



Comparative Review of Health System Integration in Selected Countries in Latin America

Thomas Bossert
Nathan Blanchet
Suzanne Sheetz
Diana Pinto
Jonathan Cali
Ricardo Pérez Cuevas

**Inter-American
Development Bank**

Social Protection and
Health Division

TECHNICAL NOTE

No. IDB-TN-585

January 2014

Comparative Review of Health System Integration in Selected Countries in Latin America

Thomas Bossert
Nathan Blanchet
Suzanne Sheetz
Diana Pinto
Jonathan Cali
Ricardo Pérez Cuevas



Inter-American Development Bank

2014

Cataloging-in-Publication data provided by the
Inter-American Development Bank
Felipe Herrera Library

Comparative review of health system Integration in selected countries in Latin America / Thomas Bossert,
Nathan Blanchet, Suzanne Sheetz, Diana Pinto, Jonathan Cali, Ricardo Pérez Cuevas.

p. cm. (IDB Technical Note ; 585)

Includes bibliographical references.

1. Medical care—Latin America. I. Bossert, Thomas J. II. Blanchet, Nathan. III. Sheetz, Suzanne. IV.
Pinto, Diana M. V. Cali, Jonathan. VI. Pérez Cuevas, Ricardo. VII. Inter-American Development Bank. Social
Protection and Health
Division. VIII. Series.
IDB-TN-585

<http://www.iadb.org>

The opinions expressed in this publication are those of the authors and do not necessarily reflect the views of the Inter-American Development Bank, its Board of Directors, or the countries they represent.

The unauthorized commercial use of Bank documents is prohibited and may be punishable under the Bank's policies and/or applicable laws.

Copyright © 2014 Inter-American Development Bank. All rights reserved; may be freely reproduced for any non-commercial purpose.

Thomas Bossert, tbossert@hsph.harvard.edu; Diana Pinto, DPinto@IADB.org

Comparative Review of Health System Integration in Selected Countries in Latin America

Thomas Bossert,¹ Nathan Blanchet,² Suzanne Sheetz³

Harvard School of Public Health

Diana Pinto,⁴ Jonathan Cali,⁵ Ricardo Pérez Cuevas⁶

Inter-American Development Bank

January 2014⁷

¹ Senior Lecturer on Global Health Policy, Department of Global Health and Population, Director, International Health Systems Program, Harvard School of Public Health, tbossert@hsph.harvard.edu

² PhD, Department of Global Health and Population, Harvard School of Public Health, nblanche@hsph.harvard.edu

³ MPH, Harvard School of Public Health, ssheetz@mail.harvard.edu

⁴ Health Lead Specialist, SPH Division, IDB, DPinto@IADB.org

⁵ Global Health Corps Fellow, SPH Division, IDB, JCal@IADB.org

⁶ Senior Social Protection and Health Specialist, SPH Division, IDB, RPerez@IADB.org

⁷ Research conducted April 2012-May 2013.

Abstract

This technical note presents a comparative analysis of Latin America's fragmented health systems. It provides a detailed account of health system fragmentation along six dimensions (organizations, risk pooling, eligibility, benefits, premium/contributions, payments) and the effects of historical reforms in Costa Rica, Colombia, Ecuador, Brazil, Mexico, and Chile, as well as examples of successful integration in Spain and Turkey. Additionally, it offers a set of policy options for promoting the integration of health systems and a series of practical steps for implementing health system reforms. It concludes that analyzing the fragmentation of various dimensions of health systems can be useful for developing policy, but further research is needed to determine the effect of fragmentation on health system performance.

JEL Classification: D61; H44; H51; H55; I10; I11; I13; I14; I15; I18; I38; L33; N36; N46; P46

Keywords: Health system fragmentation, health system integration, health system reform, health system performance, Latin American health systems, dimensions of fragmentation

Table of Contents

Introduction	5
Analytical Framework	6
Variation in Dimensions of Fragmentation within and across Countries	14
Historical Reforms and their Effects on Dimensions of Fragmentation	27
Reducing Fragmentation: Lessons from Turkey and Spain	31
Politics of Integrating Fragmented Financing Systems	33
Policy Options for Promoting Integration	34
Conclusions	39
References	41

Abbreviations

ANS	Agência Nacional de Saúde Suplementar, Brazil
AUGE	Acceso Universal de Garantías Explícitas, Chile
CAUSES	Catálogo Universal de Servicios de Salud, Mexico
EBAIS	Equipos Básicos de Atención Integral en Salud, Costa Rica
EBAS	Equipos Básicos de Salud, Ecuador
EPS	Entidades Promotoras de Salud, Colombia
FONASA	Fondo Nacional de Salud, Chile
FOSYGA	Fondo de Solidaridad y Garantía, Colombia
GES	Garantías Explícitas de Salud, Chile
GHIS	General Health Insurance Scheme, Turkey
IDB	Inter-American Development Bank
IESS	Instituto Ecuatoriano de Seguridad Social, Ecuador
IMSS	Instituto Mexicano de Seguro Social, Mexico
INS	Instituto Nacional de Seguros, Costa Rica
ISAPREs	Instituciones de Salud Previsional, Chile
ISSFA	Instituto de Seguridad Social de las Fuerzas Armadas, Ecuador
ISSPOL	Instituto de Seguridad Social de la Policía Nacional, Ecuador
ISSSTE	Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado, Mexico
LAC	Latin America and Caribbean
MOH	Ministry of Health
MS	Ministerio de Salud, Costa Rica
MSP	Ministerio de Salud Pública, Ecuador
PAHO	Pan American Health Organization
PEMEX	Petróleos Mexicanos, Mexico
PSF	Programa Saúde de Família, Brazil
SALUD	Secretaría de Salud, Mexico
SEDENA	Secretaría de la Defensa Nacional, Mexico
SEM	Seguro de Enfermedad y Maternidad, Costa Rica
SEMAR	Secretaría de Marina, Mexico
SESAs	Servicios Estatales de Salud, Mexico
SGK	Turkish Social Security Institution
SGSSS	Sistema General de Seguridad Social en Salud, Colombia
SISBEN	Sistema de Identificación de Potenciales Beneficiarios de Programas Sociales, Colombia
SNS	Servicio Nacional de Salud, Chile
SP	Seguro Popular, Mexico
SSC	Seguro Social Campesino, Ecuador
SSI	Social security institution
SUS	Sistema Único de Saúde, Brazil
TSSE	Transformación Sectorial de Salud en el Ecuador
UF	Unidad de Fomento, Chile
UPA	Unidades Ponderadas Asistenciales, Spain
US	United States
WHO	World Health Organization

Introduction

Currently, most countries in the Latin America and Caribbean (LAC) region are engaged in some type of reform to expand access to health care and often to improve financial protection. Although these reforms vary by country on whether the expansions take place through publicly-financed and publicly provided health care or through mandatory health insurance schemes, the sources for funds, and institutions for administering them, all rely on increasing pooled funding for progress towards universal health coverage. Yet with few exceptions, most health sector financial arrangements in the Latin American region are fragmented, given the coexistence of several schemes in which different socioeconomic groups are covered by different funding pools, each with particular benefits, financing sources, and rules for access and purchasing of services. There is acknowledgement that health financing fragmentation can be a key factor behind the inefficiencies and inequities documented in the region's health systems, and an obstacle towards achieving universal health coverage. Thus, current planned or ongoing health sector reforms need to consider policies to mitigate this problem.

This technical note is based on a study commissioned to Harvard School of Public Health by the Inter-American Development Bank (IDB), which sought to develop a framework for cross-country, comparative, and systematic analysis on the institutional arrangements that characterize the region's fragmented health financing systems, explore the potential effects of fragmentation on health system performance, and identify possible alternatives and pathways for integration. The first section of the note reviews the theoretical and empirical literature on fragmentation and presents an analytical framework based on this review. In the second section the cases of six Latin American countries (Brazil, Chile, Colombia, Costa Rica, Ecuador, and Mexico) are analyzed and compared to each other based on the fragmentation of their health systems along six dimensions. The third section explains major health system reforms carried out in these countries and analyzes the impact that each reform had on fragmentation. The fourth section contains an analysis of two additional cases of countries from outside the region that have carried out successful health system integration (Turkey and Spain) in order to draw relevant lessons for Latin America. The note concludes by laying out a set of policy options for promoting the integration of health systems in Latin America and a series of practical steps to guide policy-makers in achieving this end given their particular policy environments.

Analytical Framework

Health System Components as Control Knobs for Performance

The overriding framework for this analysis is derived from the “control knobs” approach used in *Getting Health Reform Right* (Roberts et al. 2004). This approach analyzes health systems in terms of how changing policies in the areas of financing, payments, organization, regulation and persuasion (“control knobs”) are likely to improve the performance of a health system in the achievement of ultimate and intermediate objectives. The ultimate objectives put forward include improved health status, reduced financial risk, and improved patient and citizen satisfaction, in addition to improved equity across all of these objectives. The intermediate objectives are improved efficiency, quality, and access. They are likely to assist in reaching the ultimate objectives and are more directly impacted by health system policy changes.

Defining and Conceptualizing Fragmentation

Fragmentation is a characteristic of the financing, payment, and organizational control knobs as applied mainly to the ways financing and payment are organized. It may also have some relationship to regulation, especially of the private sector financing institutions or by mandating affiliation to an insurance system; and to persuasion, for instance if governments attempt to increase coverage in voluntary insurance plans by social marketing campaigns.

Fragmentation is a widely-used concept in diverse fields, but its definition, measurement, and effects are rarely straightforward. Though nearly always characterized by divisions of some nature, the diversity of uses of “fragmentation” underlines the importance of a clear conceptual definition of the term and framework for analysis with health systems research and policymaking. A review of how the concept of fragmentation has been used in health systems literature, with special attention to fragmentation of the health financing and payment “control knobs” clarifies the conceptual definition of fragmentation employed in this study.

The issue of fragmentation of medical care was raised as early as the 1960s in the United States (US), prompted by concerns about quality of care and inequality of access for the poor. Fragmentation was characterized as involving separation between public and private sectors and a lack of “coherence” across the system of medical care provision (Miller 1966).

Londoño and Frenk (1997) continued those themes in an influential model for health system reform focused on Latin America. Linking the concept of fragmentation more explicitly to health financing and delivery, they view health systems as “structured relationships” across populations and institutions and discuss problems stemming from divisions across those two dimensions. They offer a four-group categorization of Latin American health systems, as reproduced in Table 1. Considering divisions among population groups and institutionally-based functions (revenue collection, purchasing, etc.) is helpful for conceptualizing fragmentation, but a more detailed framework that captures more dimensions of health financing arrangements is needed.

Table 1. Londoño and Frenk’s Framework for Describing Latin American Health Systems

INTEGRATION OF POPULATIONS	INTEGRATION OF INSTITUTIONAL FUNCTIONS	
	VERTICAL INTEGRATION	SEPARATION
Horizontal Integration	Unified public model (e.g., Cuba, Costa Rica)	Public Contract Model (e.g., Brazil)
Segregation	Segmented Model (Most Latin American Countries)	Atomized private model (e.g., Argentina, Paraguay)

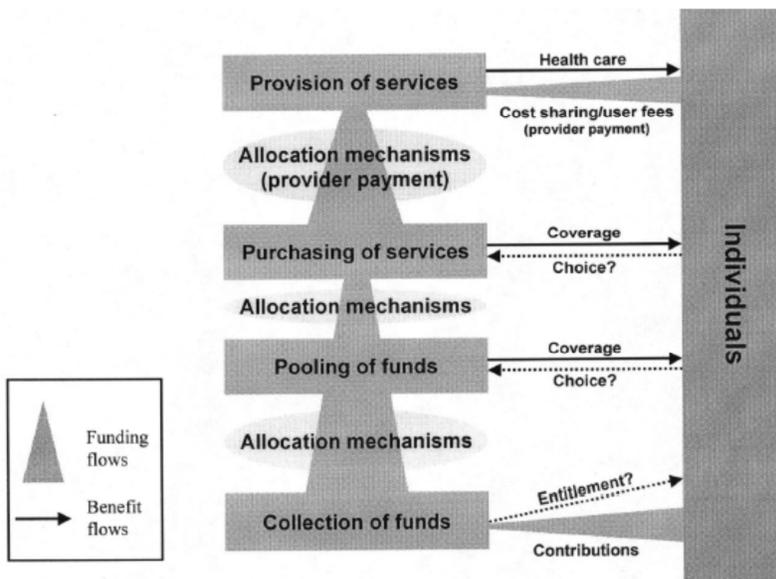
Reproduced from Londoño and Frenk (1997) Figure 3

The Pan American Health Organization (PAHO), the World Bank, and the IDB build on Londoño and Frenk’s model and offer definitions for both segmentation and fragmentation. *Segmentation* refers to the “coexistence of various health subsystems with distinct financing, affiliation, and provision arrangements ‘specialized’ for different segments of the population according to their income level and social position;” and *fragmentation* is the “existence of many non-integrated entities and/or agents within the whole system or in a subsystem that operate without synergy and often competing among each other” (PAHO 2008). Though treated separately, the two concepts are very similar. Segmentation refers to the division without coordination of health subsystems with respect to population groups, while fragmentation is the division without coordination of functions (e.g., revenue collection) or agents (e.g., providers) of

a health system or sub-system. In this technical note, “fragmentation” encompasses both concepts.

Kutzin (2001) developed another influential framework for describing health financing arrangements, and he also sought to disaggregate from Londoño and Frenk’s model the various “components of health financing sources, resource allocation mechanisms, and associated organizational and institutional arrangements.” His model is shown in Figure 1. Each component of health financing in Kutzin’s left-hand column can be analyzed for the extent to which it is fragmented (divided without coordination) in a given country’s system.

Figure 1: Kutzin’s Descriptive Framework for Health Financing Arrangements



Reproduced from Kutzin’s (2001) Figure 1

Similarly, McIntyre et al. (2008) described finance-related divisions in three major categories and eight sub-components (provision appears as a sub-component of purchasing) as follows in Table 2:

Table 2. McIntyre et al.’s Framework for Health Systems

Revenue collection	Source of funds
	Contribution mechanism
	Collecting organization
Risk pooling	Coverage and composition of risk pools
	Allocation mechanism
Purchasing	Benefit package
	Provider payment mechanisms
	Provision

Source: Adapted from McIntyre et al. (2008) Table 1

These authors define fragmentation as “the existence of a large number of separate funding mechanisms (e.g. many small insurance schemes) and a wide range of health-care providers paid from different funding pools.” In a fragmented system, different populations are in different funding pools (the size of which matters) and served by different providers, thus reducing opportunities for income and risk cross-subsidies. To these authors, out-of-pocket payments “represent the most extreme form of fragmentation,” a notion which will be revisited below.

Building on this prior work, health financing fragmentation can be defined as: **the division, without explicit means of coordination, of various dimensions of the health financing and payment control knobs in a given country.** The “dimensions” of health finance and payment include (not exhaustively) the populations, the organizations, and the mechanisms involved in collecting revenue, pooling funds, purchasing services, and allocating benefits.

A “perfectly unified” health financing system would occur where an entire population constitutes a single risk pool covered by the same comprehensive package of health services, funded through a single revenue-collecting mechanism that pays a unitary organization of providers in a uniform way. Perfect fragmentation would be where each individual in a country pays entirely out-of-pocket⁸ to receive individually-variable health services from non-

⁸ Following McIntyre et al.’s (2008) and Baeza et al. (2006)’s intuition: “the limited extent of risk pooling (high out-of-pocket expenditures) also contributes to fragmentation because high out-of-pocket spending means risk pooling at the lowest possible level, the household.”

coordinated, individual providers, with risk-pooling only at the household level. This continuum is similar to the one developed by Londoño and Frenk, but the measurement of multiple dimensions of health financing and payment allow for far more than four gradations along that continuum.

Fragmentation's Effects on Health System Performance

To identify health system performance problems that may emerge from fragmentation, a literature search for theoretical or empirical evidence linking particular dimensions of health financing fragmentation to intermediate and ultimate health system objectives was conducted. Although a formal evaluation of the quality of each study cited was not performed, it is important to note that much of the literature on effects of health financing fragmentation fails to meet a high standard of establishing causality. None of the studies reviewed attempted the kind of rigorous comparison to an appropriate, non-fragmented counterfactual that would likely be required. In addition to rigorous counterfactuals being absent, basic conceptual definitions and clearly stated mechanisms are often lacking.

Several studies theorize or report on health financing fragmentation's effects on health system intermediate objectives of equity, efficiency and quality, without specifying which particular dimensions of fragmentation are responsible. PAHO (2008) claims that fragmentation led to inequity as well as inefficiency by creating "persistent imbalances" in human resources distribution across public and private sub-systems and across richer and poorer regions (PAHO 2008). Cutler, Bigelow, and McFarland (1992) found the Canadian mental health system to be more efficient than comparable areas in the more fragmented US system. Other literature links medical errors in the US to the fragmentation of health information (Bourgeois, Olson, and Mandl 2010).

Other works analyze the effects of specific dimensions of fragmentation. The most dominant of these dimensions studied in health systems research is when multiple **organizations** or agencies are responsible for health coverage. Associations to efficiency, equity, and quality continue to predominate. The PAHO (2008) study, for example, specifies that "various agents operating without coordination" hinder efforts to standardize quality, cost, application of interventions, and referral mechanisms.

Kutzin (2001) outlined how Chile’s “opt out” separation of private insurance funds—*Instituciones de Salud Previsional*⁹ (ISAPREs)—from the national insurance fund—*Fondo Nacional de Salud*¹⁰ (FONASA)—“eroded solidarity” and led to inequitable resource allocation where much more was spent on those insured in the private sector. His later work highlights examples of the negative effects of fragmentation in Germany, the Netherlands, and the former Soviet Union (Kutzin 2008).

In terms of numbers of health financing organizations, the US may be one of the most fragmented health systems among high-income countries, and a volume edited by Elhauge (2010) is replete with examples of deleterious effects of that fragmentation. Regarding quality, there is compelling evidence of low levels of “long-term health investments,” as no private insurer has incentives to fund preventive measures that would most likely benefit a different insurer (usually Medicare). On efficiency, the large number of insurers in the US is largely responsible for administrative costs reaching an estimated 31 percent of total health expenditures. A major reason for such costs is elucidated in Blackburn and coauthors’ (2005) study of Chile’s use of private insurers: that major efforts and resources are deviated from care provision to the more lucrative work of discriminating on the basis of risk (i.e., cream skinning). McIntyre et al.’s (2008) findings across three African countries are consistent with these conclusions.—In South Africa, for example, the large number of separate medical schemes could not negotiate effectively for lower prices from powerful collectives of medical providers, leading to cost escalation.

The most frequent emphasis in the literature is on fragmentation of financial organizations or agencies. These are often considered synonymous with **risk-pools**, but this technical note differentiates the two concepts. While risk pooling often mirrors the number of organizations, financial risk may also be pooled between organizations through cross-subsidization thereby minimizing the effects of fragmentation. Some authors raise more specific dimensions that could vary both across and within financing organizations. Examples of such dimensions include implicit or explicit **eligibility** categories (e.g., FONASA high-income eligibility in Chile (Kutzin 2001), variable **benefit packages** (Londoño and Frenk 1997), different **premium levels** (Hyman 2009), and—in places where the private sector plays a major

⁹ Health Insurance Institutions.

¹⁰ National Health Fund.

role in health financing—the extent of private health insurance **market competition or concentration**¹¹ (Scanlon et al. 2008; Dafny, Duggan, and Ramanarayanan 2009; Millett, Chattopadhyay, and Bindman 2010). Similar to the effects of fragmentation across organizations, the division without coordination across these dimensions can increase (unproductive) administrative costs, misalign incentives away from the equitable production of health, threaten continuity and quality of care by fragmenting information and delivery, and hinder stewardship functions. In addition to these five dimensions, a sixth adapted from McIntyre et al. (2008)—**fragmentation of payers and payment mechanisms**—may be influential on objectives and relevant in Latin America.

On the other hand, there are theoretical reasons why fragmentation could also have positive impacts on the health system. While publicly integrated systems have lower administrative costs and the ability to increase equity, there is little competition in the market. Pauly (1988) argues that competition within the health insurance market provides for cost-containment, efficient pricing, meaningful data collection on population risks, and consumer-focused health care services. Further literature contends that competition introduces innovation and diversified services into the health system, and responds most efficiently to patient interests (Enthoven 1978). Competition, according to Enthoven and Tollen (2005), should nevertheless be contained to the financing organizations while integration in the delivery system should remain to encourage the provision of high quality health care services.

Choice of Dimensions for Fragmentation Framework

After investigating theoretical or empirical evidence linking particular dimensions of health financing fragmentation to intermediate and ultimate health system objectives, a manageable set of six dimensions of health financing fragmentation was chosen for country analysis: **organizations, risk pooling, eligibility, benefits, premiums, and payments.**

¹¹ Private insurance market concentration was not included as a dimension due to very small purely-private health insurance markets in most of the cases studied here.

Table 3. Six Dimensions of Fragmentation and Definitions

Dimension	Definitions
Organizations	Number of different organizations offering financing coverage or insurance to a significant portion of the population (at least 5%). More organizations = more fragmentation.
Risk Pooling	Presence of mechanisms that pool or share health financing across population sub-groups and/or across financing organizations (e.g., payroll tax revenue used for workers' insurance and to help fund coverage for the informal sector). Smaller risk pools and decreased sharing of financing across organizations = more fragmentation.
Eligibility	Number of different eligibility categories for beneficiaries (if different from number of financing organizations). More categories = more fragmentation.
Benefits	Number of different benefits packages offered by these organizations (overall and average by type of organization). More benefits packages = more fragmentation.
Premiums	Number of different contributions or premium levels offered by these organizations (overall and average by type of organization). More premium levels = more fragmentation.
Payments	Number of different payers and payment mechanisms for major provider types. More payers and more mechanisms = more fragmented.

Source: Authors

Case Selection and Data Sources

The six Latin American countries were identified along a continuum from highly fragmented financing to highly integrated systems in order to explore associations between fragmentation and health system outcomes. Special attention was given to the diversity of economic, political, social, and historical environments in each country. World Bank and World Health Organization (WHO) databases, literature reviews, personal interview records, data from national governments and the private sector, and IDB documents were used to create comprehensive country profiles

and classify countries along the fragmentation continuum. The following sections are based on these detailed case studies, which are published in an accompanying IDB report.¹²

Analyzing and Comparing the Cases

The fragmentation framework was applied to code each country relative to each other in each of the dimensions as low, low-medium, medium, medium-high, or high. Costa Rica was chosen as the reference country for a low level of fragmentation and other countries were rated based on the extent to which they differed. For international context, the UK's National Health Service represents equal or lower fragmentation than the Costa Rica benchmark and the US represents high fragmentation on every dimension. In addition to the six Latin American countries, the cases of Spain and Turkey were analyzed because they have successfully reduced the fragmentation of their health systems and may offer valuable lessons for Latin American countries that wish to do likewise. It is important to note that fragmentation classifications are based on the authors' interpretation of available evidence at the time the study was conducted and are open to debate, especially as new health reforms are implemented in the selected countries.

Variation in Dimensions of Fragmentation within and across Countries

There is substantial variation in fragmentation across the countries: not a single dimension is equal across all countries, and only Mexico is coded exactly equal across all six dimensions (medium). Low fragmentation is more frequently coded (9 country-dimension codings in Table 4) than high fragmentation (2 codings). Some form of medium is the most dominant coding type (24 codings).

The variation of degrees of fragmentation among the different dimensions makes it difficult to present a clear judgment about overall levels for a country. While Costa Rica and, to a lesser extent, Chile can be consistently rated as having low levels of fragmentation and Colombia has the only dimensions classified as highly fragmented (organization and payments), Brazil, Mexico and Ecuador are mostly in the medium range. Colombia is the best example of the additional information produced by identifying different dimensions of fragmentation, as the

¹² This report can be found at: <http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=38569551>.

country has both high fragmentation in terms of number of financing organizations (insurers), but relatively low fragmentation of benefits and eligibility categories. The following sections discuss each of the dimensions in terms of country variation.

Organizational Fragmentation

Costa Rica is the least fragmented within the organization indicator. The *Caja Costarricense de Seguro Social*¹³ (*Caja*) insures over 93% of the population and there are less than five private health insurers in the country. While private insurance represents 7% of the total private expenditures in the country, the only insurer that holds 5% market share is provided by a government entity, the *Instituto Nacional de Seguros*¹⁴ (INS).

Ecuador and Chile have low-medium levels of organizational fragmentation. There are five major organizations in Ecuador, which does not include the small private sector that covers 3-8% of the population. The *Ministerio de Salud Pública*¹⁵ (MSP) in Ecuador covers an estimated 51% of the population despite universal eligibility, and four social security institutions (SSIs), including the *Instituto Ecuatoriano de Seguridad Social*¹⁶ (IESS), *Instituto de Seguridad Social de las Fuerzas Armadas*¹⁷ (ISSFA), *Instituto de Seguridad Social de la Policía Nacional*¹⁸ (ISSPOL), and *Seguro Social Campesino*¹⁹ (SSC) cover about 25% of the population. The Chilean system boasts 14 total entities (including FONASA and the private ISAPREs). The Chilean private sector is highly consolidated to three main insurers that hold over 50% market share within the 16% of the population that enrolls in private insurance plans.

Mexico is in the medium range with several national-level SSIs (and several additional smaller ones)²⁰ plus one public organization, Seguro Popular, providing health coverage to the population not affiliated with a SSI. Obtaining social insurance coverage figures is problematic given that there are no formal linkages between the affiliation information systems of the public

¹³ The Costa Rican Social Insurance Fund.

¹⁴ National Insurance Institute.

¹⁵ Ministry of Public Health.

¹⁶ Ecuadorian Social Insurance Institute.

¹⁷ Armed Forces Social Insurance Institute.

¹⁸ National Police Social Insurance Institute.

¹⁹ Rural Social Insurance.

²⁰ Mexican social security institutions include *Instituto Mexicano de Seguro Social* (IMSS), *Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado* (ISSSTE), *Petróleos Mexicanos* (PEMEX), *Secretaría de la Defensa Nacional* (SEDENA), and *Secretaría de Marina* (SEMAR)

sector (including *Secretaría de Salud*²¹ (SALUD) and the SSIs), meaning that it is hard to identify whether a person is affiliated with more than one institution or if there is migration from one institution to another. With this caveat in mind, the available information indicates that *Seguro Popular*²² (SP) covers around 45.3% of the population and five major SSIs cover about 60.3% of the population. Overlap of the affiliation figures is likely, explaining why there are more people affiliated (127.7 million) than people living in the country (117.4 million) (INEGI 2012; Presidencia de la República, México, 2013). Over ten private insurers collectively account for about 6.7% of the population (CNSF, 2011). Accounting for the fact that private insurance may supplement another form of coverage, about 8% of Mexicans are left without health coverage²³ (Gutiérrez et al. 2012). Additionally, the decentralization that began in 1986 has given significant powers to the states, and the SP program boosted this power; therefore, the public sector could be viewed as having additional fragmentation.

The highest organizational fragmentation exists in Colombia and Brazil based on the overall count of organizations regardless of market size. The majority of the Colombian population relies on the large publicly regulated system—*Sistema General de Seguridad Social en Salud*²⁴ (SGSSS)—but the system comprises 72 *Entidades Promotoras de Salud*²⁵ (EPS) insurers that are a mix of non-profit and for-profit private insurers.²⁶ Although Colombia's system has many different public and private insurers (high organization fragmentation), they are all forced by regulation to provide the same basic benefits packages at the same premium, which provides greater uniformity across the other dimensions than the other systems. Brazil is medium to highly-fragmented in terms of the number of organizations. The public *Sistema Único de Saúde*²⁷ (SUS) is mandated to cover the entire population, but about 1,600 private insurers provide supplementary insurance or cover sectors of the population that choose not to use SUS services, which represents about a quarter of the population. Brazil was coded slightly less

²¹ Health Secretary.

²² Popular Health Insurance.

²³ This information is derived from administrative data, although in the 2012 National Health and Nutrition Survey, 21% of Mexicans self-reported to not have health coverage.

²⁴ General System of Social Security in Health.

²⁵ Health promoting entities.

²⁶ <http://www.supersalud.gov.co/supersalud/LinkClick.aspx?fileticket=cYt7PX8p6gg%3d&tabid=825&mid=2394>.

²⁷ Unified Health System.

fragmented than Colombia due to the vast majority of Brazilians covered by SUS and the fact that many private insurers cover only very small populations.

Decentralization of public systems does not increase fragmentation when the provision of services is decentralized but funding is mainly from a single source or matched by local sources at a relatively similar level. Mexico is not an exception, given that funding of healthcare for the public sector comes from different sources and the allocation to each state varies significantly. In other cases, like Chile, Colombia and Brazil, the public systems were decentralized but the coverage and funding did not vary enough to consider the decentralized units as significantly fragmented.

Risk Pooling

Financial risk-pooling is a mechanism that can reduce fragmentation by shielding financing organizations from funding shortages and catastrophic expenditures through shared financing streams. The larger a risk pool, the less fragmented a system. The size of the risk pool usually runs parallel to the number of financing organizations that exist, however it is a distinct dimension that merits separate analysis.

Costa Rica is the least fragmented in the risk-pooling dimension, with 93% of the population covered by the *Caja*, which collects and controls all of the funds directly. Employer and employee contributions represent the primary funding source for most citizens, and also cross-subsidize the state-insured populations.

Risk pooling within Brazil is more fragmented than Costa Rica due to the larger private sectors, but still on the lower range of the spectrum due to the size of the SUS risk pool and its role as the final underwriter of risk. The SUS in Brazil acts as the primary risk pool but insurers in the large private sector each have their own separate risk pools. More significantly, the private sector provides the bulk of hospital care in the country (La Forgia and Couttolenc 2008).

A large, centrally and publicly-regulated system also exists in the case of Colombia. The risk-pooling dimension is debatably characterized as low to medium despite the large number (72) of different insurers—EPS—that do, in some sense, constitute separate risk pools. While the EPS pool funds to cover health services only for their members, the funds are funneled through

the national *Fondo de Solidaridad y Garantía*²⁸ (FOSYGA) and returned in risk-adjusted capitated payments—meaning that lower-risk Colombians in one EPS are helping subsidize higher-risk Colombians in another EPS. Also, since EPS are prohibited from denying coverage, patients in a bankrupted EPS should in principle be able to switch to coverage through another EPS thanks to the presence of the national SGSSS system, a form of indirect risk-pooling. More explicitly, different percentages of the contributory regime funds have been used to cross-subsidize the subsidized regime, thus enhancing risk-pooling nationally.

Ecuador has low-medium fragmentation. The MSP receives its funding from general tax revenues and also contributes proportionally to the four major employer-based social security regimes. The financial risk held by the MSP covers approximately half of the population and serves as a safety net while the social security institutes pool risk within their populations and do not cross-subsidize.

Chile has low-medium fragmentation. The ISAPREs have a cross-subsidization scheme whereby the *Superintendencia de Salud*²⁹ transfers risk-adjusted funds across the private sector, although in practice this is rare. Although the private sector represents a significant share of the population, much like in Brazil, the ISAPREs are the final underwriters. The ISAPREs are mostly separated from the FONASA risk pool, and therefore Chile has slightly higher fragmentation than in Brazil.

Mexico has a medium level of risk pooling fragmentation for various reasons including the number of SSI pools, the larger private sector, and the lack of cross-subsidization. The major risk pools in Mexico are the public SALUD and *Seguro Popular/Oportunidades*³⁰ regimes, and the social insurance institutes such as the *Instituto Mexicano del Seguro Social*³¹ (IMSS).

Eligibility

More eligibility criteria often signals greater fragmentation. While a larger number of total eligibility criteria could indicate greater access if it covers a diverse population, eligibility that is segmented by different sectors of the population reduces equity. Eligibility can also determine an

²⁸ Solidarity and Guarantee Fund.

²⁹ Health Superintendent, a government agency that oversees FONASA and the ISAPREs - <http://www.supersalud.gob.cl/portal/w3-propertyvalue-3332.html>.

³⁰ Opportunities- a national conditional cash transfer program.

³¹ Mexican Social Security Institute.

individual's premium and co-payment levels, with implications for financial risk, equity, and administrative/managerial costs.

In all countries there is a difference between the eligibility criteria for the public sector financing and the private sector. In Costa Rica where the public sector covers 93% percent of the population and allows all citizens access to essentially the same benefits package, the eligibility fragmentation is low, even though there are a variety of eligibility offerings based on age and health risks. Historically, the *Caja* began by insuring wage-earning workers, and has since expanded to the entire population. Officially, the *Caja* divides citizens into categories based on income and employment status, such as: wage-earning workers, pensioners, poor and disabled, and dependents, but the Illness and Maternity benefits package is effectively the same. Furthermore, every citizen is eligible for the decentralized primary care system *Equipos Básicos de Atención Integral en Salud*³² (EBAIS) that is based on geographic location.

Ecuador has medium eligibility fragmentation. The Ecuadorian MSP explicitly covers the entire population, although coverage estimates indicate that the effective access is limited to 51% of the population. The remainder of the population is either uninsured, or eligible for generally better quality social insurance benefits³³ through their employment status.

Mexico provides insurance coverage based on employment status in the formal sector through the SSIs. The only requirement to enroll in SP is to not have an affiliation with any SSI. This creates considerable fragmentation, which is widened as a consequence of differences in the benefits packages between the SSIs and SP. In the SSIs, there is no explicit package of services. Affiliates receive health care according to the capability of the institution. In contrast, SP has an explicit package of benefits for primary and secondary care, called *Catálogo Universal de Servicios de Salud*³⁴ (CAUSES) and for tertiary care provides the *Fondo de Protección contra Gastos Catastróficos*.³⁵

Income-based eligibility is used as a method to determine health coverage levels in Chile and in Colombia's subsidized regime. Eligibility for health benefits in Chile falls into the low fragmentation category. Despite the significant portion of the population covered by private

³² Basic Comprehensive Health Care Teams.

³³ For example, *Instituto Ecuatoriano de Seguridad Social* (IESS)- Ecuadorian Institute of Social Insurance

³⁴ Universal Catalog of Health Services

³⁵ Fund for Protection Against Catastrophic Expenditures

insurance, benefits packages across private and public plans are mandated by law to include specific treatments within the *Acceso Universal de Garantías Explícitas*³⁶ (AUGE) plan. Health treatments beyond the AUGE package, however, can vary considerably in private plans. The fragmentation in eligibility is higher relative to Costa Rica because the public sector eligibility in Chile is based on income levels to some degree and individuals are ranked into four categories: FONASA A, B, C, or D. Colombia has a low to medium coding for eligibility and uses a means test³⁷ to categorize individuals and their families into one of six income levels for both the subsidized and contributory regimens. Prior to 2012, income categories determined eligibility for a certain benefits package in the SR, but post-reform the benefits packages will be increasingly unified.

While Brazil's public insurance and its primary care *Programa Saúde de Família*³⁸ (PSF) are available to all citizens, those who choose private insurance are subject to a wide variety of eligibility limitations. Brazil has a low to medium range of eligibility because of the relatively larger private insurance population.

Benefits

The next dimension of fragmentation is the sets of benefits offered across and within financing organizations, with more sets of benefit packages creating greater fragmentation. When fragmentation of benefits occurs along socioeconomic lines, such as higher-income formal sector workers versus lower-income informal sector workers, it has clear implications for equity. Benefits fragmentation may also affect efficiency, through greater administrative expenses, and access and quality through disruption of access to particular services due to changes in health insurance status.

Costa Rica has the least fragmentation of benefits. The *Caja* administers three distinct benefit regimens, but the illness and maternity benefits are uniform for all. Even the uninsured cannot be denied health services. There is potential for fragmentation of benefits to increase in Costa Rica if the extent of private health insurance coverage continues to grow. While currently

³⁶ *Acceso Universal de Garantías Explícitas* (AUGE)- Universal Access of Explicit Guarantees, now known as Garantías Explícitas de Salud (GES)- Explicit Health Guarantees

³⁷ The Sistema de Identificación de Potenciales Beneficiarios de Programas Sociales (SISBEN)- Identification System for Potential Beneficiaries of Social Programs

³⁸ Family Health Program

covering less than 7% of the population, there were 79 accident and illness insurance policies offered by eight companies as of 2012 (SEGESE 2012).

Colombia's SGSSS covers approximately 91% of the population and also has relatively low fragmentation of benefits. Despite offering coverage through 72 public and private health insurers, benefits have been uniform within just two regimes under the SGSSS—the contributive and subsidized regime. The difference between the two packages has been large since the creation of the system in 1993, with the premium value of the more limited subsidized regime being just 58% of the contributive regime's value (\$146 vs. \$252, respectively). However, as of July 2012 the two regimes have officially been unified, and if implemented successfully may substantially decrease fragmentation in Colombia to a level similar to Costa Rica. Also like Costa Rica, some fragmentation of benefits is present due to differences in private, supplementary health insurance coverage that approximately 5% of the Colombian population buys.

Brazil and Chile have medium levels of benefits fragmentation due mostly to larger private insurance markets, though fragmentation is still lower than, for example, in the US due to very large public sector benefits packages. As mentioned before, in Brazil the SUS provides a standard set of primary, secondary, tertiary, and population-based health services through a mix of private and public providers, covering about 76% of the population. But there is also a sizable and growing private health insurance market covering nearly 24% through 1,608 private health (and dental) insurers who offer employer-based and individual plans. In Chile, the public sector has offered the AUGE/GES benefits package for all of its beneficiaries since 2005, covering 76% of the population with primary and preventive services, acute care, emergency care, and care for 80 targeted health conditions.³⁹ There is some division across four income groups under GES in terms of co-payments and access: co-payments are waived for those in two lower income groups, and all those except the lower income groups have the choice of accessing private providers with higher co-payments required. About 16% of Chileans receive health benefits through private health insurers, ISAPREs, where benefits may vary by plan. However, there is some standardization even in this sector because Chilean law mandates that the ISAPREs offer the GES. On top of the GES package, individuals can purchase complementary health plans and

³⁹ Began with 56 conditions in 2006, subsequently rose to 69, and most recently increased to 80 conditions as of July 2013, [http://www.bcn.cl/leyfacil/recurso/plan-ges-\(ex-auge\)](http://www.bcn.cl/leyfacil/recurso/plan-ges-(ex-auge)).

additional ISAPRE benefits. The *Superintendencia de Salud* estimated that there were over 12,000 different plans offered by the 13 ISAPREs in 2011 (Strooy 2011).

Ecuador also qualifies as having moderate fragmentation of benefits packages since it has a few large divisions between SSIs (but little fragmentation within them) and the MSP's services, plus a small private health insurance market.

Mexico is similar to Ecuador, with four major divisions of benefits packages, cutting across the large SSIs, SP, public services available to all, and the IMSS *Oportunidades* program. The actual effective package of benefits in Mexico qualifies for a medium to high fragmentation because decentralization results in substantial variation in the capacities of the different states to deliver SP-based and public benefits.

Premiums/Contribution Levels

Fragmentation of premiums or contribution levels refers to variations across and within health financing organizations in the financial contributions required by individuals and employers for health coverage. Basic contributions required to be eligible for coverage are the primary focus, but variation in co-payment levels by individuals is also considered as a source of fragmentation in this dimension. Fragmentation in contribution levels has perhaps the most direct link to equity. High fragmentation may very well enhance equity by requiring lower or no contributions from the poor and higher contributions from the wealthy.

Costa Rica is the least fragmented country in terms of contributions, with low to medium fragmentation. In Costa Rica, the dominant *Caja* has a singular system of payroll tax contribution from employers and employees in the formal sector, and there are no contributions required by those in the subsidized regime. Additional contribution levels come from out-of-pocket premiums paid in the private health insurance market, but this only covers a small portion of the population.

Brazil has a low to medium level of premium fragmentation. The SUS is supported by general taxation and therefore requires no direct contributions for health by employers and individuals. Funding is instead provided by federal, state, and municipal treasuries from a pool of total tax revenue (Montekio, Medina, and Aquino 2011). Brazil is still classified as low to medium due to its very large number of private health insurers that charge different premium values.

Ecuador and Colombia, despite having quite different health financing systems, also have low to medium fragmentation in premiums and contribution levels. Health coverage in Ecuador's formal labor market depends primarily on payroll contributions that are split between employers, employees, and the state, but unlike the singular *Caja*, these contributions vary somewhat under several SSIs (though not as many as Mexico) and the IESS's *Seguro Social Campesino*⁴⁰ program for farmers. MSP services are funded by numerous taxes, and there is a small, premium-based private health insurance market.

An assessment of Colombia's level of premium fragmentation depends on how the premium structure of the separate regimes is analyzed. Employers and employees in the contributory regime uniformly contribute 12.5% of employee income to FOSYGA through a payroll tax. Subsidized regime beneficiaries pay nothing. The employer and employee portions are actually collected by the 72 EPS health insurers which charge varying co-payments by income level, creating a low-medium level of fragmentation.

Chile and Mexico have medium levels of fragmentation in contribution levels. In Chile, all formal sector workers except the poorest (Category A) must pay 7% payroll tax to fund coverage by FONASA, which is also supported by general tax revenues. Workers are exempted if they are self-employed or retired with a pension (Bitrán and Urcullo 2008). Beneficiaries can voluntarily use their 7% contribution to buy coverage from one of the 13 ISAPRES, on top of additional funding up to a price ceiling of 60 UF⁴¹ per month (Bitrán and Urcullo 2008). Premiums for the complementary health plan are calculated using a base price that is risk-adjusted for individual risk factors (Strooy 2011). Premiums for coverage on top of the complementary package differ depending on the benefits covered in the individual plan.

Mexico's structure of contributions, largely based in the familiar tripartite division of payroll contributions from employers, employees, and the state in the formal sector, is somewhat similar to that found in Ecuador, but there are a larger number of SSIs in Mexico with variable policies on contributions and co-payments. In practice, SP is almost entirely financed by general taxation from the federal and state governments, which reduces fragmentation, but contributions by members of the different SSIs vary widely. Considering only contributions for health care,

⁴⁰ Farmer's Social Insurance.

⁴¹ Chilean *Unidad de Fomento*, a unit of account.

70% of the contributions for IMSS come from the employee and employer and only 30% from the state, whereas for the other SSIs 100% of the contributions comes from the state.

Payments

Fragmentation in health financing can also occur through the various payers and payment mechanisms used to pay health providers, both across and within organizations. Greater fragmentation occurs with more payers and also with more payment mechanisms used. Different payment mechanisms create particular incentives among providers, which in turn have implications for the intermediate health system goals of efficiency, quality, and access. In addition to payment type, the *fragmentation* of payment types may also affect those same goals.

Costa Rica has the lowest level of fragmentation in the payment dimension, but fragmentation is still present. Within the *Caja*, primary care providers are paid based on historically-based per capita rates, and allocations for secondary and tertiary level care are based on hospital production units—performance measures agreed upon in annual management commitments⁴² between the *Caja* and regional health providers (EBAIS, clinics, and hospitals) (PAHO 2002). The *Caja* also contracts with private providers and reimburses the costs of drug and laboratory costs for beneficiaries who are referred from public facilities (and who pay consultation fees out-of-pocket). For the small private health insurance market, the INS dominates and pays providers through both fee-for-service and capitated rates per patient in a catchment area to health care cooperatives. In sum, despite the *Caja*-dominated health system in Costa Rica, one still finds a mix of payers (public and private) and payment mechanisms (historical budgets, fee-for-service, and capitation, in addition to out-of-pocket payments) at this “low” level of payment fragmentation.

Chile also has a low level of payment fragmentation. Within FONASA, provider payment varies by type of service. Public hospitals are paid through a combination of historical budget, medical diagnosis, and procedural details. Primary care centers are paid a fixed rate per capita and a budgeted amount. Ambulatory hospitals that provide GES services are paid through a pay-per-visit rate. Together, this variation in payment methods under FONASA is similar to that found in Costa Rica’s *Caja*. Chile’s ISAPRES cover a larger proportion of the population than in

⁴² *Compromisos de Gestión*.

Costa Rica (16%), though with just 13 operating in 2011 they are not nearly as numerous as private insurers in Brazil, and the market is heavily concentrated within three ISAPRES that cover over two-thirds of the population. In contrast with the public system, the ISAPRES pay private health care providers through fee-for-service (Maturana and Barrera 2011), and unlike elsewhere in Latin America, are prohibited from vertically integrating with providers (Gottret, Schieber, and Waters 2008). However, by creating holding companies, the largest insurers are linked to co-owned providers in ways that are similar to vertical integration.

Ecuador is in the low to medium range, and is fairly similar to Mexico, which is in the medium range of payment fragmentation. Both have several major payers in the public sector, including the SSIs (of which there are a larger number in Mexico leading to a slightly higher fragmentation categorization), the ministries of health, and special programs such as *SP* and *IMSS/Oportunidades* in Mexico. Both countries also have additional payers in their relatively small (in terms of population covered) private health insurance markets that add to fragmentation. Within payers in the public sector, there is a mix of historically-based global budgets, salaries (based on both collective agreements and individual contracts), and small scale experimentation with contracting to private providers and performance-based payments (Nigenda and González 2009), all in addition to a high level of out-of-pocket payments in both countries (roughly 50% of total health expenditures).

Brazil has a medium level of fragmentation on the payment dimension. The SUS uses a mix of payment methods at different levels of service, including historical budgeting, fixed financing transfers to municipalities based on per-capita rates, variable transfers to municipalities based on performance metrics, and fee schedules for private hospitals (524 procedure groups based on the *Autorização de Internação Hospitalar*⁴³) and private ambulatory clinics (based on the *Sistema de Informação Ambulatorial*⁴⁴). While Chile and other countries also have a mix of methods in their public sectors, Brazil is differentiated somewhat in payment fragmentation by having a larger portion of the population covered by private insurance and a much larger number of private insurers. These insurers include Health Maintenance Organizations that contract with private health providers as well as vertically integrated health providers such as Amil, the largest such provider.

⁴³ Authorization for Hospitalization.

⁴⁴ Ambulatory Care Information System.

Finally, Colombia has a high level of payment fragmentation. While the country has higher coverage levels in its public SGSSS system, the payment function in that system is divided among the EPS health insurers. Those insurers form their own networks of health providers and independently determine payment methods. Providers are generally paid on a capitated basis for preventive and primary care services and on a fee-for-service basis for specialists and hospital care. In addition to the EPS' payments for care, the *Plan Básico de Salud*⁴⁵ of the SGSSS is paid for through contracts between the country's 32 departments and over 1,000 municipalities, and public and private providers. The purely private (non-SGSSS) sector is small in Colombia, but adds some fragmentation of the payment dimension.

While Colombia has recently reduced fragmentation of its benefits package (see above), this change has not affected the continuing fragmentation of payment types. The following table presents the summary findings of the case studies.

Table 4. Comparative Fragmentation Levels in Six Selected Latin American Countries

Dimension/ Indicator	Brazil	Colombia	Mexico	Ecuador	Chile	Costa Rica
Organizations	MEDIUM-HIGH	HIGH	MEDIUM	LOW-MEDIUM	LOW-MEDIUM	LOW
Risk Pooling	LOW	LOW-MEDIUM	MEDIUM	LOW-MEDIUM	LOW-MEDIUM	LOW
Eligibility	LOW-MEDIUM	LOW-MEDIUM	MEDIUM	MEDIUM	LOW	LOW
Benefits	MEDIUM	LOW	MEDIUM	MEDIUM	MEDIUM	LOW
Premiums/ Contributions	LOW-MEDIUM	LOW-MEDIUM	MEDIUM	LOW-MEDIUM	MEDIUM	LOW-MEDIUM
Payments	MEDIUM	HIGH	MEDIUM	LOW-MEDIUM	LOW	LOW

Source: Authors

⁴⁵ Basic Health Plan.

Historical Reforms and their Effects on Dimensions of Fragmentation

In each country there were periods of reform in the health system that decreased fragmentation, increased fragmentation, or even caused a mix of the two across different dimensions of fragmentation. Considering these reforms and the specific effects they had on fragmentation helps provide a future basis for evaluating fragmentation's effects on health system performance. The following narrative describes some of the major historical reforms for each country and how they may have impacted the fragmentation of health care financing. Table five provides a summary.

Clear Trend toward Decreasing Fragmentation: Costa Rica

Costa Rica is the only country among these cases whose reforms over the past four decades have nearly uniformly decreased fragmentation. Most significantly, the country had a significant shift toward more integration in the 1970's when the *Caja* took over funding and provision of services from the *Ministerio de Salud*⁴⁶ (MS), and when coverage by the *Caja* was expanded to dependents, agricultural workers, independent workers, and indigent populations in 1961, 1975, 1978, and 1984, respectively (Cercone 2010). In the 1990s, the creation of EBAIS teams and their standardized package of services reduced fragmentation of benefits. The shift toward greater managerial autonomy for providers through decentralization of the functions of budgeting, contracting, and human resources is the only element of recent reforms that may have increased one dimension of fragmentation, payment.

Partial Decrease in Fragmentation: Mexico and Ecuador

Mexico and Ecuador have had partial decreases in fragmentation, with some caveats. Mexico has always been moderately fragmented and had not experienced much change despite efforts by high-level policymakers to unite SALUD and the SSIs, especially IMSS and ISSSTE. One major reform was the passage of the 2003 *Ley General de Salud*⁴⁷ that created SP. SP was a new organization which technically increased the organizational dimension of fragmentation if considered separate from SALUD, which oversees SP. However, by bringing most of the 50

⁴⁶ Ministry of Health.

⁴⁷ General Health Law.

million previously uninsured under SP coverage—without any expansion of private health insurance—the reform decreased fragmentation of risk pooling (especially for tertiary care which is financed from a national fund), benefits, eligibility, and premiums (since they are mostly waived to enroll in SP). The effect on payment fragmentation appears minimal. Given the prominent role states have in implementing SP in Mexico, however, accounting for decentralization could conclude that SP increased fragmentation by effectively creating 32 new financing organizations (31 states and 1 federal district).

Ecuador similarly has had moderately fragmented health financing for most of the past several decades. In 2008, however, the country established a constitutional right to health and simultaneously embarked on an ambitious set of reforms called the *Transformación Sectorial de Salud en el Ecuador*⁴⁸ (TSSE). The overall objective of the TSSE is to ultimately guarantee universal access to health services that are free at the point of service, primarily through a comprehensive public health network.⁴⁹ This large set of reforms should increase funding for health (and has begun to do so) and expand and equalize benefits available to individuals covered by MSP, as compared to those covered by IESS. However, the extent to which it will impact other dimensions of fragmentation is not yet clear. There is potential to reduce fragmentation of nearly every dimension except number of organizations (since there is no plan to eliminate the SSIs or to expand private health insurers), mostly through harmonization of elements such as benefits, tariffs, information systems, and even access to certain facilities between the MSP and the IESS.

Mixed Effects on Fragmentation: Chile, Brazil, and Colombia

Chile, Brazil, and Colombia all have had reforms or periods of change that have had decidedly mixed effects on fragmentation. Chile had a highly integrated system⁵⁰ from the 1950s to 1989. The introduction of private insurance in the 1980s led to increased fragmentation due to an increase in the number of financing agencies. This in turn led to a reduction in access by the poor majority in the public sector health system (longer waiting times, reduced budgets, etc.). However, significant improvements in public services funded by the government insurance

⁴⁸ Transformation of the Health Sector in Ecuador.

⁴⁹ *Red Pública Integral de Salud*.

⁵⁰ The *Servicio Nacional de Salud*.

FONASA occurred especially in response to the AUGE reforms in 2000, which reduced fragmentation and inequities in effective access, and may be connected to improvements in health status as well.

Brazil has experienced decreasing fragmentation with the creation of the SUS in 1988 but also increasing fragmentation with the introduction and expansion of private insurance. In 1996, public sector primary health care was reorganized and standardized through the PSF, an example of a reform that decreases one dimension of fragmentation, benefits, in a particular area, primary care. And while private insurance coverage has expanded and therefore increased fragmentation generally, the creation of the *Agência Nacional de Saúde Suplementar*⁵¹ (ANS) in 2000—and its increased regulation of private insurance—decreased several dimensions of fragmentation within that private sector.

Colombia is perhaps the best example of how a single reform can both decrease and increase different dimensions of fragmentation. Prior to the passage of Law 100 in 1993, Colombia's health financing system was fragmented across the *Ministerio de Salud y Protección Social*⁵² (MinSalud), *Instituto de Seguros Sociales*,⁵³ and private pre-paid plans. On two dimensions of our framework, organizations and payment, Colombia became even more fragmented with the introduction of many private health insurers (EPS) that compete for affiliates under the SGSSS and autonomously determine how to pay providers in their networks. However, the SGSSS's more unified regulatory framework decreased fragmentation of risk pooling (arguably, depending on one's interpretation of FOSYGA's function and whether individual EPS constitute separate risk pools), benefits (from many to just two regimes, and now officially just one), eligibility, and premiums/contributions levels. On balance, one could argue that Colombia's health financing system is less fragmented today—and certainly has far higher coverage levels—despite a large expansion in the number of private health insurers.

⁵¹ National Agency of Supplementary Health.

⁵² Ministry of Health and Social Protection.

⁵³ Social Insurance Institute.

Table 5. Historical Health Sector Reforms and Effects on Fragmentation

Country	Year	Reform	Effect on Fragmentation					
			Organizations	Risk Pooling	Eligibility	Benefits	Contributions	Payments
Costa Rica	1973-78	Caja takes over public hospitals	↓	↓	↓	↓	-	-
	1990s	EBAIS created, decentralization of contracting and budgeting	↓	-	↓	↓	-	↑
Mexico	2003	General Health Law, SSPH, SP	-	↓	↓	↓	-	-
Ecuador	2008-12	Constitutional right to health, TSSE, RPIS	-	-	↓	↓	-	-
Chile	1989	Introduction of private insurance	↑	-	↑	↑	↑	↑
	2000	AUGE reforms	-	-	-	↓	↓	↓
Brazil	1988-90	SUS established	↑	-	↓	-	↑	↓
	1996	PSF	-	-	-	↓	-	-
	2000	ANS created	-	-	-	↓	-	-
Colombia	1993	Law 100	↑	↓	↓	↓	↓	-

Source: Authors

Note: ↑ increase in fragmentation; ↓ decrease in fragmentation; - no change.

Reducing Fragmentation: Lessons from Turkey and Spain

Turkey and Spain are international examples of successful integration of health financing. They offer insights that generally support the findings of the more integrated cases of Costa Rica and Chile. More importantly, the experiences of Turkey and Spain may provide valuable lessons concerning the process through which Latin American countries can further reduce fragmentation in their health financing systems.

Spain is classified as having low fragmentation in all dimensions of health financing. The integration of the Spanish system occurred in the 1960's, slightly later than the first phase of integration that created the *Servicio Nacional de Salud*⁵⁴ (SNS) in Chile and earlier than the integration of Costa Rica under the *Caja*. All Spanish citizens are covered by the public *Sistema Nacional de Salud*,⁵⁵ and only 13 percent of the population has complimentary private insurance. Financing and service provision are decentralized to 17 regional governments, but risk is pooled nationally and funds are transferred to low income regions. All Spaniards are covered under one eligibility category and receive a standardized benefits package, although there is some regional variation for additional benefits. Public health services are financed by general tax revenues and users pay no premiums, but a copayment of 40 percent is required for pharmaceuticals. Public sector health personnel are paid salaries set at the national level and primary care physicians receive a per capita payment adjusted for health and socioeconomic risks of their population; payment for specialists varies by region. *Unidades Ponderadas Asistenciales*⁵⁶ (UPAs), a system similar to Diagnosis-related Groups, determines the level of hospital payments. Provider contracts also include quality and performance indicators linked to payment levels in order to incentivize and reward superior care. Some regions have experimented with private providers, but public provision still predominates in most regions (García-Armesto et al. 2010).

Turkish reforms occurred more recently after a long period of sustained effort to overcome resistance in the three different social financing schemes. Turkey's organizational fragmentation is low. It essentially has one financing organization, the Social Security Institution (SGK), which covers almost the entire population with the General Health Insurance Scheme (GHIS), and only 2 percent of the population has private insurance. Risk pooling is also low. A

⁵⁴ National Health Service.

⁵⁵ National Health System

⁵⁶ Weighted health care units.

single national risk-pool exists on paper, although the Green Card scheme which finances care for the poor has yet to be integrated. Eligibility is classified as low-medium. Although all people residing in the country for one year are eligible for GHIS, about 12-13 percent cannot afford to pay premiums but are not considered poor enough to qualify for the Green Card Scheme. A standard benefits package is available to all GHIS enrollees, including Green Card members, giving it a low fragmentation classification. Both premiums/contributions and payments dimensions have low-medium classifications. There are three different contribution levels for payroll taxes (12.5%, 12%, 0) for formal worker, self-employed/unemployed, and green card members, and some variation in copayments. The SGK is the principle purchaser of health services, but the Ministry of Health (MOH), which is a major provider of services, funds public hospital budgets and pays family physicians. Moreover, MOH health centers, university health centers, and private providers are all paid using different mechanisms.

Table 8. Dimensions of Fragmentation, Spain & Turkey

Dimension	Spain	Turkey
Organizations	LOW	LOW
Risk Pooling	LOW	LOW
Eligibility	LOW	LOW-MEDIUM
Benefits	LOW	LOW
Premiums/Contributions	LOW	LOW-MEDIUM
Payments	LOW	LOW-MEDIUM

Source: Authors

Politics of Integrating Fragmented Financing Systems

The cases reviewed here suggest that reforming fragmented financing systems, like most major reforms, is difficult because strong entrenched interests defend the status quo and mobilizing other major political actors to strengthen a coalition of support for reforms can be challenging (Roberts et al. 2004). Successful political reform is usually contingent on a variety of factors, making it difficult to suggest clear paths to adoption and implementation in specific cases.

The successful cases of integration suggest some contextual opportunities may open political “windows” of which alert political actors can take advantage. The cases of Costa Rica, Chile, and Turkey suggest opportunities arise when advocates for integration are able to create a consensus across several interested actors and gain political support of the top executive. In Costa Rica, the major effort to integrate a fragmented financing system in the 1970’s was led by the *Caja* with cooperation of the MS. Success was a function of collaborative leadership of the heads of both the *Caja* and the ministry supported by the President and his political party. In Chile the creation of the SNS in the 1950’s was the result of the collaboration of a socialist Minister of Health (Salvador Allende) and a right wing public health physician (Coke) in a period of relative stability in the post-World War II period. The political process of integration in Turkey suggests that a sustained effort on the part of the Minister of Health, with strong support of a reformist Prime Minister, and cooperation by the Ministry of Labor and Social Security was needed to overcome bureaucratic resistance to the reforms over more than five years. These factors are in addition to the relative political and economic stability Turkey enjoyed after 2002.

Furthermore, financing reforms may have a greater chance to succeed if they are linked with other reforms either for broad modernization, in the case of Turkey, or reforms in several social sectors as in Chile and Colombia. Constitutional protections (rights to health) also appear to be relevant contextual factors, helping to spur reforms in Brazil and Ecuador and a radical move toward unification of benefits packages in Colombia. In Spain, integration emerged in the post-civil war period of consolidation of the Franco regime and was part of a consensus dominated by the Falange party. The democratic regimes following Franco’s death developed consensus on universal access to a single public system as part of the broader process of restoring democracy which enshrined access to health care provided by the state in the new constitution.

In most of the other countries, collaboration among the key actors of the different financing agencies and strong and consistent political leadership did not emerge. In Colombia, the 1993 reform called for the gradual unification of the “rules of the game” (that is, benefits packages, quality standards, contracting rules) of the subsidized and contributive regimes. However, political resistance from stakeholders and lack of continuous and consistent policies directed to this purpose led to continued fragmentation, until a recent court ruling required the merging of benefits packages.

Policy Options for Promoting Integration

Although this review has not produced compelling evidence that integration of financing actually improves health system performance, it does suggest that there are good reasons for reducing most dimensions of fragmentation of financing systems. Advocates for integration may be able to learn from the cases highlighted in this document as they attempt to integrate their systems—or particular dimensions of their systems. A set of steps and options for achieving this goal are presented below, with attention to the political conditions mentioned previously.

Step 1: Assess health system performance according to ultimate and intermediate objectives

Despite the widespread current policy trend to promote increased integration in health system financing, it is vitally important that countries first assess their health system performance vis-à-vis the ultimate and intermediate objectives discussed here and elsewhere. A useful diagnostic process discussed by Roberts et al. (2004) is to identify major problems in the system and then review evidence to identify the likely proximal causes of those problems, and to continually work through underlying causes until it becomes clear which “control knobs” should be adjusted to produce solutions to the problem. The risk of promoting integration without adequate problem analysis is twofold. First, the effects of integration are more or less relevant to different health problems, and a major push toward integration would be unwise if the most pressing health system problems are likely caused by conditions other than fragmented financing. Second, several agenda setting and policy adoption theories, such as Kingdon’s (1995), recognize the importance of prominent problem identification for moving a policy proposal to the top of public policy agendas and successfully adopting reforms. Moving fast toward integration without such problem identification may doom reforms politically.

Step 2: Apply multi-dimensional framework of fragmentation

Once a country's health system's ultimate and intermediate problems are identified and logically linked to health financing fragmentation as a cause—and while these are being promoted as important problems for reform—reformers should apply the multi-dimensional fragmentation framework used here to assess how that country compares to these cases along the various dimensions (countries presented here will undoubtedly want to review and edit their cases based on the best and most up-to-date information on the health financing system). There are two key goals in doing so. First, the analysis should help identify which dimensions of fragmentation should be targeted, with priority given to dimensions that are relatively more fragmented compared to other countries and/or dimensions that are likely most linked to the problems identified in Step 1. Countries that have undergone integration-promoting reform previously should—to the extent possible—compare their systems before and after prior reforms for a more robust assessment of whether fragmentation of particular dimensions matter. The second goal is to iteratively incorporate findings from the fragmentation analysis into efforts to promote identification of the problem (Step 1) and increasingly move the policy agenda toward particular integration-promoting policy proposals.

Step 3: In tandem with political analysis, consider three broad options for increased integration

Building on the foundation of clear health system problem identification, detailed analysis of different dimensions of fragmentation and links between those dimensions and system problems, reformers will next be in a position to choose a particular integration strategy. Based on the varied experiences of the cases studied here, below are three broad options below that countries could consider alongside an analysis of which option is most viable politically.

Option 1: Move toward a single financing agency.

This option, based in part on Costa Rica, Turkey, and Spain, would be to integrate several sources of funding – tax based, social insurance, co-pays – into a single system either in a social security institution as in Costa Rica and Turkey or the ministry of health as in Spain. There are two main sub-options to this approach. One is to separate financing from provision (Turkey), and the other is to have both financing and provision in one agency (Costa Rica and Spain).

At a more operational level, there is a good deal of variation among the three cases that could serve as model approaches on particular issues. For example, the three countries pay providers differently. Turkey recently switched from a heavy reliance on fee-for-service payments to more bundled payments, and uses a reimbursement commission with representation from multiple stakeholders to set rates. Costa Rica's *Caja* uses historical budgeting formulas plus performance measures for hospital payments, based on annual goals and management commitments agreed upon by the *Caja* and regional health providers; and Spain uses a system similar to the US Diagnosis-Related Groups for hospital payments.

Despite being the most unified under a single, public health financing system, all three countries still rely on private sector provision of services to some extent. Turkey allows balance billing to finance such services, and in Costa Rica, patients can access private services but must pay entirely out of pocket, with only some drug and laboratory costs eligible for reimbursement by the *Caja*.

There are also varying degrees of decentralization in these cases, with Spain having the most decentralization to strong regions that are entirely responsible for the administration of the national health system for their populations, whereas Turkey's and Costa Rica's systems are relatively centralized.

This option is likely the most difficult politically given clear losses among entrenched bureaucracies. It may need to be a long term goal rather than an immediate objective, but one for which policymakers can lay a foundation by first harmonizing other dimensions such as benefit packages.

Option 2: Strengthen the single public financing system and allow private insurance to retain a significant part of the market.

This option, based on Chile's recent reforms, and to a lesser extent Mexico's SP, would be to mount a major reform to strengthen the capacities and the funding of both the public financing agency and public sector providers. While this effort may not reduce the number of financing organizations, it does increase the coverage of a single financial entity and effective access of a large proportion of the poorest population to a single benefits package, and enlarge a single risk pool, maintaining public sector providers as the major recipient of public funding. In both Chile and Mexico, this reform did not have an effect on the private insurance market or the private

sector providers. For instance, in Chile the GES reforms improved public services sufficiently to maintain 80% of the population covered by the public insurance system. In the 2000's, the private insurance market declined from 26% to 16% of the population but has remained stable and profitable. Despite these improvements, the Chilean system still allows many of the publically insured access to private providers through subsidized vouchers, especially for outpatient care. In Mexico, the situation was different; half of the expenditures on healthcare are in the private market, which in turn has been growing steadily in the last decade. A significant proportion of those affiliated with SP are still paying out of pocket and attending to private providers.

This means that to develop comprehensive health policies and promote the integration of the system, further attention should be given to private providers. Otherwise, the private market may counteract the financial protection policies of the public sector. Operationally, these reforms imply a significant increase in investment in the public system both in terms of infrastructure (and equipment and supplies) and human resources, and as with many reforms, require significant increases in budgets for the public sector providers.

This option may still require significant political support from the top executive and usually a negotiation with the Ministry of Finance, but would not require consensus among the leadership of most major actors as did the reforms in Costa Rica, the SNS in Chile, and the recent reforms in Turkey.

Option 3: Unify the benefits packages and premiums of a system with multiple public and private insurance institutions.

This option, based on Colombia and, to a lesser extent, Ecuador, focuses not so much on uniting the organizations providing financing but creating some basic unity on benefits packages and premiums. Although there may be many different financing agencies, they all are required to play by similar rules and provide similar services at a basic price. This option may be necessary when the different current fragmented stakeholders have sufficient power to prevent efforts to unify them but not sufficient power to prevent the imposition of similar regulations on all the separate agencies.

In Colombia, the first step in unifying benefits was defining two benefit packages that would dominate the first several years of reform under the SGSSS—the more generous

contributory regime and the more limited set of benefits under the subsidized regime. While not the ideal end point from an equity perspective, the approach of starting with two packages instead of one could help both political viability early in a reform (by keeping benefits extensive for those in the formal sector) and financial viability. However, Colombia was forced by subsequent high court rulings to unify the regimes more quickly than was envisioned, a likely outcome in other Latin American countries with health-related constitutional protections. A potential middle-ground is defining an explicit timeline for unifying schemes from the beginning—or attempting to raise enough revenue to finance an extensive package for all from the beginning.

In addition, it may be more politically feasible to begin expanding benefits to certain levels of care, such as primary care. Beyond setting explicit, insurance-based benefit packages, countries such as Ecuador and Costa Rica chose to standardize the delivery of primary care services across the country by establishing multi-disciplinary primary care teams, EBAS and EBAIS, respectively.

The three options above are not mutually exclusive and may even be part of a sequence. Option 3 and the public-sector part of Option 2, for example, could be more politically viable first and second steps toward achieving a single financing agency outlined in Option 1.

Step 4: Prepare for managing complex implementation phase

The final and perhaps most difficult step on any path to greater integration is managing implementation of reform, a phase which is virtually guaranteed to lead to a somewhat different end point than originally designed. The cases studied here offer multiple examples of the kinds of challenges that can arise in implementation. Among countries with medium to high levels of fragmentation, but which have all had some integration-promoting reforms, challenges include: customer satisfaction complaints and bankruptcy among some of Colombia's insurers; tax evasion among formal sector workers in Colombia and other countries that rely on payroll taxes; lack of enrollment given the voluntary nature of SP in Mexico; inequitable and inefficient distribution of health workers and facilities in Ecuador's and Brazil's public systems; and balancing the disproportionate revenues of Chile's private ISAPRE system with the greater utilization of health care services in the public FONASA system.

Costa Rica is a leader among countries that have moved toward a single financing agency, but medical expenditures have risen faster than revenues there, resulting in delayed payments to providers and questionable financial sustainability. Turkey is still attempting, a decade into reform implementation, to completely separate purchasing and provision, with the MOH continuing to manage a global budget from the Ministry of Finance for its hospitals and funding for Green Card scheme members. In Spain, the general tax-financed system remains vulnerable to macroeconomic downturns, deficiencies in the public system cause patients to seek care in the private market, and ensuring equitable services across decentralized and autonomous regions has also proven difficult. These three cases underline the continuing challenges and need for constant adjustment even in places that are most successful in terms of integration.

Conclusions

The analytical framework developed by this study proved useful for conducting a first analysis of the institutional arrangements that characterize health financing fragmentation in countries of the LAC region. Despite the diversity of the health systems of the countries included in this study, it was possible to make comparisons in each of the six dimensions. The variation of degrees of fragmentation among the different dimensions makes it somewhat difficult to present a clear judgment about overall levels for a country. While Costa Rica and, to a lesser extent, Chile can be consistently rated as having low levels of fragmentation and Colombia has the only dimensions classified as highly fragmented (organization and payments), Brazil, Mexico and Ecuador are mostly in the medium range.

The first conclusion that can be drawn from this exercise is that there are many different aspects of fragmentation beyond the predominant policy discussions focusing on the presence of different financing organizations. A better understanding requires considering the multi-dimensionality of fragmentation. Colombia is perhaps the best example of the additional information produced by identifying different dimensions of fragmentation, as the country has both high fragmentation in terms of number of financing organizations (insurers), but relatively low fragmentation of benefits and eligibility categories. For other countries in the region, this differentiation is important both for analysis of causes and effects of “fragmentation,” and also for considering policy options—where reducing certain dimensions of fragmentation may be much more politically viable and acceptable than others.

The framework also provides a theoretical lens through which to analyze the effect of historical reforms on dimensions of fragmentation in the six countries, which leads to two further conclusions. First, it is important to recognize that health reforms in Latin America over the past several decades have both decreased and increased different dimensions of health financing fragmentation, with only Costa Rica nearly uniformly moving in the direction of integration. Second, regardless of which dimension(s) of fragmentation that countries attempt to address, collaborative leadership of financing institutions and high level political support appear to be important conditions for integrating major financing institutions.

An additional conclusion from the application of this framework is that a multidimensional approach to health financing fragmentation can facilitate the development of manageable, step-by-step policy options to promote the integration of health systems. This will be increasingly important for many countries' current initiatives to move towards universal coverage of health services, which can be more successful if strategies to consolidate and articulate financing sources, pooling mechanisms and service provision are introduced.

Finally, this study identifies a knowledge gap with respect to the link between health financing fragmentation and health system performance. Not only is there a lack of data but also of adequate methodologies to evaluate whether a more integrated system is more likely to achieve health system objectives. LAC can potentially serve as a laboratory—providing a variable historical record with decreases and increases in fragmentation within countries—which may help in analyzing fragmentation's effects on health system performance, especially where data are available before and after reforms. Therefore, additional research should be supported in order to provide better evidence of the impact of integration as a basis for policy recommendations.

References

- Baeza, C. and T. Packard. 2006. *Beyond Survival: Protecting Households from Health Shocks in Latin America*. Palo Alto, CA, United States: Stanford University Press.
- Bernal, Ó. 2012. *Análisis de las Empresas Promotoras de Salud*. Bogotá, Colombia: Universidad de los Andes.
- Bitrán, R. D., and G. C. Urcullo. 2008. "Chile: Good Practice in Expanding Health Care Coverage—Lessons from Reforms." In: P. Gottret, G. J. Schieber, and H.R. Waters, editors. *Good Practices in Health Financing: Lessons Learned from Low - and Middle - Income Countries*. Washington, DC, United States: World Bank. 89-135.
- Bonilla-Chacín, M. E. and Nelly Aguilera. "The Mexican Social Protection System in Health." UNICO Studies Series 1. Washington, DC: The World Bank.
- Blackburn, S., C. Espinosa, and Marcelo Tokman. 2005. *Alternativas para reducir la discriminación y la segmentación por riesgo en el sistema de salud chileno*. Santiago de Chile: United Nations.
- Bourgeois, F. C., K. L. Olson, and K. D. Mandl. 2010. "Patients Treated at Multiple Acute Health Care Facilities: Quantifying Information Fragmentation." *Archives of Internal Medicine*. 170 (22): 1989-95.
- Comisión Nacional de Seguros y Fianzas, Anuario Estadístico de Seguros y Fianzas 2011. Secretaría de Hacienda y Crédito Público 2011, México
- Cutler, D. L., D. Bigelow, and B. McFarland. 1992. "The Cost of Fragmented Mental Health Financing: Is it Worth it?" *Community Mental Health Journal*. 28 (2): 121-133.
- Dafny, L., M. Duggan, and S. Ramanarayanan. 2009. "Paying a Premium on Your Premium? Consolidation in the US Health Insurance Industry." Working paper No. 15434. Cambridge, MA, United States: National Bureau of Economic Research.
- Elhauge, E. 2010. *The Fragmentation of US Health Care*. Oxford, United Kingdom: Oxford University Press.
- Enthoven, A. C. and L. A. Tollen. 2005. "Competition In Health Care: It Takes Systems To Pursue Quality And Efficiency." *Health Affairs*. September 7: 420-433.
- Enthoven, A. C. 1978. "Consumer Choice Health Plan." *New England Journal of Medicine*. 298 (13): 709-720.

- Frenk, J., E. González-Pier, O. Gómez-Dantés, et al. 2006. "Comprehensive Reform to Improve Health System Performance in Mexico." *The Lancet*. 368 (9546): 1524-1534.
- García-Armesto, S., M. Begoña Abadía-Taira, A. Durán, et al. 2010. "Spain: Health System Review." *Health Systems in Transition*. 12(4): 1–295.
- Gottret, P., G. J. Schieber, and H.R. Waters, eds. 2008. *Good Practices in Health Financing: Lessons Learned from Low - and Middle - Income Countries*. Washington, DC, United States: World Bank.
- Gutiérrez J.P., J. Rivera-Dommarco, T. Shamah-Levy, et al. 2012. *Encuesta Nacional de Salud y Nutrición 2012: Resultados Nacionales*. Cuernavaca, México: Instituto Nacional de Salud Pública (MX).
- Hsiao, W. and R. Shaw, Eds. 2007. *Social Health Insurance for Developing Nations*. Washington, DC, United States: The World Bank.
- Hyman, D. 2009. "Health Care Fragmentation: We Get What We Pay For." University of Illinois Law & Economics Research Paper No. LE09-012. Champaign, IL, United States: University of Illinois.
- Instituto Nacional de Estadística y Geografía. 2012. *Anuario Estadístico de los Estados Unidos Mexicanos 2012*. México: Instituto Nacional de Estadística y Geografía (INEGI).
- Kim, M. K., R. J. Blendon, and J. M. Benson. 2013. "What is Driving People's Dissatisfaction with their Own Health Care in 17 Latin American Countries?" *Health Expectations*. 16 (2): 155-63.
- Kingdon, J. 1995. *Agendas, Alternatives, and Public Policies*. New York: Harper Collins College Publishers.
- Kutzin, J. 2001. "A Descriptive Framework for Country-level Analysis of Health Care Financing Arrangements." *Health Policy*. 56 (3): 171-204.
- . 2008. "Health Financing Policy: A Guide for Decision-makers." Health financing policy paper 24. Copenhagen, Denmark: World Health Organization.
- La Forgia, G. M. and B. Couttolenc. 2008. *Hospital Performance in Brazil: The Search for Excellence*. Washington, DC, United States: World Bank.
- Londoño, J. L. and J. Frenk. 1997. "Structured Pluralism: Towards an Innovative Model for Health System Reform in Latin America." *Health Policy*. 41 (1): 1-36.
- Maturana, C. C. and M. E. Barrera. 2011. "Financiamiento, regulación y fiscalización en

- latinoamerica: más calidad y derechos en salud.” Report from IV Congreso latinoamericano de órganos reguladores y de control de los sistemas de salud. Superintendencia de Salud. Santiago: Chile.
- McIntyre, D., B. Garshong, M. Gemini, et al. 2008. "Beyond Fragmentation and Towards Universal Coverage: Insights from Ghana, South Africa and the United Republic of Tanzania." *Bulletin of the World Health Organization*. 86 (11): 871-876.
- Montekio, Víctor Becerril, Guadalupe Medina, and Rosana Aquino. 2011. “Sistema de salud de Brasil. *Salud Publica Mex* 53 (supl 2): S120-S131.
- Miller, S. 1966. "Solving the Urban Dilemma in Health Care: More Poverty, Greater Demand for Public Services, Reduced Financial Resources, and Fragmentation of Services." *Bulletin of the New York Academy of Medicine*. 42 (12): 1150-56.
- Millett, C., A. Chattopadhyay, and A. B. Bindman. 2010. "Unhealthy Competition: Consequences of Health Plan Choice in California Medicaid." *American Journal of Public Health*. 100 (11): 2235-40.
- Nigenda, G. H. and L. M. González. 2009. "Contracting Private Sector Providers for Public Sector Health Services in Jalisco, Mexico: Perspectives of System Actors." *Human Resources for Health* 7(1): 79.
- Pan American Health Organization (PAHO). 2002. “Profile of the Health Services System of Costa Rica.” Washington, DC, United States: Program on Organization and Management of Health Systems and Services, Division of Health Systems and Services Development, Pan American Health Organization.
- . 2008. *Social Protection in Health Schemes for Mother, Newborn and Child Populations: Lessons Learned from the Latin American Region*. Washington, DC, United States: Pan American Health Organization.
- Pauly, M. V. 1988. "A Primer on Competition in Medical Markets." In: H. E. Frech and R. Zeckhauser, editors. *Health Care in America: The Political Economy of Hospitals and Health Insurance*. 1:27-71. San Francisco, CA, United States: Pacific Research Institute for Public Policy.
- Pinto, D. and L. O’Connell. 2012. “Apoyo a la Transformación Sectorial de Salud del Ecuador.” Nota Sectorial. Washington, DC, United States: Inter-American Development Bank. March 2012.

- Presidencia de la República, México. 1er Informe de Gobierno 2012-2013. Anexo Estadístico. Estados Unidos Mexicanos, 2013.
- Roberts, M. J., W. Hsiao, P. Berman, et al. 2004. *Getting Health Reform Right: A Guide to Improving Performance and Equity*. New York, NY, United States: Oxford University Press.
- Scanlon, D. P., S. Swaminathan, W. Lee, et al. 2008. "Does Competition Improve Health Care Quality?" *Health Services Research*. 43 (6): 1931-1951.
- Superintendencia de Salud (SEGESE). 2012. "Estadísticas: Histórico 2012- Abril Anexo 2." Gobierno de Chile. <http://www.sugese.fi.cr/estadisticas/2012.html>.
- Strooy, L. R. 2011. "Modelos y Mecanismos de Financiamiento en Sistemas de Salud." Presentation from Health Superintendent. Santiago: Chile. <http://www.supersalud.gob.cl/documentacion/569/Presentaciones/Chile.pdf>.
- World Bank. 2008. "Realizing Rights through Social Guarantees: An Analysis of New Approaches to Social Policy in Latin America and South Africa. Washington, DC, United States: World Bank Social Development Department. Report No. 40047 – GLB.
- World Health Organization (WHO). 2000. *The World Health Report 2000: Health Systems: Improving Performance*. Geneva, Switzerland: World Health Organization.