

Diagnostic Related Groups (DRGS): Resourceful tools for financial crisis times?

Grupos Relacionados de Diagnóstico (GRD): ¿herramientas de pago en tiempos de crisis?

Grupos Relacionados de Diagnóstico (GRD): Ferramentas de pagamento em tempo de crise?

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Recibido: Septiembre 14 de 2010 • Aceptado: Febrero 21 de 2011

Para citar este artículo: Castro-J HE. Diagnostic Related Groups (DRGS): Resourceful tools for financial crisis times? Rev. Cienc. Salud 2011; 9 (1): 73-82.

Abstract

This document is intended to be read by the Colombian Ministry of Social Protection (former MoH) and includes some recommendations that could be implemented on the aim to increase allocative efficiency, thus improving macroeconomic performance of the Colombian Health System (CHS). It will be conducted as follows: first it will briefly review the background and actual context of the CHS, after this, will mention some related issues that justify a policy intervention on strategic purchasing to promote long run sustainability and hopefully the future attainment of major goals such as universal coverage and quality improvement. After prioritizing the main financial threats to the system, based on findings from literature review from countries that have successfully implemented similar policies, this paper will make some policy recommendations on regards especially to inpatient health care services in Colombia.

Key words: *Health systems, DRGs, Strategic purchasing, Efficiency*

Resumen

Este documento tiene la intención de captar la atención del Ministerio Colombiano de la Protección Social (anterior Ministerio de Salud), e incluye algunas recomendaciones que pudieran ser implementadas con el objetivo de incrementar la eficiencia en la colocación de recursos, de esta manera mejorando el desempeño macro económico del Sistema de Salud Colombiano (SSC). El documento se desarrollara de la siguiente manera: primero de manera breve se revisará el contexto

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y estado actual del SSC, posteriormente, se mencionaran los aspectos relacionados que justifican una intervención política en contratación estratégica, que promueva la sostenibilidad a largo plazo y ojala el logro futuro de objetivos primordiales como la cobertura universal y la mejora de la calidad. Después de priorizar las amenazas financieras principales del sistema y basados en hallazgos provenientes de la revisión de la literatura de países que exitosamente han implementado políticas similares, este artículo hace algunas recomendaciones relacionadas especialmente con el manejo de servicios intrahospitalarios en Colombia.

Palabras clave: *Sistemas de Salud, GRDs, Contratación estratégica, Eficiencia*

Resumo

Este documento tem a intenção de captar a atenção do Ministério Colombiano da Proteção Social (antigamente Ministério de Saúde), e inclui algumas recomendações que poderiam ser implementadas com o objetivo de incrementar a eficiência na colocação de recursos, desta maneira melhorando o desempenho macroeconômico do Sistema de Saúde Colombiano (SSC). O documento se desenvolverá da seguinte maneira: primeiro de maneira breve se revisará o contexto e estado atual do SSC, posteriormente, se mencionaram os aspectos relacionados que justificam uma intervenção política em contratação estratégica, que promova a sustentabilidade em longo prazo e oxalá o logro futuro de objetivos primordiais como a cobertura universal e a melhora da qualidade. Depois de priorizar as principais ameaças financeiras do sistema e baseados em achados provenientes da revisão da literatura de países que exitosamente tem implementado políticas similares, este artigo faz algumas recomendações relacionadas especialmente com o manejo de serviços intra-hospitais na Colômbia.

Palavras chave: *Sistemas de Saúde, GRDs, Contratação estratégica, Eficiência*

Background

Since the introduction of Law 100 (1993) the CHS has moved from a monopolistic highly integrated Social Security System to a Social Health Insurance scheme that promotes competition of private health insurers and providers on the bases of quality and choice. Before the Health Sector Reform (HSR), the CHS was dominated by the Social Security Institute (SSI), a single public purchaser and provider that insured formal sector workers and their families; low levels of coverage (around 20%) obliged poor and uncovered population to access either public or private health care facilities facing high levels of out of pocket expenditure, esti-

mated in 43,7% in 1993 (1), a negative impact on accessibility for the most vulnerable population even at public hospitals were described before HSR amongst inefficiency, fragmented markets and poor targeted public subsidies (2).

According to official figures from the Ministry of Social Protection Ministry in Colombia (3) in 2009, coverage was about 80% with 17.198.673 in the Contributory Regime (RC) and 17.135.830 in the Subsidiary Regime (RS), but still near 9.000.000 Colombians were uninsured. It is to mention that there has been a progressive catch up in the Total Health Expenditure (THE) during the last decade moving

from USD\$ 370 p.c in 2000 to USD \$568 p.c (PPP) in 2007 according to WHO.

Some of the biggest achievements of the HSR since 1993 are the notorious access improvement to health services amongst the chronically ill individuals (4) and the poorest enrolled population (5), sustained reduction trends on maternal mortality and infant mortality rates for under 1 and 5 years old, as well as higher rates for inpatient deliveries by skilled professionals and vaccination coverage (6).

Aims and Objectives

Although Colombia still faces important unfulfilled challenges, the target in the short run is to create strategies to promote sustainability under an economic crisis scenario where imposing additional financial loads to workers, employers or government could not only be unfeasible but disastrous for the Colombian economy.

The main recommendations will address policies to promote strategic purchasing of services from hospitals and clinics, since such services are a big component of the total health budget. Introducing contractual incentives for cost containment and quality improvement might promote allocative efficiency and induce a welfare gain for Colombian society.

Justification for Policy Intervention

Biggest problems now are related to sustainability; since 1993 Total Health Expenditure (THE) has increased from 6,2% to up to 7,8% and specially during the last decade THE p.c has progressively raised from about USD\$ 200 in the late 1990s to USD\$ 370 in the early 2000s, to USD\$ 568 in 2007 (4). Due to government's pressure to obtain universal coverage, rates of enrollment have also increased by 27% in RS and by 8% in RC from 2007 to 2008; as expected, the newly enrolled population is

demanding more health care services that have required additional funding. The basket of benefits, firstly established in 1993 has become obsolete due to lack of dynamic regulation, and since the central government has played a passive role on price, market entry and average technology regulation; other instances such the Constitutional Court (CC) has taken responsibility on their own and based on principles of human rights have dictated verdicts that enhanced means such as CTC (Technical Scientific Committees) and *Tutelas* which enable citizens from both regimes to potentially access any kind of treatment available in the CHS, as long as it is recommended by a licensed physician; hence now, the scope of coverage is potentially infinite although the breadth is not universal yet. According to data from FOSYGA from 2006 to 2008 health expenditure from services not included in the original (POS) basket of benefits (NO POS) has increased by 4,1 times due to CTC and by 4,5 times from *Tutelas*.

Financial sustainability of third party payers and their ability to efficiently allocate resources is now in jeopardy; levels of reimbursement from FOSYGA pool refunded to insurers for health services considered as NO POS, represents much less than the real costs faced by them, and the its tendency is decremental (from 84% to 75% period 2007/2008), mostly associated to bureaucratic delays to accede these funds. Another big issue is the fact that even though there has been an inflationary trend in the CHS between 1990- 2007 of 13,6% (CIP) per year over the last years (7), the incremental rates of reimbursement authorized to allocate resources to third party payers has only increased an average of 3% per year over the same period of time.

One of the main objectives of HSR was to promote competition based on choice and quality, hence a big private network of clinics and

hospitals that claim high quality standards has evolved ever since. Most of inpatient health care providers are paid retrospectively (fees for service-FFS), covering full costs incurred on each treatment, FFS are recognized as poor incentives for providers to put extra effort on cost containment, therefore introducing additional pressure on THE. With some extra profits in the long run, most of for-profit providers and some of the non-profit ones, have improved their infrastructure and level of complexity, becoming tertiary level care providers, justifying their higher fees claims on quality investment. Due to the market segmentation, individually insurers lacking of monopsonistic purchasing power, struggle each year with powerful health providers on the negotiation of incremental fees, hence more budgetary constraints avoid allocation on more preventive interventions outside hospitals.

Official calculations estimated that health care service provided by hospitals and clinics accounts for up to 50% of THE (including inpatient care -general wards and ICUs-, elective ambulatory surgery and emergency care). Last December 2009 a deficit of COL\$ 7 billion (USD\$3,5 billion) and a financial crisis of the CHS was announced publicly by the President of the country.

DRGs International Evidence

Country evidence from LIC/MIC about incentive payments is new and scarce; some findings will include then High Income Countries (HIC) experience:

Americas

Since the inception in USA of DRGs in 1983 as Prospective Payment Systems (PPS) for Medicare, studies have shown that DRGs reduce the length of hospital stay by 20- 25% over a 5 year period time (8,9). A study in Puerto Rico showed that when introducing payment

quality incentives for HIV inpatient treatment, the mean length of stay was reduced from 22.3 days to 11.3 days in one year (46.8% reduction) and also the annual mean cost of inpatient care per AIDS patient fell from \$15,118 in 1987 to \$3869 in 1988 (10). Mexico, Brazil and Colombia have made small pilots without assessing final impact (11), but have shown that DRGs can be useful sources for budgeting and comparison amongst hospitals (12).

OECD and Western European Countries

DRGs in Spanish hospitals began to be implemented in 1994, but regional propagation was completed only by 2002, the most significant impact was the reduction in the length of stay. Since 1995, Italy has been one of the countries that has successfully implemented DRGs for improving healthcare funding. There has been a noteworthy reduction in the number of hospital beds as well as in the cost of healthcare services (13). In 1997, activity-based financing (ABF) was introduced for Norwegian Hospitals, evidence shows that ABF did increase productivity (14). The Czech Republic had a purely FFS schedule that led to a cost explosion, with expenditures increasing on average by 46% from 1992 to 1995, when expenditures were capped and a DRGs system of per diem payment was introduced expenditure increases slowed to less than 5% from 1995 to 2000. A relative reduction in numbers of beds and reduced average lengths of stay increased allocative efficiency in this country (15). *Now most of European countries have introduced different types of prospective payments.*

Eastern European Countries

Before the break-up of the Eastern bloc there were 3 times higher referral rates, 1,5 times higher hospital admission rates and average

lengths of stay were 2 to 3 times as high as OECD countries. 65% to 85% of state health budgets were for inpatient care (16). In 1987, many Eastern European countries began new organizational and financing models to improve efficiency. There were early successes, with drops in admissions (17, 18) and expenditure shifts from nearly 70:30 to 50:50 inpatient to outpatient spending (19). Samara, in the Russian Federation, reported closures of 5500 beds (20).

Final Recommendations

The CHS with an oligopolistic market of just a few purchasers for RC and RS, requires an imminent intervention from the government. So far there are not clear guidelines for paying providers nationwide and Strategic Purchasing appears as one the feasible options to improve allocative efficiency, under as described above a scarce resources scenario. FFS is the predominant mechanism to pay inpatient health care providers in Colombia and it can account for up to 50% of THE; since FFS is highly correlated with a pronounced increase in volume and overall THE some other method to pay providers must be put in place. Based on the Yardstick competition theory, Prospective Payment Systems have evolved in many countries as based on units fixed payments, aimed to remove supplier induced demand DRGs are the most famous ones, and have emerged as one of the significant means to control hospital expenditure, but could also be utilized for elective surgery and some other complex procedures. Health providers are motivated to innovate in cost-reducing technology, use of lower-cost alternative treatment settings, and deliver cost-effective care. Payment mechanisms can be defined as monetary transfers per unit (person, case, day, year, visits), they can be prospective

or retrospective and include some risk sharing between payer and provider. Strong evidence from HIC and more limited from MIC have showed a positive impact on length of stay averages, costs, substitution rates for most cost-effective interventions, admission rates, reduction of oversupply of beds and so on. Savings attained could be used to improve allocation of resources in non-hospital necessary services, such as promotion and prevention, shorter waiting lists for elective care could be achieved, and derived from real incentives to providers to be more efficient and sustainable, prices could be controlled and quality improved if included as a target. Comparisons among hospitals could be eased on quality and efficiency bases.

Some considerations are important when introducing incentives for health care providers; design of fair and transparent cost-sharing mechanisms, and directly related to cost targeted; and if, supported by relational contracts based on reliable and national equivalent data, chances to succeed get much higher. Risks of up-coding, cream skinning, quality skinning are caveats to bear in mind, and to control as they become visible.

Incentive payments or DRGs are not a panacea solution to improve performance of the CHS, a prompt actualization of the basket of benefits, dynamic Health Technology Assessment of new and existing technologies and price regulation, as well as stronger monitoring and enforcement of quality standards are milestones to assure better outcomes. Incentives to reward goal achievements at the primary care level should also be considered and additional strategies to improve purchasing power, such as unified purchasing unit (conformed by current third party payers) mimicking monopsony should be explored, aimed to achieve economies of scale and scope.

Appendixes

Appendix 1- Colombia Country Profile

Colombia has become during the last decade a middle income country with a GDP p.c of USD\$ 8587 (PPP) (2) with a population of 44,5 Million people, population growth rate of 1% annually, literacy rate of 93% for men and women over 15 years old and an estimated unemployment rate of 12%. The formal sector is 43% and the informal one is of 57% of economy (7). Colombia Ranks 77 in the Human Development Index over 193 nations (0.807). Inequalities: Gini co- efficient 0,585. Basic education attainment rates are 54% for low quintile to over 96% in high quintile 2005. Military expenditure is still high 4%. Inflation rates between 4,5 and 8% in the last five years (2% in 2009) within inflation rates in the health sector that tend to double general one rates.

Appendix 2- Country Health Indicators

The life expectancy at birth is 73 years. Mortality rate is 17 per 1000 live births. Mortality rate under 5 years is 68 per 1000, Maternal mortality ratio per 10.000 births is 40, the prevalence of HIV 0,8%. Total Health expenditure is increasing over time from 7,3% of GDP in 2006 (comparison Latin America 7% upper MIC 6%) to 7,8% in 2007. From THE 6,2% (85,4%) is from public resources (SHI) and 1,1% (14,6%) from private (comparison Latin America 50% and 45,3% upper MIC). Public Health expenditure from Government is 17% (increasing trend over lasts years). Out of pocket health expenditure as percentage of private funding is 43,9% (comparison Latin America 72,2% Upper MIC 70,7%). Total out of pocket expenditure has reduced from 43,7% in 1993 to 7,5% in 2003. Health expenditure per capita in 2000 was USD\$ 143 and in 2006 was \$464 (with 10% average inflation rates per year) (comparison Latin America USD\$ 374 and upper MIC USD\$ 412). External resources for health are now USD\$ 0.

Some key outcome indicators have improved over the lasts years but differences still remain amongst income groups: Immunization basic coverage from 48,2% low to 73,5% high quintile; Antenatal care ranges from 75,9% in low quintile to 96,3% in high quintile; Delivery attendance from a medically trained person ranges from 72% in low quintile to 99,3 in high quintile; Infant mortality rate from 32% in low quintile to 14,4 % in high quintile; Under 5 mortality 39,1 % in low quintile to 15,9% in high quintile; Total fertility rate from 4,1 to 1,4 low to high quintiles and nutritional deficit tend to be between 7 to 3,5 times more frequent in the low quintile than in the high quintile (4).

Appendix 3- Colombia Health System Description and Macro performance

Nowadays the Contributory Regime (RC) covers mandatorily formal sector workers from wage premiums split between employees (4%) and employers (8%) and also voluntarily for informal workers with ability to pay to private Health Insurers. The Subsidized Regime (RS) covers poor and indigent population (selected from the national survey for SISBEN) and is financed with resources from solidarity contributions from the RC (1%) and treasury transfers from the territories. Pooling is assured by the National Health Fund (FOSYGA) for both regimes whilst purchasing and provision health services are functions performed by private, mixed or public organizations on a competitive market with different levels of vertical integration up to a maxi-

mum regulated level of 30%. 85,3% of THE is public expenditure (50,8% of public is from the SHI being the highest in Latin America) and 14,3% is private expenditure.

Funding: RC Collection is made by approximately 18 private insurance companies from wages of formal employees (mandatory) and informal employees (voluntary). RS Collection from about 30 private, mixed and public funds from 1% of solidarity from RC and territory tax transfers.

Pooling: FOSYGA is the national pool for all regimes with risk adjustment related to age, gender, geographical location of population and for some chronic conditions prevalence (e.g Chronic Renal Failure).

Purchasing: Is decentralized in each insurance company or fund there are no economies of scale for the whole health system. Capitation or fixed budget are the most frequent ways to pay for primary health care and fees for services the most frequent one for inpatient, chronic and highly specialized services.

Provision: Is dominated for private health providers, in urban areas most of them have evolved to tertiary level institutions. Public facilities have to be self efficient and are only reimbursed from the government for services provided to uncovered population either from RC or RS. The use of public facilities is more common for first and second quintile and private facilities for third to fifth quintiles of population.

Achievements after Health Sector Reform in 1993 are: Increase in coverage from 20% to near 80%, Out of pocket previous to HSR was 43,7% in 1993 (1) then lower to 7,5% in 2003, access improvement to health services amongst the chronically ill individuals (above 75% of HIV/AIDS patients under ARV therapy) (4) and the poorest covered population (up to 65% for primary and preventive health services) (5); some of the most remarkable health outcomes improvements are the sustained reduction trend on Maternal Mortality from 93,9 in 1998 to 75 in 2006 (rate by 100.000 live births), Inpatient deliveries from 76,8% in 1995 to 97,1% in 2006 and access to skilled professional attending delivery from 80,6% in 1990 to 97,1% in 2006. Vaccination coverage for PTD has also improved from 50,3% in 1998 to 92,2% in 2008 (6). Infant mortality rates under 1 year have declined from 30,8 in 1990 to 15,5 in 2006 and Infant mortality under 5 years old from 37,4% in 1990 to 18,9 in 2006 (rates by 1000 live births).

Universal enrolment and collection at RC have been complicated to attain since young healthy population and small firms tend to opt out of the system or evade their premiums, additional unsuccessful initiatives to monitor and control collection of funds have been made, but implying heavy transaction costs to the CHS that may increase allocative inefficiency. The hope of the actual government is to obtain universal coverage via the RS which relays its revenues either from more public funds collected by taxation or by increasing the percentage of contribution from the RC; both being unfeasible right now under a worldwide economic crisis and because of their negative impact on economic growth and employment supply would be tasks with low chances of success.

Fees for Service (FFS), is the predominant mechanism to pay inpatient health care providers in Colombia (90% of the time according to ACEMI (23)) and correlates with a pronounced increase in volume and overall health expenditure (EOHS-WHO, 2005). Also remuneration mainly based on time- and/or population allows no flexibility to respond to local needs or changes in technology or treatment patterns. It is important to mention that Colombian Health System lacks of regulation not only in HTA, but learning curves, skilled professionals standardization and also in patents and entry barriers to branded costly medicines, health expenditure related to Cancer, Orphan and some other chronic diseases originally not included in the basket of benefits, have double in a period of one year time (3).

After a declared financial deficit crisis of about COL\$7 billion (USD\$3,5 M), last December 2009, the President of Colombia declared the Social Emergency in the health sector due to the unsustainable financial situation in the Health System. This becomes an opportunity window to introduce additional measures that could promote sustainability and re-establishes the lost stability of the past years. Two of the major initiatives proposed by the government are to increase revenue from raising Tobacco and Alcohol taxes and the second one is to reduce the breadth of coverage for affluent population; as expected both approaches have been highly criticized.

Appendix- 4 Definitions

CTC- (Spanish acronym for Technical Scientific Committee)- Responsible for individual approvals of services originally excluded from the basic basket of services in the CSH.

Tutelas (Spanish for High Courts of Law individual verdicts)- Allow individuals based on human rights principles to access any kind of excluded services (necessary- unnecessary- luxury-basic-experimental-evidence based) to improve health outcomes regardless of the cost or effectiveness.
POS- Mandatory Plan of Benefits (Spanish acronym)

LIC- Low Income Countries: GNI per capita of USD\$ 975 or less.*

MIC- Middle Income Countries: GNI per capita of USD\$ 976- \$11.905 (can be sub- categorized in low- middle and upper middle IC (LMIC up to \$3.885 and UMIC above)*)

HIC- High Income Countries: GNI per capita USD\$ 11.906 or more.* CHS- Colombian Health System

*According to WB Atlas Method.

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