

Editorial

Health Professionals, Organizations and the Health System: Making What Is Socially Advisable Individually Attractive



Profesionales, organizaciones y sistema sanitario: haciendo individualmente atractivo lo socialmente conveniente

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In a previous article, we reviewed the criteria and methods for making decisions and setting priorities in the health sector to produce the greatest benefits and the least harm with the assigned resources.¹ In this scenario, clinicians, as the patients' agents, find themselves influenced by several circumstances: by how their activity is measured and motivated—by colleagues, managers, and the patients themselves—by the types of organizations where they work, and by the norms and values that predominate in the society they live in. This article summarizes the practical implications of the available scientific knowledge on incentives, organizations, and institutions. Clinicians are the main allocators of resources in national health systems. As such, they require an adequate regulatory framework, which will be discussed below, and a professional and organizational setting that will motivate them to tackle key problems. These exist in any health system, clinicians are the only professionals who can resolve them, and they concern the gap between efficacy and effectiveness. The solution to these problems, in addition to being socially desirable to consolidate the welfare state, should be individually attractive. This article focusses on how to combine these aspects.

THE PHYSICIAN-PATIENT RELATIONSHIP

On an airplane, the pilot travels with us. Although this does not always guarantee a safe arrival and suicidal behavior has been documented, it is always more reassuring to share our fate and the outcome. This does not necessarily happen in the case of medical care. The physician does not take part in the patient's infection, caused by a poorly placed catheter, a badly sutured wound, or improperly cleansed hands.

The physician-patient relationship is not only characterized by a difference in information between the 2 parties. There may also be a difference in the interests they each have, and it is difficult to

determine the extent to which the implicit or explicit accords that regulate their relationship are fulfilled.

Clinical work involves multiple tasks and is costly to evaluate, as personal effort is not open to observation. Could we be guided by outcomes? To answer that question, we should take a look at the recent shift in mind-set from paying for “being” to paying for “outcomes”, with a pause in between for paying for “doing”.

FROM “WHAT YOU ARE”, TO “WHAT YOU DO”, TO “WHAT YOU ACHIEVE”

For decades, the rates established for contracts with hospitals were based on their classification according to the level of care they offered. This stemmed from the implicit hypothesis that the complexity of the care provided would be related to the degree of diversity of the patients attended and the severity of their conditions. Obviously, this hypothesis was often refuted. It seemed more sensible for health centers to be compensated according to their activity. Risk adjustment systems made it possible to meaningfully measure a portion of the hospital activity. For example, Fetter's Diagnosis-Related Groups (DRGs), implemented in the United States at the beginning of the 1984 fiscal year, allowed patients to be classified according to diagnostic, treatment, and demographic variables in groups of predictable resource use. In a society of chronically ill and dependent patients, a greater frenzy of care is not usually an indication of better quality, but instead, quite the opposite: the more (eg, comas, unscheduled hospital admissions), the worse. Why do we finance health services with public money? Because of the impact it has on health; so that access to them depends on need, and not on the ability to pay. Let us think, then, about paying for that impact. Many variables influence health status, and it is very difficult to establish the percentage attributable to the health intervention. Perhaps we should go back a bit in time, even to before we were born. If we knew that we would be diabetic or that we would have gastrointestinal cancer, which country would we choose to live in? In the country that best controlled diabetes, measurable by glycohemoglobin analysis? Or one with high cancer survival, estimated, for example, by the percentage of gastrointestinal

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cancers diagnosed in hospital emergency rooms² or the concentration of highly specialized oncological surgery departments?³

Payment according to quality (outcome, performance) in health goes back, at least, to 1600 B.C., and it has undergone many incarnations over these thousands of years. The last resurrection of this concept occurred when military secrets from the Second World War were released, and management by objectives and payment by outcomes both became generalized in industry and the military.

The Hammurabi Code established payment for interventions according to their outcome. For example, in a successful ocular procedure, the price would be 10 silver coins for the upper classes (nobility, military), 5 for the middle classes (artisans, farmers) and 2 for slaves; if the procedure failed, the surgeon's hand could be amputated.⁴ Thus, the evaluation of the life gained depended on the affected person: you were worth as much as you had. In this sense, we suspect that the Babylonian surgeons had the same skill in selecting patients as did general practitioners in Britain exercising their influence on the denominators of eligible patients in order to achieve 97% of all possible points during the first year of the pay-for-performance scheme. From 2004 to 2005, this implied an average of 40,000 dollars more per year per physician gaining 97% of points.^{5,6}

After successfully applying the concept of payment for results during his time at the Ford Motor Company, Robert McNamara was named Minister of Defense in 1962. He resigned in 1968 because of discrepancies with the President at that time, Lyndon Johnson, in relation to the escalation in Vietnam. However, before leaving office, he had the opportunity to transfer some of the innovations that had worked so well in Ford to the military. Payment for results was an extraordinary failure. The success of the missions was measured by the body count (supposedly, of the enemy). And when you pay for corpses, you get corpses, even though they may be those of defenseless civilians.

INCENTIVES, ONE BIG FAMILY

Human behavior is influenced by 3 types of motivation: extrinsic, intrinsic, and transcendent. It was after the second industrial revolution (telegraph, steam-powered transportation, electricity, advances in chemistry), with the separation of ownership and management, that Taylor and Fayol initiated the scientific study of work organization. Although the name Hawthorne may be linked more often to a type of epidemiological bias—the Hawthorn or observer effect—or to a concept that was many decades later referred to as “total quality” in health care,⁷ it was precisely in the Western Electric factory in Hawthorne during the 1930s where the impact of motivation on performance was “discovered” based on experimental results. There began industrial psychology.

An incentive is any factor that provides a reason for an action or omission and explains why the option chosen is preferred over the alternatives. Incentives have always existed and they vary between societies (which activities are valued the most?), between organizations (self-employed, employed by others, for profit, not for profit, etc.), and between persons. Therefore, there are 3 different levels of incentives:

- Social rules of the game, whether formal (laws, regulations) or informal (customs, professional deontology)
- Organizational models and the degree of competition between them.
- Individual or group incentives in the form of promotions, prestige, stability, satisfaction, money, etc.

Social Rules of the Game

If the problems that humanity encountered during its evolution had always implied competing with other members of the group, we might all be profiteers or at the most, strict reciprocators. However, human evolution has been obliged to experience phases in which the whole group was saved or nobody was saved, and there were people willing to sacrifice personal gain in order to achieve justice and compliance with the social norms.⁸

The mind uses instinctive mechanisms, including emotions, to resolve the most important problems, those related to survival and reproduction. Over the last 2 million years, the human mind has evolved in the hunter-gatherer setting. Therefore, in its dimensions of instinctive cooperation and limited rationality, the mind is poorly adapted to a globalized setting characterized by cooperation “with strangers”.⁹

The practical implications of these concepts in health care organization are the following:

- We have to consider social approval and interesting work.
- Moral messages and sanctions should not be replaced by market transactions. (As an example, the poor outcome of using fines to penalize parents who pick up their children late from day care). Professionalism matters.
- Explicit incentives are not the solution for all problems. There are other useful ways to generate value, such as selecting the best people or using appropriate technology for the job.
- The employment relationship is also a social relationship. In this sense, it is unwise for management practice to abolish productive aspects, such as reciprocity as a source of voluntary cooperation, the relevance of social approval, and enthusiasm for interesting work.

Social Rules of the Game, Also Called Institutions

Every society has its rules of the game: its institutions. In this context, institutions are defined as the restrictions created by humans to provide a structure for political, economic, and social interactions.¹⁰ Institutions are as much a society's rules of the game as the mechanisms to safeguard it. They can be formal, such as the Constitution, laws, property rights, and deontological ethics, or informal, such as customs, traditions, or the expected standards of conduct in a group of professionals. The institutional quality of a country is emerging as the main factor that explains its progress.¹¹

The institutions of any society depend on their previous trajectory, and they are imbued with considerable inertia. Desirable institutions are those that best reconcile the interests of the individual with the interests of society. Human institutions result from an intentional design: based on instincts, but devised; intentional, but not predictable. The process of institutional change differs from natural selection, as it is influenced by learning, decisions, and imitation. In the health sector, in addition to the rules of the game established by the State, clinical standards and medicine-industry relations are of particular importance.

Clinical professional standards include both the set of behaviors the profession considers acceptable (certified by prestige and eponymy, or ostracism), and the series of values and expectations shared by the professional reference group.

The important thing is to provide physicians—the main decision-makers in the health system—with the incentives, information, and infrastructure needed to reach clinical decisions in a cost-effective manner. When possible, adequate selection of personnel, focusing on attitude as well as aptitude, can compensate for the weak incentives characteristic of the health sector. This

selection approach as an alternative organizational solution to incentives is particularly important in the public sector, which requires professional ethics that incorporate the idea of service.

Types of Organizations and Degree of Competition Between Them

In the health sector, the type of organization (public or private, self-employed or working for others) and the degree of competition and cooperation between organizations determines the strength and adequacy of incentives.

In Spain, publicly-funded bureaucracies predominate, and there are very few non-profit organizations, for-profit organizations, or professional cooperatives. As it is difficult to improve management in public bureaucracies, experiments have been carried out with alternative organizational types. The small number of available evaluations on the impact of new forms of organization highlight the importance of flexible management. In addition, they indicate that there are no significant differences in terms of clinical and economic indicators between public hospitals and concession hospitals, as was seen in the Valencian Autonomous Community.¹² If anything, the comparison showed that there was better use of certain surgical procedures (cesarean deliveries) and superior outpatient surgery in the concession hospitals than in the comparators. These evaluations should be improved, and this requires a willingness to do so. They should have a population focus: Whether hospital A is more efficient than B is not as important as whether what is lost with B is not counterbalanced by what is gained with A.¹³

Attempts to Decentralize Bureaucracies

Bureaucratic organizations characterize the public sector, although they are not exclusive to it. The main characteristics of these organizations include centrally established decisions, functional specialization, meticulous regulation of procedures, various ways of addressing a problem to achieve results (ambiguous production functions), difficulties in measuring productivity, a civil servant-type link between employees and the organization, and limitations on discretion. In short, rigid decision systems that respond slowly and inefficiently to the demands of change and adaptation.

Bureaucratic organizations that were suitable for achieving economies of scale in mass production conditions become inadequate when knowledge gains importance as a productive factor and the demand becomes more sophisticated. In these circumstances, the fundamental organizational problem (coordinate and motivate) is transformed to one of situating the decision-making capability right where the specific information (costly to transmit) is located; that is, to decentralize. In this regard, the scarce separation between political and management decisions, together with insufficient autonomy to decentralize in health care centers, explains the paucity of advances achieved.

Among Natural Monopolies, There Can Be Competition by Quality Comparisons

The monopoly is a specific example of an economy of scale, as the services required for a geographically stable market can be produced at a lower cost and higher quality when there is only 1 supplier instead of 2 or more. Monopolies are detrimental to social welfare; hence, the policy should be to avoid their appearance or at least their permanence over time. Company policy, in contrast, is directed toward securing the greatest market

share possible; that is, to resemble as much as possible, a monopoly.

Guaranteeing this triumph of humanity called the welfare state, with its substantial health care component, implies ensuring a high percentage of public funding to enable access according to need. In addition, although values regarding equanimity vary over time and between countries, the key to a quality health care system lies in universal coverage for the population and comprehensive financing. In Spain, 72% health of care expenditure is publicly funded, an amount far below that of the comparator countries. When dealing with public funds, we should think of the best way to spend them among the very different types of organizations. In reality, clinical skill, volume, degree of competition, and public ownership account for the managerial quality in hospitals¹⁴; therefore, stimuli should be used to govern this quality. There are two fronts of action to achieve this: improve management and improve the institutional setting. The latter, which is beyond the scope of this article, has to do with competition by comparing quality between health, research, and educational centers.

Individual Incentives

Individual incentives, the third level, refers to persons. These incentives attempt to create a positive change in behavior and include the approval of patients and colleagues, promotion, prestige, stability, satisfaction, money, compatibility with personal and family life, etc.

The various instruments that improve professional performance are known and have been evaluated. Multicomponent interventions stand out among them: education, clinical audits, computerization, quality management, financial stimuli, etc.

Payment by salary, capitation, and act are the three worst forms of compensation known: hence, the current evolution towards mixed systems. Each one has its indications and drawbacks, and therefore, it is useful to combine them.

As mentioned above, explicit incentives are not the solution to all problems: nothing replaces correct selection of personnel, which should include evaluation by colleagues, although this is usually difficult in our setting. Furthermore, management practices should not abolish productive aspects, such as the presence of altruistic reciprocators, an interest in a job well done, and the search for social approval.

As a basic objective, we should not stop providing useful health care services to adopt others that are harmful. The major clinical challenge is to avoid the excess health care expenditure (33% of the total according to the Institute of Medicine) that results from indicating ineffective procedures, and mainly, from badly indicating effective procedures. Cesarean section, angioplasty, and antidepressant treatment are good examples: extremely useful for the correct indication, but iatrogenic problems and wasted resources outside the indication.

Clinical problems are resolved clinically, although it is always helpful to know how the beliefs are formed leading to overuse (eg, education, colleagues), why ineffective treatments disappear so slowly,¹⁵ what incentives are disastrous, and how to stimulate competition in the true concern, quality in health care. Choosing Wisely, the Right Care Alliance, and the Essential project, among others, are steps in the right direction. Nonetheless, these efforts face formidable resistance and inclinations (prestige and power) internalized in both patients and clinicians by the implied perception of innovation, science, and health services, which does not correspond to their impact on social welfare. That is why clinical management and health care management cannot be separated.

In health care we should support “weak” incentives (there is a danger that “strong” incentives will lead to an erroneous action)

and take into account all the implied incentives provided by legal, social, and professional contexts.¹⁶

MAKING INDIVIDUALLY ATTRACTIVE WHAT IS SOCIALLY ADVISABLE

The victory of humanity known as the welfare state, including its crown jewel, health care, can be consolidated in Spain. This can be done by implementing slight adjustments that render it more similar to the welfare states of northern and central European countries and measures that the current circumstances and numerous opinions demand:

- Recover planning (the capability to authorize openings, changes, and discontinuations of health care facilities). Estimation of the human and physical supply needed has a great effect on future use. That is, true management by use.
- Make the sustainability factor effective. This regulates the composition of the services' portfolio according to cost-effectiveness and the budgetary impact, as is done in countries in Europe with greater purchasing power (and a more consolidated welfare state).

Clinical practice adapts to the available means and the established portfolio of services. This has been repeatedly observed since the publication of the famous "tale of two cities": Boston and New Haven.¹⁷ Furthermore, clinical practice, as the main allocator of health care services by diagnostic and therapeutic decisions, contains the key to making a publicly-funded health system desirable for voting citizens.¹⁸ It should be solvent, be able to tackle problems with limited resources, eliminate excessive inappropriate use, underuse, and overuse—one-third of the health expenditure in the United States¹⁹—and reduce the gap between efficacy (what can be achieved ideally) and effectiveness (what is actually achieved).

To make continuous improvements in their practice individually attractive for clinicians, organizations should have management autonomy and receive a part of their budget according to results—after adjusting for all that needs to be adjusted—in the setting of competition by comparison of quality. For this to happen, we need policies that enable better public management.²⁰

CONFLICTS OF INTEREST

None declared.

REFERENCES

1. Campillo C, Ortún V. La decisión clínica: clave de los resultados de los servicios de salud en cualquier país. *Rev Esp Cardiol*. 2018;71:515–519.
2. Porta M, Fernández E, Belloc, Malats N, Gallén M, Alonso J. Emergency admissions for cancer: a matter of survival? *Br J Cancer*. 1998;77:477–484.
3. Manchón-Walsh P, Espinàs J, Prades J, et al. Evaluación del proceso de concentración de cirugía oncológica digestiva de alta especialización en Cataluña. Monográficos de la Central de Resultados. Barcelona: Agència de Qualitat i Avaluació Sanitàries de Catalunya, Departamento de Salud de la Generalitat; 2016.
4. Spiegel A, Springer C. Babylonian medicine, managed care and Codex Hammurabi, circa 1700. *J Comm Health*. 1997;22:69–89.
5. Doran T, Fullwood C, Gravelle H, et al. Pay for performance in family practices in the United Kingdom. *N Engl J Med*. 2006;355:375–384.
6. Murray C, Frenk J. Ranking 37th—Measuring the Performance of the U.S. Health Care System. *N Engl J Med*. 2010;362:98–99.
7. Berwick DM. Controlling variation in health care: a consultation from Walter Shewhart. *Med Care*. 1991;12:1212–1225.
8. Fehr E, Gächter S. Altruistic punishment in humans. *Nature*. 2002;415:137–140.
9. Camerer C, Fehr E. When does "economic man" dominate social behavior? *Science*. 2006;311:47–52.
10. North DC. *Institutions institutional change and economic performance*. Cambridge: Cambridge University Press; 1990.
11. Acemoglu D, Robinson J. *¿Por qué fracasan los países?* Barcelona: Deusto; 2012.
12. Arias A, Illa C, Sais C, Casas M. Evaluación de la eficiencia y calidad científico-técnica de los hospitales en España según su modelo de gestión. *Gac Sanit*. 2007;21:Supl 1:11.
13. López-Casasnovas G, Del Llano J. *Colaboración público-privada en sanidad: el modelo Alzira*. Madrid: Fundación Gaspar Casal; 2017. editores.
14. Bloom N, Propper C, Seiler S, Van Reenen J. The impact of competition on management quality: evidence from public hospitals. *Rev Econ Stud*. 2015;82:457–489.
15. Tatsioni A, Bonitsis N, Ioanidis J. Persistence of contradicted claims in the literature. *JAMA*. 2007;298:2517–2526.
16. Casadesús R, Spulber D. *Agency revisited*. Bilbao: Fundación BBVA; 2007.
17. Wennberg JE, Freeman JL, Culp WJ. Are hospital services rationed in New Haven or over-utilised in Boston? *Lancet*. 1987;1:1185–1189.
18. Peiró S. De la gestión de lo complementario a la atención integral de la atención de salud: gestión de enfermedades e indicadores de actividad. In: Ortún V, ed. In: *Gestión clínica y sanitaria. De la práctica diaria a la academia, ida y vuelta*. Barcelona: Masson-Elsevier; 2003:17–87.
19. Institute of Medicine. *The health care imperative: Lowering costs and improving outcomes*. Washington DC: National Academies Press; 2010.
20. Meneu R, Ortún V. Transparencia y buen gobierno en Sanidad. También para salir de la crisis. *Gac Sanit*. 2011;25:33–38.