



efpia*

**STRENGTHENING HEALTH SYSTEMS
THROUGH SMART SPENDING**

Policy recommendations

Faced with an unprecedented health security crisis on top of the challenges of an ageing population and increasing burden of chronic diseases, our health systems need to both strengthen their resilience to future shocks and meet increased demand for healthcare, while staying sustainable over time. Whilst we need to keep investing in our health systems, in particular in some countries and regions in Europe where health expenditure is below the EU average, there are also opportunities to make healthcare spending more efficient. Smart healthcare spending will allow us to improve health outcomes while not increasing overall costs, or even create savings in the long-term that can be reinvested for better health. This is different from the short-term budget cuts that took place after the economic and financial crisis in 2008-2009, which many times led to worse health both at population and patient level in several European countries.

In order to inform a discussion on how smart spending can improve health systems' resilience, responsiveness and readiness, EFPIA has developed a number of policy recommendations for national and European policy-makers. A number of case studies show how smart spending and health system planning can improve long-term outcomes while keeping the systems sustainable and flexible in order to respond to future challenges.

Measure outcomes and publish data

As achieving optimal patient or population level health outcomes is a core objective of smarter spending, health system decision-makers need reliable and granular data on outcomes in order to assess the true efficiency of spending. Today, health outcomes vary dramatically both between and within countries in the EU, but this is often not visible due to differences in how these outcomes are defined and measured. This has been starkly exemplified by the COVID-19 crisis, where it has been difficult to compare even mortality rates between EU Member States due to different data collection standards and methodologies. Measuring standardised outcomes that matter to patients is an essential tool in better understanding their variation in the EU. This allows for better assessment of real efficiency and healthcare value. Publishing these data in a transparent way, following the model of countries like Sweden, can inform service providers on the preferred service design. It can also empower patients by allowing comparisons to be made over time, and between providers and services, therefore contributing to more informed decisions.

Improve care coordination, including through integrated health data and digital health

Addressing roadblocks in the patient journey and removing duplicative interventions can reduce unwarranted costs and potentially improve health outcomes. Integrated care has the potential to increase the continuity of care and reduce unnecessary waiting times, support patients' empowerment and foster health systems sustainability and resilience. For some diseases and conditions, especially the most complex ones, the implementation of standardised patient pathways can help improve this care coordination. Digital health services and Electronic Health Records (EHRs) are also crucial tools to strengthen care coordination and service integration, as well as to improve empowerment and self-management through patient access to their own health data.

Promote efficiency through smart pharmaceutical spending

Substantial savings can be made by promoting competition for off-patent medicines. Member States should exchange good practices on the best ways to achieve an effective and competitive off-patent market and how to attain rational use of medicines, including better adherence to treatment and avoiding inappropriate polypharmacy, through digital tools. Savings made should be reinvested to improve access to innovative medicines, which have an important role in further improving lives of patients and reducing unnecessary healthcare spending in other parts of the health and social care systems.

Strengthen prevention, early detection and intervention, including health literacy

Prevention and health promotion measures, as well as actions for early disease detection and intervention should be strengthened in order to limit avoidable mortality and morbidity and reduce unnecessary costs for the health system. Improving health literacy by integrating it into health policies and targets, as is the case in Austria, Germany and Switzerland, will contribute to better health outcomes and more efficient health resource use.

Move to payment models that reward outcomes over volumes

Traditional payment models used in healthcare can sometimes create incentives for overconsumption of care or inappropriate interventions, or in other cases result in rationing of services, inefficient waiting times and risk selection of patients. Moving to payment models that focus on outcomes would address one of the central problems that healthcare systems face today: not incentivising what actually matters; better health for patients. Instead of paying for hospital beds, visits to doctors, tests, or pills, healthcare systems should reward better health outcomes for patients and longer lives. Tying incentives and payments to outcomes is not just appropriate for some medicines and therapy areas, but for healthcare services in general. This may require extra monitoring and collection of data, but will result in a deeper understanding of how to better allocate limited resources and provide incentives for care coordination and service integration.

Integrate budgets across the care cycle

Outcomes-based payment models that take into account the full clinical pathway can facilitate the integration of care, as different services are incentivised to work together to achieve the best result for the patients. This would help overcome today's fragmented healthcare budgets where there are poor incentives for investments that would realise long-term savings in another part of the system. Removing budget silos between different parts of the healthcare system can enable more efficient resource allocation, focusing on achieving the best value for the patients. This will also allow healthcare systems to become more flexible and able to adjust to external shocks and future health threats.

Share best practices

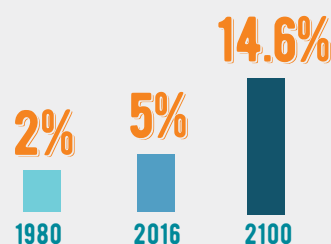
Sharing and implementing best practices will enable more efficient healthcare systems for patients, payers, hospitals, and providers, guide better informed public health policies, and pave the way for the reduction of health inequalities. Success stories, such as the European Reference Networks (ERNs), a network of over 900 associated hospitals working on rare and complex diseases pooling knowledge across Europe, or the All.Can Efficiency Hub, gathering best practices in cancer care from around the world, should be replicated in other therapeutic areas to create a learning community and help organisations find and implement tested solutions to common challenges.

The issue at stake



AN AGEING POPULATION

Healthcare systems are facing unprecedented challenges from an ageing population, and increased prevalence of chronic diseases driving rising demands on services. The percentage of the European population over 80 years of age has risen **from 2% in 1980 to over 5% in 2016**, and is projected to **exceed 14.6% by 2100**ⁱ.



While Europeans grow older, they also become more afflicted by chronic conditions. The burden of chronic diseases already represents **75% of the total European expenditure on health** and is estimated to be on the increaseⁱⁱ. Their indirect costs, in particular on the employment market due to absenteeism and presenteeism, are also substantial, both for people with chronic diseases and for caregiversⁱⁱⁱ. The COVID-19 crisis has exacerbated these existing and underlying problems.



**CHRONIC DISEASES
ACCOUNT FOR
75%
OF THE TOTAL
HEALTH EXPENDITURE**

To meet upcoming demands, and making health systems more resilient when facing similar health threats in the future, strategic investments on health are needed. Health expenditure in the European Union (EU) has reached an **average of 9.6% of gross domestic product (GDP) in recent years**^{iv}, but several countries are spending significantly below this average. Low expenditure on health is impacting quality of care and patient outcomes. The 2019 Council Conclusions on the Economy of Wellbeing pointed out the link between health and wellbeing, and economic growth, productivity and long-term sustainability^v. The European Commission Annual Growth Survey 2020 called on Member States to invest in healthcare and long-term care to meet the needs of an ageing population^{vi}, while the European Semester Country Specific Recommendations 2020, for the first time, proposed strategic health investments to all Member States^{vii}.

Increasing healthcare expenditure is however not always possible, as health must compete with other societal priorities within finite public budgets. According to the Organisation for Economic Co-operation and Development (OECD), **one-fifth of healthcare expenditure is spent inefficiently**, making no meaningful contribution to health outcomes^{viii}. Enhancing the efficiency of healthcare spending is therefore a promising way to achieve public health objectives while ensuring healthcare systems sustainability. It could also represent a good approach to optimise health systems capacity to respond to the rapid increase in caseloads, as shown by the COVID-19 crisis.



“...governments have four broad policy levers: i) increase overall government revenues, ii) reallocate other government spending to health, iii) shift to private finance, and/or iv) find efficiency gains. Shifting more health spending to private finance risks reduced access to health services and a higher financial burden for households due to increased out-of-pocket payments. **Therefore finding efficiency gains, while challenging, is critical to slowing expenditure growth without damaging access or quality.**”

Synthetic Note, 8th Meeting of the OECD Joint Network of Senior Budget and Health Officials: Fiscal Sustainability of Health Systems, 10-11 February 2020 [emphasis added]

Smart spending in healthcare

By identifying inefficient healthcare spending and reallocating these resources to other parts of the system, significant improvements in patients' health outcomes and quality of care could be achieved without additional increases in overall expenditure. **Tackling wasteful spending in healthcare has thus the potential to facilitate the transition from low- to high-value care**, freeing up resources that could be used for interventions that would bring higher value to patients, health systems and societies. This will help facilitate the shift towards healthcare systems that are more outcomes-focused and centred around what matters to citizens and patients, as outlined in 2017 by the Health Ministers of the OECD countries.

The concept of efficiency should not be confused with short-term cost containment measures. The latter, which were widely adopted in the aftermath of the late 2000s economic crisis, solely focus on reducing inputs and often have a negative impact on health outcomes^x. Cost-cutting strategies should be avoided, especially in the current context following the COVID-19 pandemic, when new investments will be needed to enhance the resilience and agility of our healthcare systems. **Efficiency means to maximise patients' outcomes that can be attained through a certain health investment, or to maintain the same outcomes while achieving savings. The objective of efficiency gains is not to cut budgets, but to reinvest potential savings in innovation and higher-value care.**

Many health systems measure efficiency by comparing inputs to outputs, rather than to outcomes. An example of the former can be the number of cataract surgeries that a certain hospital can produce from a set level of resources. This information can then be compared with data from other hospitals in the region or country, being useful for healthcare managers, but not answering the question how the surgeries have improved the health status of the patients compared to other hospitals. As noted by the EU Expert Group on Health Systems Performance Assessment, **using a definition of efficiency that relates inputs to outputs can lead to a faulty interpretation of the data.** Still, many countries use output indicators as a proxy for outcomes, often due to a lack of appropriate data and methodologies to assess health outcomes of different interventions^x.

Causes of inefficient spending – some examples

Inefficient healthcare spending can take many forms, ranging from unnecessary tests to delayed hospital discharges, from clinical errors and use of suboptimal or outdated treatment options and protocols to underutilisation of generic medicines. In order to highlight the benefits for patients and health systems to address inefficient care, and therefore free up resources that could be reinvested in the system, EFPIA commissioned a report to look further into a number of areas where good healthcare practices have improved outcomes for patients. Some of these case studies are used as examples below^{xi}.

Poor care coordination

Addressing poor coordination between hospitals and other settings, such as primary or social care services, is an important source of efficiency gains, as it was also demonstrated by the COVID-19 crisis. It is estimated that **inappropriate emergency departments visits**, for instance for low-urgency problems that could have been better dealt in primary care settings, account for about **20% of all visits in Italy and France, over 30% in Portugal, and more than 50% in Belgium and Slovenia**^{xii}. **Hospital services are in general resource-intensive and expensive, and should be used only for those treatments and care that require a high level of expertise or specialised treatments and equipments. Patients that can receive appropriate care in outpatient settings, including for follow-up care or rehabilitation after treatment in hospital, should therefore as a rule be cared for in these other settings.** Better access to high-quality primary and community care services should therefore be fostered, including through the use of telemedicine and other home-care solutions, while coordination mechanisms and tools such as comprehensive Electronic Health Records should be implemented. It is estimated that eHealth solutions could decrease health expenditure in most European countries by 5% on average^{xiii}.



DIABETES PROJECT AALST

In Belgium, the Diabetes Project Aalst provides chronic disease management in a primary care setting. It focuses on establishing integrated care teams, including diabetes educators, that help patients manage their conditions. The project, which has seen the participation of **69% of the general practitioners** of the Aalst region, has led to a significant **improvement in patient outcomes** within a short period^{xiv}.



INTEGRATED CARE



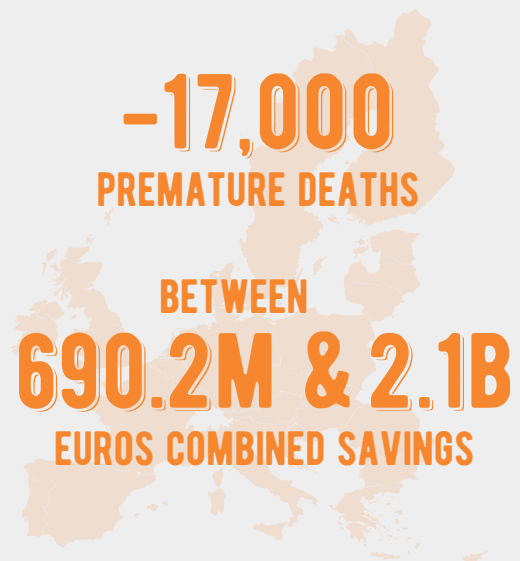
LEADS TO BETTER PATIENT OUTCOMES

Avoidable hospital admissions from chronic diseases, such as chronic heart failure, chronic obstructive pulmonary disease (COPD), or diabetes, consume **over 37 million bed days each year**^{xv}. Inadequate management of these diseases, for example non-adherence to treatment, can lead to exacerbations, unplanned outpatient visits and hospital admissions. Disease management programmes, structured treatment plans aiming to help patients better self-manage their chronic disease and quality of life, thus contribute to increasing overall healthcare efficiency.



COPD PATIENT MANAGEMENT EUROPEAN TRIAL

Making use of home telemonitoring for COPD patients, the COPD Patient Management European Trial (COMET) in France, Germany, Italy and Spain led to fewer acute care hospitalisation days, reduced frequency of exacerbations and mortality rates (1.9% for patients following the disease-management programme versus 14.2% for the others), and improved patient symptoms. The report commissioned by EFPIA found that, in the hypothetical scenario that all COPD patients in the EU Member States plus the United Kingdom would participate in a similar disease management programme and assuming a 75% compliance rate, the **combined savings for the EU would range from €690.2 million and €2.1 billion Euros** due to reduced hospitalisations, and **up to 17,000 premature deaths could be avoided**^{xvi}.



Care coordination should also be improved to manage patient with more complex needs, such as those affected by cancer. Each cancer has a specific pathway, and there is no one unique approach to treat the hundreds of types of cancer. Numerous steps are involved in the initial examination of the disease, which might need to be repeated several times. There are also different healthcare professionals involved, from the general practitioner to the oncologist, from the surgeon to the radiologist. **Poor coordination of care might lead to long waiting times for patients, as well as to poor health outcomes due to duplication or omission of certain tests.** Standardised patient pathways, which help define all the necessary steps the patient needs to take in cancer care, aiming at enabling timely access to diagnostics and treatment, and hence at increasing patient survival, increase the efficiency of health systems. The integration of primary prevention strategies, for instance through targeting alcohol consumption, smoking and obesity, into health care pathways could further improve their efficiency^{xvii}.



STANDARDISED PATIENTS PATHWAYS FOR 32 CANCER TYPES

1 YEAR SURVIVAL
INCREASED
FROM 61% TO
69%

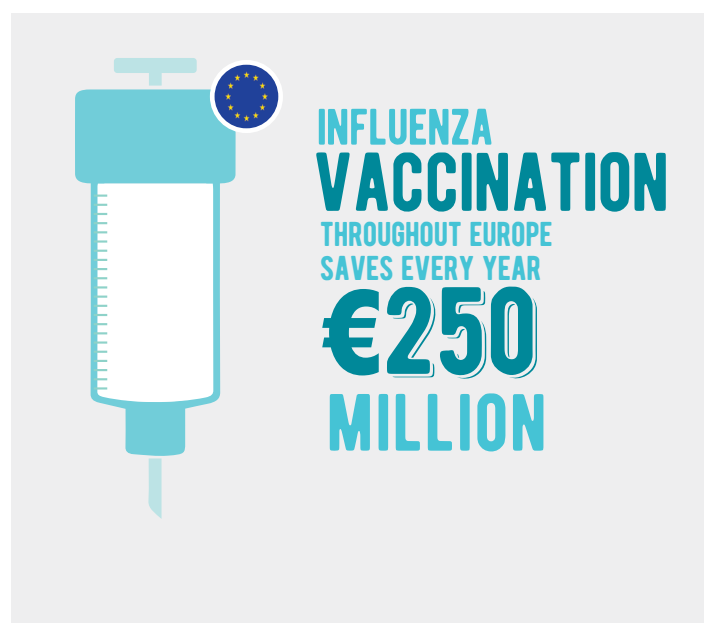
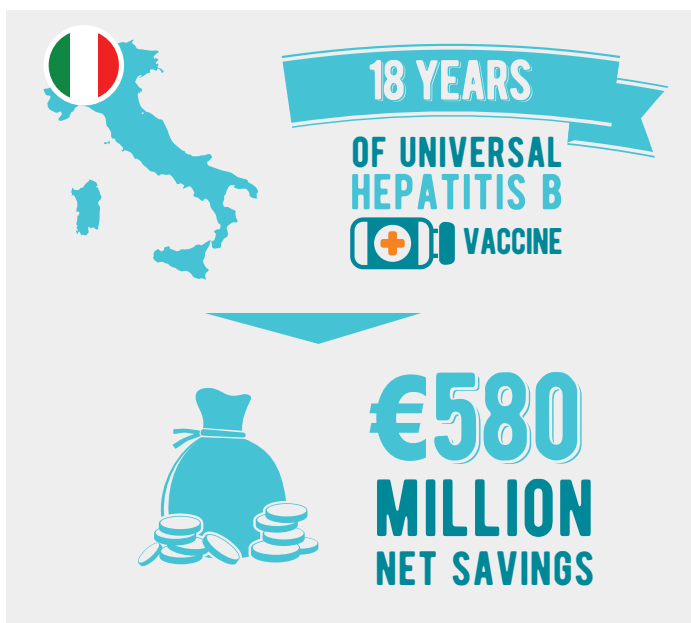
3 YEAR SURVIVAL
INCREASED
FROM 45% TO
54%

Several European countries have implemented standardised patients pathways in cancer care. In Denmark, in a joint effort by all relevant stakeholders, standardised patients pathways have been established and implemented between 2007-2008 for 32 cancer types. As a result of these pathways, which also included a strategy on how to refer patients from general practitioners to hospital care based on the severity of their symptoms, the one-year and three-year **survival rates increased from 61% and 45% to 69% and 54% respectively**^{xviii}.

Lack of prevention and early detection

The most cost-effective way of achieving good health is often to prevent the onset of the disease or to detect and treat the condition as early as possible. Insufficient investment in both primary and secondary prevention can therefore result in unnecessary morbidity and mortality for patients and in increased costs for the health and social care systems.

Vaccination programmes, for instance, have had a significant impact on eradicating certain infectious diseases in Europe, such as smallpox, and in reducing mortality and morbidity associated with chronic diseases, **saving two to three million lives worldwide every year**. Effective immunisation also alleviates pressure on health systems. 18 years of **universal Hepatitis B vaccine** in Italy resulted in **580 million Euros net savings**. **Influenza vaccination** throughout Europe saves every year **250 million Euros**, considering both the reduced direct and indirect costs of hospitalisations avoided and work days lost^{xix}. The vital significance of vaccines has been clearly shown by the COVID-19 pandemic, which, in lack of functioning treatments and vaccines, has forced governments to take wide-ranging public health measures with substantial economic consequences.



Also, systematic screening can detect serious diseases like cancer early, when they are more responsive to less aggressive treatments, and therefore limit their progression. If followed by appropriate care, these tests can thus significantly reduce avoidable mortality in cancer, a source of inefficiency, and improve health outcomes and quality of life of cancer patients. For example, people diagnosed with stage I melanoma have on average a five-year survival rate of 95%, compared to lower than 20% for patients with already metastasised tumours. Treating colon cancer at stage IV instead of I is four times more expensive, according to a recent UK report^{xx}. However, if the target population is too wide, a screening programme may result in running more tests than necessary. If false negative or false positive results are generated, patients may be led to follow an improper treatment pathway. Organised screenings for early detection of colorectal cancer have shown good results in improving participation rates, decreasing disparities in screening uptake, and reducing inefficiencies, such as over-screening, poor quality, and complications^{xxi}.



COLORECTAL CANCER SCREENING PROGRAMME IN THE BASQUE COUNTRY



-16% IN CANCER INCIDENCE

-26% IN CANCER MORTALITY

€93M IN NET SAVINGS

The organised colorectal cancer screening programme in the Basque Country, which achieved a participation rate of 72%, is deemed to have led to both a **drop-in cancer rate incidence of 16% and in mortality rate of 26%**, hence **reducing the cost of treatment by 256 million Euros and resulting in net savings of 93 million Euros**.



COLORECTAL CANCER SCREENING PROGRAMME IN EUROPE



**331,000
HEALTHY LIFE YEARS
GAINED PER YEAR**



**€9.9B
IN NET SAVINGS**

If the success of this programme could be replicated throughout the EU and the United Kingdom this would correspond to an **additional 331,000 healthy life years gained per year, and 9.9 billion Euros savings^{xxii}**.

Another clear source of inefficiency in healthcare is the low level of health literacy, with nearly half of all Europeans having inadequate (12%) or problematic (35%) health literacy skills^{xxiii}. Limited health literacy is associated with less participation in health-promoting and disease detection activities, riskier health choices such as higher smoking rates, more work accidents, diminished management of chronic diseases, poor adherence to medication, increased hospitalisation and re-hospitalisation, higher morbidity and premature death^{xxiv}. It is estimated that limited health literacy costs the American healthcare system 73 billion US Dollars per year and in Switzerland between 1.5 and 2.3 billion CHF. This in combination with demographic change and future developments in health illustrate the need for a strategic approach to health literacy^{xxv}.

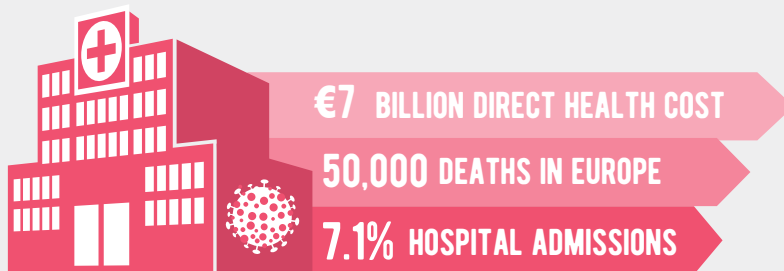
Healthcare associated infections and antimicrobial resistance



HEALTHCARE ASSOCIATED INFECTIONS

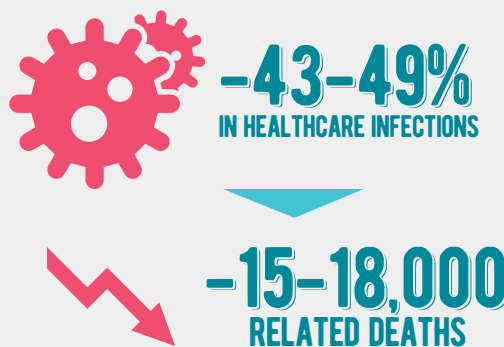
According to the OECD, **hospitals spend more than 10% of their budget to correct preventable medical errors or infections acquired in their settings**^{xxvi}.

The World Health Organisation (WHO) estimates that nosocomial infections could be linked to around 50,000 deaths per year in Europe and result in 7 billion Euros direct health costs, mostly reflecting extra days of hospital stay.



In Europe, 7.1% of hospital admissions are due to healthcare associated infections, and this percentage increases significantly for some low- and middle-income countries worldwide^{xxvii}. Prevention of these infections amongst hospitalised patients is therefore a priority, even more in light of the COVID-19 pandemic and the workload it has imposed on hospitals.

Between 2011 and 2016, the Federico II University Hospital in Naples adopted the Lean Six Sigma method aiming at removing process variations linked with nosocomial infections. The programme led to a reduction in the incidence of colonised patients and in the number of hospitalisation days associated with healthcare infections, decreasing costs by 43%. A best-case reduction of 43-49% in the incidence of these infections would result in **15-18,000 fewer related deaths and savings of 3.6-4.0 billion Euros** in the whole EU plus the United Kingdom^{xxviii}.



ANTIMICROBIAL RESISTANCE

Healthcare associated infections are often caused by antibiotic-resistant bacteria. Since their discovery in the early 1900s, antimicrobials have been fundamental for treating infections and therefore contributed greatly to improved population health. However, their incorrect consumption, which according to the OECD may account for **up to 50% of the entire antimicrobials use**, is a source of inefficiency and drives the rise of antimicrobial resistance (AMR)^{xxix}.

According to the European Centre for Disease Prevention and Control (ECDC), the health burden of infections due to AMR is comparable to that of influenza, tuberculosis and HIV/AIDS combined, and is **estimated to cause 33,000 deaths in the EU yearly**^{xxx}. Antimicrobial resistance also increases the cost of healthcare, being associated with **1.5 billion Euros lost** in healthcare costs and productivity losses^{xxxi}.



Without effective antimicrobials, an extensive range of procedures, from serious interventions such as organ transplantation and cancer chemotherapy, to the most wide-spread surgical operations like caesarean sections or hip replacements, can become very risky. National strategies with clear targets should be supported by comprehensive surveillance systems. Education and information activities should be boosted, both for clinicians and patients. Antimicrobial stewardship programmes, often developed and supported by pharmaceutical companies, encourage responsible use and infections control, while trying to address the presence of pharmaceuticals in the environment. Investment into economic models to stimulate antibiotic discovery are also urgently needed, as recognised by the European Parliament, the Commission and the Council. In line with the European Commission's 2017 One Health Action Plan against AMR, AMR can only be tackled holistically with the involvement of all stakeholders – national governments, industry, academia, healthcare professionals, and civil society associations.

Misaligned incentives

Poorly designed payment systems can create negative incentives and thus represent another cause of inefficiency. Most health services are still reimbursed based on volume, for example fee-for-service (FFS) schemes are common for reimbursing general practitioners, while diagnosis-related groups (DRG) models are normally used to reimburse hospitals based on the diagnosis and related expected resource use. These systems pay for the quantity of care they provide, without factoring in the outcome of this care, and can therefore in some cases drive overuse of care that is not clinically necessary^{xxxii}. For example, a study found that caesarean rates were much higher for patients with private insurance than for uninsured patients, as the private insurance reimbursement was much higher for caesarean than for vaginal birth^{xxxiii}.

On the contrary, simple capitation models where providers are remunerated on the basis of a fixed number of registered patients regardless of how much care they need can sometimes lead to underprovision of care or cherry-picking of patients with lesser care needs^{xxxiv}.

Health systems should therefore strive to mitigate faulty incentives caused by these payment models, including by introducing schemes that drive smarter spending on health by taking into account the outcomes of care and the long-term costs for the overall health system. Examples include pay-for-performance (P4P) bonuses, bundled payments and population based payments, which through different means attempt to reward patient or population level health outcomes and quality of care. For example, a bundled payment that includes the provision of rehabilitation and any reoperation needed after surgery, will incentivise high-quality care that minimises the risk for re-operation. Novel payment models are also increasingly used for reimbursing medicines and other medical goods based on the value they bring to patients and health systems, including outcomes-based contracts for innovative pharmaceuticals^{xxxv}.

Countries in Europe are increasingly experimenting mixed systems or designing novel payment models that link incentives to patients' outcomes and not to outputs. For instance, in Denmark value-based management has been piloted in several hospitals, where reimbursement mechanisms take into account patients' outcomes instead of the volume of care provided to them^{xxxvi}. In a pilot outcomes-based payment project in the United Kingdom, the National Health Service (NHS) paid for those patients with a complete or at least partial response after four cycles of treatment^{xxxvii}.

Efficiency and pharmaceutical expenditure

Innovative pharmaceuticals play a crucial role in improving the health of patients^{xxxviii}. Major scientific advances during the last decades have allowed patients throughout Europe to live longer, healthier and more productive lives. Today, **over 90% of people diagnosed with breast, prostate cancer, and malignant melanoma survive at least five years after diagnosis^{xxxix}.** **More than 9 in 10 patients living with Hepatitis C, the leading cause of liver transplants, can now be cured with only 8-12 weeks of treatment^{xl}.** **Pharmaceuticals can also avoid unnecessary costs in other parts of the healthcare system. Non-adherence to medicines, which is responsible for nearly 200,000 premature deaths, is estimated to cost European health systems 1.25 billion Euros every year due to unnecessary emergency care visits and hospitalisations^{xli}.** **New cancer drugs introduced in the United States between 1993 and 2014 reduced the amount of days spent in hospital, and thus the cost of treatment by 5 billion US Dollars^{xlii}.** The development of **innovative therapies to delay the onset of dementia** could significantly lower costs for social care, which for people with severe Alzheimer's Disease is currently estimated to cost around 18 billion Euros annually in the EU^{xliii}. The use of **innovative cardiovascular medicines** across 20 OECD countries in 1995-2003 led to **a four-time reduction of the cost of hospitalisation^{xliv}.** **Lack of access to or underuse of innovative medicines can therefore be a significant cause of long-term inefficiencies in health systems.**



DIABETES EXPENDITURE

Diabetes absorbs 9% of the total health expenditure in the EU and this number is projected to rise by 12% over the next 25 years^{xlv}. An estimated **75% of these costs though is triggered by preventable diabetes-related complications**, such as diabetic retinopathy, heart and kidney failure^{xlvi}. The systematic use across Europe of innovative medicines could contribute to reducing mortality rates, significantly improving overall outcomes and therefore lowering future costs. Still, **only 6.2% of diabetes expenditure is used for medicines^{xlvii}.**



75% OF DIABETES COSTS IS SPENT ON PREVENTABLE COMPLICATIONS

At the same time, pharmaceutical expenditure can often be made more efficient, while focusing on patient outcomes.

Generics and biosimilars

Across OECD countries, **generic uptake** varies **between 10% and 80%**^{xlviii}. The OECD estimates that this variance can be partially explained by clinicians, pharmacists and patients' reluctance to recognise generics' therapeutic equivalence. Thus, appropriate plans that can steer their behaviour towards the use of lower priced alternatives, either generics or branded products that have aligned their prices with generics, should be adopted. **Greater penetration of generics will not necessarily in itself generate savings, unless there are policies in place that promote competition in the entire off-patent segment. The savings generated through effective competition in the off-patent market should be reinvested in the financing of innovative medicines and other healthcare products and services.**



SMART PHARMACEUTICAL SPENDING

60%
OF THE VOLUME OF
MEDICINES USED



20%
OF THEIR VALUE



In Sweden, effective competition in the generics market is achieved by automatic substitution to the generic product with the lowest price over a period of one month ("product-of-the-month" system), which has resulted in 42% lower prices than the European average^{xlix} for medicines that are 15 years and older. In particular, pharmaceuticals within the generic substitution system account for **60% of the volume of medicines used, but only for 20% of their value.** Pharmacies must dispense the least expensive drug included in the reimbursement scheme available on the market. Doctors and pharmacists may only prohibit generics substitution on medical grounds^l.

Likewise, effective competition can generate substantial savings in the off-patent biologics market.

Biologic drugs, which are developed from living cells using biotechnologies, have revolutionised the life of patients with serious conditions such as cancer, rare or autoimmune diseases, and are currently estimated to account for **25% of the total pharmaceutical spending**ⁱⁱ. Increased competition in the off-patent market could result in **saving up to 50 billion Euros** by the end of 2020, according to estimations for five European countries and the United Statesⁱⁱⁱ. The introduction of biosimilars usually leads to substantial price reductions, both for the original product, but also for the whole product class. In the case of **Epoetin alfa (EPO) in Portugal**, for instance, the **price decrease of the total market amounted to 66%**. These savings, generated by leveraging biosimilars competition, can be used to increase patient access to high-value treatment, also in other therapeutic areas. However, this does not necessarily happen for all molecules and in all countries. For example, in oncology, countries that have difficulties in access to medicines remain without biosimilars for about two years after their introductionⁱⁱⁱⁱ. The adoption of appropriate policies that consider the specificities of biosimilar products (namely, that they are not strictly identical to the originators and that the decision to switch medication in the clinical interest of the patient therefore should remain with the physician) could therefore enable further savings and broader access, for example through gain-sharing schemes that allow healthcare providers to keep a part of the savings from the introduction of biosimilars for other investments.



SMART PHARMACEUTICAL SPENDING

€7.1 BILLION
SAVINGS



€4.5 BILLION
ATTRIBUTABLE TO
USE OF GENERICS



A 2016 study found out that in oncology in Europe, increased competition in the off-patent market would have resulted in total savings of **7.1 billion Euros**, of which **4.5 billion** are attributable to greater appropriate use of generics and 2.6 billion of biosimilars. In particular, biosimilars have been priced 25-30% lower than their reference biologic product, while it is estimated that generics have led to price reductions of 70-80%^{liv}.

Rational use of medicines and inappropriate polypharmacy

The concept of rational use of medicines includes both over-prescription and overuse of medicines, as well as under-prescription, poor uptake of innovative medicines and non-adherence to treatment. One important category in this regard is inappropriate polypharmacy, especially in the elderly. As the European population is getting older and chronic diseases are rising, more and more people are living with several co-morbidities and therefore taking numerous medicines to treat them. In Scotland, for instance, while only **10% of the population in childhood and adolescence** experience polypharmacy, this percentage raises to **50% in the age group 65-69 and to 75% in the 80-84-year-old** category^{lv}.

Although there is not a standardised definition, the WHO commonly describes polypharmacy as the use of five or more medicines. Excessive polypharmacy has been defined as the situation when ten or more medicines are used. Polypharmacy is not in itself a problem, as some patients do suffer from multiple morbidities. However, it has to be closely monitored, as drug-drug or disease-drug interactions may result in adverse events, higher hospitalisation rates, a greater risk of mortality and worsening of quality of life for certain patients. In such cases, polypharmacy can create inefficiency in the healthcare system. Indeed, when using **two medicines** there is a **13% risk of an adverse outcome**, rising to **58% when using five medicines** and up to **82% when seven drugs are taken concurrently**^{lvi}. Polypharmacy is also associated with non-adherence, which positively correlates with the number of medicines taken^{lvii}. It is estimated that inappropriate polypharmacy accounts for 4% of the global ineffective pharmaceutical spending; around 18 billion US Dollars worldwide could be saved with better management^{lviii}.



MEDICATION REVIEWS



FROM **9** TO **232**

EUROS IN NET SAVINGS PER PATIENT PER YEAR

Medication reviews are a manner to address inappropriate polypharmacy. A medication review programme implemented in Scotland, a joint effort by geriatricians, pharmacists and general practitioners, resulted in improved quality of life and physical and cognitive functions, reduced mortality rates, as well as net savings for the system ranging from **9 to 232 Euros per patient per year**. Healthcare costs are mostly reduced by avoiding the prescribing of potentially inappropriate medicines, as well as through decreases in avoidable outpatient visits and hospitalisations, estimated to cost 1.24 million Euros per year. Implementing a similar programme in the EU Member States plus the United Kingdom, could potentially lead to savings of up to 2.3 billion Euros.

The way forward

The unprecedented challenges we are facing today, exacerbated by the COVID-19 pandemic, require profound health system transformations, switching from a focus on acute care in hospitals to more integrated and people-centred care in the community. More flexible, value-based and outcomes-focused models represent the best alternative to continue to provide high quality care without raising financing needs, and to make health systems resilient and responsive, able to adjust to future possible shocks and challenges. A greater focus on outcomes sets the right incentives, rewards those innovative technologies and interventions, including prevention, that deliver most value for patients and the system in the long-term. In order to improve smart health spending and thus contribute to the sustainability of the healthcare systems, EFPIA recommends the following principles to inform regional, national and European policy-making.

Measure outcomes and publish data

As achieving optimal patient or population level health outcomes is a core objective of smarter spending, health system decision-makers need reliable and granular data on outcomes in order to assess the true efficiency of spending. Today, health outcomes vary dramatically both between and within countries in the EU, but this is often not visible due to differences in how these outcomes are defined and measured. This has been starkly exemplified by the COVID-19 crisis, where it has been difficult to compare even mortality rates between EU Member States due to different data collection standards and methodologies. Measuring standardised outcomes that matter to patients is an essential tool in better understanding their variation in the EU. This allows for better assessment of real efficiency and healthcare value. Publishing these data in a transparent way, following the model of countries like Sweden, can inform service providers on the preferred service design. It can also empower patients by allowing comparisons to be made over time, and between providers and services, therefore contributing to more informed decisions.



"It is sometimes said that data is "the new oil". Even though some of the expectations about the possibilities of data are unrealistic and utopian, it is clear that an intelligent approach to collecting, processing, linking and analysing data has become an indispensable part of the strategy of every organisation; policy organisations are no exception."

Pedro Facon

Director-General Healthcare

Federal Public Service Health, Food Chain Safety and Environment, Key Data in Healthcare, General Hospitals, 2019

Improve care coordination, including through health data and digital health

Addressing roadblocks in the patient journey and removing duplicative interventions can reduce unwarranted costs and potentially improve health outcomes. Integrated care has the potential to increase the continuity of care and reduce unnecessary waiting times, support patients' empowerment and foster health systems sustainability and resilience. For some diseases and conditions, especially the most complex ones, the implementation of standardised patient pathways can help improve this care coordination. Digital health services and Electronic Health Records (EHRs) are also crucial tools to strengthen care coordination and service integration, as well as to improve empowerment and self-management through patient access to their own health data.

Promote efficiency through smart pharmaceutical spending

Substantial savings can be made by promoting competition for off-patent medicines. Member States should exchange good practices on the best ways to achieve an effective and competitive off-patent market and how to attain rational use of medicines, including better adherence to treatment and avoiding inappropriate polypharmacy, through digital tools. Savings made should be reinvested to improve access to innovative medicines, which have an important role in further improving lives of patients and reducing unnecessary healthcare spending in other parts of the health and social care systems.

Strengthen prevention, early detection and intervention, including health literacy

Prevention and health promotion measures, as well as actions for early disease detection and intervention should be strengthened in order to limit avoidable mortality and morbidity and reduce unnecessary costs for the health system. Improving health literacy by integrating it into health policies and targets, as is the case in Austria, Germany and Switzerland, will contribute to better health outcomes and more efficient health resource use.

Move to payment models that reward outcomes over volumes

Traditional payment models used in healthcare can sometimes create incentives for overconsumption of care or inappropriate interventions, or in other cases result in rationing of services, inefficient waiting times and risk selection of patients. Moving to payment models that focus on outcomes would address one of the central problems that healthcare systems face today: not incentivising what actually matters; better health for patients. Instead of paying for hospital beds, visits to doctors, tests, or pills, healthcare systems should reward better health outcomes for patients and longer lives. Tying incentives and payments to outcomes is not just appropriate for some medicines and therapy areas, but for healthcare services in general. This may require extra monitoring and collection of data, but will result in a deeper understanding of how to better allocate limited resources and provide incentives for care coordination and service integration.

Integrate budgets across the care cycle

Outcomes-based payment models that take into account the full clinical pathway can facilitate the integration of care, as different services are incentivised to work together to achieve the best result for the patients. This would help overcome today's fragmented healthcare budgets where there are poor incentives for investments that would realise long-term savings in another part of the system. Removing budget silos between different parts of the healthcare system can enable more efficient resource allocation, focusing on achieving the best value for the patients. This will also allow healthcare systems to become more flexible and able to adjust to external shocks and future health threats.

Share best practices

Sharing and implementing best practices will enable more efficient healthcare systems for patients, payers, hospitals, and providers, guide better informed public health policies, and pave the way for the reduction of health inequalities. Success stories, such as the European Reference Networks (ERNs), a network of over 900 associated hospitals working on rare and complex diseases pooling knowledge across Europe, or the All.Can Efficiency Hub[™], gathering best practices in cancer care from around the world, should be replicated in other therapeutic areas to create a learning community and help organisations find and implement tested solutions to common challenges.

The sustainability of our healthcare systems requires that we break down silos, measure outcomes and drive integration of care services. The inclusion of all actors, including industry, is needed to achieve these goals and secure the future of our healthcare systems. This will not only benefit patients, but all stakeholders including healthcare professionals, providers, and payers. Adding additional funding to a system with inefficiencies at many levels is not a sustainable approach.

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EFPIA

Leopold Plaza Building * Rue du Trône 108

B-1050 Brussels * Belgium

Tel.: +32 (0)2 626 25 55

www.efpia.eu * info@efpia.eu