

# IMPROVING HEALTH SYSTEM EFFICIENCY

**URUGUAY**

## Building up the national integrated health system

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# ABBREVIATIONS

AGESIC	Government Agency for Electronic Information
ASSE	State Health Services Administration
BPS	Social Security Bank
DISSE	General Directorate of Social Sickness Insurance
FNR	National Resources Fund
FONASA	National Health Fund
HRH	Human Resources for Health
IAMC	Collective Medical Assistance Institution
IMAE	highly specialized medical institutes
JUNASA	National Board of Health
MEF	Ministry of Economy and Finance
MPH	Ministry of Public Health
MTSS	Ministry of Labour and Social Security
PIAS	Comprehensive Health Care Programme
SNIS	National Integrated Health System
SNS	National Health Insurance

Uruguay is committed to achieving universal health coverage for its entire population. The path to success relies in part on the health system identifying and resolving any inefficiencies. This would in turn release resources for an expansion of population coverage and available services, improved financial protection for low-income families and, in general, more equitable access to health care.

The health system reform launched in Uruguay in 2005 explicitly prioritizes equity, financial protection and change in the health-care model, and recognizes people's right to health protection. In December 2007, Law 18.211 created the National Integrated Health System (SNIS) and the National Health Insurance (SNS) and set forth as a basic premise, "effectiveness and efficiency in economic and social terms". In relation to the health system, the Law established that "adjustments in the level of health-care premium, the inclusion of new services and the reduction of co-payments shall be made in line with economies resulting from improvements in system efficiency and from the incorporation of new users in the health providers registers".

The policies and regulations designed in the context of the reform have undoubtedly had an impact on system efficiency, as have the resulting actions taken by providers.

The national health system reform indicates changes in the management model, the health-care model, and the financing model. With regards to the financing model, the National Health Insurance scheme and its corresponding National Health Fund entail a new mechanism of payment to health service providers. The mechanism includes a capitation payment adjusted according to the estimated risk of the beneficiaries, and an additional payment linked to the fulfilment of predefined health-care goals. The main changes proposed in the health-care model are an organized network of care levels according to user needs and the complexity of the services based on a primary health care strategy; and a prioritization of first level care. The management model has been mainly reoriented at the macro level, resulting in a new institutional framework with broad social participation, and in the strengthening of the steering role of the Ministry of Public Health (MPH).

## 1.1 Objectives

This paper analyses the efficiency incentives and the series of policies implemented upon the creation of the SNIS, as well as the observed and expected results following its implementation. The document focuses on three dimensions that have particularly affected efficiency results: institutionality and governance, payment mechanisms to providers, and human resource policies.

The institutional and governance analysis shows the changes in procedures and structures made to regulate, govern, and control the system. For payment mechanisms, the analysis focuses on the modalities used by the National Health Insurance scheme. In the case of human resources, some characteristics of the labour market that impact on the inefficient use of resources, and the policies developed to correct them, are described.

## THEORETICAL AND CONCEPTUAL FRAMEWORK

### 2.1 Efficiency in health

In general, the concept of “efficiency” is widely discussed in the economic literature, possibly due to its direct relation with the management of limited resources. Nonetheless, in most studies the concept refers to a better use of resources or inputs in the production of goods and services. In this context, the concepts of technical and allocative efficiency arise. Technical efficiency is centred on maximizing production for a given use of inputs or resources – or minimizing the use of supplies for a given product level – while allocative efficiency refers to an optimal assignation of resources that reflects population preferences or needs.

Here, the discussion on efficiency in health, and specifically from a health system perspective, goes far beyond the idea of minimizing costs and maximising the production of the existing institutions. Producing a greater number of health or medical care services is not a goal in itself for the health system, but an intermediate product or input to achieve the best possible level of health for the population. Therefore, an analysis of efficiency requires a set of health indicators that reflect the results for the entire population.

According to Hollingsworth and Peacock (1), options for measuring this type of results include biometric indicators, such as changes in body mass index for certain population groups; survival indicators such as changes in mortality rates; and quality of life parameters such as disease burden estimates. The empirical problem with this approach, besides the variety of indicators, is that many of them are based on such a wide set of interventions and health policies – and as a consequence, the health system itself – that they may have a negligible impact on health. In other words, is the health system of a given country more efficient because its life expectancy at birth is higher, even if it uses the same resources per capita as another country? Is life expectancy at birth the best indicator of population health? Moreover, is life expectancy at birth the sole result of the health system and the way its institutions operate?

Technical efficiency is defined as health-care interventions that address different pathologies carried out using the lowest possible resources to achieve the desired health improvement. This means applying care procedures based on cost-effectiveness studies. From this standpoint, the health system can assign or allocate resources to achieve the best possible results in community health status, based on the selection of a set of technically efficient health programmes. In this respect, employing the “best possible use” of resources implies that they are allocated taking the population’s health needs into account according to public health priorities, and not according to user preferences as consumers, and therefore their willingness to pay. To achieve this, the role of states in general and ministries of health in particular, is crucial in determining these priorities. They must be based on a thorough analysis of the country’s situation, with a clear vision of the goals, while being flexible in situations requiring specific interventions.

### 2.2 Incentives for health systems efficiency

The implementation of government policies in health systems contributes in varying degrees to the goal of an efficient use of resources, which ultimately allows for an equitable right to health for the population. The main causes of inefficiencies in health systems summarized in the 2010 World Health Report (2) provide a framework to identify ways to rectify them.



To achieve this goal, areas considered more relevant to improve the allocation and efficient use of SNIS resources were selected. This section presents the theoretical framework linking the areas selected to better system performance and health results.

### 2.2.1 Institutional and governance

The concept or definition of governance has been widely discussed in different academic fields, mainly in economics and political science. Its use by international organizations, politicians and government is common but with great variability in its meaning.

Within the framework of the International Development Research Centre programme on Governance, Equity and Health, a workshop took place in Montevideo in 2004 to analyse the concept and use of governance in policy and health systems research. The definition adopted understands governance as “collective action processes which organise the interaction between actors, the processes dynamics and the rules (formal and informal), with which society determines its behaviour and takes and executes its decisions.” (3)

Báscolo (4) develops an analytical framework to explain the effectiveness of different strategies that promote integrated health services into primary health care (PHC) in Latin America. Different modes of governance (clan, incentives and hierarchical) are defined from a political economy perspective. This theoretical framework enables an analysis of the contributions of SNIS institutions and governance to system efficiency, in the context of a move towards a PHC strategy.

The hierarchical mode, also referred to as the bureaucratic mode by Ouchi (5), is based precisely on bureaucratic standards and regulations, and on formal authority. It aims to standardize and control production processes as well as relationships between organizations through regulatory mechanisms. The level of power of the different actors determines their ability to influence regulatory policies. The effectiveness of the hierarchical mechanism critically depends on the regulatory bodies’ ability to supervise, and especially to control and evaluate the system.

The incentives mode of governance, also referred to as market governance by Ouchi, seeks to promote behaviours that align the interests of actors with those of the organization. Basically, it employs tools related to resource allocation and payment mechanisms to institutional or individual providers, including prices, and contracting policies. The effectiveness of this governance mechanism relies on accurately identifying the incentives to which the actors will respond, as well as the appropriate design and monitoring of the mechanisms, supported by an adequate quality information system.

The clan or value-based mode of governance is characterized by a vision, values and goals shared by the actors involved, and by the participative development of proposals and regulations. In this case, effectiveness will depend on the possibility of achieving a shared vision and goals in the context of the different roles and interests of the actors within the health system.

The above governance modes are often combined in health systems. At the same time, they are constantly evolving to reflect social, political and economic processes, which in turn determine relationships of power and shape the system.

This perspective suggests that the concept of governance is an important tool to analyse social policies and, in the case of this study, the contribution of policies implemented under the auspices of the 2005 health system reform, to a more efficient use of resources. Highly effective institutional changes and political processes enabled the implementation of the policies and determined new institutional arrangements and regulatory mechanisms.

The measures promoted by the reform required changes in the processes and structures used to regulate, direct, and control the health system. These are related to leadership and supervision within the system, and thus to the ability to define a clear vision of the goals and policies to guide the new processes and structures. For example, regulatory policies should allow the effective financial organization and administration of the health sector, harmonization of service provision and establishment of health programmes, and ultimately aim to achieve the best possible health status for the entire population.

The next step is to evaluate the extent to which the reform of the collective action processes, and their integration in the new structures, has led to a sustainable, reliable and high-quality system that usefully and equitably responds to the health-care needs of the population. In this context, it is important to determine how decisions are made, how the different actors can participate in this process, and how this impacts on existing power relationships. At the same time, this can be strengthened or modified, through a dialectical process, according to the governance mode adopted.

A given mode of governance and organizational and institutional arrangements of a health system may lead to a lower degree of efficiency in that system, or may encourage to some extent a better use of available resources. In turn, this will also determine the degree of equity with which the resources are allocated. The diverse and, in many cases conflicting interests present in the health sector interact and influence how efficient and equitable its performance will be. The prevailing institutional framework affects this result. The political economy of the reform processes will dictate whether the goal of universal health coverage can be met.

The mechanisms regulating the behaviour of strategic actors in the health system are part of the proposed governance analysis, in so far as they contribute to achieving efficient performance.

### 2.2.2 Payment mechanisms

Provider payment mechanisms refer to different ways of transferring resources from the financial agent to the health service provider. The goal is to encourage improvements in the efficiency of the system.

It is not easy to select payment mechanisms that achieve a set of desirable incentives. For example, they may have negative effects such as a rationing of services, a decline in quality, and risk selection. Moreover, the payment mechanism must be governed by regulatory and control measures that promote adequate and timely access to quality health services for the population. The design of payment mechanisms must be an essential part of institutional arrangements if the incentives are to be properly transmitted to agents in the health system (6).

Any payment mechanism has advantages and disadvantages, involving different financial risks and incentives that will affect health sector performance. The payment mechanism should therefore be adapted to the reality of the particular health system.

These payment mechanisms can be complemented with a performance payment as a way of enhancing the advantages and reducing the disadvantages of the basic mechanism. Pay-for-performance mechanisms are usually implemented in payment by budget and capitation payment mechanisms Table 1).

**Table 1. Description of payment mechanisms**

Payment system	Concept	Economic incentive	Distribution of risks	Expected effects	Efficiency
<b>Payment by budget</b>	Hospital is paid for an unspecified activity within a specific time	Minimize costs	Burden lies with provider if certain characteristics are not taken into account	<ul style="list-style-type: none"> <li>• Costly implementation</li> <li>• Compatible planning</li> <li>• Leeway for provider</li> </ul>	Efficiency is encouraged when the data are similar. Few incentives to improve productivity
<b>Payment for service or act</b>	The most disaggregated service is paid. Payment is retrospective	Maximize the number of medical acts	Burden lies with the financing agent	<ul style="list-style-type: none"> <li>• No preventive programmes</li> <li>• High cost technology</li> <li>• Induced demand</li> <li>• Corruption</li> <li>• Discriminatory rates</li> <li>• Inequality</li> </ul>	Encourages activity and overuse
<b>Payment for hospital admission</b>	Hospital is paid for each patient night	Maximize the number of stays and minimize the average cost of stay	If payment is not adjusted, the risk of expensive admission lies with provider. Risks to financier if rates are adjusted to expected costs	<ul style="list-style-type: none"> <li>• Increased average length of stay</li> <li>• Minimized cost of stay</li> <li>• Unnecessary hospital admissions</li> <li>• No ambulatory surgery</li> </ul>	Hospital activity is encouraged
<b>Capitation payment</b>	Provider is paid for enrolled individual and care cost	Maximize enrolment and minimize care costs	Per capita non-adjusted: risk lies with the provider. Per capita adjusted: risk lies with financing agent	<ul style="list-style-type: none"> <li>• Prevention</li> <li>• Referral</li> <li>• Risk selection</li> </ul>	Encourages prevention and service integration when it is efficient

Source: Álvarez, Pellisé and Lobo, 2000.

## Capitation payment

Capitation payment gives providers a financial reward for delivering health care of a certain level to a defined population during a defined period (7). This can include selected services or a comprehensive service package. In the first case, fragmentation of the care process occurs, while a comprehensive service package achieves greater efficiency by reducing unnecessary services. As a result, it promotes an appropriate use of resources and the integration of levels of service for longitudinal population care.

The positive incentives for capitation payment point to the effective and efficient provision of services, coordination and optimization of costs, high quality, improved capacity to address ill-health and, therefore, better health results (8). This payment system encourages preventive activities, maintains the continuity of care and uses fewer resources. It also has the advantage of making the cost of health services more predictable, favouring the best clinical approach to efficiency and reducing hospitalization rates. A negative incentive is that institutions may attempt to contain costs by selecting lower risk users, causing access problems.

The capitation payment system can take two forms. The simple formula is uniform for all enrollees and shifts the risk of cost to providers. In this type of system, risk selection problems may appear. On the other hand, the risk-adjusted payment allows an estimation of the expected health expense for an individual over a certain time period. Thus, it promotes efficiency given that it approximates the capitation payments to expenses while avoiding the temptation of selecting lower-risk patients. In this case, the lower risk is transferred to providers.

To reflect this risk, an adjustment can be made using demographic, epidemiologic and diagnostic variables or based on the prior use of the service. Several countries adjust for demographic variables given the availability of data. These variables commonly include sex, age, income, mortality, disability, employment and geographic location. Notwithstanding, international evidence shows that demographic adjustment may be insufficient to predict costs. And incorporating more risk variables to increase the ability to predict expenditure implies having adequate information systems, which tends to generate higher costs.

In addition, risk-adjusted payments may be prospective or retrospective. The first considers expenditure expected in the future, so it can solve some efficiency problems. The retrospective option considers past expenditure, making it more suitable to address risk selection problems but generating negative incentives for provider efficiency.

The capitation payment system is considered by many authors to encourage an efficient use of resources and avoid risk selection since it appropriately reflects the expected expenses of the population. As such it may improve equitable access in situations where payment according to risk does not rely on an individual's capacity to pay, but on a pooled fund based on solidarity between different risks and incomes. The capitation adjustment frequency is also of great importance, as a way of reflecting the cost structure associated with coverage.

These adjustment mechanisms must be complemented by a strong regulatory framework, where information reported is standardized, a mandatory services package is established, and access to services is controlled.

Cornejo indicates that the literature on capitation payment mechanisms to providers used internationally is extensive but that the majority of studies focus on capitation adjustment formulas, while reviews of the different distribution mechanisms of capitation funding to providers, and how this affects efficiency, coordination, equity and quality of service are scarce (8).

## Payment by results

Payment for quality or performance combines a set of strategies aimed at stimulating the improvement of health-care quality, and remunerating health-care providers according to their results related to quality objectives or defined productivity (9).

One of the objectives of the performance measurement initiatives was to give governments and populations appropriate information on the operation and results of their health systems (10). Performance evaluation by the regulators provides information on the current situation, allows better detection of problem areas, and allows the remuneration of agents to be linked to quality and efficiency, which ultimately leads to improved results in health.

According to WHO (11), the concept of performance is more complex than the degree of compliance with certain goals: the performance of a health system is an equation between the results achieved and the results that could have been obtained depending on available resources (12).

Health goals should be based on quality of care indicators that are quantitatively evaluated, and standards for processes must be established that allow for an evaluation of the performance of each agent. Information systems play a role, since the strength and validity of the proposed indicators depend critically on the quality of information.

These measurements must be clinically relevant and valid; stable enough to allow comparisons over several years; feasible; robust (reliable) and capable of guiding improvements. In any case, the system should be able to adapt changes in indicators, type of incentives, criteria, etc. and allow for a continuous realignment between remuneration and improvement in quality (9).

Financial incentives, in order to change results, must be implemented together with other strategies aimed at the quality of care, such as clinical practice guidelines, audits, public dissemination of results, and coordination and integration of health care.

### 2.2.3. Human resources

Human resources are a fundamental pillar of the health system. The efficient functioning of health services, as well as population health outcome depend in part on its workers' performance. As stated by Sousa et al. (13), an increase in the number of workers in a health system can contribute to increased coverage, but there is the potential to achieve more through the efficient use of existing human resources.

Worker performance depends not only on their own characteristics (such as origin, knowledge, experience and motivation), but also on the characteristics of the population attended, the health system and the conditions under which they carry out their work (e.g. available resources, remuneration, management of workers, security). Correct performance is understood as personnel that work in a way that is sensitive to needs, fair and efficient, and aims to achieve the best possible health outcomes given the resources and circumstances (14).

Based on the World Health Report 2006, four dimensions are desirable in the performance of workers: availability, competence, responsiveness to needs and productivity. Availability refers to the spatial distribution of workers and their presence in the workplace. The most commonly used instruments to promote availability relate to salaries and remuneration. Competence comprises the combination of technical knowledge, capacity and attitudes. In this case, the most influential instruments are ongoing training and supervision through staff audits. Responsiveness to needs refers to good treatment of patients. Here the most effective instruments include the establishment of standards and the supervision of personnel. Productivity refers to the offering effective, maximum health services given the personnel available and the rationalization of work time. In this case, potential mechanisms to improve productivity are adjustments in remuneration, improved teamwork and responsible accountability.

Issues that may lead to inefficient performance, such as multi-tasking, lack of motivation or poor geographical coverage, must be identified and measured. Some indicators used to measure inadequate performance are the number of staff, absence rates, and user satisfaction.

International precedents show that the number and quality of workers are related to coverage and health results. For example, Sousa et al. (13) show that the total density of health workers has a statistically significant and positive correlation with prenatal care coverage. If we break health workers down by category, nurses appear to have the greatest impact on medical coverage.

## INCENTIVES FOR EFFICIENCY IN THE NATIONAL INTEGRATED HEALTH SYSTEM

### 3.1 Governance and institutionalality

The Uruguayan health system reform initiated in 2005 required institutional and political changes in order for the proposed measures to build the National Integrated Health System (SNIS) to be viable. This is a complex, ongoing process involving the incorporation of changes at all levels: health service providers, their staff, the users, and the regulators – notably the Ministry of Public Health. (15) Changing the care model to one that guarantees the right to health through a PHC strategy requires profound transformations in behaviour, habits and interests.

In line with the objective of this study to analyse how different policies contribute to a better use of system resources, each aspect of the new SNIS institutions and governance acts are reviewed to determine which encourage a more efficient performance of the health sector.

Clearly, the process of governance in the SNIS has evolved in proportion to progress in implementing the system reform. Regulatory mechanisms, with their own dynamics, have also strived to build the SNIS while adapting to progress, looking for the right incentives while recognizing the different players' actions and interests. The dynamics of regulation affect the behaviour of interested parties, which in turn affects the way in which regulations change.

The institutionalality created by Law No. 18.211 enables a mode of governance in which social participation at different levels of the system is a major component. This allows involvement of health sector workers, users and providers in policies design, implementation and subsequent control. Importantly, it promotes participation in setting the rules, based on which decisions are taken, implemented and then evaluated. Setaro (15) states that “The reform increases public control, through the National Board of Health (JUNASA), with the purpose of establishing a different operating logic within the SNIS, limiting market competition and promoting cooperation and complementarity of services.”

The National Board of Health is a decentralized body of the MPH that is responsible for coordination of the SNIS and administration of the National Health Insurance (SNS) scheme. It is composed of seven members, four of whom are members of the Executive (two from the MPH, one from the Ministry of Economy and Finance and one from the Social Security Bank), plus a representative of SNIS workers, users, and the providers contracted by JUNASA. The benefit package for the SNS-enrolled population is purchased by signing a management contract, which is then controlled and monitored by the MPH and JUNASA.

The emergence of JUNASA in 2008 introduced the clan mode of governance, incorporating social representatives in the government of the SNIS. While this removed space from the market governance mode, it strengthened regulatory mechanisms through economic incentives to providers. The vocation of building common goals, values and vision, grounded in the concept of health as a fundamental human right, complements the regulatory mechanisms that encourage transformative action that reflects the goals of the SNIS. Synergy between both modes of governance promotes transparency and accountability by providing informed and participatory decision-making, economic incentives for a more efficient use of resources, and progress towards universal access to health care.

JUNASA's responsibilities in administering the National Health Insurance scheme include issuing orders that enable the National Health Fund to pay per capita rates adjusted by age and sex, and a complementary payment for the compliance of goals by contracted providers. The Fund is administered by the Social Security Bank, the highest authority in social security matters.

The study by Setaro (15) concludes that "health sector reform is based on institutional arrangements historically developed by the health system, progressively, for sectoral governance. The reform combines doses of innovation with high levels of continuity in the sectoral governance arrangements". A new relationship is formed between the State, the market and society.

Resource allocation for health coverage of more than two-thirds of the population is therefore conditioned by compliance with the management contracts, with non-compliance open to economic sanctions. A strategic purchasing function enables the use of incentives for change in the care model and more effective and efficient management of resources. However, the contents of the contracts are the result of interaction between the members of JUNASA, whose ability to impact is not homogeneous but resembles the power relationships of society.

Cooperation and health care complementarity are principles of the reform that should be promoted through the National Board of Health. However, despite the fact that the Board will face diverse market interests and logistics, primarily among providers, there is no doubt that these measures will have a positive impact on the use of limited resources, avoid duplication and take advantage of economies of scale.

The SNIS legislation foresees the creation of Departmental Boards of Health and Local Advisory Councils with social participation and broader representation of players involved in health care in the territory.

Departmental Boards of Health are mandated to encourage participative action and have advisory and evaluation functions in their respective jurisdictions. However, their reports and proposals are not binding. They were gradually created in the 19 departments of the country between 2011 and December 2013, with the establishment of the Departmental Board of Health in Montevideo.<sup>1</sup>

Departmental Boards of Health must promote, observe and develop the guiding principles and objectives of the SNIS, as well as the best knowledge of local realities and needs in health, for which their reports and proposals should be primarily dealt with by the JUNASA. In addition to evaluating compliance with the management contracts in their territories, they are expected to promote good relationships and complementary agreements between providers.

The responsibilities of the State, in regulating the health sector, including its competence and mechanisms, have undergone significant changes, encompassing institutional and governance changes. Among these is the articulation of the economic regulatory policies between the MPH and the Ministry of Economy and Finance (MEF). Participation of the MEF in JUNASA allows for greater involvement in health objectives and more efficient prioritization of resource allocation.

Within the MPH, the Health Economics Division created in 2005 became the main articulator of price regulation policies. The MPH Health Economics Division shares responsibility for economic regulation with the MEF, particularly for prices and economic evaluations that justify the entry of new services to the Comprehensive Health-Care Programme (PIAS). In turn, the Health Economics Division interacts with JUNASA, supporting its work. In this way, the diverse interests and opinions of the players represented in JUNASA are present in the design and monitoring of policies.

The Ministry of Public Health and the Ministry of Economy also participate in the development of agreements on wages and working conditions of the Wages Council operating under the auspices of the Ministry of Labour and Social Security (MTSS). This allows the promotion of new models of work in the sector that are

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<sup>1</sup> Departments are units of the administrative division of the national territory.



more in line with the PHC strategy. From the MPH, and consistent with the critical importance of human resources for good performance in the health system, the Development and Monitoring of Personnel in Health Division was also created in 2010.

Under JUNASA, the following specific technical and political committees have emerged to enhance the design and implementation of different measures: Capitation Commission, Health Care Goals Commission, Multiparty Advisory Commission (monitors the Medical Agreement), and Implementing the Outpatient Agenda System Commission.

The evolution of modes of governance and regulatory mechanisms has been gradual and constant in the post-reform period, reflecting organizational, social and cultural changes, the maturing of some issues and the adoption of new ways of thinking about health. During this process, there has been a major impetus to develop information systems of providers and of the regulator itself. This is important for the state to expand its regulatory capacity to monitor and evaluate health care providers. The “Salud.uy” project, led by MPH and the government agency for electronic information (AGESIC), has started to coordinate a health information system based on the electronic health record; beyond this, it also supports the informed design of policies in the sector. An advisory board with broad social participation is part of the governance of the project.

The hierarchical mode of governance is also present in the Uruguayan health system. However, ongoing tensions between regulation and freedom of practice and management of providers limit progress. Evidence-based protocols and clinical practice guidelines are now in widespread use, and management tools and monitoring and evaluation methods are being standardized. Despite this, their use faces resistance from care and administrative practices, and lacks the decisive support of medical professionals. In particular, the organization of integrated health-care networks based on PHC, which uses its resources more efficiently through coordinated and complementary services, has been driven by incentive and clan governance mechanisms with weak regulation.

It cannot be ignored that the new governance model of the SNIS was born in a special political context: the arrival of a ‘left’ government for the first time in the country’s history, with parliamentary majorities, and policies that proposed a new social protection matrix with the participation of citizens in the design and monitoring of policies. The health system reform initiated in 2005 was part of the proposed programme of the party in government. It had been developed with a group of social organizations, including the trade unions of health workers, both medical and non-medical, and included very specific guidelines.

The particular mode of governance that is configured in the SNIS has the potential and means to encourage a more efficient performance of the health system.

### **3.2 Payment mechanisms in the National Integrated Health System**

The main payment mechanisms to providers used in health systems exist in Uruguay with the exception of payment for hospital admissions. However, the relative importance of each mechanism and its most relevant characteristics have changed as a result of the reform process.

In this section the payment methods used by the National Health Insurance are analysed, with descriptions of capitation and performance payments. With respect to capitation, its evolution and method of calculation are presented. In the case of performance payment, the system of care goals is described, a tool used to promote the change in the care model driven by the reform (Table 2).

The most notable changes in payment mechanisms are the capitation payments adjusted by age and sex, and payment for compliance with health-care goals that the National Health Insurance scheme, financed by the National Health Fund, makes to contracted providers.

The National Health Insurance scheme (SNS) was established in 2008, by virtue of Law 18.211 of the Uruguayan Health System Reform, under the auspices of the National Integrated Health System. The SNS is based on the former General Directorate of Social Sickness Insurance (DISSE) administered by the Social



Security Bank, which provided health coverage to private workers and low-income retirees. There were approximately 700 000 DISSE enrollees in 2006 (21% of the population).

The social participation of health users and workers in the National Board of Health (JUNASA) is another novel characteristic of the change in payment mechanisms, to the extent that this body hires providers that provide comprehensive health coverage to enrollees of the National Health Fund (FONASA). This function works through the signing of management contracts.

**Table 2. Type of payment mechanisms in the National Integrated Health System**

Payment mechanism	Provider/financier	Prior to 2007	Post reform
<b>Payment by budget</b>	ASSE Hospital de Clínicas Sanidad Militar Sanidad Policial	Historical budget	Historical budget with significant increases
<b>Payment for service or act</b>	National Resources Fund (FNR) Highly specialized medical institutes (IMAE)	Payment of services for public sector users from general revenue. Payments from FNR to IMAE	No change No change
<b>Capitation payment</b>	IAMC <sup>2</sup>	Prepayment premiums from individual affiliates regulated by MEF. DISSE prepayment fees calculated as average of individual fees	Prepayment fees from individuals regulated by MEF and MPH. Capitation adjusted by age and gender paid by SNS, financed by FONASA
	FNR	Prepayment by individual affiliates and DISSE from the IAMC and private insurance	Prepayment by individual affiliates and FONASA from the IAMC and private insurance
	Private insurance	Private prepayment for risk	Private prepayment for risk plus capitation adjusted by age and gender for FONASA affiliates
<b>Performance payment</b>	ASSE IAMC Private insurance	N/A	Payment for compliance with health-care goals

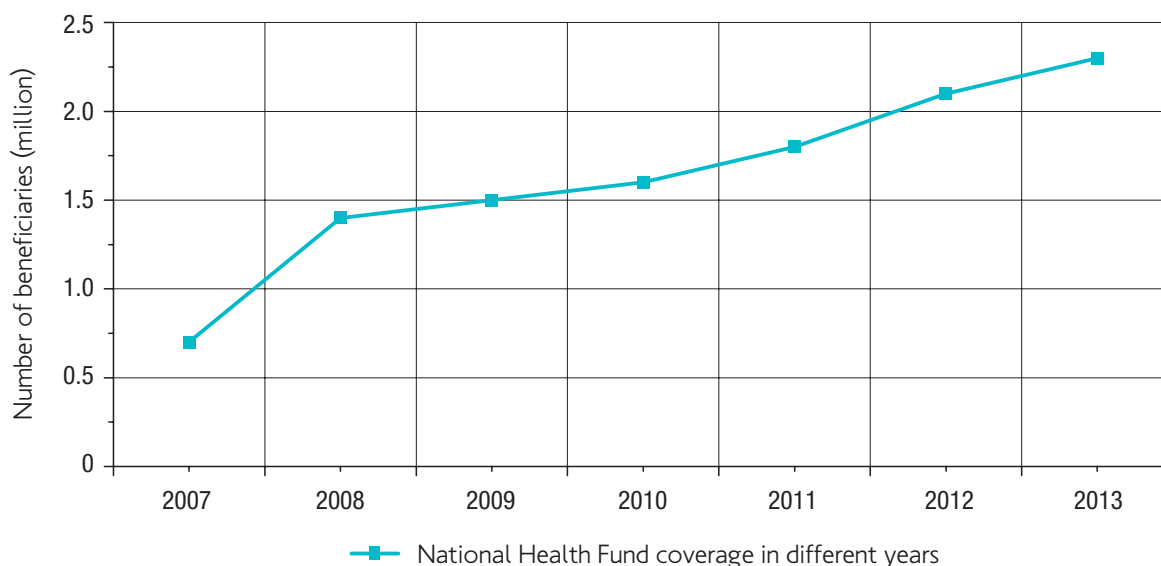
ASSE: State Health Services Administration; DISSE: General Directorate of Social Sickness Insurance; IAMC: Collective Medical Assistance Institution; FONASA: National Health Fund; FNR: National Resources Fund; IMAE: highly specialized medical institutes; MEF: Ministry of Economy and Finance; MPH: Ministry of Public Health.

Source: Own elaboration.

<sup>2</sup> The Collective Medical Assistance Institutions (IAMC) are non-profit private institutions, operating a prepayment system and providing comprehensive health care at all levels.

The importance of the new payment mechanisms is evident when observing the evolution of affiliates of SNS and FONASA, which grew from 2007 by 226%, reaching a total of over 2.25 million beneficiaries in December 2013 (69% of the total population) (Fig. 1). In turn, the cost represents about a third of the country's total expenditure.

**Fig. 1. Evolution of National Health Fund coverage**



Source: JUNASA accountability, 2013.

### 3.2.1 Capitation payment

#### Uniform capitation payment incentives prior to the reform

Prior to 2007, the Social Security Bank (former DISSE administrator), only contracted collective medical care institutions (IAMC) for comprehensive health coverage for its beneficiaries, i.e. only workers in the private sector and low-income retirees. Payment to the contracted providers was through capitation, whose value was determined based on the pricing structure presented for their individual and collective enrolees. In turn, these prices were regulated by the MEF which authorized maximum prices for each IAMC and the signing of collective affiliation agreements, primarily with trade unions and other collective organizations. These agreements had lower prices than those faced by individual affiliates as well as other benefits in moderating fees and access to non-obligatory services.

The capitation that the Social Security Bank paid to each IAMC was calculated as a percentage (approximately 85%) of the average value of individual premiums for each institution. Therefore, the values of the quotas of collective affiliations were excluded from the calculation, and the number of capitation payments paid by the Bank were equal to the number of IAMCs (41 in 2007).

The incentives that this type of calculation and payment determines are diverse. A review of the legislation that covers them does not allow clear conclusions about their foundation and objectives, and there is no background literature on this type of price regulation. As such, some theories and explanations are presented here regarding their potential impact on the behaviour of the regulated actors and their consequences in terms of efficiency and access to health care.

Firstly, it is worth noting that the prices in effect in each IAMC were based on a historical control that began in the 1980s and included periods of complete liberalization. For example, in February 1992 the prepayment premium was liberalized, but returned to being capped in August 1993. However, this ceiling was set against prices during liberalization, which caused significant heterogeneity in the prices of different IAMCs. The form

of price regulation consists, still today, of half-yearly authorizations of a maximum percentage increase in individual and collective premiums.

As a result of this policy, the prices that the Social Security Bank paid to IAMCs depended critically on several factors, including:

- The geographical location of the IAMC, which determines its market power and the potential to increase its prices, to a greater or lesser extent, during periods of liberalization. Some departments in the country have only one private institution whose sole competition is the State Health Services Administration (ASSE). In contrast, the capital had 12 IAMCs in 2007. As such, the ability to pay of people residing in different parts of the country is also heterogeneous.
- The ability to attract enrolees through collective agreements by offering more favourable conditions without affecting their income from DISSE premiums.
- The composition by risk, in particular by age and sex, of the affiliated population, which determines its proportion of DISSE enrolees, and its affiliate retention policy.

Thus in many cases, the premium received from the DISSE enrolees was able to subsidize the care costs of the population affiliated individually or through collective agreements. The incentives indicated the convenience of a higher proportion of collective affiliates and low-risk DISSE affiliates, and a low proportion of individual affiliates with high quota values that determined the income from social security.

Institutions with higher risk affiliates, and especially with an older population of individuals affiliates, which engaged in lower risk selection and had lower quota values, were the most affected at the time of collecting revenue from DISSE. In 2000, the immobility of DISSE affiliates was added, which had given few incentives to improve care for this population and even led to rationing of services by charging moderated rates far higher than those faced by individual and collective affiliates.

The allocation of resources from social security turned out to be inefficient and inequitable. It did not meet the objective of ensuring health care for workers affiliated to DISSE and encouraged cost reduction through the selection of a less risky population, and increased barriers to access for the high-risk population. The link between payment received and expected costs of the insured population was non-existent. Nor were there any controls to ensure that cost reduction did not result in lower quality and fewer services.

Nonetheless, beyond the inefficiencies encouraged by this payment mechanism, it did have clear advantages compared with payment for service situations, as in other international cases, considering the low capacity to exercise control over the cost-effectiveness and opportunity of the services provided.

#### **Age and gender adjusted capitation incentives since the reform**

In 2007 the payment mechanism to providers contracted by DISSE was modified and the National Health Fund to finance the SNS was created in 2008.

Law 18.131 further enabled the State Health Services Administration to provide health coverage to beneficiaries opting for this provider. This measure aims to reduce the economic barriers to access present in the IAMC by charging moderating fees to the extent that the public provider does not charge fees or co-payments. It also facilitates better geographic access as ASSE has a vast service network across the country. In this way, a more efficient allocation of resources is promoted, enabling ASSE to receive capitation income for a population already attended by, but confined within the IAMC. Thus, it caters for IAMC enrolees who, due to the existence of geographic or economic barriers, have resorted to the public service provider.

Capitation payment adjusted by risk (in this case the risk associated to the age and sex of the affiliate) and performance payment became the mechanisms used by the SNS to form “health premiums”. Since then, all institutions receive the same amount of capitation for each of their members according to their age and sex (Table 3), and an additional payment subject to compliance with a set of health-care goals.

**Table 3. Relative capitation structure calculated in 2007**

Sex	Age							
	<1	1–4	5–14	15–19	20–44	45–64	65–74	>74
Male	6.52	1.9	1.11	1.08	1.0	2.07	3.99	5.26
Female	5.57	1.79	1.0	1.43	2.12	2.53	3.47	4.34

Source: Own elaboration.

The capitation group of men of 20–44 years old is defined as the base capitation and the amount to be paid monthly for each affiliate is calculated according to the above structure. Payments respect the right to equal health care which is explicit in the 2008 decree that created the Comprehensive Health-Care Programme.

Capitation prepayment, both before and since the reform, is made for a comprehensive set of services that include all levels of care. This avoids the inefficiencies that arise when payment is made separately by level of care, resulting in the duplication of services, inadequate use of resources, as well as fragmentation of the care process with the subsequent impact on the quality of health care.

The transition to the new mechanism inevitably led to “winners” and “losers” among IAMCs, since some inequities in their perceived incomes were reduced through redistribution according to the health risk of the population affiliated through FONASA. However, while keeping the pricing structure of individual and collective premiums of institutions unchanged, the cross subsidies that previously funded the lower values of some agreements tended to disappear, causing some imbalances.

A key element in this analysis is that concomitant with the change of payment mechanism, a gradual process of incorporating new population groups to the SNS, financed by FONASA, began. In 2007, public employees of the central administration enrolled, followed by other public workers and children under 18 of insurance workers who were beneficiaries. Thus by December 2008 affiliates to FONASA had doubled compared to 2007. The process continued in the following years with the incorporation of independent workers, workers’ spouses, retirees and pensioners. In this way, the initial imbalances that may have arisen in the pricing structure of the IAMC were levelled to the extent that the majority of its members became affiliated through FONASA, and their income related to expected costs depending on their age and sex.

Risk selection is an expected consequence of a simple or non-adjusted capitation payment system that existed prior to the reform. Capitation adjusted by the age and sex of FONASA enrolees has tended to eliminate this discrimination. In addition, other regulations have been added to prevent the rejection of insured enrolees and control the prices and conditions of chargeable moderating fees. This aims to ensure access according to health care needs, thus promote efficient use of scarce resources.

Another measure that has contributed to improved health access for the population was enabling mobility of FONASA affiliates, requiring three years of being registered with the same provider. In addition, a change from a IAMC to ASSE was possible at any time.

The management contracts signed by the National Board of Health with integrated providers responsible for the health care of FONASA beneficiaries are an important tool for strategic purchasing. These allow payment mechanism incentives to complement the control of compliance with conditions that promote equitable access and actions aimed at changing the care and management model. The reporting of information, including data required for the capitation calculations and the quality of that data, are part of the established requirements. Health premium payment orders (capitation plus health-care goals) are made monthly by JUNASA based on the evaluation of compliance with the targets agreed and the management contracts.

It is relevant to stress the importance of combining different tools in order to achieve the efficiency and equity objectives in the health system. In this sense, the payment mechanism by capitation adjusted by age and sex is complemented by performance payment through achieving health-care goals, with the signing of management contracts, and other regulatory measures carried out by the health authority in a governance framework that has social participation as one of its pillars.

In summary, the main incentives for the adoption of a capitation payment system adjusted by age and sex are avoiding risk selection, thus promoting more equitable access to health care as needed, and efficiency by approximating the value of the payment to expected and justifiable expenses. As seen below, estimating the expected cost is not easy and it depends critically on the information available to the regulator.

### **National health insurance capitation calculation**

Capitation adjusted by risk attempts to approximate the value of the payment to the provider with the expected cost of care for each individual in a given period. The more accurate the estimate, the lower the incentive to select risks. The base period used for the estimate made by the Health Economics Division is a year, which is then broken down to obtain a monthly average value that accounts for seasonal variations in the use of health services.

The choice of variables used to predict the cost associated with different risk profiles was determined by the availability of information. Demographic variables of age and sex – the most common variables used internationally – were selected, recognizing that while they are important determinants of expenditure, they have limited predictive value. Despite their limitations, this system has clear advantages over pure or non-adjusted capitation.

It is important to highlight the existence of the National Resources Fund in Uruguay, which covers high-cost, low frequency catastrophic events that are also included in the Comprehensive Health-Care Programme. Therefore the capitation paid by FONASA to the comprehensive providers does not include these events and as such, prediction errors will be lower. FONASA provides a prepayment fee to FNR to ensure this coverage for its beneficiaries.

Moreover, expenditure estimates for future demand and associated costs are based on historical information on use and costs available for the IAMC for 2005 (12). The main drawback of approaching future demand through information on the past performance of institutions is the lack of incentives for cost containment by providers. This incentive varies depending on the frequency of capitation value adjustments.

For new services to PIAS another criterion must be adopted, also prospective, where demand and future use estimates are based on epidemiological and behavioural data. Data on costs may come from various sources, including the public sector.

The relative capitation structure developed and applied since 2007 has seen few changes following the incorporation of services into PIAS, mainly those covering mental, sexual and reproductive health. Annual data continue to be collected on the use and costs of IAMC through the Health Care Costs Structure (ECAS) report, which allows modifications to improve the estimates. The main public provider, ASSE, is beginning to report this data. Systematic monitoring of information arising from the ECAS report shows some minor changes in the patterns of use in different age and sex groups as well as more significant changes in costs that would not be covered by the semi-annual price adjustment based on the IAMC sector costs parametric. Defining the frequency and methodology with which a structural adjustment of capitation values is made is pending.

Regarding management contracts, the creation of a commission was agreed in 2010 with the participation of integrated providers, the MPH and the MEF, to review the calculation and capitation structural adjustment methodology currently in operation. Structural adjustment in the values of capitation should reflect changes in the structure of costs associated with health care. In general, this adjustment is made at intervals of between 5 and 10 years in countries that use this payment mechanism. In defining both the frequency and the adjustment methodology, it is crucial to consider the efficiency incentives that they generate.

It is therefore important to determine the costs that will or will not be validated. In particular, the costs of mandatory services indicated in the PIAS and provided to their affiliated users must be considered. This is complex given that contracted integrated providers offer other non-mandatory and complementary services to their users and sell services to third parties (institutions and individuals). The extent to which capitation should cover financial costs or finance new investments is also part of the methodological debate.

Regarding the frequency of the structural adjustments, factors which can determine changes in the structure of costs must be taken into account, which is particularly important in the reform process being developed

in Uruguay, and in turn will be key in differentiating structural changes from circumstantial changes. Another important aspect from an efficiency perspective is defining the period in which costs will be observed in order to make this adjustment, in order to reflect more permanent changes in use and costs, while discouraging unnecessary expenses.

The reform process aims to change the care model to one that prioritizes primary care with a PHC strategy reaching beyond health service care. In this context, it is critical to question the use of information on the past behaviour of providers for designing capitation, which reflects the IAMC curative and hospital-centred care model. The impact of measures to drive changes in the care model can be observed over longer periods than changes in the funding model. Change in a dominant paradigm that involves cultural and organizational changes must also deal with diverse interests and centres of power. The capitation payment mechanism can only reflect changes taking place in that sense; it cannot cause them. In any case the performance payment mechanism – the other part of the “health premium” paid by FONASA – seems to be a more suitable tool to induce actions that promote change in the health-care model. Management contracts can operate in the same way, but similarly cannot lead the process.

The promotion and prevention actions implicit in the PHC strategy have positive effects on population health status in the medium and long term, and thus are not often seen as profitable by the health institutions embedded in the predominant care model. Efficiency gains, meaning the best possible health results at a given level of costs, as a product of these actions are not observable in the short term, making it difficult to prioritize from a management perspective.

Periodic reviews of the use and cost patterns of providers will show advances in the change of the care model. Afterwards, the capitation values should reflect these changes.

### 3.2.2 Performance payment in the SNS: health-care goals

As noted above, the SNS payment mechanism through capitation adjusted by age and sex is complemented with performance payment to achieve health-care goals contributory to the SNIS efficiency and equity objectives.

Health-care goals are a management and care tool that aims to improve, through economic mechanisms, the quality of services and the development of the care model proposed in the health reform (16). The objective is to promote comprehensive care and encourage preventive health-care policies.

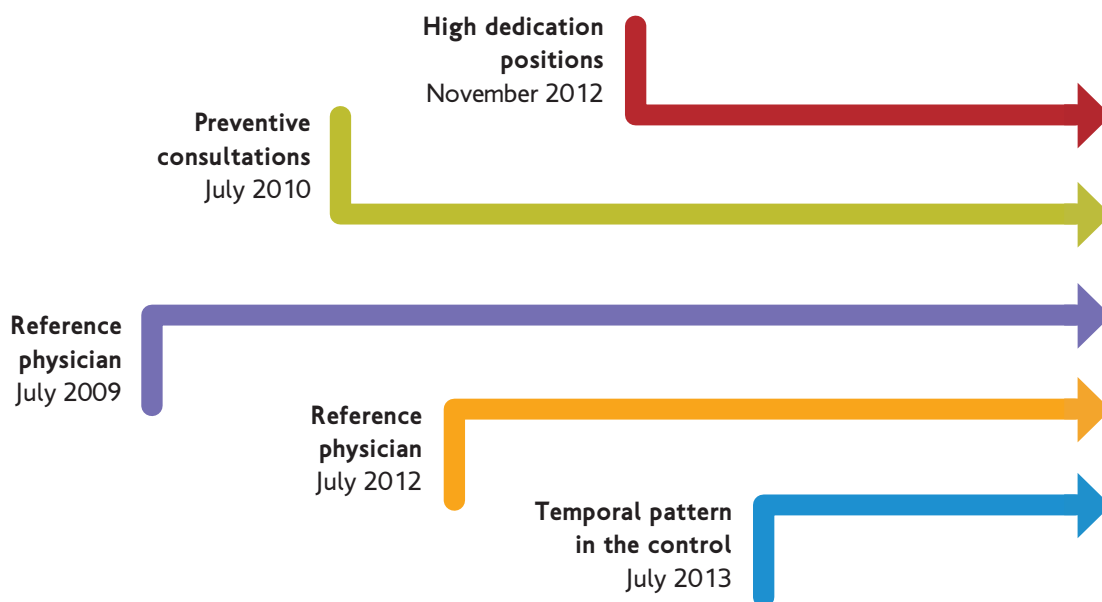
The design of health-care goals began in July 2007 with the creation of Goal 1 based on prioritization of programmes related to child and prenatal care. This goal currently promotes health of children up to the age of three, prenatal care and screening for situations of domestic violence.

In July 2009, Goals 2 and 3 started to promote the conceptual framework of the reference physician, considered a key member of the health team, to consolidate a care model with a comprehensive health approach at the first level, offering longitudinal and continuous care. These goals have evolved over time. Goal 2 began with two components: the reference physician and health worker training. The objective was to develop a hierarchical process of the reference physician through users of general practitioners, family physicians, paediatricians and geriatricians of the institution. Goal 3 relates to the need for a medical record for users over 65.<sup>3</sup> In 2010, both goals incorporated the consultation of the user with their reference physician, standardizing preventive consultations. In 2012, the tracking of a temporal pattern in the control was added to the user consultation, and in 2013, health promotion activities were incorporated as well as qualitative elements on the indicators reported.<sup>4</sup> Fig. 2 shows how the changes produced by Goals 2 and 3 strengthen the reference physician role, generating the ideal stage for the creation of Goal 4.

<sup>3</sup> A portable instrument that summarizes the overall health of the member and facilitates access to and contact with health providers at any level of care.

<sup>4</sup> During 2013, reports were requested on: the characteristics of the population and its reference physicians; analysis of changes in information systems to prioritize the reference physician role and recommended controls; the relation between reference physicians and high commitment positions; referral and counter-referral procedures; reference physician and reference team; reference physician and labour health care relationships.

**Fig. 2. Strategy for strengthening the reference physician role**



Each colour represents a different tool or strategy that will strengthen the reference physician role.

Source: Adapted from JUNASA Accountability 2013 (16).

Goal 4 stimulates the creation of high dedication positions<sup>5</sup> in general medicine, family medicine, paediatrics, gynaecology, intensive care for adults and children, neonatology and internal medicine in health institutions, agreed by the Wages Council in November 2012. Besides high dedication, an innovation of the new positions is the very definition of a reference population of the physician. In this case, the payment by results tool encourages the institutions providing health services to contract physicians in high dedicated positions. This is combined with a specific mode of performance payment applied to the physicians, agreed with the Medical Union of Uruguay in the Wages Council with the participation of the MPH, the Ministry of Labour and the MEF. This policy reflects, in addition to the combination of tools mentioned above, intersectoral participation in the design and monitoring of a series of mutually reinforcing measures to bring about a new paradigm of health care.

This type of performance payment is expected to encourage quality of care and efficiency. The incentives for the organizational, process, and cultural changes are part of the strategy towards a new care model based on primary health care.

Considerable international evidence exists on the impact on population health of increased promotion and prevention activities, whether driven by a change in the medical work model, and/or indirect influences such as the development of health information systems.

Cromwell (17, 22) refers to a second generation of performance payment which is just one element of a wider set of policies and interventions in the provision of health services. This mechanism should strengthen financial incentives with other types of incentives that promote improvements in quality and efficiency at multiple levels of the health system.

Similarly, García-Altés (10) notes that “indicators and associated incentives are not the only instrument available for improving quality in the health system. In fact, it is a tool which probably only works properly as part of overall organizational strategies. In any case, the imperative towards greater transparency in the system and an improvement in quality make measuring performance and publishing information publicly unavoidable. The ultimate goal should be to pay for the health of the population.”

<sup>5</sup> These post-holders are expected to dedicate 40–48 hours per week at the same health provider.



## Evaluation of health-care goals

Health-care goals can be evaluated in two dimensions: analysing health outcomes, and the impact they have on the care and management processes of institutions. However, it is difficult to evaluate the impact on health outcomes and organizational changes that reflect improvements in accordance with care and management models. It is inappropriate to establish a direct causal relationship between welfare goals and the evolution of these indicators.

One difficulty with evaluating health impact is that it cannot be measured in the short term; in turn, it is difficult to establish whether the impact is due solely to implementation of a specific measure. However, impact indicators can measure progress, stagnation or setbacks in the health of children and pregnant women, for instance, that are undoubtedly affected by changes in health provider processes generated by health goals, and by changes in behaviour of an increasingly informed population.

Given this situation, analysis of change in the institutional processes has been prioritized where evidence shows such changes to improve health outcomes.<sup>6</sup> This type of evaluation will also dictate when such an economic incentive can be withdrawn without mitigating the health goals.

The fact that an institution meets the indicators proposed in the health goals does not imply a transformation in its operations, although it does demonstrate organizational effort to meet the goals. Measuring changes in the process involves an analysis of qualitative aspects and observing whether changes in the way of working, in the protocols and in the organizational culture have occurred. For this reason, the Ministry of Public Health is implementing alternative ways to monitor improvements, such as visits to institutions and tailored questionnaires.

The majority of institutions consulted agrees that the introduction of health-care goals has led to positive changes in their processes, the greatest impact being in information systems, the role of medical records personnel, the medical records register and the forming of domestic violence teams.

With respect to the quality and timeliness of the information obtained, the rigour and continuity of health-care changes appear to have resulted in the transformation and improvement of the computer system. Institutions emphasize that more information allows up-to-date health diagnoses and improved monitoring of the affiliated population, information that was not systematized before incorporation of the goals. In this sense, the payment mechanism for goals encourages investment in administrative and information technology structures in addition to the processes themselves, and generates a more efficient service based on a more timely and complete data analysis.

The Medical Federation of the Interior recognizes that “the introduction of the payment system for goals has provoked an interest by companies in the sector for epidemiological aspects scarcely considered previously when making institutional decisions. The goals have also generated, in some cases, alignments in clinical practice, above all in paediatrics, and have consequently also resulted in the creation of areas of convergence in clinical and management views, usually in tension, allowing the identification of common interests.” (18)

Increased focus on the role of medical records staff in the care process has improved the medical records register, since attention to the guidelines of the different programmes has highlighted the importance of clear and complete records of consultations.

While not an outcome indicator, it is of note that the Perinatal Information System Register improved as a result of the requirements for its completion in the health-care goals.

The Basic Perinatal Clinical History system allowed to standardise and unify the collection of these data in a single sheet, including family background, sociocultural characteristics, personal information, current pregnancy status, childbirth, postpartum and new born history. It also facilitates audit and analysis of the course of maternal, fetal and neonatal health nationwide. This is an important improvement for the system

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<sup>6</sup> These analyses will soon be published by the Ministry of Public Health.



as a whole, given the availability of quality information for public policy decisions. Changes in prenatal care and early detection of pregnancy can be evaluated by the system, indicators that have been required to reach the health-care goals since 2007. However, better quality information was required before it could be used as a tool to evaluate health outcomes.

Effective interventions related to care management should result in greater cost efficiencies and improved quality of care. International evidence shows that actions at the first level of care can generate savings by reducing avoidable hospital admissions, readmissions, and emergency care. However, it is not possible to verify these effects in the short term, and a careful consideration of interaction with other measures linked to the reform process is necessary. In particular, the gradual incorporation of new groups of beneficiaries into the SNS, as well as the reduction of barriers to access for the users, have led to changes in demand that must be considered in a rigorous analysis.

In the case of prenatal control, the number of pregnancies that have undergone the minimum number of controls, established in the Guide to Sexual and Reproductive Health, has increased. This can be seen in both the public and private sectors. In recent years, the number of early detected pregnancies (before 12 weeks) has also increased in the public and private sub-sector, which reduces maternal-fetal-neonatal risks.

In 2009, a module on Good Practices of Infant and Child Feeding was added to Goal 1, with sustained work on the part of the institutions that includes training in maternal nutrition for new mothers and infants up to two years of age. This may have contributed to the decline of children with low birth weight (less than 2.5 kg).

With reference to infants between 1 and 3 years of age, increased compliance has also been detected with the controls established by the Programme for Children, which stipulates four controls in the second year of life and three controls in the third.

Given that goals 2 and 3 required an institutional reorganization and, therefore, a cultural change within the institutions, the workers and health users, their impact on health will be seen over a longer term than that of Goal 1. The objective in this case was to encourage agreed controls with the reference physician of the adolescents, adults and seniors of the institutions. The reference indicators measure the number of users from these age groups that have had a consultation with their reference physician. Both indicators noted that the institutions have, on average, exceeded the goal established over every quarter.

By December 2013, 45% of the user population was referenced. The reference physicians represent 58% of all general practitioners, family doctors, paediatricians and geriatricians. In turn, 43% of consultations using these specialties were made with the reference physicians, so their role has become increasingly important in recent years (16).

With respect to Goal 4, a little over a year after its inception it had advanced in its objective to support the high dedication medical positions agreed in the Wages Council. As of December 2013, 84 high dedication positions had been created in 18 institutions across the country.

JUNASA has produced a preliminary evaluation of the impact of the goals on health outcomes. It is clear that a direct causal relationship between the care goals and the evolution of these indicators is not feasible. However, it does allow for an approximation of progress, stagnation or setbacks in performance indicators of the health of children and pregnant women, indicators that are no doubt influenced by changes in the processes generated by the care goals of providers and the variation in behaviour of an increasingly informed population (document in preparation).

### 3.3 Human resource efficiency

The effective performance of the health system depends on the characteristics of health workers and the working model in which they operate. The organization, quality of employment and incentive systems largely determine what, how and how much is produced in the health system, and the quality of service and system efficiency.

From 2005, within the Wages Council negotiations framework and a greater budgetary allocation in the public sector, policies to improve the conditions of workers in the sector began to be developed, in terms of pay levels and the description of job categories, responsibilities and rights. These policies were implemented in line with the modalities of the new working model and the objectives the care model driven by the reform.

Structural changes in the health-care model, as part of the PHC strategy, began with the reference physician, who represents continuity of care. In other words, the doctor who will monitor the patient's specific health problems throughout his/her life.

*The focus of a country's health services towards primary care is associated with lower care costs, greater public satisfaction with health services, better health indicators and lower use of medicines.*

Ortun V. La atención primaria, clave de la eficiencia del sistema sanitario, 1995.

However, given the conditions of the labour market in effect until 2010 it was necessary to reorganize medical work conditions. These were defined as part of a hospital-centred care model within a fragmented health system where the public subsector had no objective conditions to compete for qualified human resources (12).

In this section, historic characteristics of the labour market that have led to an inefficient policies and use of resources will be analysed. First, the role of basic specialties in the health system is analysed, considering their fundamental role in the primary care model promoted by the reform. Second is the poor geographic distribution of human resources which, as well as generating unequal access, generates inefficiency in the health system. Third, the multiple employment of human resources in the health system, in addition to deteriorating the quality of care, generates inefficient resource management. Reducing fragmentation is essential to achieve continuity and sustainability of care. Finally, the medical payment systems are analysed, comparing previous methods with those raised by the Wages Council in 2012, which added a variable payment to the fixed payment based on a reference population.

### 3.3.1 The role of basic specialties

According to Ortún et al. (19) sustainable primary care entails significant efficiency gains. This is because a reference physician with the clinical records of a user can detect risk factors at a very low cost. The physician acts as a filter, referring the user to specialized care once the diagnosis and treatment methods the specialist will use justifies the reference. The connection between primary and other levels of care is essential, as it avoids duplication of testing and leads to greater efficiency in diagnosis and treatment.

In Uruguay, basic medicine has the highest share of all positions, followed by health specialties. By subsector, the IAMC shows greater homogeneity in the distribution of types of specialty, while ASSE has a greater tendency for basic and higher specialties related to anaesthetic-surgical positions. An analysis shows that the basic specialties have a greater weight outside Montevideo than in the capital city of the country.

If contracted hours of basic specialties in charge of a reference population are analysed (general medicine, family medicine, paediatrics and geriatrics), and given their importance to change in the care model, a lower weight than that needed to change the model is highlighted. The same is true if the distribution of hours by level of care for the IAMC is observed, which shows that 20% of the total hours are devoted to outpatient services (Table 4).

**Table 4. Contracted hours per 1000 users, 2013**

Health coverage	State Health Services Administration		Collective Medical Assistance Institutions	
	Montevideo	Elsewhere	Montevideo	Elsewhere
General medicine	314.1	238.4	174.5	271.2
Gynaecology	88.4	92.4	69.9	111.0
Paediatrics	323.0	239.1	367.8	294.4

Source: SNIS Human Resources Division.

The new system extends working hours with the aim of improving the quality of care and reassessing the basic specialties as pillars of the healthcare model change (Table 5). “When the work of general practitioners is compared with specialists, the former usually employ fewer resources after correcting for age, gender, type and severity of disease.” (19)

The Wages Council drives change strategies designed to add value to health-care processes and rationalize medical work during its life cycle in areas of general welfare (20).

**Table 5. Medical hiring in Collective Medical Assistance Institutions, 2013**

	Basic specialties	Medical specialties	Anaesthetic surgical
Independent	9%	7%	12%
Substitute	16%	22%	16%
Fixed substitute	24%	15%	16%
Position holder	51%	57%	57%
Total	100%	100%	100%

Source: SNIS Human Resources Division.

When analysing the different forms of recruitment, there are no significant differences for IAMCs in the speciality group; the position holder and fixed substitute have the greatest number of hires. This is in line not only with the change in model, which allows for greater job stability, but also with expected impact on the performance of workers and subsequent efficiency.

Devoting more hours to primary care is essential in changing the health-care model. While basic specialties represent a high number of hours, they do not focus on first level care. This is why, for the high dedication positions agreed in November 2012, it was established that they “include hours for urgent and emergency cases, home care, inpatient care and home visits, which may not exceed 75% of the total workload, with hours of direct polyclinic care (which may not be less than 20% of the total workload), inpatient visits, as well as health education and promotion activities and hours of institutional activities that do not involve direct patient care”. (20)

Activities for the aforementioned positions are defined by agreement. In the case of general, family and paediatric polyclinics, the time allocated by physicians includes the longitudinal care of their reference patients and those not referenced. Polyclinics have an important health promotion component with activities targeting families and the environment (20). It is hoped that the creation of the new positions ensures an effective link between the reference physician and their patients. This may act as a filter, reducing the costs of consultations with specialists when they are unnecessary.

#### **Insufficient geographic coverage**

Inadequate geographical distribution of human resources for health (HRH) can affect equitable access to different health services for the population. In turn, many health problems of the population are related to inequities in the distribution of HRH across the territory (21). Planning the supply and demand of human resources to meet population needs from a regional perspective, while remaining cost-effective, is therefore critical for an effective health system.

According to data from 2013, Uruguay has 82.24 doctors per 10 000 inhabitants in Montevideo and 24.16 outside the capital (Table 6). However, there is a wide variation by geographic area, with Artigas, Cerro Largo, Durazno and San José being the departments with the fewest doctors.

**Table 6. HRH distribution per 10 000 inhabitants, by location, 2013**

Human resource	Montevideo	Elsewhere	Total
Physicians	82.2	24.2	47.5
Nurses	24.9	11.3	16.8
Auxiliary nurses	42.6	31.2	36.0

Source: SNIS Human Resources Division.

If available hours per user are considered, rather than the number of staff, the private sector in Montevideo offers fewer hours than the Public Health Services Administration, the biggest difference being for non-medical workers and nurses. However, the government figures may be overestimated since the working hours intended for national reference centres are assigned to Montevideo even though they cover the population throughout the country (22).

Katzkowitz et al. (23) conclude that variables related to local development, health resources in the area as well as variables related to each worker, influence the decision of physicians to work in a particular place. Policies should therefore be implemented that allow a better territorial distribution of doctors nationwide in order to offer real access to health services for the population. In this case study it is observed that salaries do not explain where doctors work, since salaries are higher outside of Montevideo, they cannot be considered the only incentive for mobility (Table 7).

A more equitable distribution of health personnel will increase the resolutive capacity in the field and reduce the number of referrals to Montevideo. In any event, in order to maximize efficiency of available resources, complementary service agreements that avoid the duplication of care should be encouraged and promoted.

**Table 7. Average salary by occupation and gap between the capital and elsewhere, in Uruguayan pesos, 2013**

Occupation	Montevideo	Elsewhere	Gap (%)
Administration, services and other	27 911	26 620	0.95
Nursing	30 562	26 749	0.88
Medical	48 459	75 682	1.56
Non-medical technicians	26 763	30 114	1.13

Source: SNIS Human Resources Division.

The policies implemented should ensure the working conditions of the various subsectors. To this end, the Wages Council agreement 2010 (20) not only includes changes in wages, but also establishes a conceptual framework and general guidelines for changes in medical work. One of the issues arising from the agreement is the adequacy of time spent by doctors in the institutions with the aim of generating greater stability for health-care workers.

In 2010, ASSE signed an agreement that encourages the creation of high dedication positions at the second level of care. In addition to defining the time commitment of physicians (40–60 hours a week) the agreement states that these must be evenly distributed between the metropolitan area and the field. This can be seen as an incentive policy to locate physicians outside of the capital, where they will have greater capacity to resolve health matters within the care centre. Fewer referrals to Montevideo will thus lead to a more efficient use of resources.

### Multiple employment

One of the great problems in the Uruguayan health system is multiple employment in the job market. In 2010, 55% of physicians worked in two or more institutions, 22% worked in three or more, and 9% were employed by more than four institutions (Table 8) (12). While this phenomenon is common to all health workers, it is

more pronounced among doctors and generates, among other things, a low concentration of hours in each institution. This may be detrimental to care and worker stability due to fragmented positions (23).

If the level of multiple engagements within the basic specialties is analysed, 53% of doctors with positions in polyclinics work in more than one institution, with paediatricians having the highest value (62%). However, general medicine has the lowest rate of multiple employments with 51% of professionals working as general practitioners in two or more institutions.

**Table 8. Multiple employment in collective medical assistance institutions and public health services administration, 2013**

Number of institutions	Employment category (%)				
	Medical	Nursing	NMT	ASO	Total
1	39.0	82.6	79.9	96.6	79.3
2	30.9	16.6	15.7	3.2	14.2
3	16.9	0.8	3.4	0.1	3.9
4 and over	13.2	0	1.1	0	2.6
<b>Total</b>	100	100	100	100	100

ASO: administration, services and other; NMT: non-medical technicians.

Source: SNIS Human Resources Division.

The creation of specialty positions aims to reduce multiple employment, since their working hours are expected to be 40 to 48 hours. This concentration of employment not only improves the quality of medical care and work.

#### Physician remuneration

“Different payment methods have different effects on production levels, service productivity, the quality of services and on the level of resource utilization.” (24).

Current physician remuneration systems in Uruguay are salary, payment by act and a combination of both. In ASSE and the IAMC in the regions, salary is the predominant system, while IAMCs in Montevideo are paid by act or by mixed payment (fixed salary plus payment by act).

During the first period of the reform, actions focused on improving salary levels in the sector, which had suffered a sharp decline during the country’s last economic crisis, both in IAMCs and ASSE. The salary recovery in IAMCs, and the convergence of salaries in ASSE with previous levels, created the conditions for implementing policies to adapt the working arrangements to the new priorities of the National Integrated Health System. In the discussion on medical work conditions, two events stand out: the salary agreement signed in 2010, where the theoretical basis of the medical work reform was established; and the 2012 agreement which aimed to generate multipartite dialogue spaces to design a unique sectoral arrangement for the public and private sectors.

The change in the work regime required a review of the logic of mixed payment. Thus, a proportion of the fixed salary would be retained and supplemented with a variable payment linked to certain results based on a referenced population. In order to finance the transition to the new conditions agreement, health-care Goal 4 was created in May 2014 (see Section 3.2.2). Institutions are remunerated if they achieve this goal of establishing new positions based on the number of affiliates to the National Health Fund, which are expected to increase progressively. The goal thus acts as an incentive for institutions to reorganize their management structure by aligning their employees with the new regime.

Buglioli et al. (24) purport that if the three basic remuneration methods (payment by act, salary and capitation) are compared, the mode that shows the least incentive for efficiency is payment by act, followed by salary. Capitation, understood as a payment for responsibility over a population, is the most likely to lead

to efficiency as a higher salary is acquired by increasing the number of patients, without increasing resources per individual as is the case for payment by act.

The high dedication positions defined to date are those within general medicine, family medicine, paediatrics, gynaecology, internal medicine, adult and paediatric intensive care, and neonatology. These positions are largely remunerated following the mixed payment form outlined above. This method may enhance the advantages of each component and moderate any negative effect on efficiency and quality: the salary component creates an incentive to minimize costs (effort or time), as the income is fixed and known, although it provides little incentive for physicians as efficiency is not rewarded. On the other hand, the variable payment moves responsibility for the efficiency of care to physicians, as well as stimulating preventive measures, greater continuity of care and a lower use of resources (24).

It is expected that the new medical agreement will lead to a more efficient health system compared with the previous regime. Transition from the old to the new working conditions will be progressive and both payment regimes will co-exist for several years. The results will therefore be seen in the long term.

### 3.4. Other policies

There are other policies and measures that affect the efficiency of the health system and interact with the issues highlighted above on the health reform in Uruguay.

The incorporation of services in the Comprehensive Health-Care Programme (PIAS) recently began using economic evaluation techniques through the coordinated efforts of the MPH and MEF. However, much remains to be done in this area. The articulation of payment and financing mechanisms is needed for the National Integrated Health System, including the National Resources Fund. Financing of highly specialized services included within PIAS by the Fund may generate a system of perverse incentives. For example, it may discourage prevention when the cost of treatment and services is financed by the Fund; on the other hand, it will induce demand from the collective medical assistance institutions that own highly specialized medical institutes.

Moreover, the regulations in effect as a result of the health reform require that the incorporation of any new technology must be approved by the MPH, taking into account the available scientific information, the need for its use and the rational for its location and function. While this appears to represent progress, as unnecessary equipment should no longer be authorized, other difficulties remain unresolved. The main problem is not the technological capacity of the country, but the inefficient distribution and use of available equipment. In some cases, this is due to the lack of trained human resources and in others, due to the lack of complementation agreements between providers in the same region.

In terms of medicines, the two main incentives for efficiency are centralized medicine purchasing mechanisms, and the Therapeutic Drug Formulary, an integral part of the Comprehensive Health-Care Programme. The Formulary was created with the mandate to evaluate the best therapeutic options based on their efficiency and cost-benefits. In addition, an ongoing project is the development of a generic medicines policy.

Within the stewardship functions of the MPH, the harmonization of health service provision is of great importance. Since the reform, major advances have been made with the SNIS complementation policy. The application of this tool, together with the creation of integrated health-care networks, are expected to see significant efficiency gains. This instrument will be particularly useful in areas where access to health is difficult, such as in rural areas. The actors involved also concur on the need for progress on regulatory measures to facilitate the completion of these agreements, although the specific focus depends on their areas of interest. Up to now, progress towards the complementation policy has been guided mainly by the drive and intuition of the parties.

The strategy for integrated health service networks is at different levels of development. The main public provider has made some progress in its role of as coordinator of the newly created Public Effectors Network. The regional based State Health Services Administration is expected to provide greater management autonomy, together with more efficient budget allocation mechanisms, and to encourage the creation of networks that respond to local care needs.

An efficient health system, aimed at providing universal health coverage and care for the population, is underpinned by a combination of targeted policies and instruments. A vision that only focuses on the operational efficiency of individual health providers – whether from a technical or economic point of view – is useful, but clearly insufficient to achieve the objective. Factors that affect the efficiency of a health system from the point of view of society as a whole must also be taken into account. These include coordinating actions linked to payment mechanisms and system financing, human resources, health technologies, medicines, the provision of health services and governance of the system.

The reform of the Uruguayan health system has put in place measures that allow a better use of resources; in other words, a reallocation of resources to achieve better health outcomes through improved, timely and equitable access to promotion, prevention and treatment interventions for the entire population. Extensive international evidence exists on the impact of such policies on the efficiency of health systems, although a quantitative evaluation of the magnitude of the impact was beyond the scope of this study.

This paper describes the efficiency incentives put in place in the context of the health system reform in Uruguay, and analyses the changes observed in a series of dimensions.

The National Integrated Health System introduced new payment mechanisms, prioritizing capitation adjusted for age and sex plus a payment for complying with care goals. The mechanism has some advantages for efficiency over the mechanism in effect prior to the reform, and clear advantages over mechanisms such as budget allocation or payment by act. While, capitation calculation is experiencing some difficulties related to the use of good historical information, the performance pay is guiding the transformation of care and management models promoted by the health authority. This is expected to affect efficiency since promotion and prevention policies minimize the cost of treatment of episodes of illness. Moreover, the compliance of these payments with a management contract allows the National Board of Health the strategic purchase of the Comprehensive Health Care Plan, one of the dimensions of universal coverage.

An analysis of human resources that are critical for health services also shows advances in terms of incentives for efficiency. One of the main changes has been a reorganization of medical work that changed the model change of working conditions. This generated high dedication positions that have broader responsibility and whose income is subject to the monitoring of a reference population. These positions, founded in the basic specialties, allow continuity of primary care in order to achieve better health outcomes with fewer resources. The health-care goals promote and finance these positions.

Finally, among the critical aspects analysed, the institutions created in the National Integrated Health System enable a mode of governance in which social participation is an important component in the development, implementation and monitoring of policies. This participation affects the allocation of resources, and thus efficiency will depend on how the interests and power of the different players are managed.

In summary, the Uruguayan health system has, through the reform process, taken significant steps towards the goal of universal health coverage by combining actions and instruments that allow for a better use of resources. However, inefficient performance has been identified in some of the critical dimensions analysed, in which it is possible and necessary to make progress based on recent experience.



1. Hollingsworth B, Peacock SJ. Efficiency Measurement in Health and Health Care. Taylor & Francis; Routledge international studies in health economics; 2008.
2. World Health Report. Health systems financing: the path to universal coverage, Geneva: World Health Organization; 2010.
3. Hufty M, Báscolo E, Bazzani R. Gobernanza en salud: un aporte conceptual y analítico para la investigación. *Cad. Saúde Pública*. 2006;22;Sup:S35–S45.
4. Báscolo E. Gobernanza de las organizaciones de salud basados en Atención Primaria de Salud. *Rev. Salud Pública*. 2010; 12;Sup(1):8–27.
5. Ouchi W. Markets, bureaucracies, and clans. *Administrative Science Quarterly*. 1980;25(1):129–141.
6. Buglioli M, Dean A, Esponda A, Raffaele E. El pago de los servicios de salud por parte del SNS. In: *Transformar el futuro: Metas cumplidas y desafíos renovados en el Sistema Nacional Integrado de Salud*. Montevideo: Ministerio de Salud Pública; 2010.
7. Álvarez B, Pellisé L, Lobo F. Sistemas de pago a prestadores de servicios de salud en países de América Latina y de la OCDE. *Rev. Panam. Salud Publica*. 2000;8(1–2).
8. Cornejo M. Mecanismos de distribución del sistema de pago caputivo: revisión de algunas experiencias internacionales [Tesina Master en Salud Pública] Barcelona: Universidad Pompeu Fabra; 2008.
9. Peiró S, García-Altés A. Posibilidades y limitaciones de la gestión por resultados de salud, el pago por objetivos y el redireccionamiento de los incentivos. *Informe SESPAS. Gaceta Sanitaria*. 2008;(22)143–55.
10. García-Altés A. Los sistemas de pago por desempeño: ejemplos, posibilidades y limitaciones. *Revista de Innovación Sanitaria y Atención Integrada*. 2009;(1):3; Art. 4.
11. World Health Report: Health systems: improving performance. Geneva: World Health Organization; 2000.
12. *Transformar el futuro: Metas cumplidas y desafíos renovados en el Sistema Nacional Integrado de Salud*. Montevideo: Ministerio de Salud Pública; 2010.
13. Measuring the efficiency of human resources for health for attaining health outcomes across subnational units in Brazil. World Health Report background paper. Geneva: World Health Organization; 2006 ([http://www.who.int/hrh/documents/measuring\\_efficiency\\_Brazil.pdf](http://www.who.int/hrh/documents/measuring_efficiency_Brazil.pdf), accessed 18 May 2015).
14. World Health Report. Working together for health. Geneva: World Health Organization; 2006.
15. Setaro M. La economía política de la reforma del sector salud en el Uruguay (2005–2012): Innovación y continuidad en la construcción de un Estado Social con inspiración desarrollista. [Tesis doctorado en Ciencia Política]. Montevideo: Universidad de la República; 2013.
16. Rendición de cuentas ejercicio 2013. Montevideo: Junta Nacional de Salud; 2014.
17. Cromwell J, Trisolini M, Pope G, Mitchell J, Greenwald LM. Pay for Performance in Health Care: Methods and Approaches. Research Triangle Institute Press publication BK-0002-1 103; 2001.
18. Sistema de pago por cumplimiento de metas asistenciales: antecedentes, situación actual y proyección. Documento institucional. Federación Médica del Interior; 2013.
19. Ortún V, Gervas J. Fundamentos y eficiencia de la atención médica primaria. *Med Clín (Barc)*. 1996;106:97–102.
20. Ministerio de Trabajo y Seguridad Social. Acta consejo de salarios del 5 de noviembre de 2012. Montevideo: Dirección Nacional de Trabajo; 2012.



21. Ministerio de Salud Pública. Distribución de los RRHH en Salud en el Uruguay. Documento de trabajo No 1/12. Montevideo: División Recursos Humanos del SNIS; 2012.
22. Ministerio de Salud Pública. Informe sobre recursos humanos en salud. Documento de trabajo. Montevideo: División Recursos Humanos del SNIS; 2010.
23. Katzkowicz N, Melgar M, Patisson N. Determinantes de los desequilibrios en la distribución de médicos en Uruguay. [Monografía de grado]. Montevideo: Universidad de la República; 2011.
24. Buglioli M, Gianneo O, Mieres G. Modalidades de pago de la atención médica. Rev Med Uruguay. 2002;(18);3:198–210.

ASSE (2014): Revista ASSE, Año 1, No 1, Abril 204.

Banco Mundial (2012): El Sistema Nacional Integrado de Salud. Analisis sobre la gobernabilidad del Plan de Beneficios (PIAS) en el SNIS. Documento de Trabajo.

Chisholmy D, Evans D. (2010): Improving health system efficiency as a means of moving towards universal coverage". OMS, Informe Mundial de la Salud (2010): Documento de antecedentes No 28.

Da Vanzo J, Gertler P. (1990): Household Production of Health: a microeconomic perspective on health transitions, RAND corporation note report N-3014-RC

Federación Médica del Interior (2012): "Complementación de servicios y prestaciones de salud: elementos conceptuales para una definición de su alcance y aplicación en el contexto del sistema nacional integrado de salud", documento institucional, octubre de 2012, disponible en sitio web de FEMI: [www.femi.com.uy](http://www.femi.com.uy)

Fondo Nacional de Recursos (2011): "El valor de dejarse observar: Miradas externas sobre el FNR".

Fondo Nacional de Recursos (2012): "2012 Memoria. Comisión Honoraria Administradora del Fondo Nacional de Recursos"

Grossman (1972): The demand for Health: A Theoretical and Empirical Investigation. National Bureau of Economic Research, NBER occasional paper No 19, Columbia University Press, Nueva York.

Observatorio MERCOSUR de Sistemas de Salud (2013): Perfiles descriptivos de los sistemas de salud de los Estados Partes del MERCOSUR. Perfil descriptivo del sistema de salud de la Republica Oriental del Uruguay, Montevideo.

Organización Mundial de la Salud (2007): Salud en las Américas, Washington, US.

Organización Mundial de la Salud (2009): Subsanan las desigualdades de una generación: alcanzar la equidad sanitaria actuando sobre los determinantes sociales de la salud. Informe Final de la Comisión sobre Determinantes Sociales de la Salud, Ginebra.

Organización Mundial de la Salud – Gobierno de Australia Meridional (2010): Declaración de Adelaida sobre la Salud en Todas las Políticas, Adelaida, 2010.

Organización Panamericana de la Salud - Organización Mundial de la Salud (2007): Salud en las Américas, Publicación científica y técnica No 622, Washington DC.

Organización Panamericana de la Salud (2010): Redes Integradas de Servicios de Salud.

Conceptos, opciones de política y hojas de ruta para su implementación en las Américas. Serie: La renovación de la APS en las Américas, No 4, Washington DC.

Organización para la Cooperación y el Desarrollo Económicos (2007): Health at a Glance 2007: OECD indicators, OECD 2007.

Organización para la Cooperación y el Desarrollo Económicos (2013): Health at a Glance 2013: OECD indicators, OECD 2013. [http://dx.doi.org/10.1787/health\\_glance-2013](http://dx.doi.org/10.1787/health_glance-2013)

Oxley, H. , MacFarlan, M. (1995): "Health Care Reform: Controlling spending and increasing efficiency". OECD Economic Studies No 24.



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