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Chile and Costa Rica:

Different roads to universal health in Latin America

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ABOUT THE PROJECT

The Municipal Services Project (MSP) is a research project that explores alternatives to the privatization and commercialization of service provision in electricity, health, water and sanitation in Africa, Asia and Latin America. It is composed of academics, labour unions, non-governmental organizations, social movements and activists from around the globe who are committed to analyzing successful alternative service delivery models to understand the conditions required for their sustainability and reproducibility.

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Acronyms

AUGE Ley de Garantías Explicitas en Salud (Law of Explicit Health Guarantees)

CCSS Caja Costarricense de Seguro Social (Costa Rican Social Security Fund)

CASEN Encuesta de Caracterización Socioeconómica Nacional (Survey of National Socioeconomic Characterization)

CONFUSAM Chile's National Confederation of Municipal Health Workers

EBAIS Equipos Básicos de Atención Integral en Salud (Basic Teams of Comprehensive Health Care)

ENIGH Encuesta Nacional de Ingreso y Gasto en Hogares (National Survey of Income and Expenditure from Households)

ENSA Encuesta Nacional de Salud (National Survey of Health)

EPF Encuesta de Presupuestos Familiares (Survey of Household Budgets)

FONASA Fondo Nacional de Salud (National Health Fund)

ISAPREs Instituciones de Salud Previsionales (Health Insurance Institutions)

SERMENA Servicio Médico Nacional de Empleados (National Medical Services for Employees)

SNSS Sistema Nacional de Servicios de Salud (National System of Health Services)

EXECUTIVE SUMMARY

Universal health coverage (UHC) is a health policy that seeks to provide sufficient access to affordable, quality health care for everyone in a given country. UHC can be achieved by different institutional and financial arrangements, but it has come to be dominated by the use of insurance schemes covering a limited package of health services provided by public and private healthcare providers. By contrast, universal health systems (UHS) seek to promote the development of a single public entity that provides and funds all medical and preventive services to citizens.

This paper provides an empirical assessment of these two approaches to universal health via a comparative study of Chile and Costa Rica. These two countries represent opposite approaches: in Chile, private and public insurance companies co-exist in the healthcare sector as part of a national policy; by contrast, the public sector is dominant in the health system of Costa Rica.

Data indicators from the World Bank and World Health Organization are used to compare health outcomes, looking specifically at the extent and quality of services, their cost and affordability, and proportion of the population covered. It is the first such empirical study of its kind and offers useful insights into the advantages and disadvantages associated with different paths to 'universal coverage'.

In terms of access to basic services, both Costa Rica and Chile have made major advances. For example, they have the lowest infant mortality and highest life expectancy in the Latin American region. However, availability of basic services is not the same as having access to comprehensive care to resolve most health problems, which may explain why, over the last decade, people in Costa Rica have consistently perceived their access to health services to be better than people have in Chile (66.4% vs 35.0%). This difference has been maintained even after 2005 when Chile sought to remedy the situation by imposing more stringent regulation of insurance companies (Plan AUGE).

With respect to financial protection, although the lack of access to health services for economic reasons has been reduced substantially in Chile since 2005 (from 11.7% to 4.2%), the figure remains much lower in Costa Rica (0.8%). And in comparison with Costa Rica, out-of-pocket expenditure by families and the proportion of households facing catastrophic health expenditure are all substantially higher in Chile. This situation is produced in part by the fact that Chileans pay for services or products that are not covered by their insurance (e.g. prescription drugs).

The relative affordability of Costa Rican health care is all the more impressive given the fact that total per capita health expenditure is lower than in Chile (US$811 vs US$947). The higher cost of the Chilean health system can be attributed in part to the inefficiency of the private sector in that country, where the use of unjustified medical procedures is more frequent and administrative costs are higher.

Yet according to the notions of "active purchasing" (WHO 2010) and "management competition" (World Bank 1993), the existence of different providers that are competing for resources is supposed to produce higher levels of quality at lower costs. This argument is frequently used to promote insurance schemes. The evidence presented here shows that such assumptions are not always true. The Chilean health system is an example of how segmentation produced by the coexistence of private and public insurances is detrimental; collusion among private providers and oligopolies are realities that are ignored in the competition argument.

This comparative study of Costa Rica's UHS approach and Chile's UHC policy implemented through insurance schemes indicates widespread and consistent advantages for the former model in the promotion of universal health, highlighting the financial and health outcome advantages of a strong, single public system rather than a fragmented public-private, insurance-driven model. Debates over the best institutional arrangements to organize universal health care are far from over, but this case study demonstrates that insurance schemes are neither the only nor the best option.

Introduction

The popularization of the term "Universal Health Coverage" (UHC) began with the release of the 2010 World Health Report (WHO 2010). The report provides guidance for governments to increase coverage of health care services, especially among underserved populations. Since then, UHC has occupied a central place on the agendas of supranational agencies, governments and academia (PAHO 2013a, 2013b; RF, UNICEF and WHO 2013; UN 2012). Recently, the World Health Organization (WHO) and the World Bank (2013) have been working collaboratively on UHC, with the stated aim of increasing access to quality health services in an affordable and efficient manner.

UHC is a policy tool that seeks to provide people in a given country sufficient access to quality health care in a way that is equitable and does not expose them to catastrophic expenditures (WHO 2010). Therefore, advances of a country toward UHC can be assessed in terms of population covered, quantity and quality of services received, and costs assumed by patients and their families. These broad goals, however, can be achieved by different institutional arrangements in terms of financing and service delivery. For example, resources for health care can come from general or specific taxes, social security contributions, compulsory or voluntary health insurance and/or direct out-of-pocket payments. Delivery of health services can be organized through public and/or private providers. Finally, financing and service provision can be the responsibility of a single entity or of different institutions.

The WHO (2010) argues that each country should define its own approach to UHC, depending on the historic development of its health care institutions (e.g. government health spending, coverage by public institutions and participation of the private sector), as well as social values (e.g. solidarity) and the country's demographic and epidemiologic profile. However, one of the key WHO recommendations is the "active purchasing" of healthcare services as a way to increase the efficiency of health systems. The basic premise of active purchasing is that competition among providers of health care services and related suppliers can serve as an incentive to increase their efficiency and quality. The introduction of social or public insurance is considered as the way to materialize this strategy because theoretically it allows consumers to select the provider that offers services with the highest quality at the lowest cost. Increasing health coverage through insurance requires some degree of split between funding and provision functions because usually one institution is in charge of resources pooling and contracts out services from multiple providers (WHO 2010).

Thus, even though the original UHC concept encompassed broad goals such as increased medical coverage and the avoidance of catastrophic expenditures, it has become common to equate the concept of UHC with the implementation of social or public health insurance. This bias was already present in the World Health Report (WHO 2010) that introduced UHC, as illustrated by the use of numerous exemplary cases from countries where governments had introduced insurance programs (e.g. Ghana, Moldova, Rwanda and Thailand); the advantages and risks associated with the insurance

approach, as well as recommendations for its implementation, were explored at length. Using this conceptual understanding of UHC, research has documented the positive effects of social or public insurance schemes on enrolment, utilization, financial protection from catastrophic expenditure and health status (see for example Acharya et al 2013). The generally positive assessments stemming from this research are nonetheless contested because the introduction of social or public insurance does not always lead to the improvement of these indicators.

One concern with the approach that equates UHC with health insurance is that other institutional arrangements for health care are marginalized, as has been the case with social security and universal systems. In the 1970s, primary health care (PHC) was proposed as the best delivery model to ensure that every citizen would come to enjoy his right to health care, and governments were responsible for establishing PHC as part of comprehensive national health systems (International Conference on Primary Health Care 1978). This institutional arrangement has been referred to as comprehensive, unified or universal health system (UHS) (Giovanella et al 2012; Roemer 1993), which consists of a single public entity that provides medical and preventive services to all citizens with the same standard of care regardless of their socio-economic situation. Equity is one of the main aims of UHS because everyone receives comprehensive care based on health needs, not on ability to pay (Whitehead and Dahlgren 2006).

It is worth noting that evidence on the impact of insurance schemes is easier to collect than it is to evaluate the performance of a UHS approach because of the complexities of the latter system. In addition, research comparing UHS and health insurance schemes is rare. As a result, the empirical debate about the best way to organize public health care services remains relevant, as governments search for efficient and fair use of public resources to guarantee that all or most of their citizens have adequate access to health care. It is important that the discussion around health policy focus on finding institutional arrangements for health care that are optimal both in social *and* economic terms; no system should be omitted or prioritized *a priori*.

An analysis of Latin American health systems is useful in this regard because some countries have achieved high coverage through private and public insurance programs such as Chile and Colombia, while other countries have built comprehensive UHS, Costa Rica and Cuba being the best examples. This paper aims to contribute to a better comparative understanding of insurance as national policy versus UHS by means of an assessment of the health systems of Chile and Costa Rica. The analysis is founded on the premise that these two health systems represent different models in terms of financing and delivery of health care. The Chilean public-private health system has been the object of extensive research and assessment (Bitran et al 2010; Frenz et al 2013; Paraje and Vasquez 2012; Pardo and Schott 2013; Unger et al 2008; Vasquez et al 2013); less work has been done to evaluate the performance of Costa Rican public healthcare services (Bixby 2004; Morera and Aparicio 2010). Most importantly, there has not been any comprehensive comparison of the two health models.

The primary reason for selecting Chile and Costa Rica is that they represent opposite approaches to the participation of private insurance companies and public institutions. In Chile, private and public insurance companies entered the healthcare sector as part of a national policy beginning in the 1970s; the country was a pioneer in this type of public-private institutional arrangement. As such, it is a 'mature' health system and policy-makers have had opportunities to correct possible 'defects' in its conception and implementation. By contrast, the public sector is dominant in Costa Rica's health system, operating within a strong and well-functioning market economy (as opposed to Cuba's experience that is hardly transferable to capitalist states).

The selected countries are upper middle-income countries (World Bank 2003) and they show some of the best health indicators in the region (OMS 2010, 2011). Both are considered exemplary cases of UHC for the WHO and World Bank. We first outline the histories and characteristics of the Chilean and Costa Rican systems because they are important to understand their healthcare programs today, and then describe our comparative methodology and the main research findings.

Chile's transition to public-private health

Chile's National Health System (NHS) was put in place in the 1950s through the unification of different institutions, including private charity hospitals, social security health facilities and governmental sanitary organizations (de la Jara and Bossert 1995). Special emphasis was put on the expansion of maternal and child health services as well as family planning programs provided through primary care clinics and maternity hospitals. From 1952 to 1979, as a centralized entity funded by general taxes and social security contributions, the NHS was able to achieve high rates of coverage. A parallel system for white-collar workers, the National Medical Service for Employees (*Servicio Médico Nacional de Empleados*, SERMENA), was managed by private providers.

Major improvements in population health have been attributed to the creation of the NHS and other public institutions during this period (Azevedo 1998; de la Jara and Bossert 1995). For example, between 1950 and 1980 the infant mortality rate decreased from 136.2 to 31.8 per 1,000 live births and life expectancy for men and women increased from 53.0 and 56.8 to 67.6 and 74.6 years, respectively; in addition, tuberculosis was controlled and poliomyelitis was eradicated (Azevedo 1998).

The current configuration of the health system in Chile came about through neoliberal reforms implemented by the dictatorial government of Augusto Pinochet (1973-1990). Two processes characterized this period: decentralization of primary health care units at regional and municipal levels, and the promotion of private health insurance (Azevedo 1998; de la Jara and Bossert 1995). In 1979 the National Health Fund (*Fondo Nacional de Salud*, FONASA) was created as the public entity that collects and distributes public resources to regional and municipal health authorities. Two years later the private Health Insurance Institutions (*Instituciones de Salud Previsionales*, ISAPREs) took charge

of managing health insurance schemes funded via social security contributions. During the dictatorship, public health services were underfunded, mainly hospitals; at the same time there was an expansion of private services (Azevedo 1998).

The end of the dictatorial regime in 1990 did not precipitate major policy change (Azevedo 1998; de la Jara and Bossert 1995); the first two democratic governments (Pres. Patricio Aylwin, 1990-1994, and Pres. Eduardo Frei Ruiz-Tagle, 1994-2000) focused on increasing primary care funding, creating new mechanisms to improve equity in its distribution at the municipal level, and better regulating ISAPREs. The regulatory measures for private health providers and insurance companies included the creation of the *Superintendencia de ISAPREs*, which sought to give public hospitals better access to information about people insured by ISAPREs and to prevent irrational or abusive practices through the implementation of new payment mechanisms.

In the contemporary Chilean health system the private sector is composed of ISAPREs, which are insurance companies that manage their own clinics and hospitals (Manuel 2002; MINSAL 2012). The public sector is headed by the Ministry of Health and comprises four institutions: the National System of Health Services (*Sistema Nacional de Servicios de Salud*, SNSS); FONASA (the public insurance company); the Public Health Institute; the Centre for Supply (*Central de Abastecimiento*) that is responsible for drug supply; and the *Superintendencia de Salud* which regulates public and private insurance companies and health providers.

Workers can choose to pay their health contributions to an ISAPRE or to FONASA; the only option for the rest of the population (usually low-income or poor households) is to receive care in the public SNSS and subsidies from FONASA. Participation in ISAPREs is voluntary and allows workers to select their health provider, but usually higher co-payments are associated with superior quality of services. In 2012, a majority of Chileans were covered by FONASA (74%), less than a fifth (17%) were insured by an ISAPRE, 7% were not affiliated to any institution, and 2% were members of the army or police forces that have their own health services and social security funds. Public funding comes from general taxation and social security contributions made by workers and employers to the FONASA through the Ministry of Health. Private contributions to an ISAPRE are included in premiums, co-payments and deductibles, in addition to direct out-of-pocket payments for consultations and drugs.

In recent years, the most significant reform was the passing in 2005 of the law that established the *Acceso Universal con Garantías Explícitas* (AUGE, Universal Access with Explicit Guarantees; see MINSAL 2012). The AUGE Law was specially designed to protect low-income households financially (they receive free care or pay according to their income) and to ensure that the government provides health services. The AUGE Law established a compulsory health plan for the private and public sectors to guarantee access to timely quality care for diseases with major social impacts (e.g. HIV/AIDS) or with the highest impact on life expectancy for which cost-effective treatments exist (e.g. hypertension and diabetes). Twenty-five diseases and health conditions were covered in 2005 and

by 2010 there were 69 (Frenz et al 2013). Badly needed investments in public facilities were also made (Paraje and Vasquez 2012). After implementation of this program, the number of consultations related to health conditions covered by AUGE increased (Bitran et al 2010), which created waiting lists (Paraje and Vasquez 2012). In an effort to resolve this problem, people insured by FONASA have used "AUGE vouchers" to receive care from private providers since 2011. The reduction of hospitalization rates resulting from complications of diseases covered by AUGE has been documented (Bitran et al 2010). However, one concern with the AUGE plan is that diseases not covered are receiving less attention, increasing waiting times for these conditions (Paraje and Vasquez 2012).

In 2003, before the AUGE reform, people with low socio-economic status had higher probability of consulting a general practitioner or to visit an emergency room than people with higher income; in 2009 this difference among socio-economic groups had lessened, which could mean that the increase in the use of health services was higher among well-off individuals (Paraje and Vasquez 2012, Vasquez et al 2013). Differences in the number of visits to medical specialists, access to dental care, utilization of laboratory exams, X-ray and ultrasound scans have also been reduced, but higher income patients continue to have better access to these services.

Recent research comparing health outcomes in 2000 and 2009 confirmed that high-income people made more frequent visits to specialists, but there are no socio-economic differences in visits to general physicians while visits to the emergency rooms are higher among low-income individuals (Frenz et al 2013). In addition, the study showed that the number of people who did not receive formal care for a recent illness or accident decreased from 30% in 2000, when it was higher among people with lower education or income, to 17.6% in 2009, when socioeconomic disparities virtually disappeared for that indicator.

Another characteristic of the Chilean health system is adverse selection; that is, private insurance companies concentrate on individuals with higher incomes and lower needs such as young adults with healthier habits and men. By contrast, the public sector (through FONASA) covers poorer population segments and people with more needs, such as women, the elderly, children and sick people (Pardo and Schott 2013; Sapelli and Torche 2001; Unger et al 2008). Preliminary evidence suggests that after the AUGE plan was implemented adverse selection continued (Pardo and Schott 2013).

Costa Rican universal health model

The Costa Rican health system is organized by the *Caja Costarricense de Seguro Social* (Costa Rican Social Security Fund, CCSS; see Saenz et al 2011). The CCSS was created in 1941 to serve low-income urban workers, focusing on sickness and maternity (Casas and Vargas 1980; Villegas 2005). Later, the CCSS expanded to cover rural workers but because public infrastructure was deficient services were bought from community and faith-based charity hospitals.

In 1961 the National Legislature approved a law to reach universal coverage of CCSS health services within 10 years. In the following decade charity hospitals, clinics of companies specialized in banana plantations, and facilities managed by the Ministry of Health were transferred to the CCSS. Primary care was at the centre of the Costa Rican health strategy. The Ministry of Health remained responsible for the management of sanitary and environmental programs and for the maintenance of community and rural health posts. In the 1970s, for example, the program *Salud Rural* was rolled out to prevent infectious and vector-transmitted diseases through auxiliary personnel visits to rural households (Sáenz 2005).

To sustain the expansion of the CCSS its funding was modified: all salaried workers started to contribute, employers had to put in more (from 5% to 6.75% of the total payroll), the national lottery revenues were transferred to CCSS, the government provided resources toward health care for the non-salaried poor, independent workers were invited to take voluntary insurance, and taxes on cigarettes and other products harmful to people's health were implemented (Casas and Vargas 1980).

In 1995, reforms were introduced in the CCSS, using a loan from the World Bank, in an effort to increase efficiency and quality (Clark 2002; Rodríguez 2006). A key aspect of the reform was reorganization of primary care. The CCSS took charge of the three levels of care, including primary care units that were previously under the jurisdiction of the Ministry of Health. The *Equipos Básicos de Atención Integral* (Basic Teams of Comprehensive Health Care, EBAIS) were created as part of a new healthcare model. Each team is formed by a physician, an auxiliary nurse, a technical assistant in primary care and a pharmacy technician; the EBAIS are grouped by 'health areas' that include a variety of services and health professionals such as dentists, social workers and clinical laboratory staff. An EBAIS provides services to 3,500 to 7,000 inhabitants. To reach populations with accessibility difficulties the EBAIS moves between 'periodic visit posts' housed in buildings donated by the communities or in new units established in underserved areas. In 2012 there were 1014 EBAIS, 103 health areas and 775 posts (CCSS 2012). The creation of such teams allowed reallocating resources from hospitals to primary care.

Changes in resource allocation and service contracting were also introduced with the reform (Clark 2002; Rodríguez 2006). Initially it was proposed that resources be assigned according to performance contracts (*compromisos de gestión*) signed by the managers of hospitals, clinics or health areas and evaluated based on a set of progress indicators. In this way, 10% of funding for these contracts would be linked with their performance. However, implementation of these performance contracts has been limited. With respect to the services contracting, the CCSS buys services from external providers (three cooperatives, the University of Costa Rica and one private clinic), covering around 15% of the population. Other institutional modifications included the creation of a formal system of quality assessment and improvement of the system to collect contributions from employers.

The CCSS manages three insurance plans: sickness and maternity insurance; disability, retirement and life insurance; and a non-contributing plan. The first two cover people who contribute to the CCSS, while the last one is aimed for the poor and people with disabilities (Rodríguez 2006; Saenz et al 2011). The services covered by the sickness and maternity insurance and the non-contributing plan are comprehensive and include diagnostics, consultations and drugs. By law, the CCSS must assume the cost of the treatment prescribed by a physician even if it is not included in the basic list of drugs. There are practically no restrictions on the pathologies that can be attended.

By 2012 the CCSS covered 96.4% of the population (CCSS 2012). The reform implemented in the 1990s led to a drop in the infant mortality rate to reach 4% after a period characterized by stagnation or deterioration of this indicator; adult mortality was reduced to 13% (Bixby 2004). Improvements were greater among districts where the reform was executed earlier. From 1994 to 2000 the number of people without access to health care dropped from 22% to 13%. Again this reduction was higher in localities where the reform started early: from 36% to 21% where it began in 1995-1996; and from 14% to 11% where it was implemented after 2000. Survey data from 2006 show that within the CCSS system, there were no differences in visits to physicians according to education, income or formal coverage by the CCSS (Morera and Aparicio 2010).

Methodology

This paper looks at the overall performance of health systems in Chile and Costa Rica to determine the strengths and weaknesses of each model. It aims to provide a fuller picture than recent research about UHC, which has focused on the effects of insurance programs created to boost coverage among underserved populations (Acharya et al 2013). The limitation of this latter approach is that it does not allow for performance assessments at the level of the national health system because such systems are generally formed by a complex combination of institutions and processes (as we have seen with both the Chilean and Costa Rican systems described above). For example, the introduction of insurance for targeted segments of the population can improve their access to health care, but is not clear what the effect is on the entire population. Also, when there are multiple institutions their performance can be uneven, making it inappropriate to assess only one part of a health system.

This paper therefore takes national health systems as its unit of analysis. The advantage of this approach is that evaluating the performance of the whole can demonstrate the optimal mix of institutions and services that could guarantee universal health.

We use the indicators proposed by the World Bank (2013) and WHO (2010) to compare the progression of UHC programs and health system performance in Costa Rica and Chile, as follows:

1) Extent and quality of services: whether governments provide a restricted package of services or offer comprehensive services including prevention and medical care.
2) Cost and affordability of services: efficiency in government expenditure and avoidance of catastrophic health costs, such as the impoverishment of low-income families due to out-of-pocket payments for medical services.
3) Proportion of population covered by services and differences among socio-economic groups (i.e. equity).

An exhaustive review of national surveys from both countries identified comparable indicators (e.g. user satisfaction with health services; waiting times for a consultation; drug accessibility) and a comparison of primary data was carried out whenever feasible. In most cases there was consistency among data sources, conferring reliability to the findings, but it should be noted that few of the national surveys have equivalent methodologies and some apply only to particular institutions, not to the entire health system. For example, the regional surveys by Latinobarómetro and the Latin American Public Opinion Project only provide data about public health services, excluding private providers. To compensate for this potential pitfall, proximate indicators were consulted. For example, accessibility and delivery statistics were obtained from different sources.

To assess equity and socio-economic differences in access to health care two national surveys were analyzed: Chile's *Encuesta de Caracterización Socioeconómica Nacional* from 2006 and 2011 (Survey of National Socioeconomic Characterization, CASEN; see Ministerio de Desarrollo Social 2013) and Costa Rica's *Encuesta Nacional de Salud* from 2006 (National Survey of Health, ENSA; see Centro Centroamericano de Población and Universidad de Costa Rica 2013). Unfortunately, we could not identify a more recent national survey for Costa Rica. These surveys were probabilistic and had national coverage (with the exception of remote and inaccessible areas), providing a general overview of both countries. The timing of the Chilean data is also important because it is close to the implementation of the AUGE plan in Chile (2005), which significantly changed the health system.

Statistical analyses were made using the software STATA 11.0. Analyses were carried out using the survey commands that accounted for strata, clustering and sampling weights to take into account the complex design of both surveys. In order for the reader to appreciate the comparability of results between countries, the reference period is included in each table.

The Latinobarómetro (Corporación Latinobarómetro 2013) and the Latin American Public Opinion Project (LAPOP; see Vanderbilt University 2014) were also analyzed. Information on public opinion regarding equity and quality was obtained by looking at questions on the difficulty in accessing health care in the past, present and the future and questions on the perception of efficiency of civil servants and official procedures, satisfaction with public hospitals, access to health, and quality of health care. Latinobarómetro and LAPOP questions are not always asked every year, therefore the

most recent and distant years were used. An advantage of these surveys is that they use the same wording for their questions in every country.

Information about health expenditures was obtained from the national health accounts (NHA) database of the WHO (2013a), which provides internationally comparable estimations. In the NHA, health expenditure "encompasses all expenditures for activities whose primary purpose is to restore, improve and maintain health during a defined period of time. This definition applies regardless of the type of the institution or entity providing or paying for the health activity" (WHO 2013a). WHO estimates are based on publicly available documentation such as national health account reports and reports from the ministries of finance, central banks, national statistics offices, and from international organizations. Although data are validated by local authorities (e.g. ministries of health), they may differ in terms of definitions, collection methods, population coverage and estimation methods (WHO 2013a).

When primary sources were not available, a literature search was done consulting databases such as Medline, Google Scholar and Scielo, using specific keywords.[1] Information about out-of-pocket health expenditure and catastrophic health spending was obtained from reports and publications analyzing national health surveys (Knaul et al 2011; Zúñiga-Brenes et al 2010). Data on health care for specific conditions, on preventive medicine and health promotion activities as well as on mortality and morbidity were obtained from reports of the WHO and Pan American Health Organization (OPS 2012; WHO 2013b), and websites from ministries of health in each country (MINSAL 2010, 2013; Ministerio de Salud and CONASIDA 2012).

Comparison of the health systems

Taking into account their histories and specificities, we assess the performance of Chile's public-private insurance model and Costa Rica's UHS. We look at the indicators proposed by the World Bank (2013) and WHO (2010) as mentioned above: efficiency in government spending, affordability of services, equity in access, and quality of care.

Efficiency in government expenditure

To assess the performance of health systems in terms of efficiency, we need to analyze health gains in relation to resources spent. In the Latin American context, Costa Rica and Chile have the highest life expectancies and the lowest infant mortality rates (see Table 1). In Chile, infant, neonatal and maternal mortality is lower than in Costa Rica, but Costa Rica has a lower mortality rate overall, as well as lower mortality by communicable diseases and a lower incidence of HIV and tuberculosis (see Table 2).

Total health expenditure per capita can be considered as a proxy of the total amount of resources that a society allocates to health. Among the upper middle-income Latin American countries, those

with the highest total health expenditure are Uruguay, Brazil and Chile (Table 1). The total health expenditure in Costa Rica is lower than in Chile.

TABLE 1:
Population health and health expenditure in Latin American upper middle-income countries

	Infant mortality[a] 2012	Life expectancy 2011	GGHE[b] (% GDP) 2010	THE[c] (US$ p.capita) 2010
Argentina	14	76	4	742
Brazil	14	74	4	990
Chile	9	79	4	947
Colombia	18	78	6	734
Costa Rica	10	79	7	811
Cuba	6	78	10	607
Ecuador	23	76	3	328
Mexico	16	75	3	604
Panama	19	77	6	616
Peru	18	77	3	269
Suriname	21	72	3	492
Uruguay	7	77	6	998
Venezuela	15	75	2	663

a. Number of deaths under one year of age per 1,000 live births
b. GGHE: general government expenditure on health
c. THE: total health expenditure.
Sources: Global Health Observatory Data Repository (WHO 2013b); National Health Accounts, Global Health Expenditure Database (WHO 2013a).

Why is the Chilean health system more expensive than the Costa Rican one? Part of this difference comes from the way private insurance companies and healthcare providers operate. One can look at the caesarean rate as a tracer of irrational use of medical procedures: in many cases there is no justifiable medical reason to use it and it puts both the mother and newborn at risk (Miesnik and Reale 2007). At the same time, when there are justifiable medical conditions this procedure can be beneficial. As a result, it has been suggested that at population level the caesarean rate should be between 5 and 10% and no higher than 15% (Gibbons et al 2010). In the 1990s the caesarean rate in Costa Rica was 20.8% while in Chile this rate stood at 40.0%, which can be explained by the higher frequency of its use in private hospitals (59.0% vs 28.8% in public ones; see Belizan et al 1999). For 2010, the rate was 19.4% in Costa Rica (Morera 2013) compared to 37% in Chilean public hospitals and 66% in private ones (Guzmán 2012). Interestingly, in the previous year the national body tasked with promoting commercial competition in Chile sued a provincial association of gynaecologists because they colluded to fix minimum prices for their consultations and surgical procedures including caesareans (Fiscalia Nacional Económica 2014). Thus, caesareans are not the only profitable

procedure. In an international comparison, private services in Chile had the highest costs for hospitalization, angiograms, cataract surgeries and routine office visits, and occupied the third place for caesareans, normal deliveries, and hip replacements (International Federation of Health Plans 2012).

Resources earmarked for administration are another way of assessing the efficiency of health systems. Higher administrative costs could imply that there are more resources spent on activities indirectly related with health care, such as marketing, premium collection or claims processing. During the 1990s, the public sector in Chile spent 1.2 to 4.0% in administrative activities but in the private sector this proportion was as high as 20%; in the fully public Costa Rican system these costs represented 3.6% (Nicolle and Mathauer 2010).

TABLE 2:
Mortality and morbidity in Chile and Costa Rica

	Chile	Year	Costa Rica	Year
Tuberculosis incidence[b] (OPS 2011)	14.1	2009	9.6	2009
HIV incidence[b] (OPS 2011)	5.2	2009	3.4	2009
General mortality rate, all causes[a] (OMS 2010)				
Total	4.9	2007-2009	4.3	2007-2009
Men	5.9		5.0	
Women	4.1		3.6	
Communicable diseases mortality rate[b] (OPS 2011)				
Total	29.8	2007-2009	18.9	2007-2009
Men	34.3		21.8	
Women	25.6		16.1	
AIDS mortality rate[b] (Ministerio de Salud and CONASIDA 2012; MINSAL 2013)	2.3	2008	2.9	2008
Infant mortality rate[c] (OPS 2011)	7.4	2010	9.4	2010
Neonatal mortality rate[c] (OPS 2011)	5.0	2008	7.0	2008
Maternal mortality ratio[d] (MINSAL 2013; Ministerio de Salud 2013)	18.3	2010	21.1	2010
Maternal mortality ratio[d] (OMS 2010)	25.0 (21-29)	2010	40.0 (31-50)	2010

a. Rate per 1,000 inhabitants
b. Rate per 100,000 inhabitants
c. Rate per 1,000 live births
d. Ratio per 100,000 live births

Another source of inefficiency in the insurance 'market' of Chile is the existence of oligopolies that reduce competition and create higher prices for users (Agostini et al 2007; Tobar et al 2012). In 1990 there were 21 ISAPREs (insurance companies that manage their own clinics and hospitals); by 2012 there were only seven left (Tobar et al 2012). That year, five ISAPREs (two of them are owned by the same group) covered 96% of the total population insured by private institutions. In general terms, the change of users from one ISAPRE to another has been very low (roughly 6% in 2012), which is one of the major barriers to creating new companies (Tobar et al 2012). The lack of options for users has allowed ISAPREs to decrease the coverage of their health plans without reducing their fees (Agostini et al 2007). In this way, the private health sector in Chile is highly profitable: 35.0% of net income to total assets from 2008 to 2011, which amounts to a higher profit margin than in activities such as life insurance (11.7%) and banking (17.5%) (Tobar et al 2012). For some authors (Agostini et al 2007) this panorama reveals the existence of tacit collusion among insurance companies.

Overall, the Costa Rican government has demonstrated a stronger commitment to health, as shown by the relative importance of health services in the national budget. Since 2002, total health expenditure (THE, including private and public resources) as a percentage of GDP has been consistently higher in Costa Rica than in Chile (see Table 3). Importantly, Costa Rica has also banked on preventive health activities. Between 2002 and 2006, the expenditure on prevention and public health services was higher in Costa Rica (6-7% vs 2-3%; see Table 3). This focus on prevention is more cost-effective and can yield greater public health impacts in the long term.

TABLE 3:
Health expenditure in Chile and Costa Rica, 2000-2011

	THE[a] (% of GDP)		GGHE[b] (% of GDP)		PvtHE[c] (% of THE)		OPE[d] (% of THE)		PPHS[e] (% of THE)	
Year	**Chile**	**C. Rica**	**Chile**	**C. Rica**	**Chile**	**C. Rica**	**Chile**	**C. Rica**	**Chile**	**C. Rica**
2000	8	7	3	6	56	21	37	19	2	
2002	7	8	3	6	57	24	37	22	2	7
2004	7	8	3	6	60	28	40	25	2	6
2006	6	8	3	5	58	31	40	27	3	6
2008	7	9	3	6	56	30	39	27	3	
2010	7	10	3	7	53	27	36	24	3	
2011	7	10	4	8	53	25	37	23		

a. THE: total health expenditure (public and private expenditures)
b. GGHE: general government expenditure on health
c. PvtHE: private expenditure on health
d. OPE: out-of-pocket expenditure
e. PPHS: prevention and public health services
Source: National Health Accounts (WHO 2013a).

Economic protection

Private expenditure has been higher in Chile than in Costa Rica (53% and 25% of THE for 2011, respectively), although the proportion in Chile has decreased from 61% in 2003 (see Table 3). Out-of-pocket expenditure has also been higher for Chileans (36-41% compared to 19-29% in Costa Rica). This latter indicator includes all types of health expenditure by households (usually doctor fees, drug purchases and hospital bills). Spending on alternative and traditional medicine is included in the calculation, but special nutrition or transportation costs incurred for medical assistance are not (Xu 2005). Any reimbursement through insurance is excluded from out-of-pocket expenditures.

Out-of-pocket health spending as a percentage of household expenditures is lower for Costa Rican families (4.7% vs 5.4% in Chile) (see Table 4). In both countries health expenditure is relatively more important for households with higher income. For every income quintile but the richest, health expenditure was lower among Costa Rican households compared to Chile.

TABLE 4:
Out-of-pocket expenditure in health as a percentage of household income in Chile and Costa Rica

	Chile[a]	Costa Rica[b]
Income quintile	**%**	**%**
I (low)	3.3	1.9
II	4.3	2.5
III	5.2	3.3
IV	6.3	3.9
V (high)	5.8	6.5
Average	5.4	4.7

a. Expenses on medical, dental and other health professional fees, laboratory tests, radiographs and extra hospital procedures in the last six months were assessed. Expenses for optical lenses, orthopedic appliances and equipment in the last 12 months were included.
b. Expenses for medical and dental medical treatments, therapeutic appliances and accessories, kits and lab services in the last three months were assessed.
Sources: Results from EPF 2006-2007 (Instituto Nacional de Estadística 2008) and ENIGH 2004 (Instituto Nacional de Estadísticas y Censos 2006).

Catastrophic health expenditure is defined as out-of-pocket spending for health care that exceeds 30% of a household's income (Zúñiga-Brenes et al 2010). An analysis of national surveys in Latin America (Knaul et al 2011) showed that during 2004-2005 in Chile 11% of households faced catastrophic health expenditure, while only 0.7% incurred such costs in Costa Rica – although low-income households were five times more likely to undergo such financial hardship compared to the highest income quintile in that country. These data indicate that in Chile impoverishment from

healthcare costs is equally distributed across socioeconomic strata, which is different from most Latin American countries where the wealthier households are less affected (Knaul et al 2011). In Chile, the wealthier households are typically covered by the private insurance companies (ISAPREs); therefore it is probable that insurance does not cover all health needs. In the case of Costa Rica, the coverage of the CCSS is low in poor regions (Morera and Aparicio 2010), which may explain the higher risk of catastrophic expenditure faced by poor households.

In Chile, 52.5% of patients who received a prescription for drugs following a general medical consultation in the last three months paid fully or partially for the medication (Table 5). In Costa Rica, 20.7% of those who were prescribed medication by a doctor paid for it. In all income quintiles the proportion of people who needed to pay for drugs was higher in Chile than in Costa Rica.

TABLE 5:
Proportion of people pay for drugs in Chile and Costa Rica, 2006

	Chile[a]	Costa Rica[b]
Income quintile	**%**	**%**
I (low)	3.3	1.9
II	4.3	2.5
III	5.2	3.3
IV	6.3	3.9
V (high)	5.8	6.5
Average	5.4	4.7

a. Percentage of people who paid fully or partially for medication prescribed in the past 30 days according to per capita income quintile.
b. Percentage of people who paid for medication prescribed by a doctor in the previous two weeks, according to quintile of per capita income.
Sources: Estimates obtained from analysis of CASEN 2006 database (Chile) and ENSA 2006 database (Costa Rica).

Access

Based on data from 2006, Chile had a higher percentage of people who were denied a medical consultation for lack of money than in Costa Rica (11.7% vs 0.08%, respectively).[2] In Chile that proportion was higher among people from low-income households, while in Costa Rica there were no differences. However, in Chile the proportion was reduced to 4.2% in 2011 and the income differences subsided. In 2007, more people reported facing access barriers to health care in Chile than in Costa Rica in the Latinobarómetro survey (19.2% versus 9.4%). In Chile, three reasons for difficulties accessing care were more frequent than in Costa Rica: distance to hospital (12.3% vs 7.8%), time to obtain an appointment (42.6% vs 35.9%), and cost of seeing a doctor (17.4% vs 9.0%).

With regards to gender equity, in both countries high percentages of women have been attended during childbirth by a health professional, although in Chile the percentage is slightly higher (99.7% vs 95.3% in Costa Rica; OMS 2011). In Costa Rica, more pregnant women were tested for HIV (78.0% vs 46.0% in Chile; OPS 2012a, 2012b) and more women who were in a relationship used contraception (82.2% versus 64.2%; OMS 2011); yet there was lower coverage of antiretroviral treatment for people with HIV (65% in Costa Rica compared to 88.0% in Chile; OPS 2012a, 2012b).

Quality

During the 1990s in Costa Rica most people perceived that quality of health care had increased significantly over the previous years. In 1998, 41.2% of people in Costa Rica answered that quality of health care had increased significantly, while in Chile the proportion was 5.1% (Latinobarómetro 1998). By 2007, 65% of Costa Ricans and 40% of Chileans were satisfied or very satisfied with health care; the proportions for dissatisfaction were 34% and 57%, respectively.

In 2008 and 2012 more people surveyed by LAPOP in Costa Rica were satisfied with the quality of public medical services than in Chile (Vanderbilt University 2008, 2012). Based on another survey, satisfaction with the way public hospitals work was more frequent in Costa Rica than in Chile as well (63% vs 22%; Latinobarómetro 2011).

Interestingly, LAPOP results show that most people in both countries think that government, rather than the private sector, should be responsible for health care (71.1% in Chile and 67.5% in Costa Rica; Vanderbilt University 2012); however, more people surveyed for the Latinobarómetro in Costa Rica say that the private sector should be mostly in charge (15% vs 6% in Chile; Latinobarómetro 2008).

In sum, it appears that the Chilean insurance-based system has underperformed on most accounts. When compared to Costa Rica's publicly financed and operated health system, indicators show that Chile's public-private model has higher administrative costs and leads to more irrational medical procedures in a market characterized by oligopolies and collusion among private providers. In terms of affordability, Chileans incur significant out-of-pocket health payments (including for medication) and are more likely to face catastrophic health expenditures. Both countries have good scores on access to basic care but people in Chile generally face more access barriers, including distance to facilities, wait times and cost. Finally, Costa Ricans continue to be largely satisfied with the quality of their healthcare services, more so than Chileans.

Conclusions

Universal Health Coverage was envisioned by the WHO as a blueprint for government reforms in the financing and delivery of health services, with the aim of increased coverage, reduced inequities in access to quality health services, the end of catastrophic health expenditure, and increased efficiency in the use of resources (WHO 2010). To achieve these goals, different institutional arrangements can be made. One consists of separating the functions of financing and provision of healthcare services by introducing private and public insurance schemes, which in theory should produce competition among health providers and create incentives to increase quality and efficiency. Another option, the UHS model, is based on the notion that there should be one public institution that manages resources and provides services, taking advantage of economies of scale and promoting values of solidarity and equity as the main drivers of health policy. The comparison between the health systems of Chile and Costa Rica aimed to make evident the strengths and weaknesses of each model.

In terms of the UHC goal of increased coverage and access, both Costa Rica and Chile have seen major advances in primary care. Their low infant mortality and high life expectancy are in large part the result of impressive vaccination coverage and a high rate of childbirths attended by health professionals (90%). However, availability of basic services is not the same as having access to comprehensive care to resolve most health problems, which may explain why people in Costa Rica consistently perceive their access to health services to be higher than people in Chile. This difference has been maintained even after 2005, when more stringent regulation of insurance companies was implemented (Plan AUGE) in Chile to guarantee healthcare services to the lowest income households. Although the new plan has increased access to primary care, reducing or even eliminating socio-economic inequities at this level (Frenz et al 2013; Paraje and Vasquez 2012; Vasquez et al 2013), inequities in access to specialized services persist (Paraje and Vasquez 2012; Vasquez et al 2013). In addition, although the lack of access to health services for economic reasons has been reduced substantially in Chile since 2005 (from 11.7% to 4.2%), the figure remains comparatively much lower in Costa Rica (0.8%).

Economic barriers are the main obstacles to increased access in low and middle-income countries, but there are other factors that can affect accessibility such as the administrative procedures and geographical availability of services. In Chile more people report having difficulties accessing health care because of wait lists and distance to hospitals. Both situations could be produced by the limited number of providers that insurance companies contract and the fewer illnesses that are covered by their health plans. In comparison, in a universal system people can use the closest facilities to their homes and potentially have access to all services.

Coverage for health services has increased but quality remains problematic – a common concern across Latin America. Public health services are nevertheless seen in a more positive light by Costa Ricans than Chileans. Public health care in Chile is perceived as low quality in comparison with the private sector (Paraje and Vásquez 2012). This results from underfunding by the state and the fact that public health facilities do not receive direct user contributions from high-income households, which only contribute indirectly to public services through general taxes (Manuel 2002). In contrast, Costa Ricans may perceive quality to be consistent across facilities because everybody receives care from the publicly funded and operated CCSS.

Another goal of UHC is to avoid catastrophic health expenditure, which is related to out-of-pocket payments for hospital care and drugs (WHO 2010). In the last decade, catastrophic expenditure has been higher in Chile than in Costa Rica. Many families in Chile have to pay for services or products that are not covered by their insurance, this even after the AUGE program was rolled out to reduce out-of-pocket expenditure.

As for the last UHC goal concerning sound public spending, when health outcomes are evaluated against expenditure, clearly the Costa Rican health system is more efficient than the Chilean one. It has one of the highest life expectancies in the Latin American region, but spends less than Chile on health care. Part of this difference could be attributed to the inefficiency of the private sector in this country, where the use of unjustified medical procedures is more frequent and administrative costs are higher. Another negative effect of private services is that they tend to focus exclusively on medical care and neglect preventive activities, even if these are more cost-effective in the long run.

One of the premises for the introduction of insurance schemes is that they are associated with higher efficiency and quality if there is strong government stewardship (WHO 2010). According to the notions of "active purchasing" (WHO 2010) and "management competition" (World Bank 1993), the existence of different providers that are competing for resources produces higher levels of quality at lower costs. This argument is frequently used to promote insurance schemes. However, the evidence presented here shows that such assumptions are not always true. The Chilean health system is an example of how segmentation produced by the coexistence of private and public insurance is detrimental to efficiency. On the whole, this health system is more expensive and to a certain degree this is due to the relative influence of the private sector. Collusion among private providers and oligopolies, among other practices, are realities that are ignored in the competition argument.

In addition, the Chilean case shows that governments in the Latin American region (as in middle- and low-income countries in other regions) are not strong enough to ensure ethical practices in the private sector. The fact that private insurance is more expensive in low- and middle-income countries (Nicolle and Mathauer 2010) suggests that governments in the South have little power (or determination) to regulate private companies.

Most differences in performance between the Chilean and Costa Rican health systems can be explained by the general logic of their institutional arrangements. In Costa Rica, health coverage is high and inequity is low; this is partly the result of high levels of solidarity among socio-economic groups and a national policy aimed at guaranteeing health services for all citizens: workers must make contributions to social security, and the poor are covered by a non-contributory plan that is funded by the government with resources that come from general taxation and other sources. In this way, there is a strong transfer of wealth from high- and middle-income individuals to low-income households.

Although some changes have been made to increase coverage and equity in the Chilean health system (notably through the AUGE plan), the negative effects of the coexistence of private and public insurances as a national policy have not been resolved, including inefficiency, adverse selection, higher out-of-pocket expenditures, inequities in specialized care utilization, and lower quality of public services. In this segmented system re-distribution mechanisms are few because high-income households can choose to pay their contribution to the private sector rather than financing the public system (Manuel 2002). As a result, the quality of services is lower in the public sector and access to comprehensive care depends on household income.

In conclusion, while both Costa Rica and Chile have demonstrated major improvements across a wide range of important health indicators since the introduction of their 'universal health coverage' policies, Costa Rica offers a more reliable, accessible, efficient and equitable model than Chile. Costa Rica's health provision is not without its challenges or problems, and this model is not easily reproducible (as it requires strong government commitment to public services), but the empirical evidence comparing UHS with mainstream UHC policy demonstrates widespread and consistent advantages for the UHS model in the promotion of universal health, underscoring the advantages of a strong, single public system rather than a fragmented public-private, insurance-driven model. Debates over the best institutional arrangements to organize universal health care are far from over, but insurance schemes are neither the only nor the best option.

Endnotes

1 Keywords used were: health system, health care, health services, health workers, out-of-pocket expenditure, catastrophic health expenditure, health indicators, health statistics, health data, infectious diseases, chronic diseases, medical services, mortality and morbidity, HIV, national survey, household income, socioeconomic position, coverage, equity, efficiency, quality, America, Latin America, Chile, and Costa Rica.

2 Estimates obtained from analysis of the CASEN 2006 and 2011 databases (Chile) and from analysis of the ENSA 2006 database (Costa Rica).

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