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Implications of the differences in healthcare organization

Author: María Díaz Marco

Degree in Economics

al375242@uji

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Tutor: Arne Risa Hole

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Abstract.

The aim of this paper is to present and reflect on certain conceptual and situational elements that influence the discipline of health economics.

First, it looks at the macroeconomic environment, where the necessary interrelationship between health and the economy means receiving resources, providing quality of life and, therefore, obtaining a longer life expectancy, which translates into more resources for society.

In a second step, activities and options between different financing models are considered in the search for greater efficiency. Thus, different ways of recognising this are evaluated, such as research and innovation, which are key elements in achieving optimal results, within the framework of sustainable human development.

To this end, the document is divided into sections, which serve as a reference on what is happening in Spain, Europe and the United States, the main reforms that have been carried out in the health sector, perspectives at the beginning of the 21st century, and policy and strategies.

Finally, the document contains open questions, with the aim of provoking analysis and debate, from which conclusions and recommendations will emerge.

KEY WORDS: HEALTHCARE ORGANIZATION, RESOURCES, EFFICIENCY, EQUITY, ECONOMIC IMPACT

Introduction

In 1890, the economist Alfred Marshall stated: “Physical, spiritual and moral health and strength are the basis of social wealth; at the same time, the fundamental importance of material wealth lies in the fact that, if wisely administered, it increases the physical, spiritual and moral health and strength of mankind”.

Thus, since the end of the 18th century, a multitude of references have emerged endorsing the relationship between health, economics and development.

Almost a century later, the World Health Organisation (WHO) has contributed to finding the appropriate methods to adapt the mission of the health sector to the new international economic and social context. Gradually, this concern for the importance of health has been reflected. Thus, the various reasons why the proper use of resources is vital for the evolution of this sector, as it directly affects both the economy of a country and the entire world population.

In the “World Health Report 1998. Life in the 21st century: A perspective for all”, on the 50th anniversary of the WHO, notes a growing concern about the state of health resources, given the complexity and high cost of health services, which makes it difficult to make appropriate decisions on their allocation. Although economic trends show some signs of recovery, lack of education, inequalities, hunger, environmental problems, poverty and inequalities are steadily increasing and, as a consequence, the health status of millions of human beings is directly affected.

There is evidence that, in order to increase levels of health care without affecting quality, costs must be reduced. Of course, trying to achieve equity in access to health services in a world of growing wealth but increasing numbers of poor people is a difficult task. The problem lies in controlling costs, so health sector reforms should adequately address current questions such as:

- Could different healthcare organisation models implicate different outcomes?
- Should research and innovation in national strategies be priority competences?
- Is the role of education in the population decisive?
- Differences between countries are relevant in practice?

The trust of this discussion, based on possible health reforms, has highlighted the need for countries to understand the state of health financing and spending.

Socio-Economic Context

The issue of equity is at the heart of health policies in most countries, where governments consider as the main objective of the current process of sector reforms, to ensure greater equity in the distribution of health services, improve quality and, in turn, try to reduce the costs of services or at least, moderate their increase.

The Declaration of Alma Ata, adopted in 1978 by WHO and UNICEF, considers Primary Health Care (PHC) to be the key element in achieving this goal, as a part of overall development. The recommendations of the Alma Ata conference are recognised by the World Bank as a historic for highlighting of the relationship between social development and economic development, as well as the interdependence between the economy and health.

For its part, decentralisation of the state agencies is a critical aspect of public administration that conditions change in the health system. A key aspect of health sector reform is the redefinition of the role of government at all levels. Thus, decentralisation must be accompanied by power and resources, while strengthening the leadership and regulatory capacity of Ministers of Health to regulate new modalities of service delivery and financing, and to promote broad social participation.

According to some experts, about 80% of diseases and other health problems can be addressed and solved at the primary health care level. Problems of sub-optimal delivery of health spending and inequity in access to services are therefore among the concerns that health policy makers need to address.

From a historical point of view, it took a long time before a certain amount of human and financial resources were redirected towards primary care. Professional interests that prefer clinical and curative medicine to preventive and promotive medicine still dominate the decision-making levels in the health sector. Certain economic and development policies have increased the burden of disease and governments have failed to fund long-term measures to promote and protect health.

In the poorest countries, the underfunding of health and other social services on the one hand, and the inability of governments to raise domestic and international funds for the health sector on the other, severely hampers development. Similarly, the fact that the rapid growth of private care has had a negative impact on public health services has also been a determining factor in many countries. In most cases, it has contributed to rising costs, especially out-of-pocket expenses, inefficient for-profit care and unequal access.

Subsequently, in 1933, the World Bank published its World Development Report with the theme "Investing in Health", in which its earlier approaches changed greatly. Its conclusions were based on some pioneering research, such as the calculation of the global burden of disease and cost-effectiveness.

The report proposes an approach to health policy that promotes, first, an economic environment conducive to improved health status, by adopting economic policies that benefit the most disadvantaged (e.g., by increasing their income levels and education). Secondly, it proposes to redirect public spending on health by reducing spending at the secondary and tertiary levels, thereby financing a

range of preventive measures and reducing environmental pollution. Finally, it aims to improve the management of public health services through decentralisation, thereby promoting diversity, competition and information on the costs and effectiveness of interventions.

State intervention is essential for sustainability, for equity, and for its role in articulating citizen participation for the achievement of common goals. Its greatest is to perform these functions not only effectively in terms of meeting these objectives, but also efficiently and at the lowest possible cost. On the other hand, economic and political decentralisation brings decisions closer to the citizen; it engages individual and collective contributions; and it promotes efficiency in the allocation of resources as well as their use. It is, therefore, the most appropriate form of organisation to channel and promote social and citizen participation.

In addition, the historical development of economic and social contexts plays a decisive role in the health situation and its trends. Human beings, as the centre of sustainable development and the main producer of “social wealth”, must live in health and in harmony with nature. From the perspective of the United Nations Development Programme, human development is seen as a source of income and economic growth. It encompasses the full and complete flourishing of human capacity and stresses the importance of placing people, their needs, aspirations, and choices at the centre of development efforts. In this way, human development is seen as a process of expanding opportunities, such as enjoying a long and healthy life, acquiring knowledge, and having access to the resources necessary to achieve a decent standard of living.

Therefore, it could be argued that without examining the distribution of income and the actual living conditions of the populations, development cannot be considered satisfactory when the analysis is based solely on the level of GDP and its assumed per capita distribution.

Undeniably, it is a great macroeconomic indicator however, GDP is ceasing to be the quintessential measure of development, at least human development, because the costs have been socialised, while the benefits have been privatised. In this way, it is seen how economic development a technical issue is not essentially, but a political one, as it must have the support and benefit of the majority. Finally, it shows how the market is the best allocator of resources, despite being the worst distributor of wealth.

It can therefore be concluded that the solution to the problems of healthcare and other social sectors lies not only in technology, but also in economics and politics. After all, a thorough understanding of the broad concept of health economics is at the heart of this process.

The effect of health on economic growth

The debate as to whether health or the economy should be given greater importance has taken hold in society. It is a dilemma in absolute terms of the choice between the two.

Health and economics are intrinsic to human beings. All animals have a survival instinct (health) and a way of managing scarce resources (economics). Rational complexity and the creation of sophisticated societies have caused these two concerns to become more complex in the human species: on the one hand, to live longer and better, and, on the other hand, for the economy to increase the total resources available to increase overall well-being.

It would be incoherent to choose between inalienable goods. In other words, neglecting health kills the short term and neglecting the economy kills in the medium and long term. However, the difference is that health is urgent, especially when it can cause thousands of deaths in a short period of time. However, total neglect of the economy also kills.

In fact, the two are interdependent. On the one hand, a lack of resources for health care leads to a deterioration in well-being and life expectancy. On the other hand, fragile or insecure health disrupts the management of individual resources, which in turn influences society by unbalancing a complex system that public authorities must compensate for if it is not to collapse. The current pandemic and health crisis perfectly reflect both realities.

The two false assertions (that there is a radical choice between economy and health; or, on the contrary, that there is no choice at all) are intended to hide the real choice: you must decide which health and which economy you want. The COVID-19 health crisis has demonstrated two realities: that the current economic system is incompatible with a minimum state of health, and that no public power or political organisation has sufficient alternatives.

Such vital and urgent issues as climate change, mass migration and growing inequality are proof of the daily cost in human lives of maintaining this system, as well as its enormous long-term destructive capacity, both for our species and for the planet we inhabit.

All health systems must make difficult choices between the allocation of scarce resources and the quality of life of their populations. This process is further complicated when an emergency arises that dramatically increases the demand for resources with no time to find them.

Demand far outstrips supply, and the need for investment in the health sector is increasingly evident. Research has shown the link between impaired health in older adults and drastically declining wages. The latter is one of the many elements of public health that negatively affect a country's economy.

On the other hand, it has been historically proven that appropriate health policies that include sound investments and programs can have positive results for the economy and for the development of any country. This can be seen, for example, in the eradication of polio in Latin America.

From the impact of disability benefits to the impact on employability, the health of the population can be either a burden on the economy or a benefit, so investment in health services is a factor that cannot be ignored.

Just as the health conditions of society affect a country's economy, the economy directly affects health. It is often assumed that a country's economic growth naturally drives improvements in health services, but this is not necessarily the case. The relationship between health and the economy is a kind of mutually beneficial symbiosis. In other words, it is a two-way street; and it is up to us to maintain the right flow to drive innovation, development and productivity.

Healthcare organization

The health system can be defined as a structure guided by legislation and endowed with material and human resources to meet the health needs of a population. It is made up of various institutions, agencies and services that are responsible for carrying out different health programs, such as health care, diagnostic tests, counselling, rehabilitation or surgical operations.

In short, the quality of the health system is based on the effectiveness and reliability of health care for the people it serves.

With all this in mind, the question arises: What values are considered to determine the value of a given healthcare system and which are the best healthcare systems in the world? By way of an answer to the first question, it could be argued that many values are considered, mainly patients' rights. For example, free access to healthcare, speed of care, prevention programs, counselling, efficiency, life expectancy, public investment in health, quality of human and material resources.

Types of health systems

Although many systems could be distinguished, there are three broad categories: those based on public health care, which provide care to all citizens of a country who need it; those based on private health care, which provide this care to those who pay for it; and mixed systems, which combine both services in different ways.

Looking at the different types of financing, we can think of four main models of systems:

- Welfare state system (Beveridge model): tax-financed services and state control.
- Social security (Bismarck model): contributions or compulsory participation of workers.
- Voluntary insurance (private): participation depends on individual choice.
- Direct payment for services.

Bismarck versus Beveridge

The first social security system was created by von Bismarck in Germany in 1881. One of the main functions of this system was to provide insurance in the form of annuities paid in certain contingencies such as old age or disability. The system introduced by von Bismarck was a pay-as-you-go system with contributory pensions, i.e. a system in which there was a direct link between workers' contributions and their pensions.

At the other end of the spectrum was the pay-as-you-go pension system proposed in the "Beveridge Report", published in the UK in 1942. The report called for the introduction of a minimum system, as an anti-poverty instrument, which would provide a fixed and equal welfare pension for most workers.

The adoption of one or the other system depended on a number of factors, among which political elements played a crucial role. Surprisingly, the Bismarckian system was introduced under pressure from what might be called the "middle class" with the influence of the industrial unions of the time. In 1871 Bismarck wrote "The only means of stopping the Socialist movement in its present state of confusion is to put into effect those Socialist demands which seem justified, and which can be realized within the framework of the present order of state and society". Therefore, the Reich government played an important role in the organization and implementation of all insurance schemes for the middle classes (retirement, sickness, accident, and disability).

During the same period, the UK was characterized by a liberal and democratic tradition. There were no collectivist political movements, no notion of the supremacy of state responsibility, and private and voluntary insurance systems developed. However, William Henry Beveridge, a British economist, in 1942 produced the so-called "Beveridge Report" which defined what was to become the British Welfare State after the Second World War and was launched by the elected Labor Government in 1945. This report introduced in Britain an alternative model of pay-as-you-go Social Security that would guarantee a minimum and equal pension for all workers. The Beveridge plan had a clear purpose: to reduce poverty and raise the incomes of the poorest to guarantee a subsistence level, he defined it as a "weapon against mass poverty". While defining such a minimum pension, the report also highlighted the individualistic side of his plan: state action should be limited to redistribution in favor of the poor, while individuals should be able to meet their own additional needs privately. Beveridge's plan was created with the dual intention of redistributing in favor of the poor and leaving maximum freedom to the upper middle classes to invest their income privately. This coalition between the extremes, the poor and the better-off, is also argued by Hills et al. (1994) "the old age pension campaign had a powerful momentum

due to the fact that it was built upon an unholy and unintentional alliance between conservatives and socialists".

In short, both systems were designed to serve different purposes, as political support for one or the other model was key to their creation. While the Bismarckian or contributory systems tried to satisfy the middle class by providing them with sufficient savings for old age, the Beveridge-type or welfare systems, on the contrary, tried to defend the interests of the richest and poorest workers at the same time. The poorer ones, because since the pension was equal for all, even those who had not contributed much to the system earned the right to receive a pension. And of the richer, because by providing low pensions, the contributions needed to finance them are consequently lower than those of contributory or Bismarckian systems, and therefore the richer workers have enough room to be able to devote part of their income to private savings.

In principle, there is no better or worse pension system depending on the degree of intragenerational redistribution, since, as we have just seen, the objectives pursued by each of them are different. In a contributory pension system, the pension that an individual receives is based on the fact that the higher the salary, the higher the contribution to the system and as a result the higher the pension. This means that the ratio between the pension and the last salary (what we call the "replacement rate") is also similar for all workers. On the contrary, in a welfare system, since the pension is the same for all workers, regardless of the contributions made, the replacement rate is decreasing in the wage level.

It should be noted that there are very few purely Bismarckian systems, i.e. those for which the replacement rate is constant for any wage level. Thus, for example, in the Spanish system, which is a contributory or Bismarckian system, there is a certain degree of intragenerational redistribution through the minimum and maximum pensions. It is important to note that both systems, as we have said above,

respond to very different objectives. Moreover, each system has particular characteristics associated with it. Specifically, Beveridge-type systems are associated with lower public spending on pensions as a percentage of GDP than Bismarckian-type systems. Whereas countries with Beveridge-type systems tend to have more developed private pension systems or more widespread use of private pension plans. Beveridge-type countries spend about 6% of GDP on public pension expenditure, while countries with Bismarckian-type pension systems spend on average more than 11%. In contrast, the reverse is true when we look at private pension expenditure. As can be seen, countries with a Beveridge system have much more expenditure on private pensions than countries with Bismarckian pensions, 4.1% compared to less than 1%.

Another important difference to note is the replacement rates of workers with lower earnings. Countries with Beveridge-type pension systems are associated with higher replacement rates for low earners. At the same time, as mentioned above, the replacement rate is decreasing at the wage level, with the difference being larger in the case of Beveridge-type systems.

This modality, with some variations, is predominant in France, Germany, the Netherlands, Belgium and Luxembourg.

Where coverage does not reach the entire population, countries have a public assistance system for people with an insufficient level of income.

This model ensures a much higher level of health care coverage than the liberal system but maintains unequal treatment in terms of access to services and an inequitable system in the financing of the system.

In contrast, J. Beveridge sees universality, equity and comprehensiveness as basic principles. Thus, not only is the entire population served, but access to services is facilitated in an equitable manner, guaranteeing equal opportunity for all people to benefit from health services. Currently, in

addition to the UK, the European countries with a National Health Service are Sweden, Denmark, Portugal, Italy and Spain.

The ideal pension system within an economic and monetary union, such as the European Union, would be a single system. In other words, there should be convergence over time between the pension systems of the different countries as a prior step to the existence of a common system. An optimal monetary area requires facilitating the free mobility of workers and the existence of a fiscal union. Undoubtedly, a single pension system would facilitate the free mobility of workers and would be a very important step towards fiscal union.

On the basis of a normative analysis, it is not possible to say what is the optimal degree of intragenerational redistribution that the future European pension system should have.

Beveridge or welfare systems aim at fighting poverty, while Bismarkian or contributory systems aim at income replacement in retirement (i.e. salary for pension) or the creation of a longevity insurance.

Which is better would really depend on the preferences of European society. We are at a key moment to decide in which direction the pension systems of European countries should be reformed. The intense ageing process that all countries are experiencing is leading them to implement pension reforms to adapt them to the new demographic reality. And these reforms can potentially affect the degree of intergenerational redistribution of the systems. Thus, for example, countries with Bismarkian systems are opting to maintain contributory systems and reforming pay-as-you-go systems towards so-called notional accounts.

Finally, focusing on Spain, its pension system is contributory and typically Bismarckian; however, the prolongation in time of the so-called "silent reform" could mean the transformation of the Spanish pension system from Bismarckian to Beveridge-type. The "silent reform" consists of strategically

modifying the maximum base (or the maximum wage for which social security contributions must be paid) and the maximum pension (the maximum pension that a pensioner can receive). The strategy is to freeze the maximum pension while continuously increasing the maximum contribution base. This clearly increases the intra-generational redistribution component, making the system more Beveridge-like. The political temptation is great because it increases the revenue of the system, but at the same time leaves part of the future pension entitlements frozen. As well, Spain has significant shortcomings that have been highlighted by the current crisis, but there is no denying that Spanish citizens enjoy a great privilege in being able to receive healthcare practically free of charge. Fortunately, private healthcare helps to alleviate these shortcomings and has become an effective complement.

With the exception of Finland and Norway, all Bismarkian pension systems also have a maximum or income base on which social security contributions and a maximum pension are applied and this would potentially allow the same "silent reform" mentioned above to be applied. At the same time, it is interesting to note that most countries with Beveridge-type pension systems either do not have a maximum wage ceiling on which to apply the contribution rate or they are financed by general taxation.

In short, the progressive ageing of the population in the European Union will mean that countries will have to carry out reforms to their pension systems. We should not lose sight of the fact that spending on old age is the main item of expenditure in the various European welfare states. In a framework of economic and monetary union where work is being done on the creation of a European pillar of social rights, this could be an opportunity to also move towards a common pension system. This would imply that the reforms to be implemented would lead to a series of common characteristics between countries that would facilitate the free mobility of workers, improve the efficiency of insurance of pension systems and serve as an impetus for progress towards fiscal union. Not forgetting that this

measure would also help the mutualization of risks within the EU. In this sense, we consider that the contributory (or Bismarckian) pay-as-you-go systems of notional accounts have a number of elements that would allow for the convergence of pension systems in Europe.

On the other hand, the health system in countries that rely entirely or mostly on private care leaves many of their citizens partially or totally neglected in terms of health. A well-known case in point is the United States, where there is no universal, free health insurance except for people of modest means. Private insurance is virtually the only option, unless you want to pay very large sums for the health treatment you need.

Another clear example is Venezuela's system, which suffers from numerous problems, as it is dominated by the private sector and its services are too expensive for a large part of the population to have easy access to them.

Other countries are characterized by mixed systems, and sometimes this practice is effective. For example, in the Netherlands, the entire health care system is in the hands of private companies, although the government is responsible for providing health care to its citizens. All residents of the country are obliged to take out health insurance with a national insurance company, although they are free to choose. Basic health insurance coverage is determined by the executive branch, though additional coverage is available. The cost is not high, and it offers a wide range of benefits.

Health systems and their implications

The Spanish health system has always been highly regarded. Currently, the World Health Organization ranks it in seventh place, although not all organizations rate it so highly.

In its latest analysis, Bloomberg, a company specializing in financial information, has moved Spain from third to thirteenth place, based on its healthcare management of the COVID-19 crisis and its impact on care for people with other illnesses or ailments.

In any case, there is no single ranking of the best health systems in the world, but hundreds of lists with very different results depending on their author. In order to produce a realistic ranking of the world's health systems, surveys consider a variable number of indicators.

For its part, the Commonwealth Fund classifies indicators into five groups: Quality, access, efficiency, equity and healthy living. Thus, the survey includes indicators such as safety, waiting lists, administrative organization and equity of access to health care.

To rank the world's healthcare systems, Bloomberg uses life expectancy, healthcare expenditure as a percentage of GDP and healthcare cost per capita.

Norway, the Netherlands and Australia show the best overall performance, while the United States ranks last overall, despite spending far more of its gross domestic product on healthcare. The country thus ranks last in access to care, administrative efficiency, equity and health care outcomes, but second in process of care measures.

Health systems are a complex web of relationships between different agents, which we can basically list as governments, citizens, insurers and health service providers. Among them, different levels of interaction take place in order to achieve the different objectives pursued in the health services of any society (effectiveness, satisfaction, equity and efficiency) ...

Effectiveness is considered as the capacity to achieve adequate levels of health and quality of life for people. It is the main justification for health systems. However, it has been argued that this capacity to reduce disease and improve the level of health of populations is shared with other

conditioning factors of health (environment, level of education, working environment, level and distribution of income, etc.).

The satisfaction of the population, of the individuals who use health systems and of the citizens who finance them with their taxes or insurance contributions, has two different perspectives: one with the state of health itself, which includes the measurement or self-perception of the limitations caused by our health; and, on the other hand, satisfaction with health services, which expresses the degree of conformity with the services received, in contrast to our expectations of what a quality service should be. Both opinions are based on personal assessments but are important for the collective perception of acceptance and social cohesion.

Equity is the means of achieving equal health care regardless of the different variables that may interfere, such as gender, age, social status, place of residence, etc. It is a moral and political good. It is a moral and political good that can be demanded of all activities carried out with public resources. In the health system, one of the most important dimensions of equity is equality of access, although other dimensions of greater importance in terms of health outcomes are also beginning to be considered.

In Spain, the General Law on Health recognized the right to health protection and health care for all Spaniards and foreign citizens who have taken up residence in Spain.

Subsequently, the Law on Cohesion and Quality imposed on public administrations the obligation to avoid discrimination against any population group which, for cultural, linguistic, religious or social reasons, has difficulties in effectively accessing the health services of the National Health System (SNS).

Finally, efficiency can be defined as the way in which the remaining objectives are achieved at a cost that society can afford and without misuse of resources.

Citizens' expectations of health and health services are rising. That is, health services must be able to demonstrate their performance in terms of improved outcomes. Health costs are rising, and demographic factors sometimes make them difficult to bear. Therefore, to achieve a financially sustainable system, it is necessary to contain and control costs, while ensuring equity and quality of services.

Investment and innovation

Innovation is a key driver and determinant of economic growth, as well as an indispensable way to address global challenges, including health. The health innovation industry is key to attracting investment and having a positive impact on the health system.

A little more than two years after the COVID-19 pandemic was declared, not only have several vaccines been developed, but more than 12 billion doses of vaccines have been produced and more than 60% of the world's population has received at least one dose, resulting in the largest immunization campaign in human history. The pandemic has shown us, once again, that we can achieve common goals when we collaborate across sectors and when innovation is also on our side.

The rapid response was only possible thanks to a strong innovation ecosystem in the biopharmaceutical industry.

In short, the entire innovation flow needs to be streamlined, from the approval of clinical research protocols, through the issuance of health registrations, procurement and distribution processes, all the way to the patient.

According to Fausto Avila, Audit Partner specializing in the sector at KPMG, "in a changing world, innovation is the activity that will enable companies to find new or different ways to overcome the challenges and threats they face. "

The pharmaceutical industry's commitment to innovation for the development and promotion of a healthy society is not limited to the issue of disease. Beyond that, the companies are an important source of employment, as well as attracting investment, linked to development.

Carlos Millán, a partner in KPMG's Global Strategy Group in Mexico, explained that "innovation consists of developing new or better policies, systems, products, technologies, services and methods of delivering health services that contribute to people's quality of life, with special attention to the needs of vulnerable populations". Furthermore, he stated that "in a changing world, health needs are unlimited; however, human, economic and infrastructure resources are not, and if we do not manage them properly we can invest a lot and have poor results, so we must stress the importance of making strategic investments that allow us to focus on the main needs and the greatest benefits, making a balance between what is urgent and what is necessary to make the best use of resources".

The relationship between health and socio-economic well-being

According to the study Health and economic growth by the Institute of Labor Economics IZA, there is a strong positive correlation between health and gross domestic product (GDP) in different countries.

Nations with healthier populations tend to have higher incomes. This relationship is known as the Preston curve, which compares life expectancy at birth with real GDP per capita.

On the other hand, the health value chain comprises a wide range of activities, such as social care, pharmaceutical manufacturing and medical technology. It has the potential to generate economic development and is a cross-cutting sector that can have an impact on other industries.

The study *The Great Escape: Health, Wealth, and the Origins of Inequality*), published by the *Journal of Economic Literature*, also notes that technological advances and improvements in institutional quality tend to increase per capita income and improve health.

Today, the health system needs to be further strengthened to achieve universal coverage through the provision of timely, efficient and effective services. Therefore, the priority of the sector and its role in creating sustainable development needs to be increased to accelerate growth in the coming decades.

By 2030, the OECD has targets focused on sustainable development, new technological solutions, better business models and appropriate interventions by the pharmaceutical industry. Given that, globally, we are facing a health emergency like we have never seen before, expertise and collaboration are extremely important. To meet these challenges, concrete initiatives must be taken to address market inefficiencies, which affect investments in research and the development of new medicines.

Fortunately, there is a common understanding of the incentives needed to support adequate patient access and sustainable investment. Such incentives include, among others, increased funding, market entry rewards and transferable exclusivity vouchers. Similarly, timely access to innovative health products and services enables patients to live longer, healthier and more productive lives.

Research and the availability of therapies provide cures for many conditions and put the healthcare system on a more sustainable path by reducing, for example, hospitalization costs. In addition, there is an urgent need to support research and development of vaccines and medicines for communicable and non-communicable diseases that mainly affect developing countries. As a result, access to these inputs, the impact of which is reflected in patients' health and quality of life, as well as in health system outcomes, would be facilitated.

Lifelong learning

The promotion of education within the healthcare innovation industry enables the dissemination of knowledge necessary for the improvement of skills, not only for healthcare professionals, but also for patients. In this way, the healthcare ecosystem can continue to evolve for the benefit of all. The industry's actions contribute to strengthening quality education in the country through various initiatives.

The COVID-19 health crisis has served as a turning point to foster resilient innovation ecosystems. To achieve this, it is essential to promote education and training, as innovation only flourishes when people have the scientific, technological and professional skills and capacities to sustain it.

For its part, Spain has the potential to create and nurture innovation ecosystems in health. In clinical research, for example, it has a diverse demographic profile, a healthcare system with multiple options for research, a first-class hospital infrastructure, internationally recognized researchers and regional leadership in the export of pharmaceutical products.

However, it is also important to collaborate and continue efforts to accelerate access to innovative treatments and health inputs from a holistic perspective, considering the issues on which authorities and the private sector should collaborate and promote, including:

- Fast regulatory authorization processes for medicines, medical devices and health inputs, in line with international best practices, which are recognized by other reference authorities at regional and global level.

- A strong legal and regulatory framework for industrial property (patents, clinical data protection) that encourages economic actors to continue to invest in new preventive and health solutions.

- Encourage companies to assume and overcome the risks of research by optimizing the authorization processes for clinical protocols.

- Increase funding for health and innovation to achieve better and more efficient availability of innovative health inputs and technologies.

- Continue to incorporate innovative inputs into the National Compendium of Health Inputs.

- Strengthen institutional procurement processes.

Comparison between countries

Differences between Spain, The United States and the OECD

The Spanish central government, through the Ministry of Health, is responsible for promoting coordination and cooperation in the health sector. From 1986 onwards, the Social Security System (Bismarck model) was transformed from a system of financing health services through employer and employee contributions to a Beveridge model with state financing and responsibility through taxes and the general state budget. The decentralization process was completed in 2002, with the division of the State into 17 autonomous communities. The Spanish health system has been made up of the entire range of public health services in Spain since 1986, a set of services created through the General Health Law. In fact, the Spanish health system was inspired by the National Health System, the British health system, with the aim of providing public health insurance to all the inhabitants of the territory.

The evolution of the social determinants of health in Spain is also relevant. At the end of the dictatorship, Spain started out with an enormous deficit in investment in research and development (R&D) (0.4% of gross domestic product [GDP] in 1981, compared to an average of 1.91% in Organization for Economic Co-operation and Development [OECD] countries). Currently, despite considerable progress (1.19% in 2006), it is still far from the OECD average (2.26%) and the 3% target set by the Council of Europe. R&D in medical sciences in Spain represents about 20% of total R&D (0.24% of GDP), and 49% of this is publicly funded (compared to the OECD average of 41%).

In order to describe the dimensions and evolution of research on health inequalities in Spain, two aspects will be analyzed: scientific production and research project funding.

On the other hand, the Euro Health Consumer Index 2014 is responsible for assessing the quality of the healthcare system in 35 countries. It focuses on 7 categories: information and patients' rights, accessibility, outcomes, coverage of the service portfolio, prevention and access to medicines.

The results of the report show that the Netherlands is in first place, followed by Switzerland, Norway and Finland. Spain, on the other hand, ranks 19th in terms of the quality of its healthcare system. In fact, its lowest scores are concentrated in the areas of accessibility, waiting times, direct access to specialists, non-urgent surgery, etc. Other countries with scores like Spain's are the United Kingdom, Ireland, Sweden and most Eastern European countries.

The United States is an exception among OECD countries' health systems in terms of financing. While each system has its own characteristics, they can be broadly divided into two groups, as have been seen before: those that are essentially financed by social insurance (the Bismarck model) and those that are essentially tax-financed (Beveridge model). But the United States cannot be enrolled in either of these two groups, because its health system is essentially financed by private insurance and out-of-pocket payments.

Most OECD countries have a universal health care system that protects people from excessive medical costs and promotes access to health care for all. The quality of health care has also improved in recent years: deaths from heart attacks and strokes have been reduced; and the detection and treatment of diseases such as cancer and diabetes have improved. However, there are differences between countries, so this section will look at a few health indicators that are relevant to understanding the health situation in the OECD countries.

First, indicators related to health status will be discussed, as they provide a conceptual framework for countries, and then the health system will be examined.

Life expectancy is an indicator of the general state of health of a country's population. Thus, it is worth noting that the average life expectancy in OECD countries is 80.6 years. This represents a considerable increase since 1970; life expectancy at birth has increased by an average of 10 years. Today, countries with higher incomes tend to have higher life expectancy, although life expectancy varies among different groups within the same population. For example, life expectancy is lower for people with low levels of education in all OECD countries.

In the United States, life expectancy has increased more gradually than in other OECD countries. Thus, in 1970, the United States was one year above the OECD average while it is now two years below.

Several factors may be responsible for the slower increase in life expectancy:

- A highly fragmented health system, with few resources devoted to public health and primary care, and a significant share of the population uninsured.
- Health-related behaviours: higher levels of obesity, higher consumption of medicines and drugs, higher rates of homicides, etc.
- Higher rates of poverty and income inequality.

In addition, higher per capita health expenditure is often associated with higher life expectancy at birth, although this relationship is less pronounced in countries with higher per capita expenditure. Thus, the United States and Russia have relatively low life expectancy for their expenditure, while Japan and Spain stand out for their life expectancy.

Thus, the health care system and public spending on health care affect life expectancy. Self-perceived health is also a good indicator, as well as a useful tool for understanding future use of the health care system and mortality. It is mainly influenced by different factors such as culture or socio-economic factors.

The most interesting factor to analyse is the socio-economic factor. On average in the OECD, 80% of the population with the highest income report very good or good health compared to almost 60% of the population with the lowest income. These disparities may be due to a variety of causes, such as differences in working or living conditions, or difficulty in accessing certain medical services due to cost.

The United States is one of the countries with the best self-perceived health (85%) compared to the OECD average of 68.2% and Spain's 72.4%.

Most OECD countries have achieved universal health coverage. Here, the cost of essential medical services, such as medical consultations, tests and check-ups, or surgical procedures, are covered, usually through government policies. However, there are countries where the same result has been achieved through compulsory private insurance (the Netherlands or Switzerland).

The percentage of the population with private insurance is important because the development of private insurance is related, among other factors, to the shortcomings of the public health system, the level of government interventionism in the health sector or historical developments. All of these are therefore relevant for the analysis of the health system.

The population covered by private insurance has increased in some OECD countries, notably Denmark and Korea, although in Spain it has increased slightly and in the United States it has decreased. This reduction is partly due to the ACA, which extends public coverage.

Today, non-compliance with medical needs is an alarming problem, especially for low-income groups. On average (out of 17 OECD countries), one in ten people have missed a medical consultation because of cost, which is surprising given that in most OECD countries consultations are free or with a very low co-payment. In other countries, including Spain, less than 5% of the population report not having gone to the doctor because of the cost. This indicator, together with the level of coverage, clearly shows the shortcomings of countries' health systems.

In addition, this section will also discuss data indirectly related to access to healthcare, such as the number of doctors (practitioners) per 1000 inhabitants, the number of nurses per 1000 inhabitants and the number of hospital beds per 1000 inhabitants.

The importance of these indicators lies in the impact they have on the quality of health care, as well as on the cost of health care. They also show the resources, and the capacity, available to the different health systems in each country. For example, Spain (3.9) is above the OECD average (3.4) in terms of the number of doctors per 1000 inhabitants, while the United States is below (2.4).

In terms of the number of nurses per 1000 inhabitants, the lack of nurses is a concern in quite several OECD countries, especially as the demand for nurses is expected to increase with the progressive ageing of the population. Spain (5.3) seems to be at higher risk of having a future problem with the number of nurses compared to the United States (11.3) which is well above Spain and even above the OECD (9.0).

In terms of the number of beds per 1,000 inhabitants, both Spain and the United States have similar values and are below the OECD average, which has been decreasing in recent years, due to the increase in outpatient surgery and day hospitalisation.

Health expenditure represents, on average, 9% of GDP in OECD countries, a percentage that has remained relatively stable in recent years compared to the 1990s and 2000s, when health expenditure growth exceeded GDP growth. The United States (17.2%) is substantially above the average, more than 5% above the next highest spender, Switzerland, while Spain is at the average. This difference is also present in per capita health expenditure, which, in the United States, is \$9,892 - more than double the OECD average (\$4,003). This is followed by Switzerland, which has about 25% less expenditure (\$7,919); Spain has a much lower per capita health expenditure (\$3,248).

Health expenditure can be financed from different sources depending on the country. In some countries, healthcare is mostly covered by state schemes. In others, it is compulsory insurance (either public or private) that finances most of the expenditure. In general, some components of health expenditure are out-of-pocket costs, as well as voluntary insurance that replaces or complements compulsory coverage.

For example, in Spain, public health care is provided by the National Health System (SNS), which is financed through taxes and social security contributions (it is a universal system). However, private health insurance, such as Sanitas or Adeslas, can be taken out as a complementary option, giving the right to use the private health system. Thus, in Spain, the financing of spending is mainly public, although, due to the economic crisis and the austerity measures adopted to reduce the public deficit, private and out-of-pocket spending has increased in recent years. The United States, on the other hand, is the only OECD country where private spending exceeds public spending, as most spending is on voluntary insurance.

Conclusion and outcomes

This paper has analysed different relevant aspects of the configuration of the healthcare system. As well as the differences between countries, paying special attention to the Spanish and American cases.

It can therefore be concluded that the US healthcare system is a welfare system, in which government aid is only provided under certain conditions. It is not a universal system, as is the case in Spain or most OECD states, and this is reflected in health spending. As a result, the United States is the only OECD country with higher private than public spending.

At the same time, it is worth highlighting the existing inequalities in the field of health care in the United States, both between the different states and between different population groups, with Latinos being the most vulnerable, with more than 20% of this population without health insurance. With the expansion of Medicare by the ACA, the differences between the states that have expanded their programme and those that have not become abysmally pronounced. Moreover, one of the problems plaguing US healthcare, as mentioned above, is the lack of coverage of the entire population. These high healthcare costs are due to the very structure of the system, the main causes of which are high pharmaceutical costs and the relative freedom of hospitals and doctors to set prices.

Most neighbouring countries have moved towards a universal system that seeks greater equity and protection for their citizens. In contrast, the United States, for various reasons, whether political, economic or social, remains anchored in a liberal conception of the welfare state, with its health system based on care for the neediest but which leaves part of its population unprotected and accentuates the differences between different social groups.

As for the national health system, R&D spending in Spain is far behind the OECD and the 3% target set by the Council of Europe. Moreover, both globally and nationally, scientific output incorporating the perspective of health inequalities is very low, especially when compared to other cross-cutting areas of research.

It is necessary to redefine priorities in health research. Prioritise according to three dimensions: public health (impact on health), institutional (sectors or groups involved) and equity.

The reconsideration of health research priorities must be linked to an increase in the budget for research into health inequalities. To be able to carry out research, it is also necessary to have human resources dedicated to it. It would be interesting to promote training in public health and health inequalities, both at undergraduate and postgraduate level, in disciplines of this nature.

The translation between research and action should be promoted, both with one-off initiatives and, if possible, with more stable projects.

Most of the actions arising from this research are in the area of health inequalities, so publishing a study in a scientific journal is not enough to reach decision-makers and stakeholders. Indeed, there should be a commitment on the part of research institutions to recognise and facilitate this task, without which research on health inequalities may remain a mere academic exercise.

On the other hand, to move from evidence to policy decision or action, evidence must be refined and adapted to local context, circumstances, and populations. There are numerous barriers to this process, related to the characteristics of the intervention, the definition of the target population or the designs used to test interventions.

Ways of bridging the gap between science and policy have been described, based on exposing policy makers to the process and results of research and scientists to the decision-making processes and content of policy.

The knowledge, analysis and reflection on health and its social, economic and educational implications constitute one of the most important references for the development of a philosophy of healthcare which, undoubtedly, will give rise to a professional performance framed in a Health Promotion approach.

Today, social changes are leading to a major transformation in health and education problems and needs. Achieving health for all is undoubtedly a goal in which the health system also has a fundamental role to play. Although this is not its exclusive competence, it must be admitted that it does have a guiding and dynamic role insofar as it is the health professionals who are responsible for developing the body of scientific knowledge and thus technically orienting health policies.

Clearly, all health problems identified today have a common substratum: they are largely preventable and linked to an inequitable economic and social order, as well as to unhealthy individual and collective behaviors.

Is education the alternative? If promoting health is about empowering people to intervene in their own health and to that of others in order to improve it, then of course, then education is certainly the alternative.

The results obtained allow us to conclude, first, that economic development is not human development. Moreover, greater economic development does not necessarily imply greater human development. Furthermore, the factors that affect human development do not tend to affect economic development in the same way, so it is not enough to increase per capita GDP; it is also necessary to improve the social conditions and well-being of the population.

In the same line of thought, the effectiveness of government policies and instruments must be improved. Thus, we have found that it is not enough to spend more on education or health, we must

spend better, so that the increased spending translates into improvements in the quality of the education system and the level of health care.

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