
Towards better health outcomes What role for pharmaceutical innovation?

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BACKGROUND

Demands on European health systems continue to increase. The refugee crisis is adding a new pressure on our health systems: ensuring basic access to healthcare for migrants and refugees is essential in order to stop the spread of diseases and to alleviate mental health problems. On top of that, spending on health is increasing due to factors such as demographic change, changes in healthcare delivery because of new technologies and stronger emphasis on personalised solutions, and higher relative prices for some healthcare inputs. As solutions improve, Europeans' expectations are increasing as well: who does not want to stay healthy and, when ill, have access to affordable quality healthcare and the latest solutions?

Meeting these expectations, delivering health efficiently and ensuring the long-term sustainability of healthcare in the face of reduced public budgets requires new thinking. Simply cutting costs is not the solution. In fact, it requires smart investment in health and health systems, and considering health as an asset. It entails greater effort across society to promote health and prevent disease, rather than just treat the sick. It requires defining the outcomes health systems should deliver, and ensuring that the measures taken achieve this goal. It calls for reforming health systems and addressing inefficiencies such as a lack of continuation of care; inadequate access to health promotion and disease prevention; insufficient data collection and use of IT and big data; investment in non-cost-effective technologies and solutions; and over-prescription of drugs that do not work or lead to further complications. It requires improving processes, products and services so that they lead to better health outcomes – and there is a role for pharmaceuticals as well.

Building on the series of discussions organised under *Transformations*, this paper focuses on the specific role of medicines and pharmaceutical innovation in contributing to better delivery of health. It considers the state of play of drug innovation, from the development to the deployment of medicines, and the measures needed to make it deliver more for society and the economy, while ensuring that patients in Europe can have access to innovative and safe solutions. As the EU is a major global manufacturer in pharmaceutical products, it has a strong interest to make the sector a sustainable contributor to better health outcomes in Europe.

STATE OF PLAY

Safe, effective, and good quality drugs that are prescribed and used in a rational way can make an important contribution to improving health outcomes. The pharmaceutical sector's ongoing shift in focus from products for large patient populations to developing differentiated, specialised and personalised products for smaller groups carries the potential to further improve health outcomes while addressing patients' specific needs.

However, the story is tainted with shades of grey. Drugs are not always prescribed or used in a rational way. While high prices have incentivised innovation in new drugs, the cost can be a notable obstacle for patients that need them. In many instances high prices are questioned: do they translate into proportional benefits for patients? According to the OECD, pharmaceutical spending (including pharmaceutical consumption in hospitals) accounts for approximately 20% of total health spending in the EU, and as efforts are taken to contain this, it is clear that new approaches are needed to incentivise innovation while promoting rational use and access to cost-effective drugs.

It should be noted that the EU member states agree on the need for sustainable health systems, ensuring access for patients and promoting innovation – but how this will be done is unclear. It is in the EU's interest to create an appropriate framework that builds on the sector's strengths while addressing the challenges mentioned above. In the process, three issues must be considered.

Firstly, the need for new and improved solutions, underpinned by research, continues to grow. The World Health Organisation's report *Priority Medicines for Europe and the World 2013 Update* upholds that further research and improved diagnostics and medicines would be needed in order to prevent and treat, for example, age-related diseases, chronic non-communicable diseases, antibacterial resistance and pandemic influenzas. The report identifies 24 diseases and disease groups that should be priorities for medical research.

Secondly, developing new medicines is a complex process and it requires incentives. Inventing and developing drugs requires significant expenditure in research and development (R&D). According to the European Commission Staff Working Document on *Pharmaceutical industry: a strategic sector for the European economy* (August 2014), the sector spends approximately 1 billion EUR for each new medicine that enters the market. The risks of investing in R&D are high, as many products do not even get to the market. At the same time, as recognised by the Commission, the complexity of the development process, including inflexible and demanding testing processes to ensure medicines' safety, efficiency and quality, can make it lengthier than what is seen in other sectors.

The innovation processes as well as the innovations themselves are changing. Open innovation and new partnerships with, for example, smaller companies and patient groups are growing. At the same time, as knowledge on diseases has improved, this has led to an increased focus on specialised and personalised treatment, which can be much more effective than traditional 'one-size-fits-all' solutions. However, this has also created challenges for the industry: developing more targeted medicines for diseases and the complex, often lengthy approval processes for new drugs, including growing demands on the quality, scope, and scale of data contribute to the increasing costs of developing new products. Payers and patients see the change in ever-increasing drug prices. However, it is becoming clear that just paying higher prices for new drugs is unsustainable. Other incentives will be needed to ensure the industry continues to carry out needed pharmaceutical research.

Thirdly, it is in the decision-makers and regulators' interest to support not just the development but also uptake of safe and effective drugs. They need to control and assess carefully what medicines get on the market, on what conditions, and at what speed. Past experiences have shown the risk of letting new drugs on the market before the impacts and side effects on patients are known. Also the rationale for higher prices and the added value of new drugs, compared to existing ones, is not always clear.

While member states are responsible for the organisation of their health systems, including managing the consumption of drugs and negotiating their prices, the EU provides a basic framework for action. This includes a range of legislation from clinical trials to transparency in pricing and reimbursement; and from modernising pharmacovigilance to establishing patients' rights to cross-border healthcare. As there are great differences in pharmaceutical spending across the EU, with some countries spending significant amounts of their total healthcare budgets on drugs, there has been a strong push by the EU, especially in its Country-Specific Recommendations (CSR) under the European Semester, and by the governments themselves to contain these expenditures. Governments are becoming wary of just paying more for new medications. Drugs must justify their added medical and economic value.

PROSPECTS

As demand for medicines is expected to increase in the EU and beyond in the coming years, it is in the EU's interest to use the available tools to build on this innovation, economic, employment and trade potential - while promoting more sustainable health systems and better health outcomes. It is important that the regulatory system provides incentives for industry to invest in pharmaceutical R&D while ensuring patients access to safe and effective drugs. Work has been going on for years: for example, the Commission Document on *Pharmaceutical industry* considered the state of play within the sector and encouraged discussion on the necessary conditions for innovation. This should be built on: the EU could benefit from having a platform for a dialogue on the industry's future. Moreover, a number of other measures could be taken.

The EU R&D can support advancements in health. A good example is its Research and Innovation programme, Horizon 2020, under which the EU has earmarked 7 billion EUR for addressing health and other societal challenges in 2014-2020. It is important that the EU's R&D framework and funds better reflect the changing innovation

ecosystem, including a wider range of stakeholders involved in the innovation process. The EU should use its research and innovation framework to improve collaboration between academia, patients, pharmaceutical industry, and the funders of health systems. Public-private partnerships are needed to leverage public money to incentivise research in areas where the market has failed. The academia's knowledge on medical science, patients' personal experiences and needs, combined with the industry's resources make them important partners in the innovation process. A good example is the 'Innovative Medicines Initiative', a joint undertaking between the EU and the European Federation of Pharmaceutical Industries and Associations (EFPIA), which encourages collaborative research projects in order to speed up drug development to treat different diseases, from asthma to cancer. It is important that this collaboration continues and is built upon.

The approval process of medicines must be improved. Europe would benefit from a common, more efficient approach to assessing and approving drugs, and reviewing them once they have entered the market. At the same time, these processes should better reflect the changing innovation trends, aim to create incentives for pharmaceutical innovation and promote patient access to safe and cost-effective drugs.

1) Clinical trials, conducted in the research and development phase, are the basis for deciding whether a medicine is safe, effective and better than alternatives on the market. They must provide a fair test of the drug's effectiveness, no matter who pays or carries them out.

The calls for publishing the data gathered in these trials – including negative results – are growing louder. The results must be made available once medicines become authorised. The EU clinical trials regulation promotes the creation of a register and database for clinical trials. The European Medicines Agency's (EMA) policy on publication of clinical data, which entered into force in January 2015, has already led to sharing of basic information. While more is needed, this is a step in the right direction, helping to create trust and confidence in the system. Gathering and exchanging clinical data between member states could also help them in their decisions on pricing and reimbursement. Moreover, making data readily available could accelerate research into other treatments, and allow for a real inspection of the efficacy and safety of drugs.

The development of more personalised and targeted medicines means that it is extremely difficult to carry out large, expensive and lengthy clinical trials when patient numbers are small. Crises, such as Ebola, are a good reminder of why approval processes need to be flexible, when needed. Reforming the way clinical trials are currently pursued to a more adaptive trial design, creating and accepting patient studies which are designed for smaller sample sizes, and using more computer-based modelling would be useful. Adaptive licensing, which allows for an early conditional market authorisation for drugs and data collection afterwards could also be a solution to improve patient access to new medicines. It will be interesting to follow the results of the EMA's ongoing pilot project on adaptive licencing, launched in 2014, to see whether it could be developed into an EU legislation. However, before this can even be considered, it is important that the EMA and the Commission involve all stakeholders, including health technology assessment (HTA) bodies, payers and patients, in discussions about developing such a system. Patients' views on what level of risk is acceptable should be heard, before official market authorisation, and they should also be made more aware of safety issues. In the end, the final market authorisation must depend on clear evidence about the drug's safety and efficiency.

2) There is also room for improving HTAs, which are used divergently across the EU to assess the medical, social, economic, and ethical impacts – thus the value – of new solutions, including pharmaceuticals, medical devices, and prevention methods. The EU has encouraged member state cooperation on HTAs, namely within the EUnetHTA framework. However, more cooperation on exchanging information and developing methodologies is needed.

HTAs need to assess large amounts of clinical data while comparing the performance against existing treatments. This is a challenge, for example, in the case of personalised medicines and treatments for rare diseases. The HTAs should, in addition to cost-effectiveness, take into account factors such as the lack of alternative treatments and the severity of the disease, and thus enhance a true value-based approach. Overall, a more comprehensive approach is needed in assessing a drug's value and the effects on mortality, morbidity, quality of life and on society in more general, and to ensure that the value is truly greater than that of pre-existing treatments. The HTAs could also guide pricing: the price tag should reflect and be proportionate to the incremental increase in value.

An effective intellectual property regime provides an important incentive for developing pharmaceutical products. A true European patent scheme would support innovations, especially in small and medium sized enterprises. The existing tools, such as copyright, trademarks, data exclusivity for eight years and marketing protection for ten years, which give innovator companies leeway *vis-à-vis* generic companies, have been central drivers for innovation. However, they must be used to incentivise new solutions, not old drugs with new names.

Pharmaceutical pricing and reimbursement schemes must be improved. As patients' demands for new solutions are growing, the industry needs incentives to develop affordable and more specialised drugs. At the same time, constrained public budgets require greater scrutiny on pharmaceutical spending, and thus on pricing, reimbursement and prescribing behaviour.

While drug pricing and reimbursement is a national competence, the member states should be encouraged to share best practices and improve their systems. Overall, transparency and exchange of information on pricing and reimbursement decisions on medicines need to be improved. Prices should be revised on a regular basis to take into account new evidence of cost-effectiveness. Belgium-Netherlands and Bulgaria-Romania cooperation in negotiating prices with pharmaceutical companies will make for interesting case studies of the potential benefits of cross-border collaboration, including perhaps improved access to more specialised treatments. Moreover, experiences with new cost-sharing models, such as managed entry agreements, which enable pharmaceutical companies and payers to share financial and clinical risks related to new drugs, could be of wider interest.

More rational prescribing behaviour and use of medicines is needed. For example, over-prescription and over-use of antibiotics is a serious issue that needs to be addressed. Health systems could also benefit from encouraging the use of generics and cost-effective complementary medicine, natural alternatives to pharmaceuticals. Overall, more attention must be paid to doctors' prescribing behaviour. In addition, patients' improper use of drugs is a challenge. According to WHO, around 50% of prescribed drugs are not taken or are used in a different way than prescribed by doctors. Having a better understanding of the reasons for non-compliance and assessing the implications is needed. Addressing these challenges with drug usage could also improve how pharmaceuticals are perceived.

The CSRs under the European Semester should promote the sustainability and efficiency of health systems. This requires not just focusing on containing spending and cutting costs, but encouraging a more outcome-oriented approach to public investments. The aim should be to ensure better health outcomes and promote a more evidence-based approach to the uptake of new solutions, including pharmaceuticals.¹

The development and uptake of innovative pharmaceuticals should form part of a positive storyline for Europe, where societies shift the focus from simply treating diseases to promoting health and preventing diseases; where sustainable health systems and innovation provide the basis for better health outcomes. New approaches to delivering health and improved solutions can bring enormous benefits to European societies and citizens. Whilst pharmaceuticals are only one part of the solution, it is in the EU's interest to build on this potential, and encourage the development of safe, effective, and good quality medicines, ensure that people can have access to these new solutions and promote their rational use. The guiding principle for the EU and its member states is simple: the aim must be to improve health outcomes across Europe.

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This Policy Brief builds on a series of discussions organised under 'Transformations – How pharmaceutical innovation is changing healthcare', a joint initiative of EPC and Shire.

¹ For more information, see EPC Policy Briefs "Keeping health high on the EU agenda: role for economic governance?" (5/2015) by Annika Hedberg and Martina Morosi and "What role for social investment in the new economic governance of the Eurozone?" (11/2015) by Jan David Schneider and Fabian Zuleeg.