

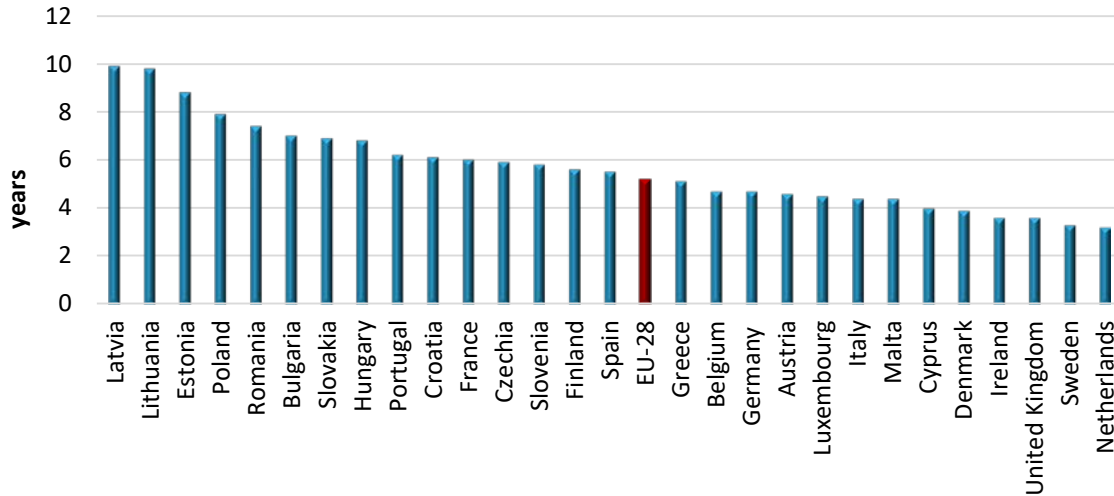
TAKING CARE OF EU HEALTH POLICY

**Coupling European Industrial
Leadership
with a Patient-Centered Approach**



EFFECTIVENESS, ACCESSIBILITY AND RESILIENCE OF EU HEALTH SYSTEMS

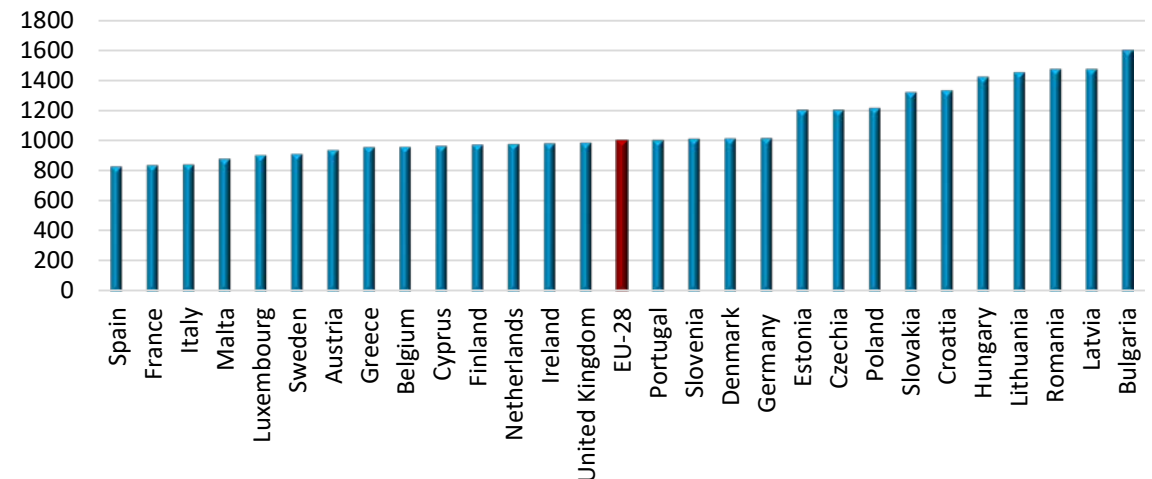
Life expectancy at birth in EU-28 (2017)



- Life expectancy at birth in the EU was estimated to be 80.9 years in 2017 and has increased over the past decades;
- Life expectancy at birth now exceeds 80 years in two-thirds of EU countries.

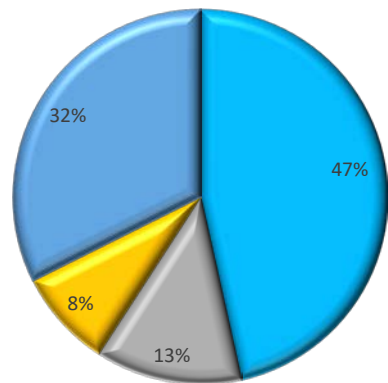
- Over 5,100,000 people died in EU countries in 2016, equivalent to about 1,002 deaths per 100,000 population;
- Overall mortality rates vary widely across Europe.

Standardised death rate in the EU countries (2016)



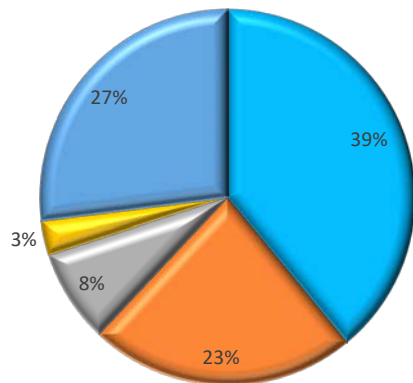
Main causes of mortality among women and men in EU (2016)

Males



- Diseases of the circulatory system
- Malignant neoplasms
- Diseases of the respiratory system
- External causes of morbidity and mortality
- Other causes

Females



- The main causes of death in EU countries are circulatory diseases (especially ischaemic heart disease and strokes) and malignant neoplasms, followed by respiratory diseases and external causes of death.

Major risk factors and challenges:

- POPULATION AGEING
- SMOKING
- ALCOHOL CONSUMPTION
- PRE-OBESITY AND OBESITY
- DECLINING VACCINATION COVERAGE
- ANTIBIOTIC RESISTANCE
- DIGITAL DIVIDE

Health promotion and prevention

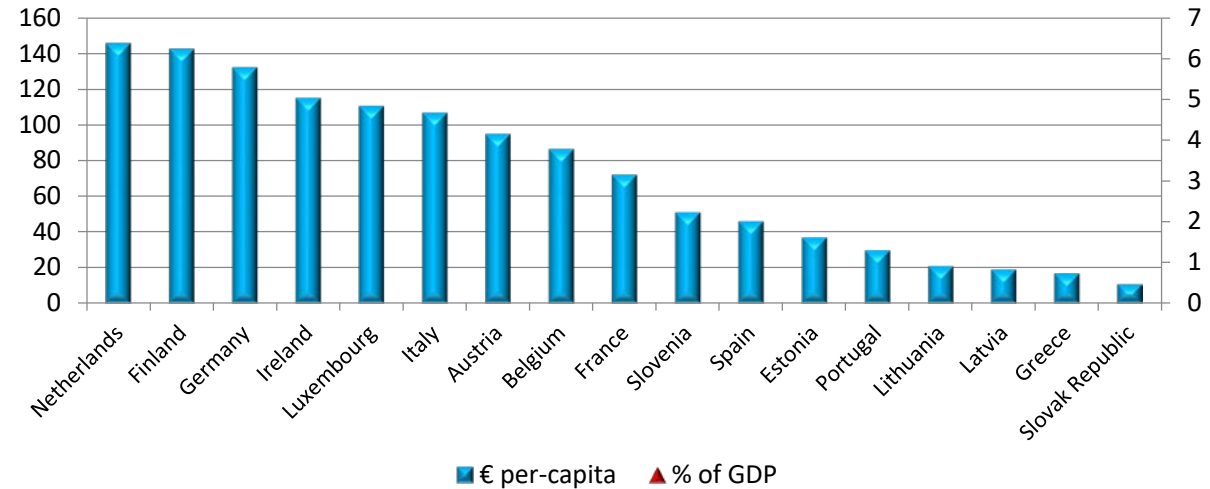
- Addressing the social determinants of health is essential in order to build fairer, healthier and more sustainable communities for all, able to lead to better health outcomes and, thus, economic benefits.

Basic strategies for health promotion (Ottawa Charter, 1986 rev.):

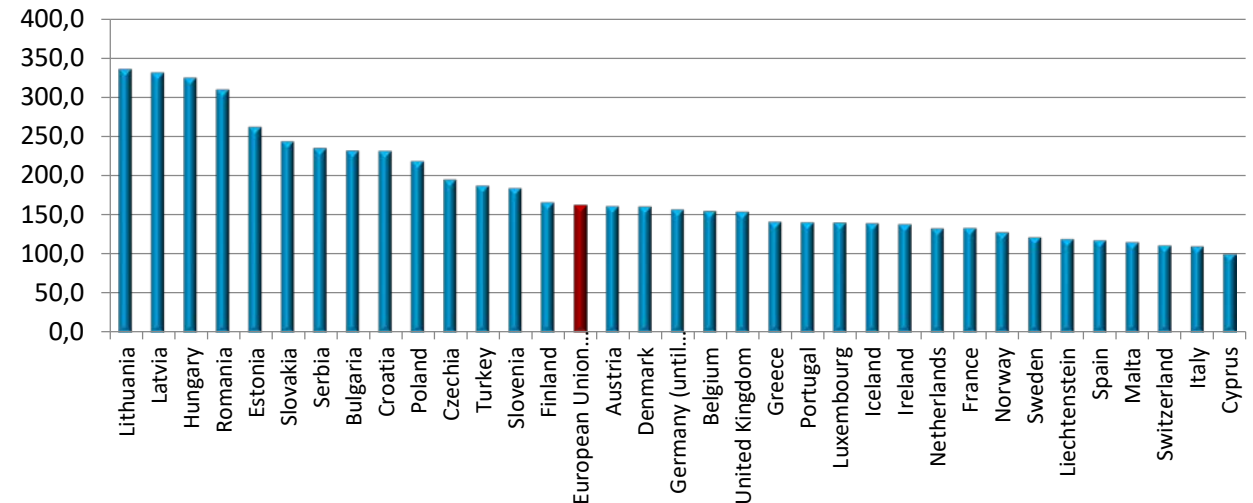
- ✓ ADVOCATE
- ✓ ENABLE
- ✓ MEDIATE

- Together with health promotion, disease prevention is crucial in improving health outcomes, reducing health inequalities and rationalizing economic resources.

Health expenditure for preventive care (2017)

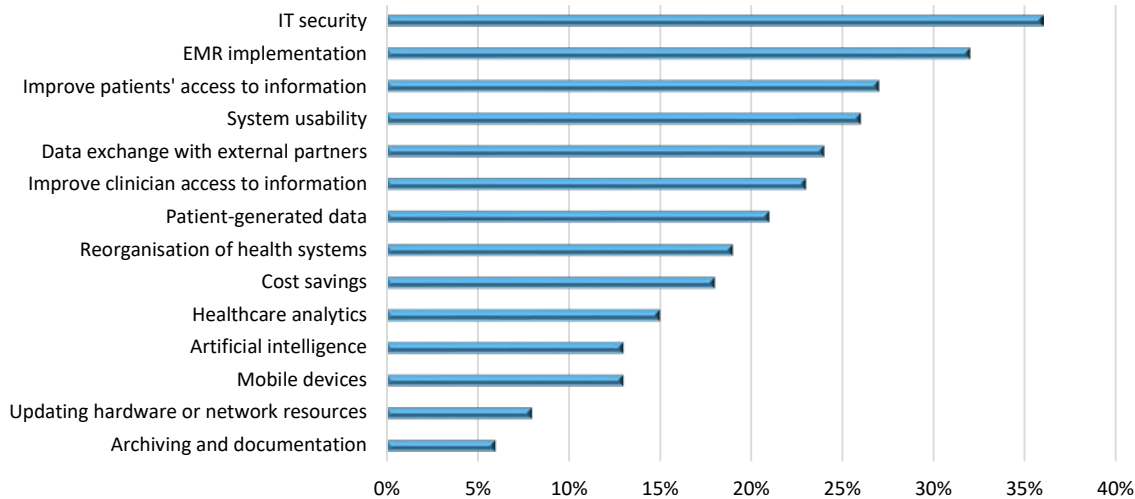


Preventable death rate standardized rate per 100,000 inhabitants (2016)



THE FUTURE OF E-HEALTH IN THE AI ERA

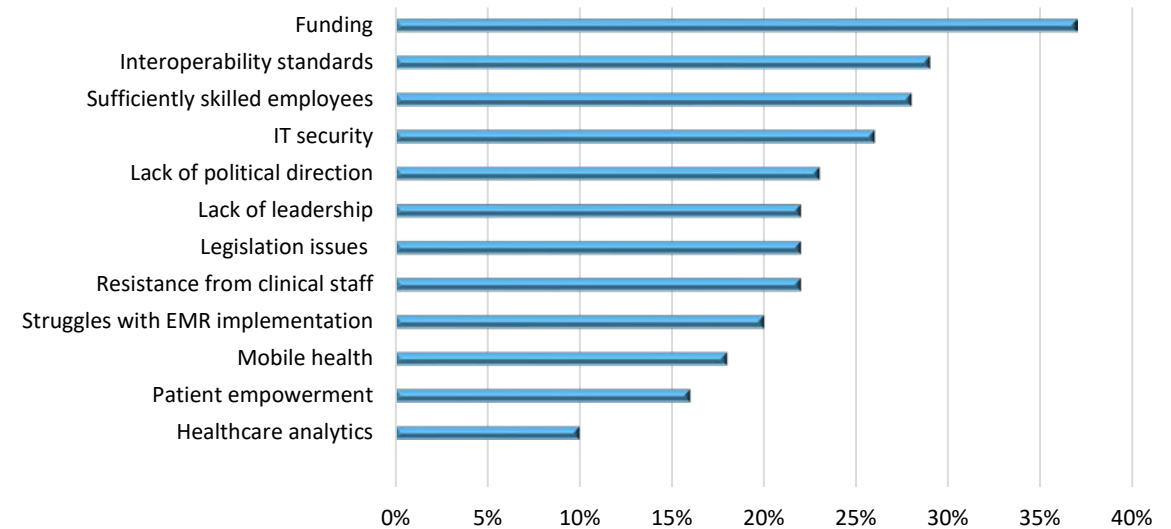
The biggest eHealth priorities for healthcare providers at the moment

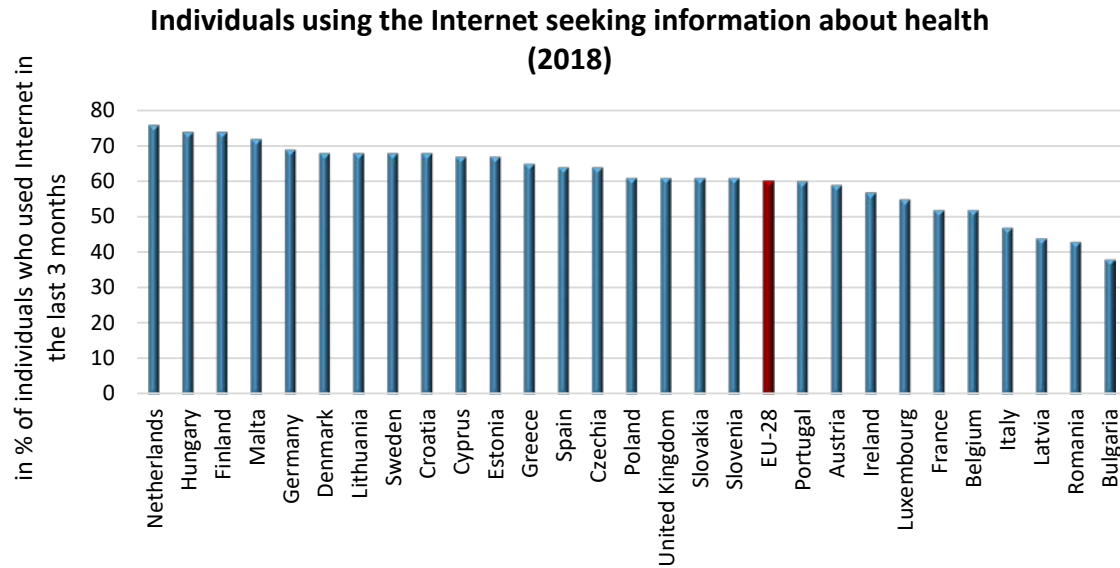


- eHealth advantages and benefits:
 - ✓ patients becoming more aware of their health and healthcare opportunities;
 - ✓ better flow of information and interaction with health professionals;
 - ✓ faster diagnosis, improved monitoring, more effective treatment and better health outcomes.

- Digital innovation in the healthcare sector is becoming increasingly important in increasing the efficiency of healthcare systems.

The main eHealth challenges for healthcare providers



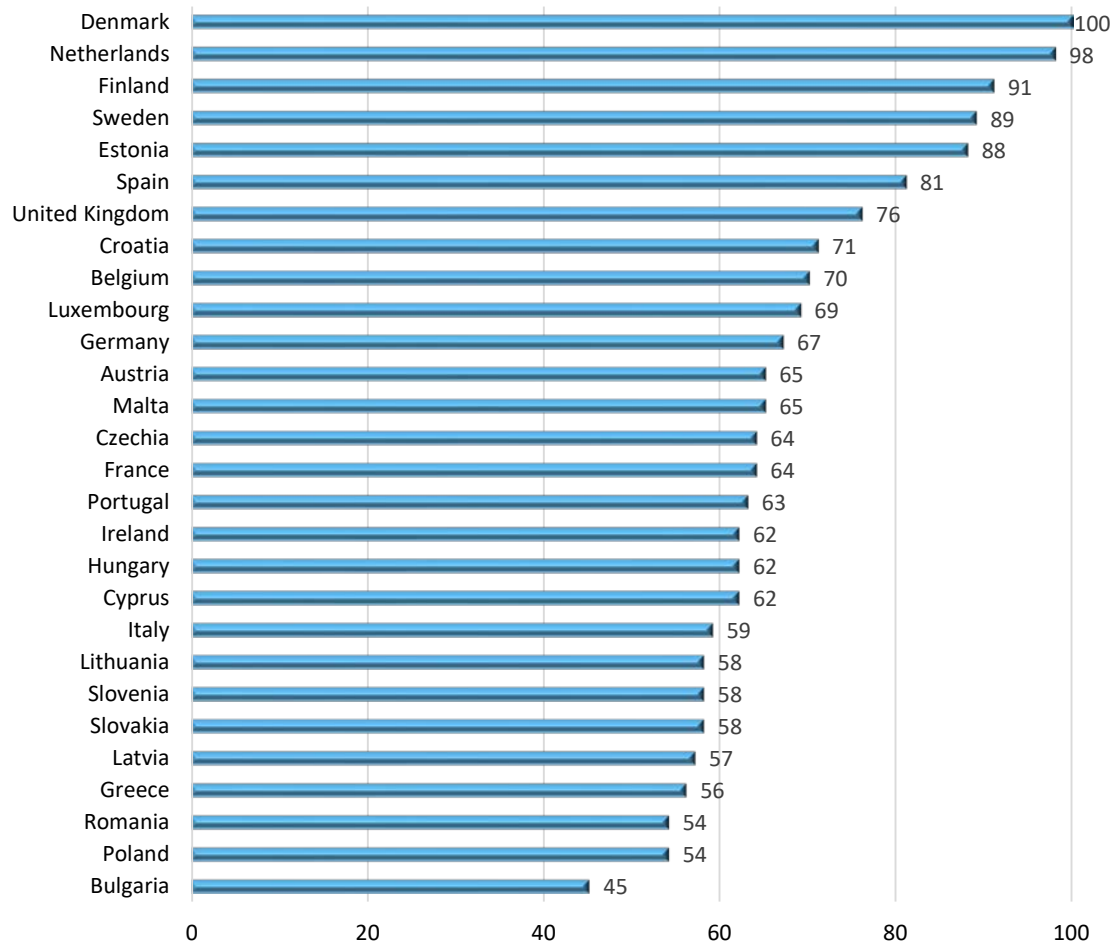


- For the coming years the main progress will regard: patient medical records, provision of telemedicine services, health information exchange with external providers, patient self-monitoring initiatives, personalized medicine, EMR implementations and artificial intelligence projects.

- Despite the advantages, many individuals either do not use the technology that is available to them or do not even have the means to manage their healthcare online.



I-Com Index 2019 on the Level of Preparedness for eHealth in the Member States



- Top ranking Denmark, Netherlands, Finland, Sweden and Estonia have in common a **high number of patients who use mobile and Internet technologies** for searching health information and making appointments and a **high level of digital skills** among the population and workforce;
- Moreover, these countries boast a **large infrastructural development and best practices in security and privacy.**

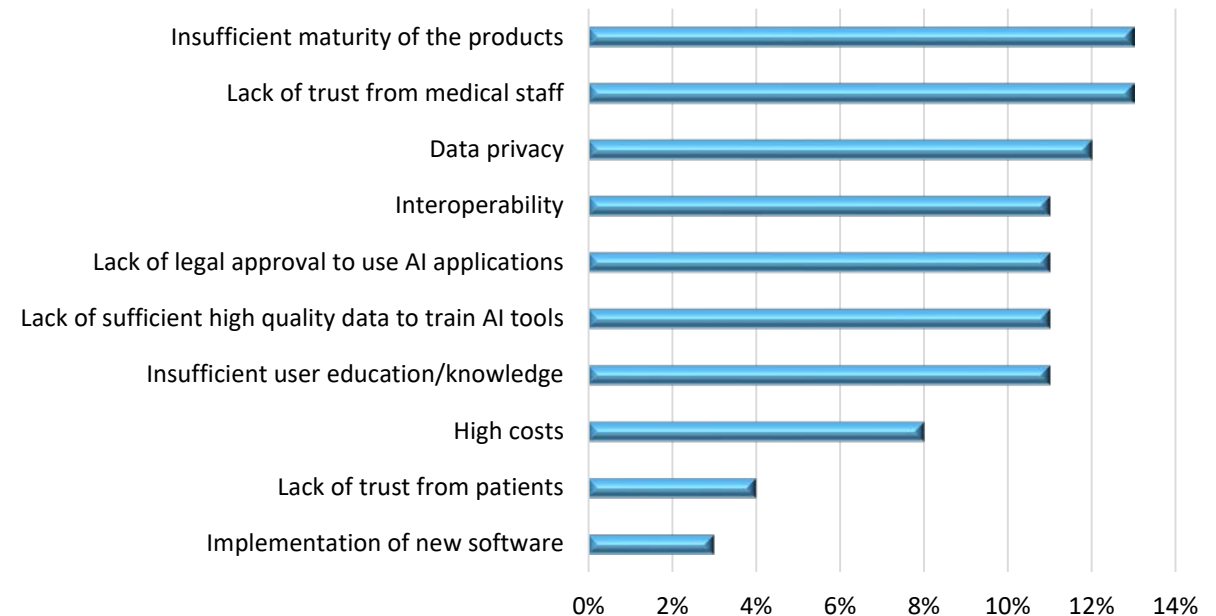
The EC “eHealth Action Plan 2012-2020 - Innovative healthcare for the 21st century” clarifies the policy domain and outlines the vision for eHealth in with the aim to address and remove **existing barriers** to reap the benefits from a fully mature and interoperable European eHealth system.



- 1) lack of awareness of, and confidence in eHealth solutions;
- 2) lack of interoperability;
- 3) limited large-scale evidence of the cost-effectiveness of eHealth;
- 4) lack of legal clarity for health and well-being mobile applications and the lack of transparency regarding the use of data collected by such applications;
- 5) inadequate or fragmented legal frameworks including the lack of reimbursement schemes for eHealth services;
- 6) high start-up costs involved in setting up eHealth systems;
- 7) regional differences in accessing ICT services with limited access in deprived areas.

The European Commission is aware of the opportunities, but also of the **critical issues linked to AI development**. In 2018 the Commission published **The Coordinated Plan on AI**.

The biggest challenges for AI in healthcare



BRINGING INNOVATION TO PATIENT: EU VALUE-BASED HEALTHCARE

THE CONCEPT OF “**VALUE-BASED HEALTHCARE (VBHC)**” IS SEEN AS AN IDEA TO IMPROVE OUR HEALTHCARE SYSTEMS

Putting value



at the heart of procurement

GOVERNMENTS are feeling the strain on their health budgets caused by an ageing population, a rise in the prevalence of chronic conditions and the acceleration of medical innovation;

BUT STAKEHOLDERS ARE NUMEROUS and often have different needs and goals, including access to services, profitability, high quality, cost containment, safety, convenience, patient-centeredness and satisfaction;

NO SINGLE AGREED ON DEFINITION of VBHC. Currently, value in the context of healthcare is often defined as “health outcomes relative to monetized inputs”, where outcomes are changes in patient health resulting from treatment and care.

OECD 2017 - “Wasteful Spending in Health” highlighted the need for health systems to spend their resources wisely and efficiently.

The public debate on VBHC led to the concept of value-based healthcare in countries committed to universal health coverage.



The resources need to be **allocated and used to treat those people who would benefit most and to reduce inequality among the population in health access and outcomes.**

TRIPLE VALUE MODEL (Value Based Healthcare Program, University of Oxford)

- **Personal value** – ensuring that each individual patient’s values are used as a basis for decision-making that will optimize the values for him/her.
- **Technical value** – ensuring that resources are used optimally - referred to as technical efficiency or simply efficiency by economists;
- **Allocative value** – ensuring that resources are allocated optimally and equitably - referred to as allocative efficiency by economists.



Main shortcomings for value-based healthcare implementation



- **Fragmented assessments of healthcare systems** among European countries (pay for performance, cost effectiveness thresholds; HTA or REA etc.);
- **Quality of care indicators is not standardized** among countries and, moreover, indicator robustness varies for different diseases;
- **Lack of data integration:** health records and socio-economic data.

Final Opinion on Defining value in “value-based healthcare” at its 16th plenary on **26 June 2019** after a public hearing on 4 June 2019.



(a) How do you define value in “value-based healthcare”? What aspects of health systems could the different definitions cover?

(b) How can “value-based healthcare” inform decision-making, contribute to health system transformation and help health systems across the European Union become more effective, accessible and resilient?

1. PERSONAL VALUE
2. TECHNICAL VALUE
3. ALLOCATIVE VALUE
4. SOCIETAL VALUE

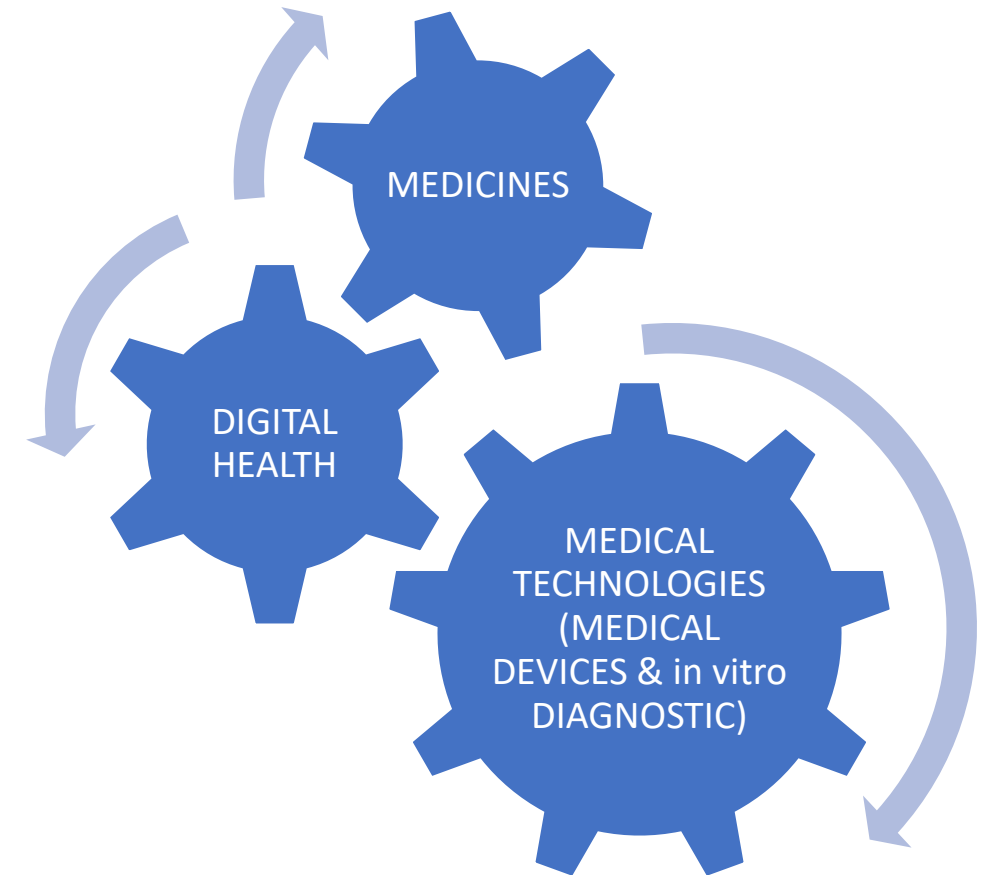
The main recommendation of the EXPH involves a multiple step strategy encompassing five different principles for implementation:

- Awareness of health for an equal and fair Europe;
- Research and development on methodologies for appropriateness and unwarranted variation, including data analysis and quality registers;
- Learning Communities for reallocation;
- Accountability;
- Patient engagement.

➤ Political commitment to universal healthcare is indeed enshrined in Art. 35 of the EU Charter of Fundamental Rights and the concept of solidarity is perceived as a basic principle for practices, regulations and institutions, rather than only as a value.

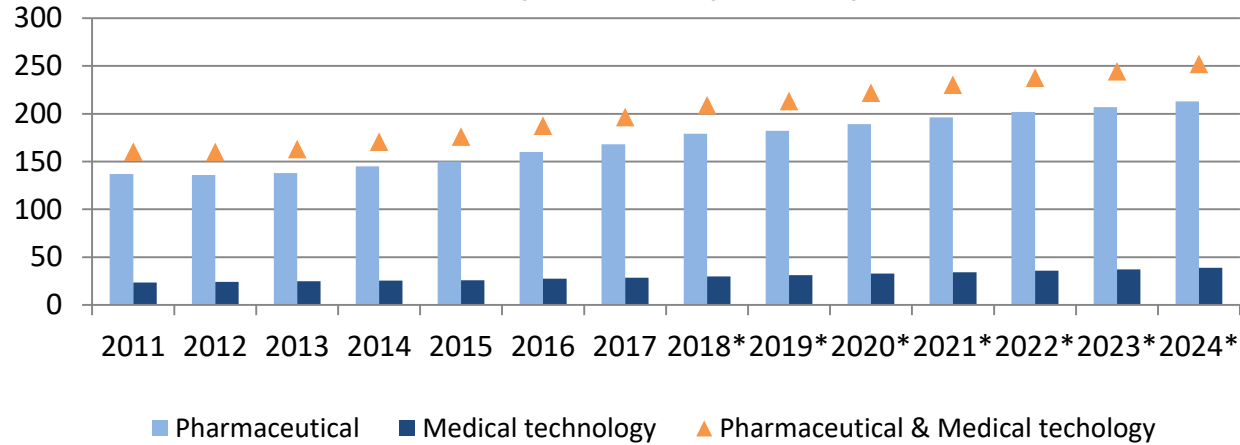
TOWARDS A EUROPEAN INDUSTRIAL STRATEGY FOR THE LIFE SCIENCE SECTOR

- **New technologies have revolutionized healthcare – delivering benefits to patients and reducing healthcare costs, allowing patients to contribute to the labor market and the economy;**
- **Innovation in pharmaceuticals, medical devices, diagnostic technologies and, increasingly, digital health has transformed the way we deliver and manage treatments and organize healthcare systems;**
- **The increasing use of integrated, combined treatment options (that combine pharmaceuticals, medical devices, diagnostics and digital health solutions) is posing new challenges for the healthcare system.**



The industry relevance to the global market

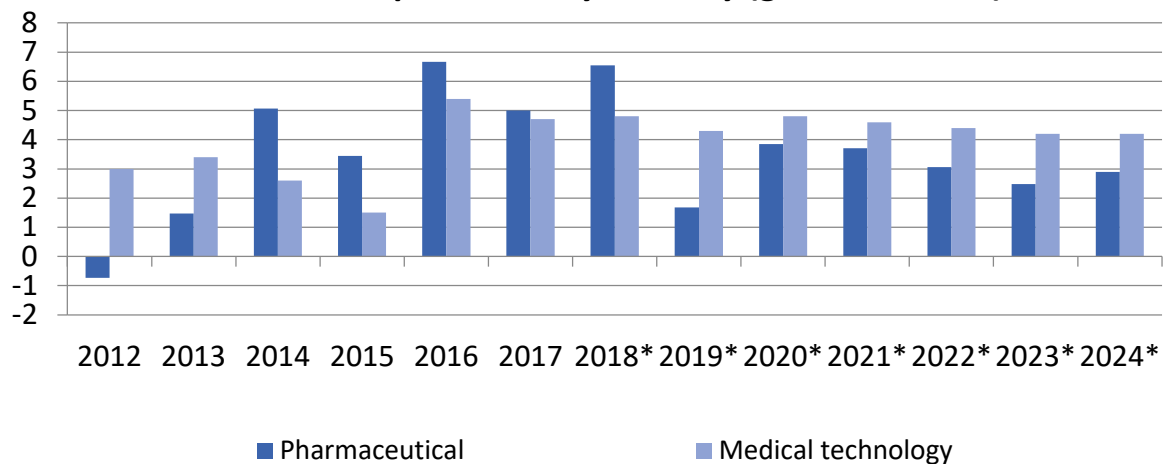
Global R&D expenditure by industry (bill. \$)



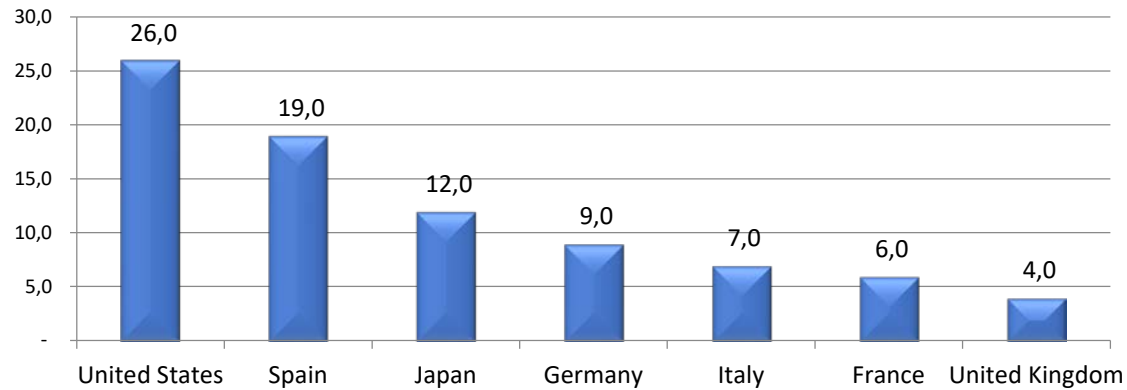
GROWING AND HIGHLY INNOVATIVE INDUSTRIES

- The life science industry, as defined at the end of the previous paragraph, is a **highly innovative sector**, in which the **investments in R&D are crucial in driving medical progress and in improving patient health and quality of life.**
- In 2018, **pharmaceutical and medical technology companies spent \$209 billion on R&D**, against the \$160 billion registered in 2011.

Global R&D expenditure by industry (growth rate, %)



Share of R&D expenditure out of manufacturing total (% , 2016)

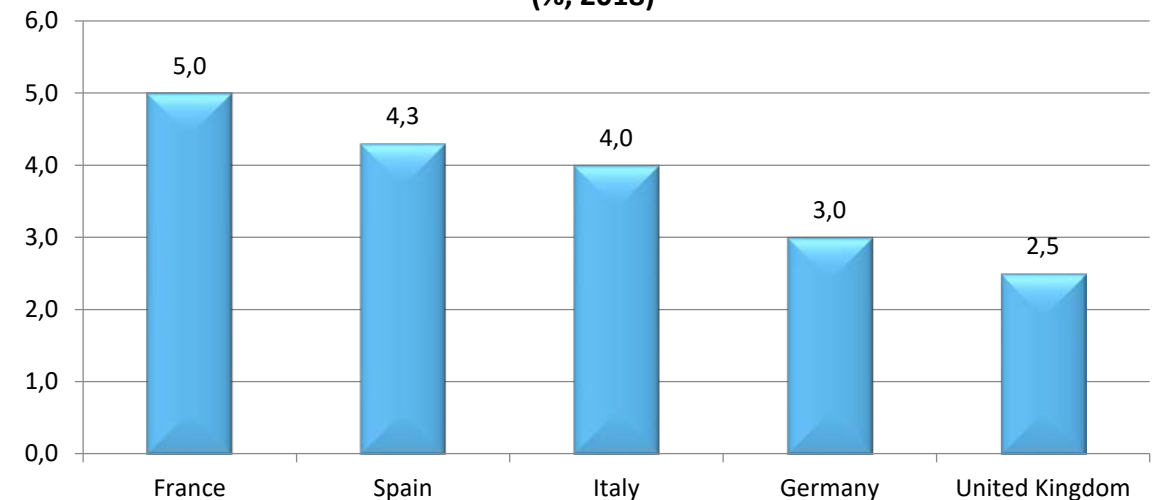


- Countries that have first understood the importance of fuelling the virtuous circle innovation-productivity-growth are those that are better positioned in terms of competitiveness and have shown greater resilience to economic crises.

The added value of the life science industry, represents a significant share in the total added value manufacturing.

- Industrial and health policies need to be aligned. Foreign investors expanding throughout Europe benefit from a high level of reciprocal recognition of shared standards between the EU Member States.

Share of life science industry added value in manufacturing total (% , 2018)



An analysis by Seboio Public Affairs, 2018 "**Which Countries are Attractive for Life Science Investments in Europe, a Comparative Analysis**", looks at the ability of different European countries in attracting life science investments:

- ✓ political and social context;
- ✓ overall industrial attractiveness;
- ✓ life science research and innovation context;
- ✓ healthcare system

In life science and healthcare, the internal European market did not fully materialise

Research funds, health policy and taxation systems remain national

Low life science research investments and public financing schemes

Difficulties in shifting academic research to commercial value (limited venture capital)

➔ Need to increase harmonization and renew efforts over the next legislative cycle to develop an industrial strategy that takes into account all the challenges and develop a policy environment that can adapt to the changing needs of a new industrial health sector.

- The cost of inaction in health can be disastrous, in terms of both human lives and economic impact;
- A shift is needed towards a patient-centered, value-based and policy-integrated approach;
- The path for action starts with health promotion and disease prevention, to a credible evidence-based approach and ends in supporting and guaranteeing the uniform development of innovative solutions;
- Health promotion and disease prevention should be important objectives for European policy;
- The digital healthcare transformation can be a major tool in enhancing the efficiency and integration of healthcare systems;
- An exchange of data among national health systems must be based on a series of ethical and legal principles alongside the existing data protection framework;
- Artificial Intelligence in healthcare must be more accurate and accessible for all;
- Level of public investment in healthcare sector should be increased to guarantee efficiency and quality care;
- Corporate venture capital and open innovation should be actively encouraged.