higher public expenditure, but this would to some extent also absorb the hidden indirect costs that societies already incur.

- **Explore ways to better target public funding.** This element is particularly important in view of the fact that LTC expenditure as a share of GDP is growing. When LTC is financed via fixed budgets, countries should define strategies on how to target coverage to the services that can be funded. The definition of clear rules would help in this respect. Prioritising of services - as already now it is difficult to meet all needs of care - should be undertaken to increase the predictability of whether and to what extent those in need can count on public support. Targeting and clearly determining the extent of user cost-sharing on LTC provision is currently being considered as a policy option in nine EU Member States. Targeting can be further improved by including the assets in the means-test used to determine individual cost-sharing (or entitlement to public support) to better reflect individual wealth. This is considered as an option in four EU Member States.

- **Increase the forward-looking time frame for LTC financing schemes**. This is key to effectively prepare for the growing number of dependents and the availability of formal and informal carers. A forward-looking strategy should indeed be the basis for the design of LTC financing schemes. For instance, Germany has strengthened LTC by creating a 'fund for demographic sustainable financing' (*Pflegevorsorgefonds*). Bulgaria has adopted a National Strategy on long-term care, and one of its key elements is ensuring sustainable financing of LTC services.

- **In order to face increasing LTC costs, tax-broadening could be considered**, which means financing beyond revenues earned by the working-age population. This is considered as an option in seven EU Member States. In addition, a better pooling across generations could be considered. Pensioners could be required to contribute premia to social LTC insurance, based on their income.

- **Financing could be strengthened by incentivising or mandating pre-funding elements**. This would mean saving, e.g. based on an insurance scheme, to pay for future obligations. This is considered as a particular challenge in half of the EU Member States. Private LTC insurance could play some role as a supplementary financing tool based on pre-funding elements. This option is considered as potentially valuable particularly in the EU13.

6.3. PROVIDING ADEQUATE LEVELS OF CARE TO THOSE IN NEED OF CARE

Public LTC systems should provide recipients with adequate care that responds to their level of need and prevents them and their relatives from falling into financial deprivation due to the high financial burden of paying for care. Need for care represents the help needed by LTC recipients to carry out their daily living activities (ADLs). This will vary from recipient to recipient due to differences in type of need, disability, age, health status, etc. The care not provided by the public system must be paid for privately by the recipient and/or their relatives or provided free of charge by the relatives themselves (as informal care). Privately bought LTC can have very high costs. Providing informal care (as discussed in Section 5.5) can conflict with the labour market attachment of the carers and therefore have a significant impact on their financial well-being.

Coverage depth and breadth across EU Member States is uneven. EU member states have set up LTC systems that protect citizens in need and their relatives from ill-health and poverty risks. Through risk-pooling they can ensure that individuals are protected against these risks at a lower cost. However, as explained in Section 5.2, the breadth (how many people in need do receive LTC) and the scope and depth of coverage (what type and level of services can each recipient expect to receive and with what level of user charges) varies widely across EU member states, as does expenditure on LTC as a proportion of GDP. This is even the case when comparing coverage rates with the estimated need for care based on the EU SILC survey. The country-specific challenges extracted from the country fiches included in this report are reported in Table 1. The list of measures below is intended as a menu of possible policy options from which Member States can choose to improve the adequacy and sustainability of their LTC systems. Which measure or combination of measures to implement remains a policy choice for the Member State.

EU Member States need to prioritise the use of public LTC funds in order to ensure goals are met without endangering long-term fiscal sustainability. Over the long term, population ageing is expected to lead to an increase in the number of people in need of LTC, therefore causing a large increase in the proportion of GDP spent on it (European Commission (DG ECFIN)-EPC (AWG) (2015b)). This makes it necessary to consider how to prioritise the use of public LTC services, targeting them at the recipients that need them most and are least able to pay for them.

Targeting of benefits is used across EU member states in order to prioritise the use of publically funded LTC services.

Targeting according to the recipient's need ensures that resources are directed at those that need care the most. The recipient's need for care involves several factors, including physical or cognitive limitations, presence or not of a family carer, as well as other characteristics. Most EU member states (as can be seen in Graph 6.2.1) have in place a minimum dependency criterion above which recipients are entitled to LTC. This is meant to focus available resources on the recipients with higher levels of need. EE, LV, MT, DK, NL, SE, EL and PT are the countries that do not have such thresholds.

Systems where the need level is not targeted face greater expenditure and the risk of implicit rationing of LTC. Not having a minimum dependency threshold does not necessarily mean that every potential recipient has access to LTC. Instead, other implicit rationing mechanisms may be used to reduce the breadth of coverage, such as long waiting lists, discretionary prioritisation by providers, etc. In some cases, the fiscal sustainability dilemma may be solved by lowering the quality and depth of coverage. In this case, limited public provision of LTC works as a 'last resort' for the elderly who cannot count on, or pay for, any other alternative, including informal care. Clearly, implicit rationing or the provision of low quality LTC services is unlikely to be optimal or aligned with the public interest. Finally, in some cases this lack of a dependency threshold may lead to increased expenditure and potential fiscal sustainability issues.

EU Member States should regularly review and update their minimum-dependency thresholds. The simple fact that a country has a minimum dependency criterion in place does not mean that the threshold is set at its optimum level. Changing circumstances may also render optimal thresholds obsolete. Even countries that already have minimum-dependency thresholds could gain from

Table 6.3.1: **Country-specific challenges for providing adequate levels of care to those in needs of care**

	Providing adequate levels of care to those in need of care:	To adapt and improve LTC coverage schemes,	setting the need-level triggering entitlement to coverage;	setting the extent of user cost-sharing on LTC benefits;	and setting the depth of coverage, the types of services included in the coverage.	To provide targeted benefits to those with highest LTC needs;	To reduce the risk of impoverishment of recipients and informal carers	
BE								BE
BG	x	x			x	x	x	BG
CZ	x	x	x	x	x			CZ
DK	x	x	x	x	x			DK
DE								DE
EE	x	x	x	x	x	x	x	EE
IE								IE
EL	x	x	x	x	x		x	EL
ES	x	x	x	x	x		x	ES
FR	x	x	x	x	x	x	x	FR
HR	x	x	x	x				HR
IT	x	x	x	x		x		IT
CY	x						x	CY
LV	x	x	x	x	x	x	x	LV
LT	x	x	x	x	x	x		LT
LU	x	x	x	x	x	x		LU
HU	x	x	x	x	x		x	HU
MT								MT
NL	x			x				NL
AT	x	x	x	x	x			AT
PL	x	x	x	x	x		x	PL
PT	x	x	x	x	x		x	PT
RO	x	x	x	x	x	x	x	RO
SI	x	x	x	x	x		x	SI
SK								SK
FI	x	x	x	x	x	x		FI
SE	x	x	x	x	x	x		SE
UK	x	x		x	x		x	UK
EU	23	21	19	21	19	10	13	EU
EA	14	12	12	13	11	7	8	EA
EU15	12	11	10	12	10	5	5	EU15
EU13	11	10	9	9	9	5	8	EU13

(1) Based on challenges as identified in the country documents to this report. For each sub-category, challenges differ by country ranging from the improvement of a tool (or practice) to its introduction. Full details are available within each country's section on challenges.
(2) The first category (Providing adequate levels of care) is signalling a challenge if any of the sub-categories flag a challenge.
Source: Commission services (DG ECFIN).

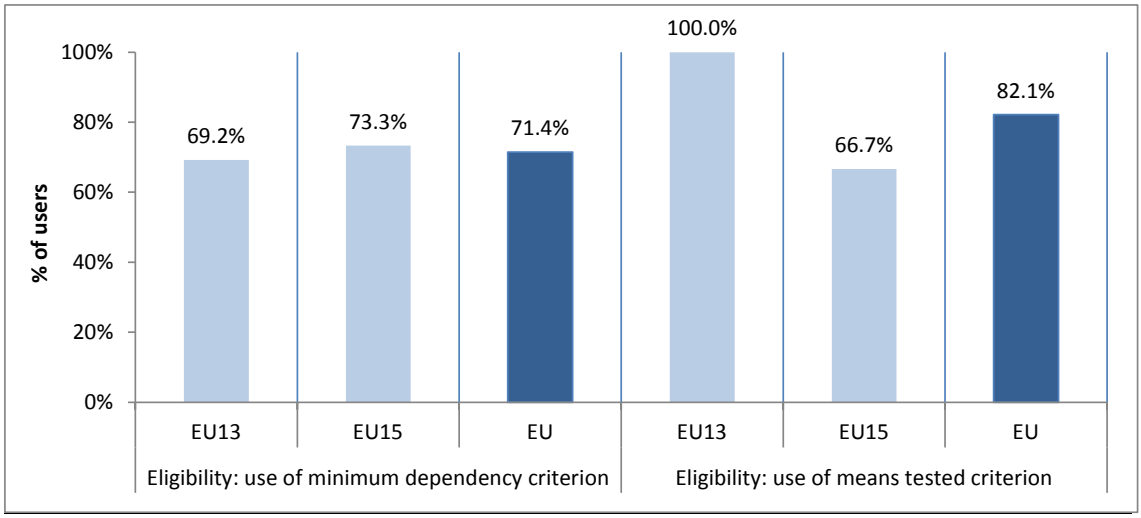
regularly reviewing the balance between breadth and depth of coverage.

Under budgeting constraints, means testing is a useful way of ensuring public LTC resources are directed at those who can least afford to pay for these services. Most EU member states have in place some element of means testing for LTC recipients. In principle, means testing means that people on low incomes will pay less for public LTC services than people on higher incomes or greater asset ownership. Asset ownership can be particularly relevant for elderly people, as their income may not be representative of their wealth. This has been implemented in a number of forms. In some EU countries people with low incomes/ownership of assets are exempted from any cost-sharing, in others people with higher incomes and ownership of assets are not covered by the public LTC system. It should be noted that DK, NL, SE, LU, FI and EL do not have any element of means-testing in their public LTC systems. Again, this may lead to implicit rationing, provision of low quality services or a high burden on the public finances.

Means-tests should be adjusted regularly to ensure it continues to be fit for purpose. Again, even countries that currently use some form of means testing may potentially gain from reviewing the balance between the breadth and the depth of coverage.

The variation in targeting across the EU suggests that there is scope for Member States to introduce or review explicit LTC benefits targeting mechanisms (including, but not limited to, minimum dependency thresholds and means testing) in order to improve cost-effectiveness and long-term fiscal sustainability. If we look at the use of minimum dependency thresholds and means testing across groups of EU

Graph 6.3.1: **Use of minimum dependency criterion and means testing across EU**



Source: Based on MISSOC; Commission services (DG ECFIN).

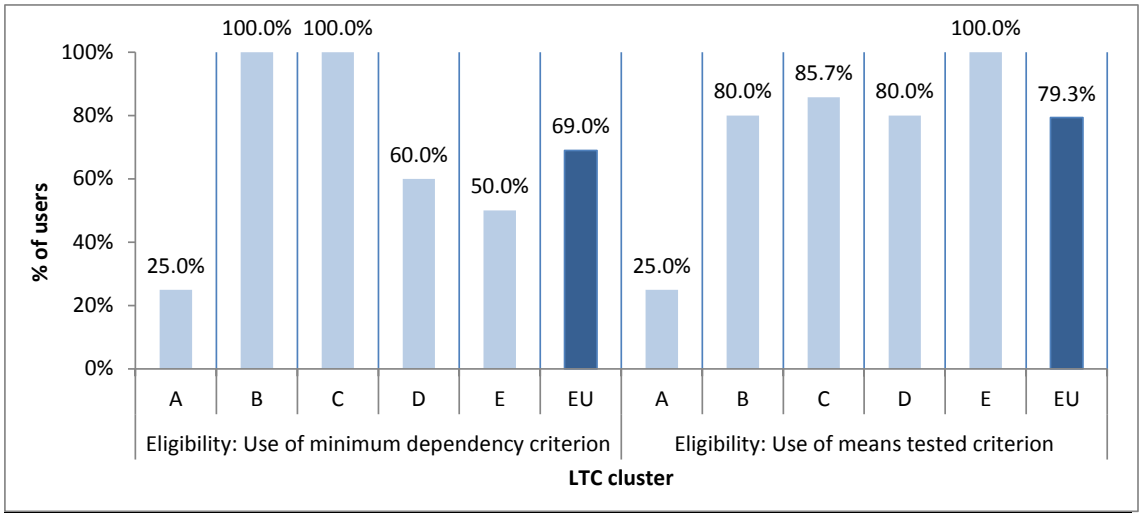
countries, some patterns appear to emerge. As Graph 6.3.1 shows, there is no great difference between EU13 and EU15 Member States in terms of use of the minimum dependency criterion (69.2% of EU13 Member States vs. 73.3% of EU15 Member States). There is however a difference for the means-testing criterion, which is used in the totality of the EU13 group but only in 66.7% of the EU15.

Graph 6.3.2 provides a further breakdown of the figures, according to the clustering of LTC systems presented in Section 5.3. This shows that clusters of countries with similar characteristics are likely to have a relatively similar use of the minimum dependency threshold. Out of Cluster A countries (Denmark, the Netherlands and Sweden, with high expenditure, formal care (FC)-oriented provision, generous, accessible and affordable) only the Netherlands uses this tool. In contrast, all countries in Cluster B (Belgium, Czech Republic, Germany, Slovakia and Luxembourg, with FC of medium accessibility and some Informal Care (IC) orientation in provision) and Cluster C (Austria, England, Finland, France, Spain, Slovenia and Ireland, characterised by FC of medium to low accessibility and medium use of IC) use minimum dependency thresholds. The tool is used by around two thirds of Cluster D countries (Hungary, Italy, Greece, Poland and Portugal, with low accessibility and strong use of IC) and only half of the countries in Cluster E (Bulgaria, Cyprus, Estonia, Lithuania, Latvia, Malta, Romania, Croatia, characterised by a rather low FC accessibility and an almost exclusive IC orientation). There is however still a great deal of variation within groups, with, for example, a Cluster E country such as Greece having a similar lack of targeting as countries in Cluster A.

When figures are broken down according to the use of the means testing criterion, the results are similar. Again, only NL out of the countries in Cluster A uses this tool, whereas all the other clusters report relatively high usage, with Cluster E showing 100% use.

To conclude, targeting of benefits can be a helpful way to make sure that care is provided to those who need it most and are least able to pay for it. Although some of the variation in these types of instruments across Member States seems to be related to how generous the LTC system is (this is clearly the case for countries in Cluster A), the variation persists even within most clusters, suggesting scope for improvement.

Graph 6.3.2: **Use of a minimum dependency criterion and means testing across EU**



Source: MISSOC.

6.4. ENSURING AVAILABILITY OF FORMAL CARERS

It is particularly important for Member States to determine current and future needs for qualified human resources and facilities for LTC and set out a long-term strategy to ensure their availability ([189]). As discussed in Section 5.7 and in the country fiches included in this report, EU Member States face a number of challenges regarding the availability of formal carers, including recruitment and retention (summarised in Table 6.4.1). These challenges are likely to become more constraining in the future because, as for health care, the demand for LTC is projected to increase over time, due to population ageing (European Commission (DG ECFIN)-EPC (AWG) (2015b). This therefore suggests the need for Member states to set out workforce planning strategies to tackle these challenges.

Recruitment faces fewer constraints than in health care, although constraints are still present. The LTC workforce has generally a lower skill level than the health care workforce, implying that it takes less time to train a new LTC worker. Although this means that tackling staff shortages in the short-run may be easier than in the health care sector, recruiting LTC workers may be problematic in countries that have a limited pool of low-skilled workers.

Recruitment can be improved by programmes aimed at encouraging workers to join the LTC sector. In some cases these can be programmes to get low-skilled workers into employment, to re-train workers of declining industries, and to introduce re-activation measures aimed at the long-term unemployed and the economically inactive. In some cases, recruitment can be aimed at under-represented population groups (ethnic minorities, etc.). Using private agencies can help match the demand for workers with the supply, but it may also create problems, such as high agency rents and the difficulty to effectively monitor agency practices to ensure their actions are aligned with the public interest. A downside of these types of policies is that many of the targeted population may use a job in LTC as a first step in the labour market and therefore not remain in the LTC sector for long.

Recruiting foreign workers can help face short-term shortages, although programmes need to be carefully designed. This mechanism is used by several EU countries. While this can have clear benefits for the receiving countries, it can represent a workforce drain for the origin countries, particularly if it is used as a long-term recruitment solution. It would therefore be important to consider this impact when setting up such schemes. Features such as temporary migration, providing training to the LTC workers that can then be used when they return to their country, can limit, for instance, the negative effects. Although poor work conditions may be prevalent in the LTC sector, migrants may still suffer from lower job-quality than the native-born. In that case, additional training, including language training, can help integration and improve labour market outcomes. If irregular migrants are disproportionately frequent in the LTC workforce, thought should be given to the level of adequacy of official migration channels in providing a sufficient number of workers. Finally, when the LTC system depends on migrant workers to fill domestic shortages over the long term may also be a sign of a failure of measures to recruit sufficient numbers of domestic workers or poor retention in the LTC labour market.

Poor retention of workers in the LTC sector can lead to shortages and reduce the impact of recruitment strategies. As explained in Section 5.7, the LTC labour market is characterised by a high staff turnover and low retention. Strategies to improve recruitment may have a reduced impact if job retention is low. A high turnover of staff reduces the return on investment in both recruitment and training, which may lead to lower quality of care. Poor working conditions can lead workers to quit, which can then increase work pressure and stress on the remaining workforce. It is therefore important to set up measures to retain the workforce.

Retention can be improved by ensuring wages are adequate and by carefully designing the structure of remuneration. Job retention is directly influenced by remuneration and work conditions. Wages are relatively low in the LTC sector (although the level varies across EU countries). Ensuring adequate wages is therefore important. However, there is evidence (Cangiano et al., 2009) that increasing the average wage level

([189]) This list of measures is intended as a menu of possible policy options from which Member States can choose to improve the sustainability of their LTC systems. Which measure or combination of measures to implement remains a policy choice for the Member State.

Table 6.4.1: **Country-specific challenges in ensuring availability of formal carers**

	Ensuring availability of formal carers:	Determine current and future needs for qualified human resources and facilities for long-term care;	Improve recruitment efforts, including through migration and developing pools of workers;	Increase retention of LTC workers by improving the pay, working conditions and non-pay benefits;	To seek options to increase the productivity of LTC workers;	
BE	x	x		x	x	**BE**
BG						**BG**
CZ	x	x				**CZ**
DK	x	x	x			**DK**
DE	x	x	x			**DE**
EE	x	x		x		**EE**
IE	x	x			x	**IE**
EL	x	x				**EL**
ES	x	x				**ES**
FR	x	x				**FR**
HR	x	x				**HR**
IT						**IT**
CY	x	x				**CY**
LV	x	x				**LV**
LT	x	x	x			**LT**
LU	x				x	**LU**
HU	x	x				**HU**
MT	x	x				**MT**
NL	x	x				**NL**
AT	x	x	x	x		**AT**
PL	x	x				**PL**
PT	x	x			x	**PT**
RO	x	x	x			**RO**
SI	x	x	x			**SI**
SK	x	x				**SK**
FI						**FI**
SE	x	x			x	**SE**
UK	x	x	x	x	x	**UK**
EU	25	24	7	4	6	**EU**
EA	17	16	4	3	4	**EA**
EU15	13	12	4	3	6	**EU15**
EU13	12	12	3	1	0	**EU13**

(1) Based on challenges as identified in the country documents to this report. For each sub-category, challenges differ by country ranging from the improvement of a tool (or practice) to its introduction. Full details are available within each country's section on challenges.
(2) The first category (Improving financing arrangements) is signalling a challenge if any of the sub-categories flag a challenge.
Source: Commission services (DG ECFIN).

per se may not necessarily lead to improvements in turnover. It is necessary to also carefully design the career path and the way increased experience leads to wage progression**.**

Improving working conditions in the LTC sector can help improve retention. Beyond remuneration, improving the working conditions of the LTC workforce is key in improving staff retention. This can be achieved (OECD 2011b) through providing LTC workers with training opportunities, greater responsibility, supervision and ability to give feedback, as well as more general improvements in working conditions. Improving health and safety conditions (for example, by regularly monitoring the performance, mental and health status of the worker) should also be taken into account, particularly in home-care settings (where health and safety conditions tend to be worse and monitoring). Monitoring of home care workers can be performed through random checks, recipient satisfaction surveys and

outcomes measurement, etc. Greater professionalisation in the management of LTC could also help retention by improving the quality of workforce management.

Providing LTC workers with greater skills and training can improve their productivity, as well as recruitment and retention. This is clearly the case for low-skilled LTC workers, where additional training can have a greater proportional impact. Creating a "LTC profession" by recognising and creating professional roles can be a way of making the role more attractive to current and prospective LTC workers.

While nurses working in LTC are already highly trained, in many cases this training does not necessarily relate to the provision of LTC itself. In this respect, there is evidence that also programmes to create nurse roles specialised in the care of elderly people can improve their productivity and make the sector more attractive (OECD 2011b).

There is however a clear trade-off between the specialisation and professionalisation of the workforce and its flexibility and cost. More professionalised workers would become more expensive and the workforce more rigid (i.e.: it would take longer to train a new LTC worker), while flexibility of the workforce in the LTC sector has traditionally been a strength.

Similarly, there may be limits to the extent to which LTC employers will be motivated to invest in training a largely part-time workforce.

Finally, the use of information technologies can improve the productivity of the workforce by redefining the type of tasks performed. Administrative tasks can be automated, for instance, reducing overheads. ICT systems can be used to improve the connectivity between recipients and LTC workers. However, the cost-effectiveness and privacy implications of ICT solutions should be assessed in each case to ensure their optimal use.

6.5. ENCOURAGING INDEPENDENT LIVING, HOME CARE AND SUPPORTING FAMILY CARERS

Increasing the proportion of LTC delivered as home care for appropriate cases can improve cost-effectiveness, as well as respond to the demands of LTC recipients, helping them remain independent longer and allowing for the provision of Informal Care. Expanding the proportion of LTC services delivered in a home care setting has been a common theme in EU member states over the last decades through what have been labelled as "ageing in place" policies. LTC recipients tend to prefer the home care setting to the institutional setting. As shown in Table 6.5.1, many EU Member States still have challenges in this area. When appropriate, home care services may also help LTC recipients to stay independent longer, as well as take part in social and other activities. As explained in Section 5.6, if used for appropriate cases, home care services tend to have lower unit costs and therefore place a smaller burden on public finances, as well as on the finances of the recipients and their relatives. Finally, it is easier to combine formal home care with informal care than it is in the case of formal institutional care.

Interventions to encourage home care and independent living can involve a mix of demand- and supply-side interventions ([190]).

Direct expansion of home-care supply is a first policy option to increase home care. This can include setting up additional dedicated structures and staff to provide LTC to recipients in their own home, professionals from institutional care visiting recipients, training and supporting informal caregivers, etc.

Regulatory measures (on access to institutional care and provision of supported accommodation, for instance) can also be used to promote home care. For example, guidelines can be set up restricting access to institutional care to cases above a certain need threshold. Similarly, the authorities can provide supported accommodation in publicly-owned flats, where the recipients live and receive LTC. Regulations can also be optimised to promote the legalisation of illegal or undeclared work.

Financial incentives and cash benefits can be used to support home care. Financial incentives for users or providers (discussed in Section 6.6) can be used to enhance user choice and promote a rebalancing towards home care. Cash benefits can be used to promote living at home for LTC recipients. Cash benefits, including payments and individual budgets, can help LTC recipients organise home care and promote choice (as done in Austria, the Netherlands, Sweden and the United Kingdom). An advantage of cash benefits is that they can be used to compensate informal carers, therefore "formalising" informal care and compensating carers for their services. Where cash benefits are however spent on formal care, their effectiveness depends on whether there is an LTC market that can provide the services, as well as on the ability of recipients and their relatives to purchase services appropriately.

There are however limits to the appropriate shift to home care, suggesting policy changes should be implemented carefully:

- **Home care should only be used when it is the most effective setting for LTC, and the scope for increasing its share varies across EU Member States.** It may not be desirable to increase the use of home care beyond a certain point. Institutional care may be more appropriate than home care for recipients with complex needs, so there is a natural limit to the optimal share of home care. However, considering the variation in its use across EU member states, there appears to be still scope for increasing the efficiency of LTC by promoting home care.

- **Expansion of home care requires the existence of providers.** The measures discussed above may not actually increase the use of home care if there is not a market or an adequate number of home-care providers. Therefore, in some cases, increasing the use of home care will first require establishing these pre-conditions.

- **Home care may make it more difficult to coordinate care, so expansion should be accompanied with measures to ensure coordination.** Home care can lead to fragmentation of care, particularly if different

([190]) This list of measures is intended as a menu of possible policy options from which Member States can choose to improve the sustainability of their LTC systems. Which measure or combination of measures to implement remains a policy choice for the Member State.

Table 6.5.1: **Country-specific challenges for encouraging independent living, home care and supporting family carers**

	Encouraging home care:	To develop alternatives to institutional care by e.g.	developing regulationencouraging home care and controlling admissions to institutional care	establishment of additional payments, cash benefits or financial incentives;	to monitor and evaluate alternative services, including incentives for use of alternative settings.	Encouraging independen	To provide effective home care, tele-care and information to recipients, as well as improving home and general living environment design.	Supporting family carers:	To establish policies supporting informal carers, while ensuring this does not weaken attachment to labout market.	
BE						x	x	x	x	BE
BG						x	x	x	x	BG
CZ	x	x	x	x	x	x	x	x	x	CZ
DK								x	x	DK
DE						x	x			DE
EE	x	x	x	x	x	x	x	x	x	EE
IE	x	x	x	x	x			x	x	IE
EL						x	x	x	x	EL
ES	x	x	x	x	x	x	x	x	x	ES
FR										FR
HR	x	x	x	x	x			x	x	HR
IT								x	x	IT
CY								x	x	CY
LV	x	x	x	x	x	x	x	x	x	LV
LT						x	x	x	x	LT
LU	x				x					LU
HU								x	x	HU
MT	x	x	x	x		x	x	x	x	MT
NL						x	x	x	x	NL
AT	x				x			x	x	AT
PL	x	x	x					x	x	PL
PT						x	x	x	x	PT
RO								x	x	RO
SI	x	x	x	x	x	x	x	x	x	SI
SK	x	x	x	x	x			x	x	SK
FI										FI
SE										SE
UK						x	x	x	x	UK
EU	12	10	10	9	10	14	14	23	23	EU
EA	9	7	7	7	8	11	11	15	15	EA
EU15	4	2	2	2	4	7	7	10	10	EU15
EU13	8	8	8	7	6	7	7	13	13	EU13

(1) Based on challenges as identified in the country documents to this report. For each sub-category, challenges differ by country ranging from the improvement of a tool (or practice) to its introduction. Full details are available within each country's section on challenges.
(2) The first category (Encouraging home care) is signalling a challenge if any of the sub-categories flag a challenge.
Source: Commission services (DG ECFIN).

providers supply services to one recipient. It is therefore important that the authorities set the conditions to ensure care coordination.

- **Recipients and their relatives need to be provided with adequate information in order to choose a suitable home care provider.** Finally, if there are several home care providers, choosing correctly can be difficult for recipients and their relatives. It is therefore important to provide information support systems for users of home care.

It is necessary to also support family carers providing Informal Care. Informal carers are a key part of the LTC system and yet they face a great deal of personal and financial cost. EU Member States have set out a number of policies in order to support carers and reduce the potential negative impact that providing care can have on them, as set out in Section 5.5:

- **Cash benefits can be used to compensate family carers.**
- **Allowances given directly to the carer can support carers, but their design needs to be carefully considered in order to avoid discouraging the carer from labour market participation.**
- **Rights for carers can provide support, but labour market attachment needs to be considered too.** Providing carers with the legal right to care leave and flexible work arrangements can help them remain employed and reduce the potential negative financial impact from providing care. It is necessary however to strike a balance between providing sufficient leave and not endangering work prospects.
- **Respite leave from care can be used to provide carers with a break from their day-to-day responsibilities.**
- **Counselling can be effective in relieving stress and addressing mental health issues.**

- **Information services and training can help improve the quality of informal care and help carers deal with their duties.**

6.6. ENSURING INTEGRATION AND CONTINUITY OF CARE

The main goals of integration of care are to enhance the quality of care, improve system efficiency and contain cost-growth across multiple systems and providers. LTC systems can be fully or partly integrated with the health and social system, or be independent. Integration may lead to an increase in the quality and efficiency of care, e.g. in providing coordinated care packages, in providing services in the most appropriate and optimal way and improving the access to services (WHO, 2003). On the contrary, disintegrated systems have to deal with several inefficiencies, leading to lower outcomes and potentially higher costs. The list of measures in this section is intended as a menu of possible policy options from which Member States can choose to improve the sustainability of their LTC systems. Which measure or combination of measures to implement remains a policy choice for the Member State.

There are several challenges in integrating LTC. First, with health and social care being traditionally separated, it is a challenge to establish continuity of care. Second, traditionally, systems are fragmented in terms of different public payers, types of reimbursement and providers of care, which make it challenging to incentivise care integration. Third, it is not straightforward how to appropriately mix health and long-term care services. LTC patients have many contacts with the health care and LTC system, which are at the responsibility of local governments, while the oversight of acute care is at the regional or national level. This creates problems at the interface from acute care to LTC.

Ten guiding principles for integrated care systems have been identified (Suter et al., 2009):

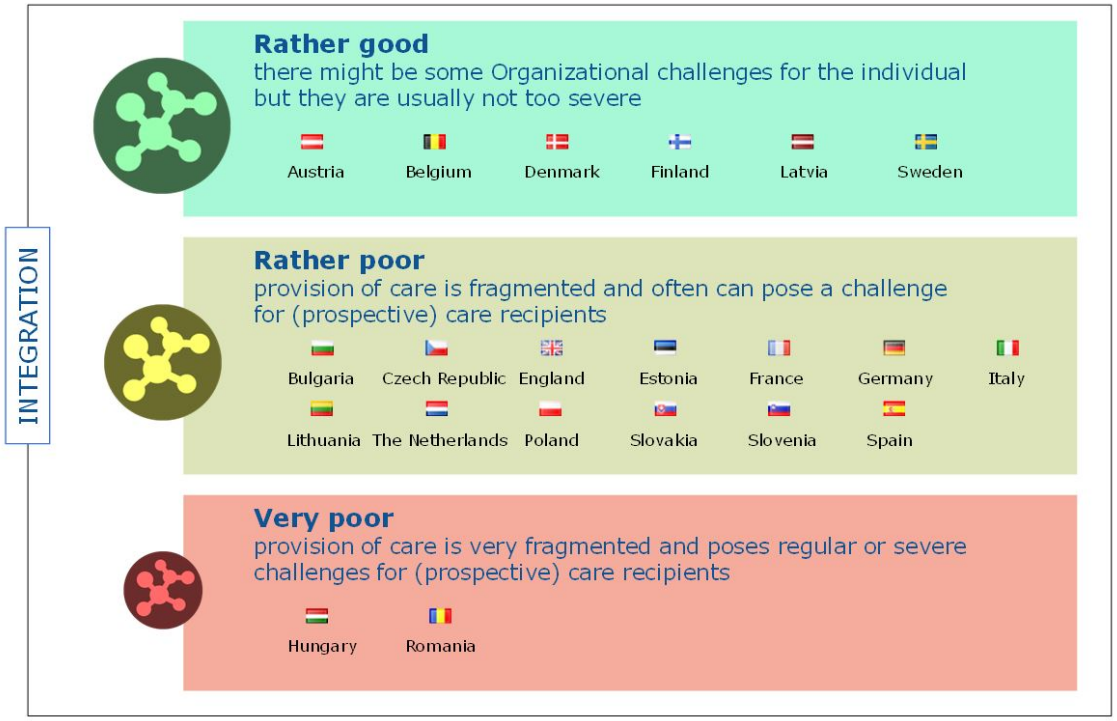
- Health systems should acknowledge the comprehensiveness of services, including services from primary through tertiary care, as well as cooperation between health and social care organisations.
- Systems should be patient focused, reflecting population-based needs, such that patient receive the "right care at the right place at the right time" (Shortell et al., 2000).
- Clear geographic coverage should be defined, aiming at maximising patient access to the services and minimising duplication of services.
- Standardised care should be delivered by inter-professional teams promoting continuity of the care process.
- Shared protocols based on evidence, clinical care pathways and decision-making tools, are the basis for enhancing the quality of care.
- Systems should be monitored and include indicators to measure performance and outcomes at different levels.
- This is supported by system-wide computerised information systems that allow data management and effective tracking of utilisation and outcomes.
- Integration relies on clear leadership and strategic vision. Physicians play a leadership role and need to be effectively integrated at all levels of the system.
- Governance should be supportive of integration through enabling contractual relationships and networks.
- Reimbursement of care providers should be incentivising integration, pooling funds and providing options for bundling payments across services.

No EU country seems to have an optimal level of coordinated care (Graph 6.6.1**).** Overall, the degree of integration is quite diverse when looking at the European LTC systems. In Austria, Belgium, Denmark, Finland, Latvia and Sweden, the degree of integration between LTC and other services is rather good, while in all other countries it is rather poor or very poor ([191]).

To overcome the difficulties, many countries have put policies in place, which aim at improving the link between health care and

([191]) It should be noted that Graph 6.6.1 is based on a 2010 publication and therefore does not include major reforms that have been enacted since, such as the 2015 LTC reform in the Netherlands.

Graph 6.6.1: **Quality of coordination between LTC and other services**



(1) Quality of coordination between LTC and other services is: 3 = Rather good – there might be some Organisational challenges for the individual but they are usually not too severe; 2 = Rather poor – provision of care is fragmented and often can pose a challenge for (prospective) care recipients 1 = Very poor – provision of care is very fragmented and poses regular or severe challenges for (prospective) care recipients.
Source: Based on Kraus (2010).

LTC services ([192]). In Belgium, the inappropriate use of acute health care services for LTC needs is limited by the provision of financial incentives, Care coordination for home-care services is ensured by the "Centers for Coordination" and the "Integrated Home Care Services". Also, Houses for the Autonomy and Integration of Alzheimer Patients have been developed for coordination purposes. In Germany, under the Competition Enhancement Act, rehabilitation services have been promoted. Further measures include on-time provision of rehabilitation services, financial incentives, improved management and counselling. In Poland, the Ministry of Labour and Social Policy coordinates care support in the social assistance homes. In Sweden, municipalities are legally obliged to take care of "bed blockers" in acute and geriatric hospitals. When the medical treatment ends at the hospital, the municipality has to arrange necessary further care, for those needing it. In the United Kingdom, two of the main policies are "Intermediate care" and "re-ablement". Intermediate care can promote faster recovery. Re-ablement is defined as "Services for people with poor health to help them accommodate their illness by learning or re-learning the skills necessary for daily living". Services are coordinated at a national, regional and local level. At the national level, structures that enable partnerships of local authorities are put in place.

([192]) Based on OECD 2009-10 Questionnaire on Long-term Care Workforce and Financing (Table 10.3, Colombo et al, 2011).

Box 6.6.1: **Promising examples of prevention, promotion and rehabilitation (European Commission, 2013)**

Prevention: The UK Department for Work and Pensions (DWP) put in place the LinkAge Plus programme, a scheme worth £ 10 million to improve the wellbeing of older people through promoting stronger partnership, better information and access to services, and putting older people at the forefront of service design and delivery. The LinkAge Plus principles can be replicated in a variety of contexts. Case studies demonstrate the potential of the approach and a business case has been developed ([1]), Taking falls as an example, on average, a fall resulting in a hip fracture costs around £ 20 000 to the taxpayer. Evidence suggests that 15 weeks of balance classes reduces the likelihood of a participant falling by around 50 per cent. This illustrative example suggests that each £ 1 spent on balance classes by the taxpayer in LinkAge Plus areas could yield health and social care savings of £ 1.35 plus benefits to the individual of around £0.90, from improved longevity and quality of life. Combining the costs and benefits of these services with a holistic approach to service delivery increases the net present value in the example to £ 2.65 per £ 1 invested.

Promotion: Based on existing successful experiences over the last decade, the UK NHS created in 2011 the New Medicine Services ([2]) (NMS, October 2011 until March 2013) to provide early support to long-term care patients, to avoid inappropriate medication and to maximise positive benefits to clients. The evidence suggests that the NMS will deliver net benefits of at least £ 210 million (discounted) in the worst-case scenario (i.e. highest cost and lowest benefit) over a 10-year period. This is purely in cash terms, and does not consider the potential wider health and economic benefits of the NMS, or the notion that £ 1 saved from a health intervention is worth £ 2.40. In the central scenario, net benefits are estimated at £ 1.5 billion (discounted) over a 10-year period.

([1]) Watt P. and Blair I. (2009).
([2]) Introduction of the New Medicine Service (2011), Department of Health, Impact Assessment 5101, from http://www.legislation.gov.uk.

Rehabilitation: In Germany, CARITAS Bremen ([3]) has developed a rehabilitative approach as part of a programme that aims to support people moving back home, with the help of a 'bridging person' ('Pflegeüberleitungsperson'). An innovative integrated care contract provides extended rehabilitative training, e.g. after acute hospital admission, to restore the mobility of older people and help them regain their autonomy and better cope with disabilities. The care unit is located in a care home, close to the department of physiotherapy, logo-therapy and occupational therapy. Following the programme, home care is available for up to seven days after discharge.

Another example from Germany is the incentives for providing rehabilitation. Prior to the 2008 Long-term Care Further Development Act in Germany, providers and sickness funds faced disincentives to finance rehabilitation, because successful rehabilitation resulted in reduction in reimbursements. The 2008 reform introduced a financial incentive if a resident is transferred from a nursing home to a lower level of care setting, as a result of rehabilitation. Also, fines were introduced, if sickness funds did not provide rehabilitation services, although this was recommended by a medical review board (Rothgang, 2010).

([3]) Kümpers S, et al., (2010) Prevention and rehabilitation within long-term care across Europe, European Overview Paper.

Disease prevention, health promotion and rehabilitation are key aspects of integrated care. One way to reduce cost in LTC is to prevent dependency. The levels and cross-country variations in self-reported dependency rates (See Section 5.3) suggest considerable scope for fostering healthy and active ageing. Prevention and promotion are preferable to acute and reactive

Table 6.6.1: **Country-specific challenges for ensuring coordination and continuity of care**

	Ensuring coordination and continuity of care	Establish better co-ordination of care pathways and along the care continuum	Facilitate appropriate utilisation across health and long-term care	Arrange for adequate supply of services and support outside hospitals	Improve safe care pathways and information delivered to patients	Steer LTC users towards appropriate settings	
BE	**x**	x	x		x	x	**BE**
BG	**x**	x	x	x		x	**BG**
CZ			x	x		x	**CZ**
DK	**x**	x					**DK**
DE	**x**	x	x		x		**DE**
EE	**x**	x	x			x	**EE**
IE			x	x	x	x	**IE**
EL			x	x			**EL**
ES	**x**	x	x		x	x	**ES**
FR	**x**	x	x			x	**FR**
HR			x	x		x	**HR**
IT	**x**	x	x	x	x	x	**IT**
CY	**x**	x	x			x	**CY**
LV	**x**	x	x		x	x	**LV**
LT	**x**	x	x	x		x	**LT**
LU			x	x			**LU**
HU	**x**	x	x		x	x	**HU**
MT	**x**	x					**MT**
NL	**x**	x					**NL**
AT			x	x			**AT**
PL	**x**	x	x			x	**PL**
PT	**x**	x	x	x	x	x	**PT**
RO	**x**	x	x	x	x	x	**RO**
SI	**x**	x	x			x	**SI**
SK			x	x		x	**SK**
FI	**x**	x	x	x	x	x	**FI**
SE	**x**	x	x	x	x	x	**SE**
UK	**x**	x	x	x	x	x	**UK**
EU	**21**	21	25	15	12	21	**EU**
EA	**14**	14	17	9	8	13	**EA**
EU15	**11**	11	13	9	9	9	**EU15**
EU13	**10**	10	12	6	3	12	**EU13**

(1) Based on challenges as identified in the country documents to this report. For each sub-category, challenges differ by country ranging from the improvement of a tool (or practice) to its introduction. Full details are available within each country's section on challenges.
(2) The first category ((Encuring coordination) is signalling a challenge if any of the sub-categories flag a challenge.
Source: Commission services (DG ECFIN).

care, enabling the individual to stay healthy for longer, potentially bringing also financial savings (Box 6.6.1).

Summarising, as disintegrated LTC systems have to deal with several inefficiencies, leading to sub-optimal outcomes and higher costs, the coordination and integration of LTC into health

care and social care deserves considerable policy attention. For most EU Member States there is scope to improve integration of care. Policies should aim at:

- **Ensuring coordination and continuity of care**, by establishing better coordination of care pathways and a care continuum, such as through a single point of access to information, the allocation of care coordination responsibilities to providers or care managers, via dedicated governance structures for care coordination. At least 20 EU countries have a potential to improve on this specific aspect.

- **Facilitating appropriate care utilisation across health and long-term care.** This could be done by arranging an adequate supply of services and support outside hospitals (in at least half of the Member States); creating better rules, improving care pathways and information delivered (in at least 12 EU Member States); steering LTC users towards appropriate settings (in at least 21 Member States).

- **Strengthen the governance of LTC systems.** Good governance is a precondition for enabling care integration and setting the right incentives for patients, payers and providers along the care continuum. As shown in Section 6.8, most EU countries could benefit from improved LTC governance structures.

Rehabilitation can also be cost-effective in long-term care and thus create cost savings. In some Member States, rehabilitation is clearly identified as a specific service (e.g. Germany), whereas in others (e.g. England, Denmark, Sweden and the Netherlands) it is an integrated part of comprehensive programmes of health care and health promotion (European Commission, 2013). Until now, it is still unclear which interventions provide good value-for-money and are cost-effective, which is a limit to the implementation of these types of measures in LTC systems (Oxley, 2009a). Countries should invest in evaluating the most promising initiatives targeting health promotion.

6.7. CHANGING PAYMENT INCENTIVES FOR PROVIDERS

The payment systems for home care workers and institutional providers have similar incentive implications as those for health care workers and hospitals (discussed in Section 3.8). Therefore the policy options discussed in this section draw from Section 4.11, adjusted to reflect the specific characteristics of LTC (drawing as well from R. Busse and N. Mays, 2008, European Observatory on Health systems and Policies (2008) and OECD 2011b). It should be noted that this list of measures is intended as a menu of possible policy options from which Member States can choose to improve the incentive structures of LTC providers. Which measure or combination of measures to implement remains a policy choice for the Member State.

Traditional payment methods for care workers make their incentive structure non-optimal. Care workers have been traditionally paid in a number of ways, but each method has drawbacks in terms of implied incentive structure.

- **Payment through salaries can lead to low-quality care.** A salary provides a guaranteed income for a period of time and is relatively common for paying LTC workers. This provides no particular incentive to over- or under-provide, but at the same time provides no incentives to provide high-quality care.

- **Capitation can lead to under-provision of services.** Capitation (paying per patient, irrespective of the volume of services provided to patients) provides incentives to provide as few units of service as possible per patient, to register more patients and avoid complex cases. On the other hand, the workers will have incentives to stay within their budget and, if combined with choice for recipients (as it often is the case), there may be incentives to maintain a certain level of quality.

- **Fee for service can lead to over-provision of care.** Fee for service (paying for each unit of service provided) provides incentives for the worker to provide as many units of service as possible, in some case to the detriment of more cost-effective care. On the other hand, the worker will not be incentivised to avoid difficult cases or to lower the quality of treatment.

Payment methods for institutional providers tend to be similar to those of acute care hospitals (who also provide some LTC on occasion). Providers can be paid through different systems, creating different incentive structures:

- **Per-diem payments incentivise institutionalisation.** If the per diem price is uniform across all patients, providers are incentivised to provide care to less expensive patients or to keep expensive patients in longer than necessary in order to recover their costs.

- **Fee for service can lead to over-provision.** In this case, the provider receives a sum of money for each service provided to the recipient. This can lead to over-provision of services, although this system is not very common in LTC institutions.

- **Case fees can face the same short-comings as "fee for service", unless carefully designed.** Case fees, including payments according to "Diagnosis Related Groups", provide a different payment according to the type of condition. If adapted to consider the difficulty of each specific case, this methodology can be effective in ensuring that providers have incentives to tackle difficult cases, although it may still face some of the issues as "fee for service", such as over-provision of services.

- **Institutional "budgets"** have a similar incentive structure for institutions as salaries have for carers.

Remuneration for care workers and institutional care providers needs to take into account their incentive structure.

Mixed remuneration methods can be a way of aligning the incentive structure with the public interest. This can be achieved through methods that combine several payment modes to overcome the perverse incentives linked to each individual method.

Adjusted remuneration methods can be used to address the perverse incentives implicit in a single remuneration method. Specific features can be added to each of the methods to overcome their specific weaknesses:

Table 6.7.1: **Country-specific challenges for improving financing arrangements for long-term care**

	Changing payment incentives for providers:	To adapt provider payments for LTC away from the basis of salary	To consider fee-for-service to pay LTC workers in home-care settings and capitation payments;	To consider a focused use of budgets negotiated ex-ante or based on a pre-fixed share of high-need users	
BE					BE
BG					BG
CZ					CZ
DK					DK
DE					DE
EE					EE
IE					IE
EL					EL
ES	x			x	ES
FR	x			x	FR
HR					HR
IT					IT
CY					CY
LV	x			x	LV
LT					LT
LU	x	x		x	LU
HU					HU
MT					MT
NL					NL
AT	x			x	AT
PL					PL
PT	x		x	x	PT
RO					RO
SI	x			x	SI
SK					SK
FI	x	x	x	x	FI
SE	x		x	x	SE
UK					UK
EU	9	2	3	9	EU
EA	8	2	2	8	EA
EU15	7	2	3	7	EU15
EU13	2	0	0	2	EU13

(1) Based on challenges as identified in the country documents to this report. For each sub-category, challenges differ by country ranging from the improvement of a tool (or practice) to its introduction. Full details are available within each country's section on challenges.
(2) The first category (Changing payment incentives) is signalling a challenge if any of the sub-categories flag a challenge.
Source: Commission services (DG ECFIN).

- Salaried providers can also receive incentive payments to encourage output and productivity by treating a number of patients or providing timely treatment.

- Capitation can be coupled with incentives to provide high-quality services.

- For an institution, fee-for-service can be combined with incentives to keep the overall budget under control or assessment procedures that ascertain the level of need of the recipient and cap the amount of care the user will be provided with. It may also be necessary to adjust fees to prevent providers from focusing on lower-need users.

- The use of budgets can be optimised by negotiating the budget ex-ante or by requiring that the institution treats a pre-fixed share of high-need users.

Finally, new payment mechanisms such as pay-for-performance schemes (P4P) that link payments to quality and efficiency can be used to circumvent the shortcomings of traditional remuneration mechanisms, but they need to be carefully designed. P4P mechanisms are used in health care, but are less frequent in LTC. There is evidence that they can have a positive impact, but need to be carefully designed to avoid the improvement in quality and efficiency indicators being offset by worse performance in non-

observed aspects of care, self-reporting issues or admission of users that are likely to lead to good performance ratings.

6.8. IMPROVING GOVERNANCE AND ADMINISTRATIVE EFFICIENCY

Governance primarily defines the way in which the system ultimately determines whether or not and how efficiently the system goals are achieved. Governance determines how services should be funded and to what extent. It also defines who is eligible for publicly funded care, how public accountability is regulated and how quality is defined and ensured. Governance of LTC is closely related with social and health care and is under the responsibility of different ministries and government levels, being generally much more decentralised than health care. Good governance is a prerequisite for efficiency and cost containment (see also Section 4.10).

In long-term care, countries have set up governance responsibilities at the national, regional and municipality level. Some countries already have or are going towards a more decentralised structure, like Finland. Governments at different levels are dealing with planning, strategy, regulation, implementation and management of eligibility and provision of care. Often, different government levels fulfil different functions. At national level, general LTC legislation may be defined with respect to the rights for public LTC provision, while the funding, provision and regulation of LTC may be left to the regional and local level. Local and regional government levels are often bound by central constraints, but the central coordination role may be limited depending on the resources and ability of the central steering authority. National frameworks exist for LTC and social care, defining standards of eligibility for the regional and local level, in countries such as Austria, England, Finland and France. Responsibilities for raising funds for LTC differ across countries, with the Nordic countries putting this task largely to the local level. Monitoring and ensuring quality of care is positioned at regional/local level in some countries (such as Austria and Spain), while quality systems are developed at national level but implemented at a local level in others (such as Finland and Sweden).

Coordination problems in governance arise because LTC and health care are not necessarily dealt within the same ministry, even when being at the same government level. Also, in LTC the housing and income conditions are taken into consideration, which is not the case, to the same extent at least, in health care, further complicating coordination. Additional stakeholders are also involved, such as insurance funds (like in Austria and Germany), posing an additional layer of complexity in planning and coordination.

Within countries various aspects of governance are executed by various stakeholders at various levels of government. This can negatively impact on administrative efficiency. Even more importantly, this means that collaboration between health care professionals and LTC professionals can be hampered, leading to lower quality of care and lower health outcomes. It also hinders the integration of services between the health care, long-term care and social care domain. A classic example is hospital discharge, which may be sped up to shift costs to LTC and social care providers to the detriment of additional costs for payers, as well as lower health outcomes.

There are different trends in governance of LTC, such as decentralization, promotion of integration of care and reliance on informal carers. Decentralisation has been advocated on grounds of better integration between the health care and LTC domain, achieving greater LTC cost-efficiency and being closer to the patients. However, the disadvantage may be emerging inequities in access to care. Integration focuses on the gaps in interfaces between LTC and health care (see Section 6.6). Also, there is a continued trend to rely on informal carers, which basically implies that the core governance of LTC is based upon the users and providers of care, with a minimal legal LTC framework. For these countries, the level of public LTC spending is very low, while a high economic and financial burden is placed on users and carers.

Most EU Member States seem to consider that the governance framework for LTC could be improved (Table 6.8.1). Only France does not identify governance as an acute policy challenge. Improving governance can be done via the following policy reforms ([193]):

([193]) This list of measures is intended as a menu of possible policy options from which Member States can choose to improve the governance of their LTC systems. Which measure or combination of measures to implement remains a policy choice for the Member State.

Table 6.8.1: **Country-specific challenges for improving the governance framework for long-term care**

	Improving the governance framework:	Establish a coherent and integrated legal and governance framework	Strategically integrate medical and social services via a legal framework	Set the public and private financing mix and organise formal workforce supply	Establish good information platforms	Aet guidelines to steer decision-making	Use care planning processes	Share data within government administrations	Deal with cost-shifting incentives across health and care	Improve administrative efficiency	
BE	x	x		x			x			x	**BE**
BG	x		x	x	x		x		x		**BG**
CZ	x	x	x	x	x			x	x		**CZ**
DK	x				x		x				**DK**
DE	x				x						**DE**
EE	x		x	x			x	x	x		**EE**
IE	x		x				x				**IE**
EL	x	x		x	x			x	x	x	**EL**
ES	x	x	x	x	x	x		x			**ES**
FR											**FR**
HR	x	x		x			x				**HR**
IT	x	x		x	x				x	x	**IT**
CY	x		x	x	x			x			**CY**
LV	x	x		x	x	x	x	x	x		**LV**
LT	x	x		x			x	x	x		**LT**
LU	x		x		x						**LU**
HU	x	x		x		x	x	x	x		**HU**
MT	x	x	x	x	x						**MT**
NL	x	x						x	x	x	**NL**
AT	x	x		x	x			x			**AT**
PL	x	x	x	x	x			x	x		**PL**
PT	x	x		x	x		x	x	x	x	**PT**
RO	x	x	x	x	x	x	x	x	x		**RO**
SI	x	x	x	x	x			x		x	**SI**
SK	x	x	x	x	x						**SK**
FI	x	x	x	x			x		x		**FI**
SE	x		x	x					x		**SE**
UK	x			x	x		x	x	x		**UK**
EU	**27**	18	14	22	18	4	13	15	15	6	**EU**
EA	**18**	13	9	14	12	2	7	10	8	6	**EA**
EU15	**14**	8	5	9	9	1	6	6	7	5	**EU15**
EU13	**13**	10	9	13	9	3	7	9	8	1	**EU13**

(1) Based on challenges as identified in the country documents to this report. For each sub-category, challenges differ by country ranging from the improvement of a tool (or practice) to its introduction. Full details are available within each country's section on challenges.
(2) The first category (Improving the governance framework) is signalling a challenge if any of the sub-categories flag a challenge.
Source: Commission services (DG ECFIN).

- **Establish a coherent and integrated legal and governance framework for a clear delineation of responsibilities of state authorities for the provision of LTC services**. This is likely to be a core precondition for a sustainable LTC system. However, it is still perceived as a challenge by half of the EU15 countries and 10 of the EU13 countries. Improving the legal framework for LTC is thus a key policy priority in the EU.

- **Strategically integrate medical and social services via a legal framework.** As a component of the overall legal framework of LTC, gaps in integration and the associated efficiency losses are an issue in many EU Member States. They are perceived as a particular policy challenge in 9 of the EU15 and all of the EU13 countries. Thus, particularly countries with currently low funding and formal provision of LTC should act on providing an adequate legal framework for integrating care. This also includes the definition of a comprehensive approach, covering policies for informal (family and friends) carers, as well as policies for the formal provision of LTC services and their financing.

- **Set the public and private financing mix and organise formal workforce supply to face the growing number of dependents.** Financing and workforce supply are key aspects of the governance and sustainability of LTC systems. However, at the current moment, half of the EU28 countries still perceive these aspects as acute policy challenges.

- **Establish good information platforms for LTC users and providers.** This can also mean providing a single point of access to users. Regardless of the complexity of governance arrangements of LTC, a clear access point for users could improve administrative efficiency, clarify governance responsibilities for each stakeholder and lead ultimately to efficiency gains and cost containment. The built-up of adequate information platforms is needed in half of the EU15 and 9 of the EU13 countries.

- **Set guidelines to steer decision-making at local level or by practising providers.** The lack of guidelines is hampering the cost-effective treatment of users, due to unclear responsibilities, also in terms of the interface between health care and LTC. This is currently perceived as an acute policy challenge only in a minority of EU countries.

- **Use care planning processes.** Care planning processes facilitate appropriate targeting of resources; contribute to cost-effectiveness and ultimately cost-containment. Care planning processes should be based on individualised need assessments, involving health and social care providers and linking need assessment to resource allocation. Care planning processes could potentially be improved in at least half of the EU28 countries.

- **Share data within government administrations and improve administrative efficiency.** Coordination and administrative inefficiencies are also linked to lack of data sharing. Data sharing could facilitate the management of potential interactions between LTC financing, targeted personal-income tax measures and existing social-assistance or housing subsidy programmes. Improved data sharing within the government administration is perceived as a policy option in half of all EU Member States.

- **Deal with cost-shifting incentives across health care and LTC.** Improving governance in terms of financing and clarifying responsibilities of providers at the interface between health care and LTC should reduce incentives to shift the patient across different providers and contribute positively to the cost-effectiveness of care. Cost-shifting is perceived as a challenge in half of the EU28 countries.

6.9. ENSURING GOOD BUDGETING PRACTICES

Sound budgeting practices are an important component to ensure the fiscal sustainability and efficiency of long-term care spending. As in the corresponding Section 4.3 for health care, this section discusses options for improvement of budgetary processes for long-term care expenditure. The results are qualitatively similar to the section on health care.

Many EU Member States use only a subset of available budgeting tools. Increasing the wider use of specific budgetary tools could be beneficial to support the attainment of specific goals of long-term care systems. This applies to planning and monitoring tools, budgetary constraints, tools aiming at the quality of long-term care spending, tools dealing with unexpected increases in long-term care expenditure, and tools defining the financing mix. Table 6.9.1summarises which tools are not used in each EU country. A specific cell is flagged, if one of the tools in a specific category is not used by the responsible budgetary authority. For instance, out of the budgetary tools (Use of performance based budgeting and spending reviews), Bulgaria reports not using spending reviews, and is thus flagged. On this basis, the following policy options seem warranted:

- **Introducing a wider spectrum of budgetary planning tools for long-term care**. Budgetary planning is a core element of sound budgetary processes, and should, as a norm, include also revenue forecasts (which is not the case in BE, CZ, IE, HR, CY, LV and SK).

- **Using performance-based budgeting and spending reviews for improving the quality of long-term care spending.** These tools could be used in more EU Member States. In fact, only a minority of EU countries use both tools (FR, HR, LT, HU and AT), while other countries are using either one or none of those (CZ, IT, CY, PL, RO and SK).

- **Introducing budget buffers, early-warning mechanisms and/or automatic stabilisers for exerting more control on potential long-term care budget overruns.** While using already one of the tools may considerable inform policy makers about potential fiscal risks, enabling them to take early remedial action, using none of the tools leaves policy makers with little information, and may trigger a higher need for short-term cuts in spending, which may not be efficiency enhancing. Reportedly, on the one extreme only CZ, DE, LV, SK and FI do not use any of those tools. On the other hand, only Cyprus and Luxembourg report using all of these tools. Thus, for most EU countries there is an untapped potential to improve budgetary mechanisms to safeguard spending levels by introducing budget buffers and to enable policy makers taking more informed decisions on budgetary reallocations, if needed and warranted ([194]).

- **Improving the financing mix.** Reportedly, most of the EU Member States do not seek to improve the financing mix for long-term care. It seems that the potential for increasing the fiscal sustainability of LTC spending is could be increased by activating financing policies, such as exploring ways for fostering predictable public financing of LTC expenditure, explore ways to better target public funding, increasing the forward-looking time frame for LTC financing schemes, and considering tax-broadening.

- **Introducing spending targets and/or ceilings on long-term care.** Most EU Member States report having introduced either a budgetary target or ceiling. Over time, more countries have applied budget ceilings or targets for expenditure on health and these ceilings have become more and more binding over time. This is because soft budget constraints on the level of health systems have partly contributed to the rise of health care spending. Overall, budget controls are perceived as having positive impact on cost containment. The CZ, DE, ES, RO, FI and the UK could potentially enhance the fiscal sustainability of long-term care spending by introducing spending targets and/or ceilings.

([194]) This list of measures is intended as a menu of possible policy options from which Member States can choose to improve the budgeting of their LTC systems. Which measure or combination of measures to implement remains a policy choice for the Member State.

Table 6.9.1: **Country-specific options for ensuring good budgeting practices in long-term care**

	Introduce expenditure/revenue forecasts and/or multiannual budgeting	Use of performance based budgeting and spending reviews	Introduce budget buffers, early warning mechanisms and/or automatic stabilizers	Seek to improve the financing mix	Introduce budget target/ceiling	
BE	x	x	x	x		**BE**
BG		x	x			**BG**
CZ	x	x	x	x	x	**CZ**
DK		x	x	x		**DK**
DE		x	x	x	x	**DE**
EE		x	x	x		**EE**
IE	x	x	x	x		**IE**
EL		x	x	x		**EL**
ES	x	x	x	x	x	**ES**
FR			x			**FR**
HR	x		x	x		**HR**
IT		x	x	x		**IT**
CY	x	x		x		**CY**
LV	x	x	x	x		**LV**
LT			x	x		**LT**
LU		x				**LU**
HU	x		x	x		**HU**
MT	x	x	x	x		**MT**
NL		x	x	x		**NL**
AT			x	x		**AT**
PL		x	x	x		**PL**
PT	x	x	x	x		**PT**
RO	x	x	x	x	x	**RO**
SI		x	x	x		**SI**
SK	x	x	x	x		**SK**
FI		x	x	x	x	**FI**
SE		x	x	x		**SE**
UK		x	x	x	x	**UK**
EU	12	23	26	25	6	**EU**
EA	8	16	17	17	3	**EA**
EU15	4	13	14	13	4	**EU15**
EU13	8	10	12	12	2	**EU13**

(1) Based on country survey.
Source: Commission services (DG ECFIN).

7. CONCLUSION

Current historically high government debt levels and projected future increases in health care and long-term care spending, influenced by population ageing as well as non-demographic factors, make the fiscal sustainability of health systems a daunting policy challenge. Against a background of rising demand for health care and long-term care services, the need to increase the cost-effective provision of care, the resilience of health systems and their fiscal sustainability has been recognised as key to ensure that European health care and long-term care systems remain a central part of Europe's high levels of social protection, and universal and equitable access to good quality care.

At the current juncture, for many EU countries it simply appears unrealistic to expect that the financing gap can be closed by injecting more public money – be it through deficit financing or tax increases - to health care and long-term care systems. Fiscal responsibility needs to be exercised; any possible increase in public expenditure on health should always be linked with policies to eliminate inefficiencies.

Total spending on health care and long-term care absorbs a high share of total resources in the economy and constitutes a significant share of public expenditure in many EU countries. In view of the challenges ahead, expenditure growth needs to be thoroughly monitored and contained in countries, where this is the case. Yet, cutting costs across the board is not necessarily a desirable option. Blunt cost-cutting may improve public finances in the short-term, but risks harming the positive contribution of the health sector to European economies and societies in the longer run, as well as having the potential to negatively affect health. On the contrary, with foresighted policy making and timely reforms, the eventual need for short-term "acute" cost cutting operations could be avoided. Cost-cutting should be encouraged to the extent it serves the purpose of improving the value for money of the services and goods that the sector provides.

At the same time, expenditure increases should not be ruled out altogether *a priori*. Especially in countries with comparatively low access and quality of health care services, and where the need for additional public financing is becoming even more prevalent due to a rising share of the population in bad health and with disabilities, increasing expenditure may be the adequate policy response to meet the health needs of the population. Still, any increases in spending should be viewed in light of their long-term fiscal sustainability. Raising additional revenues, particularly via taxes, will become more of a challenge due to ageing populations. Thus, a prudential forward-looking policy is needed to see whether financing can be sustained also over the long-run.

While high health care spending levels are often associated with potential significant efficiency gains and moreover constrain the fiscal room for manoeuvre, ensuring sustainable health systems should not only look at the level of spending, but also the quality of spending. There is a range of good practices that lead to greater effectiveness and efficiency of health care and long-term care systems, such as related to governance, financing and purchasing arrangements that are used below their potential in many EU countries. Each country can and should learn from these best practices in order boost the sectors' efficiency, while generating savings to both public and private payers.

The report provides ample evidence that quality of spending on health care and long-term care can be improved in virtually all EU countries. For instance, the survey responses presented in this report show that many EU countries see potential to improve the quality of information about the value for money of investments in health care and long-term care systems. But also other causes are a concern to further investment and to the fiscal sustainability of the systems, such as competing fiscal pressures stemming from various ministries, changing policy priorities and also the reported existence of fraud or corruption. Decisive and comprehensive policy action is needed to tackle these concerns.

In addition, more frequent budget overruns on health care and long-term care spending are another important reason why government authorities may be cautious about the fiscal sustainability of health systems. Monitoring and controlling expenditure with specific budgetary tools, using to a wider extent performance-based

budgeting and spending reviews for improving the quality spending, introducing spending targets and spending ceilings, as well as budget buffers and early-warning mechanisms can give the fiscal and health authorities more steering tools to prevent blunt cost-costing that does not serve health system objectives.

Again, getting more value for money is key for ensuring the systems' access, quality and financial sustainability. By encouraging policies realising better value for money governments can achieve greater efficiency. A comprehensive approach aligning incentives among different actors in view to effectively achieve the objectives of health systems is needed. Policy makers have a wide range of tools for this purpose. Related to health care systems the main policy options are:

- Governance should be improved, including strengthening the cooperation between fiscal and health policy government authorities and employing a wide range of budgetary planning tools, performance–based planning and regular spending review, early-warning mechanisms and automatic stabilisers aiming at boosting efficiency and cost-control;

- Health-policy reforms should be assessed and evaluated ex-ante and ex-post in a systematic and formalised manner based on evidence;

- The financing mix should be continuously improved including by ensuring that benefits package are based on cost-effectiveness criteria whenever possible and that cost-sharing supports the containment of public spending, while preserving access;

- Workforce planning and tools should be used to actively manage the health workforce. Appropriate modulation of *numerus clausus* is needed to ensure that the inflow of new doctors is aligned with prospective needs. Remuneration, benefits, and working conditions can be adjusted and the regulations of professions can be reviewed in order to improve recruitment and retention in the health workforce, as well as to tackle the imbalance in specialities, including shortages of GPs. Special attention should be given to the nurse and midwife workforce, including possibility of broadening its role;

- Health systems should move away from the traditional hospital-centric model, by giving a stronger role to primary care in the care mix between primary and secondary and by fostering health promotion and disease prevention;

- The performance of primary care systems should be improved, their role of gatekeeping and referral strengthened and care should be integrated across the whole spectrum of health service provision, both within primary care and between the latter and other sectors;

- The sustainability of hospital care should be enhanced by improving financing arrangements, through combination of activity-based payments, global budgets and pay-for-performance schemes, and by reducing operational costs, also through extending the use of centralised public procurement, price transparency and strengthening the fight against corruption, fraud and misuse of public resources. Systematic monitoring, comparison of hospital performance and benchmarking is key to improving the sector's performance. Policies should be deployed to reduce the demand for unnecessary emergency care;

- Policies should strengthen the cost-effective use and the affordability of medicines, by promoting public procurement and the role of generics and biosimilars, appropriate pricing and price-control policies, promoting rational use of medicines and addressing the challenges posed by the regulation on IPRs, and by the incentives affecting the whole value-chain, from manufacturers to distributors. Enhanced ways of cross-country cooperation should be explored further and enhanced;

- Payment and purchasing mechanisms should be designed to promote efficiency within each sector and at the wider system level, Payments strategies should combine all available tools, salary, capitation and fee-for-service, building on their complementarity to reward and incentivise performance;

- Competition should be encouraged in the areas of pharmaceuticals and pharmacy distribution, of diagnostic services and of patients transportation to promote quality efficiency improvements, paired with a close monitoring of quality of services;

- The regulatory framework should be adjusted to support and strengthen efficiency incentives, including by promoting greater financial and managerial autonomy of providers, along with enhanced transparency and accountability;

- The generation and usage of health systems data should be fostered, to allow for comparing performance across services providers, as well as health outcomes within and across countries and as an essential tool to support governance. Countries should set up ITC and data management strategies to ensure transparency and appropriate use of data.

As part of health systems, LTC systems should provide recipients with adequate care that responds to their level of need and prevents them and their relatives from falling into financial deprivation due to the high financial burden of paying for care. With rapidly growing LTC needs, EU Member States need to prioritise the use of public LTC funds in order to ensure goals are met without endangering long-term fiscal sustainability.

The increasing need for care will have to be addressed through a mix of policies that have been analysed in this report. The main reform options are:

- Establish a coherent governance framework for a clear delineation of responsibilities of state authorities for the provision of LTC services, aiming at integrating medical and social services via a legal framework and improving administrative efficiency;

- Improve the financing of LTC expenditure in a fiscally sustainable way, increasing the forward-looking time frame for LTC financing schemes and incentivising pre-funding elements. Target public funding according to the recipient's needs ensuring that resources are directed at those that need care the most. Regularly review and update minimum-dependency thresholds and the design of means testing schemes;

- Ensure adequate numbers and qualification-mix of formal carers, by improving recruitment and retention policies and aligning payments to both care providers and workers with quality and efficiency of care provision;

- Support delivering LTC services at home rather than in institutional settings when appropriate, supporting care recipients to remain independent longer and allowing for the provision of informal care;

- Strengthen policies for health promotion and rehabilitation enabling the individual to stay healthy for longer, potentially bringing also financial savings;

- Support family carers for providing informal care through features such as cash benefits, allowances, specific rights, respite leave, counselling and information, while minimising any disincentives for their labour market participation;

- Ensure coordination and continuity of care, such as through a single point of access to information and the allocation of care coordination responsibilities to providers or care managers. Deal with cost-shifting incentives across health care and LTC.

GLOSSARY AND ABBREVIATIONS

MEMBER STATES

BE	Belgium
BG	Bulgaria
CZ	Czech Republic
DK	Denmark
DE	Germany
EE	Estonia
IE	Ireland
EL	Greece
ES	Spain
FR	France
HR	Croatia
IT	Italy
CY	Cyprus
LV	Latvia
LT	Lithuania
LU	Luxembourg
HU	Hungary
MT	Malta
NL	Netherlands
AT	Austria
PL	Poland
PT	Portugal
RO	Romania
SI	Slovenia
SK	Slovakia
FI	Finland
SE	Sweden
UK	United Kingdom

ABBREVIATIONS

AWG Ageing Working Group (of the EPC)

CTS Computed Tomography Scanners

COFOG Classification of expenditure according to the functions of government (EUROSTAT).

DG ECFIN Directorate General for Economic and Financial Affairs, European Commission

DG EMPL Directorate General for Employment, Social Affairs and Equal Opportunities, European Commission

DG ENTR Directorate General Enterprise and Industry, European Commission

DG SANTE Directorate General for Health and Food Safety, European Commission

DG COMP Directorate General Competition, European Commission

DRGs Diagnosis Related Groups

EA (Euro Area) Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, Spain

EC European Commission

EPC Economic Policy Committee

EU European Union

EU13 Bulgaria, Czech Republic, Estonia, Croatia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovenia, Slovakia

EU15 Belgium, Denmark, Germany, Ireland, Greece, Spain, France, Italy, Luxembourg, Netherlands, Austria, Portugal, Finland, Sweden, United Kingdom

EU28 All current EU Member States

EUROPOP EUROSTAT Population projections

EUROSTAT Directorate General for European Statistics, European Commission

EU-SILC European Survey on Income and Living Conditions

FFS Fee for Services

GDP Gross Domestic Product

GP General Practitioner

HC Health Care

HTA Health Technology Assessment

ICT Information and Communication Technology

LTC Long-term care

MRI Magnetic Resonance Imaging Units

NGO Non-governmental organisation

NHS National Health Service

OECD Organisation for Economic Co-operation and Development: www.oecd.org

OOP Out-of-Pocket (expenditure or payments)

PET Positron emission tomography scanner

pp/pps percentage point/percentage points

PPPs Purchasing Power Parities (PPPs).

PPS Purchasing Power Standards

SHA System of Health Accounts developed by the OECD to classify types of health expenditure

SPC Social Protection Committee

TCHE/CHE Total Current Health Expenditure/Current Health Expenditure

USA (or US) United States of America

VAT Value Added Tax

WHO World Health Organization: www.who.int

GLOSSARY

Current Health Expenditure According to the classification adopted in SHA 1.0, CHE includes the functions HC1-9 (Services of curative care (HC1), Services of rehabilitative care (HC2), Services of long-term nursing care (HC3), Ancillary services to health care (HC4), Medical goods dispensed to out-patients (HC5), Prevention and public health services (HC6), Health administration and health insurance (HC7), Not specified by kind (HC9)).

Cost-effectiveness This concerns a health care good and/or service and its cost in relation to its performance or output and to comparable alternatives. It is the extent to which the service has achieved or is expected to achieve its results at a lower cost compared with alternatives. Cost-effectiveness issues arise when the service is not the least-cost alternative or approach to achieving the same or similar outputs and outcome.

Cost-sharing This takes place when patients pay for a portion of health care costs not covered by health insurance. The out-of-pocket payment varies among healthcare plans and depends on whether or not the patient choice of healthcare provider, good or service.

eHealth The term eHealth refers to tools and services using information and communication technologies (ICTs) that can improve prevention, diagnosis, treatment, monitoring and management.

Earmarking An *earmark* is a legislative provision that directs approved funds to be spent on specific projects, or that directs specific exemptions from taxes or mandated fees.

EUnetHTA The EUnetHTA collaboration process was launched in 2008 and joins together government-appointed organisations from EU Member States, EEA and EFTA countries and a large number of relevant regional agencies and non-for-profit organisations that produce or contribute to HTA.

Fiscal sustainability Fiscal sustainability is generally meant as "solvency" of the public sector. In this sense, it can be broadly defined as a situation where fiscal policy can be maintained unchanged over the post-forecast horizon (without changes in public spending, nor taxation, that would affect the government primary balance), without causing public debt to rise continuously as a share of GDP. The concept of fiscal sustainability in use by the Commission services (DG ECFIN) has a broader meaning and includes an early-detection indicator of short-term risks of fiscal stress stemming from the fiscal and the macro-financial sides of the economy.

HiT Health Care Systems in Transition, European Observatory on Health Systems and Policies,

(http://www.euro.who.int/en/home/projects/observatory).

HIV/AIDS Human immunodeficiency virus /Acquired immune deficiency syndrome.

Health Technology Assessment This is a multi-disciplinary field of policy analysis that examines and summarises information about the medical, economic, social and ethical implications related to the use of a health technology in a systematic, transparent, unbiased, robust manner. Its aim is to inform the formulation of safe, effective health policies that are patient focused and seek to achieve best value for money.

Impact assessment Impact assessment is about gathering and analysing evidence to support policy making and is represented by the process of identifying the future consequences of a current or proposed action. It is used to ensure that projects, programmes and policies are economically viable, socially equitable and environmentally sustainable.

Integrated care Integrated care, also known as integrated health or coordinated care, is a worldwide trend in health care reforms and new organisational arrangements focusing on more coordinated and integrated forms of care provision.

Out-of-Pocket expenditure (or payments) This definition comprises cost-sharing, self-medication and other expenditure paid directly by private households, irrespective of whether the contact with the health care system was established on referral or on the patient's own initiative.

Purchasing Power Parities (PPP) A PPP is defined as the ratio of the price of a bundle of products between two countries, with prices expressed in each country's own currency.

Purchasing Power Standard (PPS) The purchasing power standard, abbreviated as PPS, is an artificial currency unit. Theoretically, one PPS can buy the same amount of goods and services in each country. The volume index of GDP per capita in Purchasing Power Standards (PPS) is intended for cross-country comparisons rather than for temporal comparisons. GDP per capita when expressed in PPS eliminates the differences in price levels between countries allowing meaningful volume comparisons of GDP between countries. Expressed in relation to the European Union (EU28 = 100), a country with an index that is higher than 100 mean that this country's level of GDP per head is higher than the EU average.

Private expenditure Private expenditure refers both to out-of-pocket and private health insurance expenditure.

Public health Public health refers to "the science and art of preventing disease, prolonging life and promoting health through organised efforts and informed choices of society, organisations, public and private, communities and individuals".

Public expenditure The term public expenditure used defined in this report includes both expenditure by the government, financed through taxation as well as expenditure by insurance bodies or companies, financed through contributions by citizens enrolled in compulsory insurance programs.

REFERENCES

Acemoglu, D., Finkelstein, A. and Notowidigdo, M. J., (2013), 'Income and Health Spending: Evidence from Oil Price Shocks', The Review of Economics and Statistics, October 2013, Vol. 95, No 4, pp. 1079-1095.

ASISP (2014), Various authors, Country Documents, Pensions, health and long-term care Update 2014.

Azizi, K. and Pereira, C. (2005), 'Comparaison internationale des dépenses de santé: une analyse des évolutions dans sept pays, 1970-2002', DREES, Dossier Solidarité et Santé, Vol.1.

Berchet, C. (2015), 'Emergency Care Services: Trends, Drivers and Interventions to Manage the Demand', OECD Health Working Papers, No. 83, OECD Publishing, Paris (http://dx.doi.org/10.1787/5jrts344crns-en).

Carone, G., Schwierz, C., Xavier, A. (2012), 'Cost-containment policies in public pharmaceutical spending in the EU', European Economy, Economic Paper No 461, European Commission, Brussels.

Charalampos, E., Kaitelidou D., Katsikas D., Siskou O., Zafiropoulou M. (2014), 'Impacts of the economic crisis on access to healthcare services in Greece with a focus on the vulnerable groups of the population', Social Cohesion and Development Vol. 9 (2), pp. 99-115 (http://www.epeksa.gr/assets/variousFiles/file_1.Economou-Kaitelidou.pdf).

Clegg, A. et al. (2013), 'Frailty in elderly people', The Lancet , Vol. 381, Issue 9868 , pp. 752–762.

Clemens, T. et al. (2014), 'European hospital reforms in times of crisis: Aligning cost containment needs with plans for structural redesign?', Health Policy, Vol. 117, pp. 6–14.

Codagnone, C and Lupiañez-Villanueva, F. (2011), 'A composite index for the benchmarking of eHealth Deployment in European acute Hospitals - Distilling reality in manageable form for evidence based policy', JRC Scientific and Technical Reports, European Commission - Joint Research Centre Institute for Prospective Technological Studies, JRC 64994 (http://ftp.jrc.es/EURdoc/JRC64994.pdf).

Colombo, F. et al. (2011), 'Help Wanted? Providing and Paying for Long-Term Care', Health at a Glance 2015, OECD Publishing, Paris.

Cutler, D., Deaton, A. and Llerar-Muney, A. (2006), 'The determinants of mortality'. Journal of Economic Perspectives, Vol. 20, pp. 97–120.

Cutler D. (1995), 'Technology, Health Costs and the NIH', Cambridge MA: Harvard University and NBER, September.

Cylus, J., Irene Papanicolas, I. (2015), 'An analysis of perceived access to health care in Europe: How universal is universal coverage?' Health Policy Vol. 119, pp. 1133–1144.

Duran, A. and Saltman, R. (2015), 'Governing Public Hospitals', The Palgrave International Handbook of Healthcare Policy and Governance, edited by Kuhlmann, E., Blank, R., Bourgeault, I., Wendt, C., Palgrave Macmillian; pp. 443-461.

Expert Panel on effective ways of investing in Health (EXPH) (2015), 'Report on Investigating policy options regarding competition among providers of health care services in EU Member States'.

Expert Panel on effective ways of investing in Health (EXPH) (2016a), 'Memorandum: Advice on hospital reforms' (forthcoming).

Expert Panel on effective ways of investing in Health (EXPH) (2016b), 'Access to health services in the European Union' (http://ec.europa.eu/health/expert_panel/opinions/docs/010_access_healthcare_en.pdf).

European Commission (2010), 'Analysis: National fiscal frameworks' (Part II, chapter 3 of the Report on "Public finances in EMU – 2010", pp. 98ff.) (http://ec.europa.eu/economy_finance/db_indicators/fiscal_governance/documents/analysis_national_fiscal_frameworks_pfr_2010.pdf).

European Commission (2013), 'Long-term care in ageing societies - Challenges and policy options', Commission Staff Working Document, accompanying the document: Communication from the Commission to the European Parliament, The Council, The European Economic And Social Committee And The Committee Of The Regions,

SWD(2013) 41 final (http://ec.europa.eu/social/BlobServlet?docId=9769&langId=en).

European Commission (2013b), 'Study on Corruption in the Healthcare Sector' HOME/2011/ISEC/PR/047-A2 October 2013. (http://ec.europa.eu/dgs/home-affairs/what-is-new/news/news/docs/20131219_study_on_corruption_in_the_healthcare_sector_en.pdf).

European Commission (2013c), 'Corruption Report', Special Eurobarometer 397 (http://ec.europa.eu/public_opinion/archives/ebs/ebs_397_en.pdf).

European Commission and Social Protection Committee (2014), 'Adequate social protection for long-term care needs in an ageing society. Report jointly prepared by the Social Protection Committee and the European Commission', Brussels.

European Commission (2015), 'Fiscal Sustainability Report 2015', Institutional Paper 018 (http://ec.europa.eu/economy_finance/publications/eeip/pdf/ip018_en.pdf).

European Commission (DG ECFIN)-EPC (AWG) (2015b), 'The 2015 Ageing Report – Economic and budgetary projections for the 28 EU Member States (2013-2060)', European Economy 3, Brussels (http://ec.europa.eu/economy_finance/publications/european_economy/2015/pdf/ee3_en.pdf).

European Commission (2015c), 'Comparative efficiency of health systems, corrected for selected lifestyle factors', Final report MACELI: (http://ec.europa.eu/health/systems_performance_assessment/docs/2015_maceli_report_en.pdf).

European Commission (2016), 'SO WHAT? Strategies across Europe to assess quality of care', Report by the Expert Group on Health Systems Performance Assessment (http://ec.europa.eu/health/systems_performance_assessment/docs/sowhat_en.pdf).

European Council (2006), 'Council Conclusions on Common values and principles in European Union Health Systems' (2006/C 146/01) (http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52006XG0622(01)&from=EN).

European Observatory on Health systems and Policies (2008), 'Caring for people with chronic conditions. A health systems perspective.' Edited by Nolte, E. and McKee, M., McGraw Hill.

European Union (2012), 'Consolidated version of the Treaty on the Functioning of the European Union - Part Three: Union Policies And Internal Actions '- Title Xiv: Public Health - Article 168 (ex Article 152 TEC). (http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:12008E168:EN:HTML).

Fukushima, N. et al. (2010), 'The Long-Term Care System for the elderly in Sweden', ENEPRI Research Report No 89.

García-Goñi, M. et al. (2012), 'Pathways towards chronic care-focused healthcare systems: evidence from Spain', Health Policy, Vol. 108, pp. 236–45.

García-Goñi, M. et al. (2016), 'Pathways Towards Health Care Systems with a Chronic-Care Focus: Beyond the Four Walls', Boundaryless Hospital,, edited by Albach. H. et al., Springer.

Getzen T. (2000), 'Health care is an individual necessity and a national luxury: applying multilevel decision models to the analysis of health care expenditure' Journal of Health Economics, Vol. 19, pp. 259-270.

Giannelli, G. et al. (2010), 'GDP and the value of Family Caretaking: How much does Europe care?' (http://ftp.iza.org/dp5046.pdf).

Health Powerhouse (2015), '2015 Euro Health Consumer Index' (http://www.healthpowerhouse.com/files/EHCI_2015/EHCI_2015_report.pdf).

IMS (2014), 'Global Outlook for Medicines Through 2018', IMS Institute for Healthcare Informatics.

IMS (2015), 'The Role of Generic Medicines in Sustaining Healthcare Systems: A European Perspective', IMS Institute for Healthcare Informatics.

Jenker, E. and Leive, A. (2010), 'Health Care Spending Issues in Advanced Economiesi, IMF, Technical Notes and Manuals No 2010/16.

Joumard I., André C., and Nicq C. (2010), 'Health care systems: Efficiency and institutions', OECD Economics Department Working Papers No 769.

Kraus M. et al (2010), 'ANCIEN, A Typology of Long-Term Care Systems in Europe', ENEPRI Research Report No 91.

Lai, T., Habicht, T., Kahur, K., Reinap, M., Kiivet R, van Ginneken, E. (2013), 'Estonia: health system review'. Health Systems in Transition, Vol. 15(6), pp. 1–196.

Lichtenberg, F. (2010), 'The Contribution of Pharmaceutical Innovation to Longevity Growth in Germany and France', CESIFO Working Paper No 3095.

Luijben, AHP et al (2015), 'Mobilising The Potential Of Active Ageing In Europe. Trends in Healthy Life Expectancy and Health Indicators Among Older People in 27 EU Countries', accessed from: http://mopact.group.shef.ac.uk/wp-content/uploads/2013/10/D5.1-Health-Well-being-Trends-in-HLE.pdf

Määttänen, N. and Salminen, T. (2014) 'Informal vs. formal care: economic incentives and fiscal Implications', WP8 Quantitative Report.

Maisonneuve, C. et al. (2016), 'The drivers of public health spending: Integrating policies and institutions' Economics Department Working Papers No. 1283, ECO/WKP(2016)7, OECD: (http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ECO/WKP(2016)7&docLanguage=En).

Maisonneuve, C. and Martins, J. O. (2013), 'Public spending on health and long-term care: a new set of projections', OECD Economic Policy Papers.

Medeiros, J. and C. Schwierz (2015) 'Efficiency estimates of health care systems', European Economy, Economic Papers No 549, European Commission, Brussels.

Mulcahy, A. W., Zachary, P. and S. Mattke (2014), 'The Cost Savings Potential of Biosimilar Drugs in the United States', Rand Perspectives, Document PE-127-SANI.

Newhouse, J. (1992), 'Medical care costs: how much welfare loss?', Journal of Economic Perspectives Vol. 6(3), pp. 3-21.

Nolte, E., Pitchforth, E., Miani, C. and Mc Hugh, S., (2014), 'The changing hospital landscape - An exploration of international experiences', RAND Corporation, Research Reports 728-DH: (http://www.rand.org/content/dam/rand/pubs/research_reports/RR700/RR728/RAND_RR728.pdf).

OECD (2011), 'Health reform: meeting the challenge of ageing and multiple morbidities'. (http://www.oecd.org/els/health-systems/49151107.pdf).

OECD (2011b), 'Help wanted'. (http://ec.europa.eu/health/reports/docs/oecd_helpwanted_en.pdf).

OECD (2012), 'Health Systems Characteristics Survey 2012', OECD (http://www.oecd.org/els/health-systems/measuring-health-coverage.htm).

OECD (2012b), 'Income-Related Inequalities in Health Service Utilisation in 19 OECD Countries' 2008-2009' (http://www.oecd-ilibrary.org/social-issues-migration-health/income-related-inequalities-in-health-service-utilisation-in-19-oecd-countries-2008-2009_5k95xd6stnxt-en;jsessionid=35v3cbd9or830.x-oecd-live-03).

OECD (2014), 'Health at a glance: Europe', OECD.

OECD (2014b), 'Geographic Variations in Health Care: What Do We Know and What Can Be Done to Improve Health System Performance?', OECD Health Policy Studies (http://dx.doi.org/10.1787/9789264216594-en).

OECD (2015), 'Fiscal sustainability of health systems: bridging health and finance perspectives', OECD (http://www.oecd-ilibrary.org/social-issues-migration-health/fiscal-sustainability-of-health-systems_9789264233386-en).

OECD Health Statistics (2015b), 'Definitions, Sources and Methods: Private health insurance'

(http://stats.oecd.org/fileview2.aspx?IDFile=bd8e3b78-1c2c-4559-af30-d552e81b71b1).

Okunade, A. A., Murthy, V. N. R. (2002), 'Technology as a 'major driver' of health care costs: a co-integration analysis of the Newhouse conjecture', Journal of Health Economics Vol. 21(1), pp. 147-159.

Posnett, J. (2002), 'Are bigger hospitals better?', Hospitals in a Changing Europe, edited by McKee, M. and Healy, J., European Observatory on Health Care Systems Series, Open University Press, Buckingham, Philadelphia.

Public Health England (2013), 'Guidance NHS population screening: working with minority or hard to reach groups'.

Rechel, B., Doyle, Y. and Grundy, E. (2009), "How can health systems respond to population ageing?", Health Systems and Policy Analysis, WHO Regional Office for Europe and European Observatory on Health Systems and Policies, Policy Brief No 10.

Roberston, J., Pedersen, H.B., Perman and G. and Kluge H. (2015), 'Challenges to the affordability of new medicines in Europe: The Case of Cancer Drugs', Eurohealth, Vol. 21(3), pp. 15-18.

Schwierz, C. (2016), 'Cost containment policies on hospital expenditure in the European Union', (forthcoming) European Economy, Economic Papers 2016, European Commission, Brussels.

Shortell S. M., Gillies R. R., Anderson D. A., Erickson K. M., Mitchell J. B. (2000), 'Integrating Health Care Delivery'. Health Forum Journal, Vol. 43, pp. 35–39.

Sorenson, C., Kanavos, P. (2011), 'Medical technology procurement in Europe: a cross-country comparison of current practice and policy', Health Policy, Vol. 100(1), pp. 43-50.

Smith, S., Newhouse, J., and Freeland, M. (2009), 'Income, Insurance, and Technology: Why Does Health Spending Outpace Economic Growth?', Health Affairs, Vol. 28, No 5, pp. 1276– 1284.

Stoeckel, K and Litwin, H. (2013), 'Confidant Network Types and Well-Being Among Older Europeans', The Gerontologist (2013), June 7.

Suter, E., Oelke, N. D., Adair, C. E., & Armitage, G. D. (2009),'Ten Key Principles for Successful Health Systems Integration'. Healthcare Quarterly (Toronto, Ont.), No 13, pp. 16–23.

Thomson, S., Foubister, T., Mossialos, E. (2009), 'Financing health care in the European Union. Challenges and policy responses' Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies.

Toumi, M. et al. (2014), 'External reference pricing of medicinal products: simulation-based considerations for cross-country coordination', (http://ec.europa.eu/health/systems_performance_assessment/docs/erp_reimbursement_medicinal_products_en.pdf).

Triantafillou, J. et al. (2010), 'Informal care in LTC — European Overview Paper', INTERLINKS report (http://interlinks.euro.centre.org/project/reports).

Viberga, N., Fosberg, C., Borowitz, Molin R. (2013), 'International comparisons of waiting times in health care – Limitations and prospects', (http://www.sciencedirect.com/science/article/pii/S0168851013001759).

Vogler, S. et al. (2016), 'Pharmaceutical policies in a crisis? Challenges and solutions identified at the PPRI Conference', Journal of Pharmaceutical Policy and Practice, (https://joppp.biomedcentral.com/articles/10.1186/s40545-016-0056-8).

WHO (2000), 'Health systems: improving performance', The World Health Report.

WHO (2004), 'What are the equity, efficiency, cost containment and choice implications of private health-care funding in western Europe?' WHO Regional Office for Europe's Health Evidence Network (HEN).

WHO/Europe, (2008), 'The Tallinn Charter: Health Systems for Health and Wealth' WHO European Ministerial Conference on Health Systems.

(http://www.euro.who.int/en/home/conferences/ministerial-conference-on-health-systems/documentation/conference-documents/the-tallinn-charter-health-systems-for-health-and-wealth).

WHO Europe (2010a), 'Rural poverty and health systems in the WHO European Region'.

WHO (2010b), 'The World Health report: financing for universal coverage'.

WHO (2010c), 'The WHO Global Code of Practice on the International Recruitment of Health Personnel' (http://www.who.int/hrh/migration/code/WHO_global_code_of_practice_EN.pdf).

WHO (2012), 'Policy Summary 5: Health policy responses to the financial crisis in Europe', Philipa Mladovsky, P., Srivastava, D., Cylus, J., Karanikolos, M., Evetovits, T., Thomson, S. McKee, M.

WHO Europe (2012b), 'Sweden, Health system review', Health Systems in Transition, Vol. 14 No 5.

WHO (2013), 'Health, health systems and economic crisis in Europe: impact and policy implications', Thomson, S., Jowett, M., Evetovits, T., Jakab, M., McKee, M. and Figueras, J., World Health Organization on behalf of the European Observatory on Health Systems and Policies, Copenhagen, Denmark.

WHO Europe (2013b), 'Estonia Health system review' Health Systems in Transition Vol. 15 No 6 2013 (http://www.euro.who.int/__data/assets/pdf_file/0018/231516/HiT-Estonia.pdf).

WHO (2015), 'Access to new medicines in Europe: technical review of policy initiatives and opportunities for collaboration and research', Copenhagen: WHO Regional Office for Europe.

WHO (2015b), 'Building primary care in a changing Europe', Edited by Kringos, D. S., Boerma, W. G. W., Hutchinson, A. and Saltman, R. B. (http://www.euro.who.int/__data/assets/pdf_file/0018/271170/BuildingPrimaryCareChangingEurope.pdf).

Zweifel, P. et al. (2005), "The Sisyphus syndrome in health revisited", International Journal of Health Care Finance and Economics, Vol. 5(2), pp. 127-145.

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