TOWARDS HEALTH-CARE EQUALITY? THE PERFORMANCE OF SEGURO POPULAR IN MÉXICO (2003-2013)*

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INTRODUCTION

The purpose of this article is to review the performance of a most ambitious initiative for public health care in Mexico, *Seguro Popular* (popular insurance), which aims to offer financial protection in health to all people not insured by the social security subsystem, around half of the population in Mexico.

Inequality is the paramount challenge for Mexico, especially in the health sector. Consider, for example, that a newborn in the state of Nuevo León (one of the wealthiest and most modern states) is twice as likely to survive her first year of life as another infant born in the state of Puebla (one of the five poorest states). As we show throughout the article, these inequalities are similarly noticeable when examining the inputs of health services (personnel, infrastructure), service delivery (waiting time in emergency services, distribution of medicines) and health outcomes (diabetes control, maternal mortality rates) How is Mexico solving this problem, is the government acting alone capable of alleviating it?

Although *Seguro Popular* is only a financial tool, its effects for health services and policy have been quite significant: reductions in out-of-pocket expenditures, increases in the use of health preventive services, and patients increasingly aware of their right to health-care. Furthermore, the initiative has opened the possibility for the creation of a universal health-care system in Mexico financed by general taxes instead of contributory funding tending to characterize social security.

*A substantive part or the argument offered in this article draws on previous research on the issue, specially our book (Flamand and Moreno, 2014), and a recently published article (Flamand and Moreno, 2015). However, we present it for the first time to the English-speaking public accompanied with fully updated data regarding the various dimensions of health inequality and the performance of Seguro Popular.

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We conclude, however, that much more has to be done to achieve health equality in Mexico. In particular, we suggest that given the new and substantial influx of federal funding to the services provided by the state governments, the latter have to be subjected to a higher standard regarding access and quality. This higher standard may be achieved through a combination of transfers dependent on reaching specific quality indicators, and vigorous citizen oversight.

The article is organized into three sections. In the first, we reveal that, by design, *Seguro Popular* aims to reduce two types of inequality in health-care provision: (a) In between the services for those with social security and those for the uninsured, and (b) among the Mexican states, given that the operation of public health services in Mexico is a responsibility of the state governments. The second section delves into the performance of *Seguro Popular* after ten years of its creation with the emphasis on financing (especially out-of-pocket expenditures), access to services, health outcomes, and the quality of service delivery. The third section explores the proposals to create a universal health care system in Mexico. We offer particular insights into the challenges faced by these proposals regarding finance and delivery of services.

HEALTH INEQUALITY AS THE FUNDAMENTAL PUBLIC PROBLEM IN MÉXICO

In this article, we claim that health inequality is one of the most salient public policy problems in the present time for Mexico. But before describing its magnitude and characteristics, this section attempts to clarify the concept of health inequality, to provide a broad perspective about its causes, and to indicate some implications for policy.

THE MEANING AND CAUSES OF HEALTH INEQUALITY

What is to be understood by the term "health inequality"? In a suggestive article, Margaret Whitehead (1990) argues that such a concept involves a key ethical dimension, as long as it refers to differences that are unnecessary and avoidable, but also unfair. Undoubtedly, in every society there are unavoidable differences in the health conditions of people, which derive from their biological disparities or from habits that could be harmful for their health. These situations can hardly be defined as unfair, as long as individuals freely choose them. However, there are many other situations that cause inequalities in health outcomes that are not influenced by people's determination, for example working under hazardous conditions, living in settlement without ad-

equate access to basic services such as drinking water, sanitation or electricity, or lacking enough money to pay for a basic medical checkup. Of course, all these are unfair situations because they are not determined by people's free choices, and also because they are unnecessary and could be avoided. Therefore, according to Whitehead, the goal of public policy is not to eliminate all the differences in health conditions, but to reduce or eliminate those derived from preventable causes. Whitehead proposes the following working definition:

> *Equity in health implies that ideally everyone should have a fair opportunity to attain their full health potential and, more pragmatically, that no one should be disadvantaged from achieving this potential, if it can be avoided (1990: 7).*

If we agree with this definition of health inequality, the next important question is what do we know about its causes? Evidently, health inequality, as many other problems in the public policy realm, is a phenomenon caused by multiple factors, some of which have to do with individual decisions, but also with contextual dynamics. However, one of the most compelling arguments has been termed the "theory of fundamental causes" originally developed by Link and Phelan in 1995. They argue that individually-based risk factors should be contextualized by examining what makes people vulnerable to risks, and whether social factors such as socioeconomic status and social support are "fundamental causes" of disease (Link and Phelan, 1995). In other terms, the authors contend that access to key resources (money, knowledge, power, prestige, and social connections) affects the manner in which people avoid risks and adopt strategies to protect their health.

In a more recent piece, Phelan, Link, and Tehranifar (2010) argue that social conditions remain the fundamental causes of health inequalities:

> *If the problem is cholera, for example, a person with greater resources is better able to avoid areas where the disease is rampant, and highly resourced communities are better able to prohibit entry of infected persons. If the problem is heart disease, a person with greater resources is better able to maintain a heart-healthy lifestyle and get the best medical treatment available (Phelan, Link, and Tehranifar, 2010, p. 30).*

There seems to be strong evidence in support of the theory of fundamental causes. First, Phelan and colleagues demonstrate that low socioeconomic conditions are related to a multiplicity of dis-

eases and other causes of death –chronic diseases, communicable diseases, and injuries. Second, they find ample confirmation that socioeconomic inequalities in mortality are significantly evident for causes of death that are highly preventable, such as lung cancer and ischemic heart disease, but not for unknown causes of fatal diseases such as brain cancer and arrhythmias. Third, although the development of new knowledge improves overall health conditions, evidence indicates that it furthers the advantage of people with higher socioeconomic status.[1]

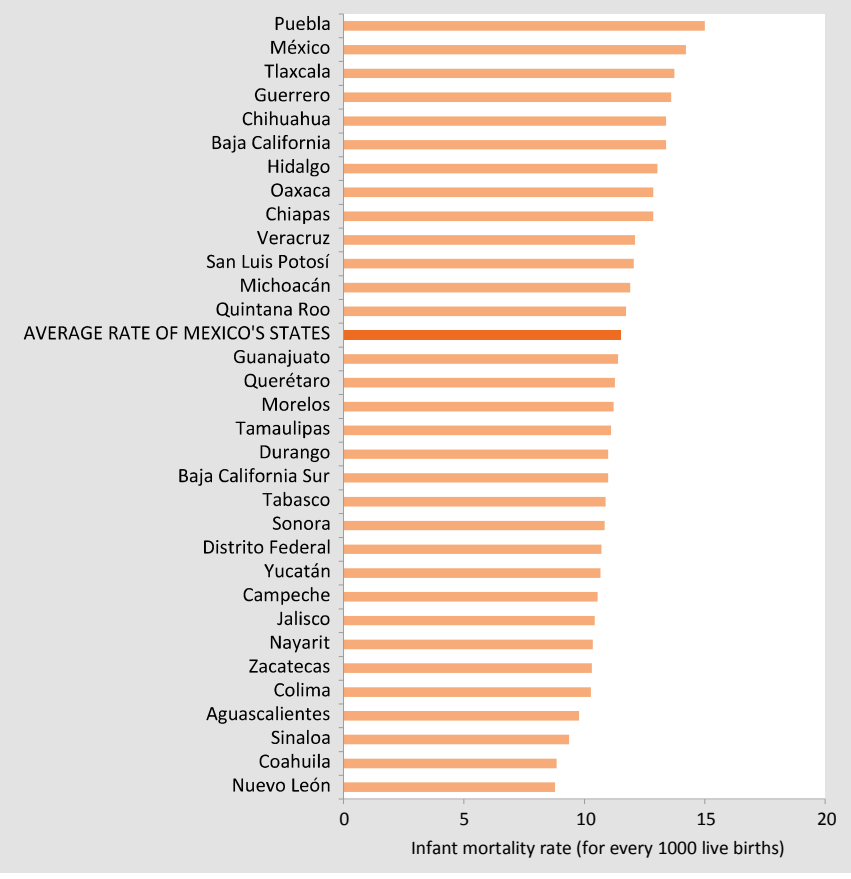
What are the implications for health policy? If we adhere to the theory of fundamental causes as a basis to explain health inequality, we could derive two main propositions. First, it should be obvious that to reduce health inequalities it is necessary to lessen social disparities in general. This implies that policies aimed at redistributing the resources in a society might ultimately reduce the inequalities in the health domain. Second, following Phelan and colleagues, it is also clear that prioritizing the development of interventions that do not entail the use of resources (or that minimize their relevance) can reduce health inequalities. They recommend, for example, "providing health screenings in schools, workplaces, and other community settings, rather than only through private physicians; providing health care to all citizens rather than only to those with the requisite resources" (Phelan, Link, and Tehranifar, 2010, p. 37), and, in general, to develop interventions that are affordable and may be disseminated and implemented with ease. In this article, we analyze the performance of one of the most ambitious health reforms in the last decade in Mexico, which aims to provide financial protection to those people lacking health insurance. We demonstrate that such policy was relatively successful in removing financial obstacles to health care, one of the key dimensions of health inequality, but also highlight that it still has important shortages that call for a more profound reform.

1 For example, Phelan, Link, and Tehranifar (2010) cite the work by Carpiano and Kelly (2007), which analyzed changes in breast cancer incidence following a finding by Women's Health Initiative that linked hormone replacement therapy to increased breast cancer risk. They found that breast cancer incidence among white women age 50 and older (they were more likely to have been using hormone therapy before the new finding were publicized) dropped sharply, while incidence among black women in the same age group remained in stable levels. Another study in support of the theory of fundamental causes is a work by Glied and Lleras-Muney (2008), who conducted a systematic test based on a comprehensive set of diseases. They found that more educated people were the first to take advantage of technological advances that improve health.

THE KEY DIMENSIONS OF HEALTH INEQUALITY IN MÉXICO

Despite the fact that the right to health care was enacted in the national constitution since 1983, and notwithstanding that key health indicators have considerably improved in the country throughout the last decades (Levy and Schady, 2013), health inequality is a crucial and persistent problem in Mexico. Access to health care services varies dramatically across regions, social groups, and health care institutions, and these differentials explain, to a large extent, why health conditions in Mexico –measured through widespread health indicators such as life expectancies, mortality and morbidity rates, or the incidence of different type of diseases- are so terribly unequal. Consider, for example, that a newborn in the state of Nuevo León (one of the wealthiest and most modern states) is twice as likely to survive her first year of life than another infant born in the state of Puebla, among the five poorest states of Mexico (figure 1).

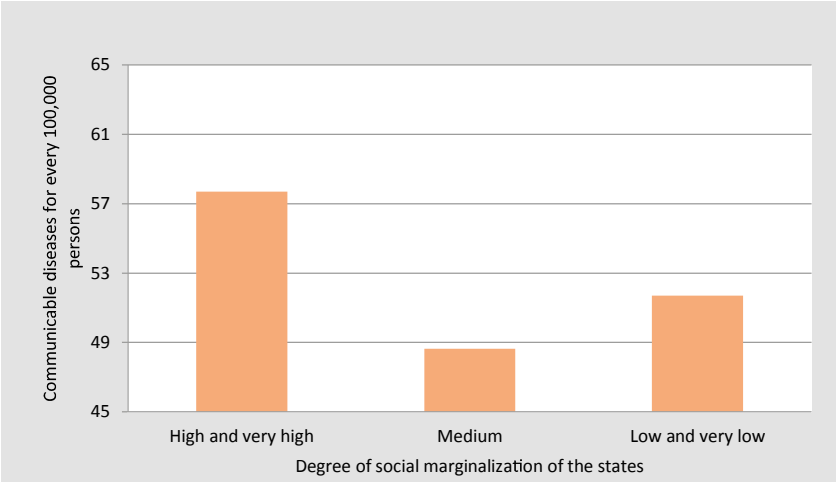
Figure 1 Infant mortality in the states of Mexico in 2013 (for every 1000 live births)



Sources: Conapo, 2015; DGIS, 2000.

These differentials are also manifest when analyzing the epidemiological profile of the regions of Mexico, some of which still suffer the typical illnesses of developing countries (infectious diseases, malnutrition, and others related to childbirth), while others are increasingly exposed to the afflictions of the industrialized world (chronic diseases, addictions, accidental injuries). In 2013, the rate of communicable, maternal, perinatal, and nutritional diseases was around 54.3 cases for every 100,000 persons, much lower than the rate of cardiovascular disorders, which is in the order of 125.8 cases for every 100,000 persons. Obviously, this sharp contrast between each type of diseases simply confirms the epidemiological transition undergone by Mexico for several decades. Figure 2, however, shows that the transition is heterogeneous across the territory given that the highest rates of communicable, maternal, perinatal, and nutritional diseases are prevalent in the most marginalized states.

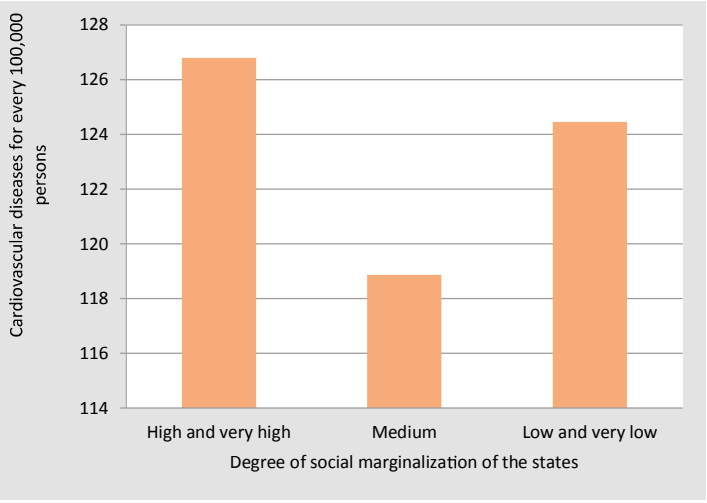
Figure 2. Communicable, maternal, perinatal, and nutritional diseases, 2013 (by level of marginalization in the states of Mexico)



Source: Authors' elaboration on the basis of DGIS, 2015

Even though it is reasonable to observe chronic illnesses (i.e. cardiovascular ailments or diabetes) in the wealthiest states, these illnesses prevail in regions with high and very high levels of socioeconomic deprivation as well (figure 3). These combined profiles of disease impose complex sanitary and financial challenges for the most underprivileged states (Rivera *et al*., 2002).

Figure 3. Cardiovascular diseases in 2013 (by level of marginalization in the states of Mexico)



Source: Authors' elaboration on the basis of DGIS, 2015

As we discussed in the previous section, there is no single cause capable of explaining the high levels of health inequality in Mexico, but there is empirical evidence in support of the fundamental cause theory. For example, under-five mortality rates concentration indexes were found to decrease as mother education increases, as access to first-level health care facilities improves, and as the rates of house overcrowding diminished (Aguilera, Marrufo, and Montesinos, 2005). An important implication of this finding is that all these factors can be influenced by policy interventions, although not exclusively by those carried out by health authorities.

To what extent has public policy helped to mitigate the problem of health inequality? Although the next section provides a more detailed analysis addressing this question, first, we discuss some general facts about the health care system in Mexico, in particular, we underline that its current organization fostered the unequal health conditions of the population. In other words, the high inequality characterizing health conditions in Mexico is analogous to the disparities observed in the organization and operation of the federal health care system.

THE FRAGMENTED AND UNEQUAL HEALTH CARE SYSTEM IN MEXICO

In Mexico, health care services are provided by three types of institutions: 1) social security institutions that provide health care services for the formal workers (and their families) of the private and public sectors; 2) public institutions at the state level that provide health care services for the uninsured (workers of the informal sector and their families); and 3) health care providers of the private sector, available to anyone who can pay for their services. Nowadays, the uninsured comprises the vast majority of Mexico's population (in 2014, 70.1% reported lacking access to social security services, as shown in table 1), since informality is prevalent in the labor market. However, only 21.8% lacks access to health services, most likely due to the creation of *Seguro Popular* in 2004, a policy of financial protection in health for the uninsured that will be discussed in the subsequent section.

TABLE 1. LACK OF ACCESS TO SOCIAL SECURITY AND HEALTH CARE SERVICES IN MEXICO (MILLIONS OF PEOPLE), 2000-2014

Year →	2000	2012	2014
Deprivation due to access to social security	69.6 (60.7%)	71.8 (61.2%)	70.1 (58.5%)
Deprivation due to access to health care services	33.5 (29.2%)	25.3 (21.5%)	21.8 (18.2%)

Source: CONEVAL, 2014

Despite the fact that only a minority of Mexicans is entitled to receive the benefits of social security institutions (including health care), it has historically received preferential treatment from the government. In 1994, the government expenditure on health was, on average, 3,039 pesos for each person covered by social security, while only 820 pesos for the uninsured. That is, more than 80% of public financial resources for health were allocated to formal workers and their families, while informal, unprotected workers and their dependents received only 20% of such funding (see table 2).

This severe imbalance however, has been gradually rectified throughout time due to the implementation of *Seguro Popular*, and the associated reforms to the health sector in 2004. In 2013, for example, 55% of public spending on health was targeted to people with social security, while the uninsured received only 45%. The resource disparities between the two groups are also present in the allocation of human resources, but they have been addressed as well in recent times. The number of medical consultations in the institutions serving the uninsured has grown very rapidly since 1994, and nowadays the figure is even larger compared to that of social security institutions (table 2).

TABLE 2. RESOURCES AND PERFORMANCE A COMPARISON BETWEEN THE INSTITUTIONS SERVING THE INSURED AND THE UNINSURED IN MEXICO, 1994-2014

Year	General government expenditure on health per capita[b]			Total human resources in the public health sector		Number of medical consultations	
	(% of total government expenditure on health)			For every 100,000 people			
	With social security	Without social security	Total	With social security	Without social security	With social security	Without social security
1994	3 039.2	820.3	1 988.6	606.7	422	1 601.7	913.1
	(80.5)	(19.5)	(100)				
2000	2 950.4	1 367.9	2 145.4	595.7	437.6	1 576.7	1 365.6
	(67.6)	(32.4)	(100)				
2006	3 880.9	2 101.7	2 902.3	581.7	491.6	1 511.3	1 796.1
	(60.2)	(39.8)	(100)				
2009	4 143.4	2 827.3	3 420.7	604.3	520.5	1 611.1	1 738.5
	(54.6)	(45.4)	(100)				
2013	5 523.9	3 545.5	4 429.0	672.0*	644.8*	1 648.3	1 745.0
	(55.7)	(44.3)	(100)				

Note: * data from 2014

Source: Authors' elaboration on the basis of DGIS, 2000, 2006 and 2012

Do these figures imply that the services of Seguro are performing better than the social security ones? We strongly doubt it, considering that social security beneficiaries are still advantaged in terms of financial resources and staff when compared with those uninsured. In other terms, it is most likely that the health care facilities for the uninsured population are facing congestion problems.

Expectedly, the beneficiaries of social security tend to have better health outcomes than the uninsured. Throughout the last 12 years, both infant and maternal mortality rates have been lower for people with social security than for the uninsured, although it seems that the indicators for the two groups are converging (table 3).

TABLE 3. HEALTH OUTCOMES
(LAST YEAR OF PRESIDENTIAL TERM)

Year	Infant mortality[1,a]		Maternal mortality[2,a,b]	
	Without social security	*With social security*	*Without social security*	*With social security*
2000	16.2	10.9	44.5	20.8
2006	11.5	9.8	30.2	15.6
2012	9.9	9.6	24.3	18.4

1 Infant deaths (under 5) per 1,000 live births.

2 Maternal deaths per 100,000 attended births.

a Population without social security includes: SS and IMSS-Oportunidades. Population with social security includes: IMSS, ISSSTE, PEMEX, SEDENA y SEMAR.

b The information for the year 2000 was foudn under the label pregnancy, birth and puerperium mortality; for the rest of the years, under the label maternal mortality.

Source: Calculated by the authors with information from DGIS, 2000, 2006 and 2012

Notwithstanding the terrible inequalities and challenges of its health care sector, Mexico is one of the countries in Latin America with the lowest levels of health care expenditure. Mexico spends in health (6.2% of GDP) considerably less than Brazil (9.7), Chile (7.7) or even Argentina (7.3), see table 4. From 2000 to 2013, however, the total health spending in Mexico grew by 1.1 percent of GDP, mainly due to the increase in the government budget for health, the share in the total health care expenditure rose from 46.6 to 51.7 percent. As we will discuss later on, this increase was due to the creation of *Seguro Popular* in 2004, which implied larger government health expenditure for the uninsured.

TABLE 4. HEALTH EXPENDITURE IN SELECTED LATIN AMERICAN COUNTRIES, 2000-2013

Country	Total expenditure on health as a percentage of GDP			Genera government expenditure on health as a percentage of total expenditure on health			Out-of-pocket expenditure as a percentage of total expenditure on health		
	2000	2012	2013	2000	2012	2013	2000	2012	2013
Argentina	7.6	6.8	7.3	53.9	69.3	67.7	29	20.1	21.1
Brazil	7.2	9.5	9.7	40.3	47.5	48.2	38	30.3	29.9
Chile	7.2	7.3	7.7	36.1	47.7	47.4	41.9	32.4	31.7
Mexico	5.1	6.1	6.2	46.6	51.8	51.7	50.9	44.1	44.1

Source: WHO, 2015

A feature of health expenditure in Mexico meriting special attention is the extremely high level of out-of-pocket expenditure (44.1 percent of the total), more than 12 percent higher than in Chile or Brazil, and 23 percent more than in Argentina. The result is stunning because out-of-pocket expenses represent all direct outlays that households pay to private health-care providers every time they request services. This high proportion implies people are very likely to incur in catastrophic expenditures, which in turn may push them into poverty. Therefore, the World Health Organization regards out-of-pocket expenses as an inefficient and unfair method to finance health care, since it violates the principle of financial justice, which states that individuals should contribute to the financing of their health care according to their payment capacity, and they should receive services according to their health needs (WHO, 2015). The enormous share of out-of-pocket expenses[2] in Mexico was the principal reason for the creation of *Seguro Popular* in the mid-2000. We will discuss the operation and performance of this initiative in the following section.

2 In 2006, the largest component of out-of-pocket expenditures was the purchase of medicines, 66 percent of the total (Wirtz et al., 2012).

A LONGITUDINAL ANALYSIS OF THE PERFORMANCE OF SEGURO POPULAR

Seguro Popular is a social protection health policy created by the federal government of Mexico in 2003 to provide financial protection to people without access to social security –more than half of its total population. By the time the policy was initiated,[3] 60 percent of the total health expenditure of the country was private, mainly from out-of-pocket payments. This situation was deemed socially unacceptable for the reasons discussed in the previous section, thus, a paramount objective of the new policy was to reduce the proportion of this type of expenses, especially for its target population, the uninsured.

FUNDING AND SERVICE PROVISION UNDER THE NEW SYSTEM

Probably, the main innovation of *Seguro Popular* is its financial mechanism. Contrary to the approach dominant before its creation, *Seguro Popular* allocates resources depending on the demand for health care services –not in proportion to the supply of services, as it used to be in the past, where resources were transferred to states according, mostly, to the presence of health infrastructure (Moreno, 2005).

In order to halt the financial inequities across regions and social groups (primarily between people with and without social security) created by the prior system, it was determined that the funds were to be allocated on the basis of the number of affiliates per state. The funding of *Seguro Popular* is composed of three sources: the federal government (83 percent of the total), state governments, and the beneficiaries who were supposed to contribute proportionately to their income –the poorest are exempted from any charge.[4] It is important to reiterate, however, that the amount of resources allocated to each state is completely determined by the number of individuals affiliated. As shown in Table 5, the number of insured

3 The Mexican Congress reformed the General Health Act (*Ley General de Salud*) in 2003 to create the *Sistema de Protección Social en Salud* (System of Social Protection in Health), although it is commonly known as *Seguro Popular*. For a comprehensive description of the principles of the reform and its main components see the work by Gonzalez-Pier et al. (2006).

4 As a matter of fact, beneficiaries do not contribute to fund the system, although these contributions were part of the original design of the program Gonzalez-Pier *et al.* (2006).

people, as reported by government sources, grew at an extremely fast rate throughout the 2004-2013 period, i.e. 55 million people were covered by 2013. Naturally, the financial resources budgeted for *Seguro Popular* have also increased, mostly at a similar rate than coverage.

The financial mechanism under *Seguro Popular* attempted to provide all uninsured people with a publicly funded health insurance covering a set of health care interventions and medicines as per the Universal Health Services Catalogue (*Catálogo Universal de Servicios de Salud* or CAUSES), as well as a package of expensive interventions that may result in catastrophic expenses. These high cost interventions were financed under a trust fund denominated Fund for Protection against Catastrophic Expenditures (*Fondo de Protección contra Gastos Catastróficos*, or FPGC). The result is that the beneficiaries of Seguro Popular do not to disburse any payment when visiting a medical facility or receiving any treatment.

TABLE 5. NUMBER OF PEOPLE INSURED AND SPENDING SEGURO POPULAR, 2004-2012

Year	Number of people insured	Spending (million pesos, current prices)
2004	5,318,289	3,462.80
2005	11,404,861	6,382.50
2006	15,672,374	12,170.40
2007	21,834,619	18,864.30
2008	27,176,914	24,915.60
2009	31,132,949	31,275.30
2010	43,518,719	37,029.50
2011	49,178,366	45,165.80
2012	52,900,000	63,129.60
2013	55,637,999	66,922.30

Sources: Office of the Presidency, 2011 and SPSS, 2014.

The provision of heath care services continues under the responsibility of state governments, along the lines of the decentralization of health services set by the federal government during the 1980s and 1990s.

The new policy created government agencies at the state-level: the state regimes of social protection in health (*Regímenes Estatales de Protección Social en Salud* or REPSS) in each of the 32 Mexican states. The most important function of REPPS is to manage the financial resources of *Seguro Popular*, and also to guarantee the provision of effective and high-quality health care services to affiliates in each state. In other words, the REPSS were established to oversee that the right to health care for all affiliates is effectively protected.

Given our claim that inequality is one of the fundamental public policy problems for health care protection in Mexico, it is worthy to investigate whether *Seguro Popular* has ameliorated the disparities among people and regions. Therefore, in the following sections, we analyze the performance of the program along its key dimensions. That is, we explore whether Seguro Popular has contributed to (a) diminishing the historical financial imbalances between the two subsystems, as well as between regions; (b) reducing health-related out-of-pocket and catastrophic expenses, and (c) guaranteeing access to effective health care services provided under reasonable quality standards to all beneficiaries.

DIMINISHING FINANCIAL IMBALANCES

We have previously shown that social security institutions and its beneficiaries have, for many years, received preferential treatment from the government, as the lion's share of public spending was targeted to them. The creation of *Seguro Popular*, however, has implied that the funds devoted by the government to the health care of the uninsured have increased dramatically. As table 2 illustrates, this has turned into a more balanced situation for both groups. In addition, the financial disparities have diminished between regions, since the difference between the state receiving the highest level of federal spending on health (per capita) and the state receiving the lowest was halved in the 2000-2010. The level of variability in the contribution of states to the health sector finances has diminished as well, even though such contribution represents no more than 17% of total public resources (see table 6 for additional details).

REDUCING OUT-OF-POCKET AND CATASTROPHIC EXPENDITURES

According to the OECD, out-of-pocket expenses as a share of total health expenditure in Mexico fell from 52.9 percent in 2004, to 49 percent in 2011. Is it possible to attribute this reduction to the implementation of *Seguro Popular*? There is mounting evidence suggesting it is indeed likely.

After analyzing data from the 2012 National Survey on Health and Nutrition, Avila and colleagues (2013) conclude that the program has reduced out-of-pocket expenses, but that reductions vary depending on the socioeconomic conditions of households (the effect is lower among the most vulnerable families), and across regions (there seems to be no effect on rural areas). Also, other studies have demonstrated that *Seguro Popular* has diminished health-related catastrophic expenses[5], both in rural and urban zones. This finding, however, does not hold in situations where the beneficiaries only have access to facilities with insufficient and low-quality medical staff (Grogger et al., 2014).

Finally, a work by Wirtz et al. (2012) focuses on the effect of *Seguro Popular* on out-of-pocket expenses for medicines, which in Mexico accounts for 5 percent of a household disposable income. Wirtz and coauthors find that affiliation to the program does not have any significant effect on the percentage of medicines expenditure out of total disposable income in comparison to households without health insurance. They offer two potential, though not necessarily rival, explanations to the fact that people insured by *Seguro Popular* continue incurring in out-of-pocket expenses for medications: (a) that the drugs included in the package of interventions (Causes) do not match the clinical needs of the households, and (b) that there is shortage of medicines in the facilities at which they consult.

5 Health-related catastrophic expenses are those representing 30 percent or more of the income of a household discounting food expenses. In addition, "impoverishing" health expenses are those which, regardless of their magnitude, push a family below the official poverty line (Frenk and Gómez Dantés, 2008: 63).

TABLE 6. EVOLUTION OF FINANCIAL IMBALANCES IN THE HEALTH SECTOR MEXICO 2000–2010

Dimension	Indicator	2000	2004	2010
Level	Health expenditure as percentage of GDP	5·1%	6·0%	6·3%
Source	Out-of-pocket health expenditure as percentage of total health expenditure	50·9%	51·7%	47·1%
Distribution	Ratio of per-person public expenditure between those covered by social security agencies and those without social security	2·1 to 1·0	2·1 to 1·0	1·2 to 1·0
Distribution	Ratio of federal per-head expenditure on health in the state with the highest figure to that in the lowest	6·1 to 1·0	4·3 to 1·0	3·0 to 1·0
State contribution	Variability in state contribution to health-care financing (coefficient of variation)	1·0	0·8	0·7
Allocation of funds	Percentage of Ministry of Health budget devoted to investment	3·3%	3·1%	4·4%

Source: Knaul et al. (2013: 9).

Murayama-Rendón (2011) provides evidence showing that, even though the program established an upper limit of 30% for the purchase of medicines, in 2009 it only spent 15% of its total resources for that purpose. Furthermore, the same study discovered that 47 percent of the total purchases of medications completed by *Seguro Popular* are far beyond the maximum price limits set by the federal operator of the program, which clearly points to a fairly inefficient financial management at the state level (Flamand and Moreno, 2014, chapters VI and VII).

GUARANTEEING EFFECTIVE ACCESS TO HEALTH SERVICES

The increase in the number of affiliates to *Seguro Popular* is, definitely, one of its main accomplishments, even though, as we showed before, in 2014 there were still 21.8% of people who reported not having any type of access to health services.[6] Beyond formal access, however, an important question is to what extent are affiliates actually using the health care services covered under the policy.

The evidence on this issue is quite positive. For example, a study by Scott (2005), one of the first external evaluations of *Seguro Popular*, demonstrates that, from the very initial stages of the policy, affiliates had higher rates of service use compared to people without any other health insurance, regardless of their income levels. Gakidou and associates (2007) also find that affiliates have increased utilization rates of health care services, but particularly among those with greater health needs, residing in the less developed states, and of the lowest income levels.

On a similar vein, Sosa and colleagues (2009) show that *Seguro Popular* promotes health care service utilization among people with diabetes, and it also boosts hospitalization for obstetric services. A recent piece by Leyva-Flores et al. (2014) focuses on primary health care utilization by indigenous people. Based on quasi-experimental methods, they find that *Seguro Popular* offsets the barriers preventing the use of primary health care services by indigenous and

6 It is important to observe that there are significant differences in the number of affiliates reported by different sources. A likely explanation for these discrepancies is that the enrolment process run by the states incorrectly registers people who are already social security beneficiaries.

non-indigenous in similar socioeconomic conditions, which suggests that "it is not being indigenous per se, but rather the lack of financial assurance for accessing health care, that hinders primary health care utilization" (Leyva-Flores et al, 2004: 4). The effectiveness of the policy on service use has, naturally, rendered positive results on health outcomes. In a recent article, Pfutze (2014) demonstrates that Seguro Popular had a large and significantly negative effect on infant mortality. In his words, "the risk of a child dying in the first month of life is reduced by close to 5 out of 1,000 (or 0.5%) for the population at large and by around 7 out of 1,000 (0.7%) for the program target population" (Pfutze, 2014: 485).

PROVIDING HEALTH CARE UNDER REASONABLE QUALITY STANDARDS

Despite the fact that *Seguro Popular* has clearly abated the financial imbalances of the health sector in Mexico, and no matter its positive results on affiliation, service utilization, and out-of-pocket and catastrophic expenses reduction, it still has important shortcomings in the quality of service provided.

Recall that the delivery of health-care services covered by *Seguro Popular* is the responsibility of 32 state-level health-care systems, and that the management of financial resources and service delivery coordination is controlled by 32 different agencies (the REPSS) that are mandated to act on behalf of affiliates.

It is crucial to note, however, that the health systems in the states are rather heterogeneous in their capacities and performance. For example, in Flamand and Moreno (2014), we show that state health systems in Mexico present massive discrepancies in the manner in which they accomplish essential public health functions such as monitoring the health status of people, developing policies to support individual and community health efforts, enforcing laws and regulations to protect health, and many others.[7]

In addition, there are also important variations across the state-run health systems regarding the specific im-

7 A list of 10 essential public health services are proposed by National Public Health Performance Standards Program, 2013

plementation of *Seguro Popular*. We found, for example, that not every state has invested the same effort in obtaining quality accreditation for state-run clinics (a crucial requirement to receive financial support from *Seguro Popular*), and that the number of "medical adjusters" (health care agents responsible of guarding the interests of the beneficiaries of *Seguro Popular*) varies significantly across the 32 states: while the state of Baja California Sur reports 6.2 medical guardians for every 100,000 persons, the figure for Querétaro barely reaches 0.2.

TOWARDS HEALTH CARE EQUALITY WITH A UNIVERSAL SYSTEM?

The basic elements of a system of a universal social protection discussed during the presidential campaign of Enrique Peña Nieto (2012-2018) were health, life and unemployment insurance, as well as a guarantee for minimum income and a pension for retirement. These must be funded with general tax revenues instead of payroll contributions (CEEY, 2012). Beyond the campaign trail, the government of Peña Nieto committed to the creation of a truly universal social protection system, and of the universal health care system in the *National Plan for Development 2013-2018*.

Health protection is meant to secure the health of a population from birth through old age. In a universal system, health care must include maternity care and preventive services, quality must be guaranteed by law, and services should be available when and where needed. Health care must be affordable and people need to be financially protected against associated costs such as payments for services received, transportation and economic loss experienced due to reductions in earnings.

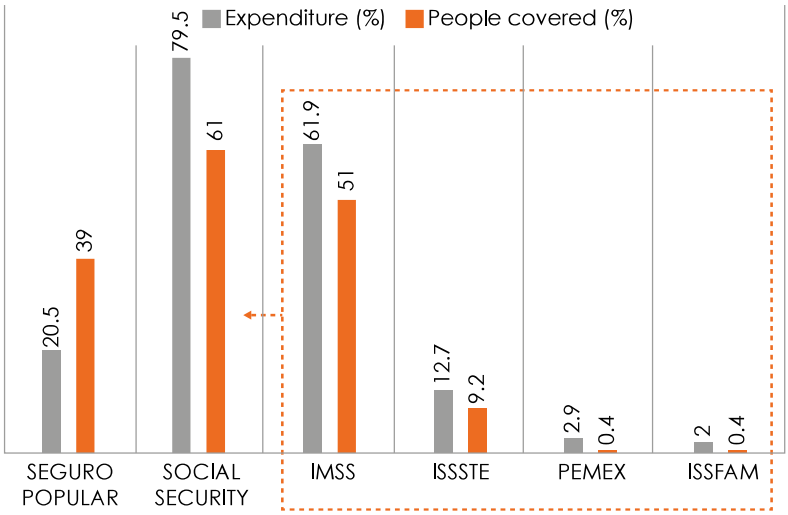
In this section, we describe the most prominent health policy initiatives promoted by President Peña Nieto in the 2012-2015 period to suggest that they are not definite stepping-stones towards universalism, but mostly fragmented efforts reinforcing the two-tier inequality of the health protection offered in Mexico through social security and social assistance.

Historically, as we discussed in the first section of the article, the coverage, generosity and quality of the services and goods provided by each subsystem have been highly unequal favoring social security beneficiaries. For example, note that while the health services provided by the social security subsystem cover only 61% of the total population, they disburse almost 80% of the total public health expenditure (figure 4).

In general, regarding social assistance to those uninsured, of the three social programs with the largest budgets two do not have a structure

tending to universality.[8] As discussed below, *Seguro Popular* targeted the poor predominantly and now gives access to fewer or lower quality services than social security, thus, they may not be associated to a transition to a universalistic structure of the social protection system (Martínez-Franzoni and Sánchez-Ancochea, 2014, pp. 16-17).

Figure 4. Public health care in México 2013 (% of coverage and of expenditure)



In a rather stimulating working paper, Martínez Franzoni and Sánchez Ancochea (2012) summarize the reasons why universalism is both important and superior to means-tested interventions; here I only list the reasons. Universal policies can be more redistributive towards the poor than means testing, they do not create stigma, they are easier to manage, and they may have powerful and positive macro-social impacts. For example, universal policies tend to create cross class coalitions favoring social cohesion, which then thrusts for the expansion of public spending and the improvement of service quality.[9]

From the mid-1990s to date, several countries in Latin America have introduced a variety of programs, including noncontributory pensions and health insurance, and cash transfers targeted to the poor. Levy and Schady (2013) consider that these policies have

8 Of the total budget devoted to social development, in 2013, Oportunidades/Prospera received 3.94%, Seguro Popular 3.44% and Pensions for Old Age 1.49% (Office of the Presidency 2014).

9 There are several pieces of research stressing the virtues of universalism, for example, Holzmann and Hinz (2005) and Gill et al. (2005). For a detailed explanation of each advantage and further examples, see Martínez-Franzoni and Sánchez-Ancochea (2012), pp. 8-15.

resulted in considerable improvements in the well-being of the poor in Latin America. In Mexico, these programs are associated with several positive outcomes: for example, *Seguro Popular* decreased the catastrophic health expenditure of the affiliated families by 23 percent (King *et al*. 2009) while *70 y más* reduced the poverty gap among recipients from 0.61 to 0.46 (Galiani and Gertler 2009)

These noncontributory programs raise various concerns, as they are expensive, face mounting pressures for increases in coverage and benefits (given that these and contributions are not directly linked), and may also discourage formal employment (Levy and Schady 2013, Bosch and Campos-Vazquez 2014). Overall, the fragmentation of social security reduces the overall efficacy of insurance, diminishes domestic savings, and misallocates resources with rather negative impacts on productivity and growth. Furthermore, according to Scott (2005b), programs are subject to the political decisions and priorities of the government in office, and are limited by the yearly budget allocations.

As a consequence, Levy and Schady (2013) suggest to reform social protection such that policies (a) pay closer attention to the quality of services, (b) strive for a more balanced distribution of benefits, and (c) move towards sustainable sources of finance, particularly, emphasizing the link between contributions and benefits.

To sum up, in general, governments have three policy instruments at their disposal for social protection: social assistance, social insurance, and universal policies. In addition to the clear advantages of universalism discussed previously, in the Mexican case it has been showed that social insurance is highly regressive (Scott 2005a y 2005b), and thus exacerbates inequality in a country plagued with acute economic and social disparities (Esquivel, 2015).

Are the initiatives promoted by EPN (2012-2015) enhancing the universalistic structure of the social protection system? To start with, several works have sketched the nature of the social assistance interventions capable of promoting a universalistic structure. In favor, they point towards program interlinked to universal health-care and education; in opposition, to interventions targeted to the poor exclusively or giving access to fewer of lower quality services (Martínez-Franzoni and Sánchez-Ancochea 2014, p. 18). The government of EPN has not progressed in this component despite having promised to do so in the planning documents of the administration. The National Development Plan (2013-2018) announced that a legislative bill would be submitted to Congress for creating the Universal National Health System; the bill has not been presented to the Congress to this date.

The current popular insurance program (*Seguro Popular*) has

been in place since 2003 and does not show a structure leading to universalism: it mainly serves the poor, and it offers both a restricted and lower quality package of services than the health services offered by social security (Flamand and Moreno, 2015). Apparently, the government is carrying out the preparatory work essential for the reform.

The Health Undersecretary in office, Eduardo González Pier, stated that the aim of the government of EPN is to transform the current organization of the system in practice given that legal or budgetary changes would be worthless without appropriate instruments for the provision of services (infrastructure, management practices and human resources). Thus, the keystones for health system reform are, according to González Pier, administrative, labor and financial agreements among the different health providers.

The government of the Federal District refused to sign the agreement needed for the implementation of *Seguro Popular* in the city for three years (2003-2006). The local Minister of Health, a leading public health scholar, argued that *Seguro* worked against the universalization of health services that her administration was promoting. The federal program implied such a large subsidy for the City that the local government finally balked and now tries to coordinate the actions of both programs.

CONCLUSIONS

The main purpose of this article is to evaluate the performance of *Seguro Popular* after more than 10 years in operation. In the first section of the article, we defined health inequality and emphasized that socioeconomic status and social support are fundamental causes of disease. This opens the door for government intervention in health beyond direct medical attention, as a network of social support operated or regulated by the government may improve socioeconomic status (e.g. with education, training or subsidies). Then we carefully described the fragmented health care system in Mexico and illustrated the profound and expansive health inequalities present in two dimensions: first, the differences between the population protected by social security and those uninsured, and, second, across the states.

The health arena in Mexico proves to be highly unequal in terms of conditions, financing, access and quality. The article reveals that Mexico spends a rather low share of its PIB in health even in comparison with other Latin American countries and that a primary source of inequality is the large share of out-of-pocket expenditures (44%).

In the face of this rampant inequality in the health sector, especially for those uninsured, the Mexican government launched *Seguro Popular* in 2003 in an at-

tempt to offer financial protection in health, better access and quality services to the 55 million of Mexicans with no health insurance. It is crucial to note that the implementation of *Seguro Popular* confronted the particular challenge of financing services to be provided in a decentralized context, given that state governments are responsible for offering health services to the uninsured population since the mid-1980s.

In the second section we analyzed the performance *Seguro Popular* with the most recent data and studies available along four dimensions: financial imbalances between subsystems, out-of-pocket and catastrophic expenses, access to effective health care under reasonable quality standards.

Diminishing historical financial imbalances. The inequality between the two subsystems in terms of expenditure has diminished noticeably. The share of the total government expenditure for the uninsured has increased from 39.8 to 44.3% in the 2006-2013 period. In addition, the difference in transferred resources to the state receiving the highest level of federal spending on health (per capita) and the state receiving the lowest diminished by half between 2000 and 2010.

Reducing health-related out-of-pocket and catastrophic expenses. We present mounting evidence that *Seguro Popular* has reduced out-of-pocket payments as a share of total health expenditure in Mexico (from 52.9% in 2004 to 49% in 2011). Purchasing medications, however, continues to be an important source of out of pocket expenditures for affiliated families pointing to the need of reviewing purchasing practices and reforming the financial management of the funds transferred to the state governments via *Seguro Popular*.

Guaranteeing access to effective health care services. It is clear that the per capita financial transfer to state governments for each new affiliate to *Seguro Popular* as an incentive for increasing the coverage of the intervention has been a resounding success, i.e. state governments affiliated 55.6 million people during 10 years of operation (2003-2013).

In 2014, however, there were still 21.8% of people reporting no access to health services which points to an overlap of social security beneficiaries and *Seguro Popular* affiliates. A complementary explanation may be the fact that when health care facilities are of low quality, understaffed or located far away from the place of residence of the interviewee, he tends to report having no health care protection.

A quite attractive positive effect of *Seguro Popular* is related to the utilization of heath care services. We reported several studies showing that affiliates have higher utilization rates of health care services than the control groups, in particular, people with greater health needs, residing in the less

developed states, and with the lowest levels of income.

Despite the fact that *Seguro Popular* has clearly abated the financial imbalances of the health sector in Mexico, its positive results on affiliation, service utilization, and out-of-pocket and catastrophic expenses reduction, it still has important shortcomings in the quality of service provided. We suggest that given the new and substantial influx of federal funding to the services provided by the state governments, the latter have to be subjected to a higher standard regarding access and quality. This higher standard may be achieved through a combination of transfers dependent on reaching specific quality indicators, and vigorous citizen oversight.

REFERENCES

Aguilera, N., Marrufo, G. and Montesinos, A. (2005). *Desigualdad en Salud en México: un Análisis de sus Determinantes*. Universidad Iberoamericana, México.

Ávila-Burgos, L., Serván-Mori, E., Wirtz, V. J., Sosa-Rubí, S. G., and Salinas-Rodríguez, A. (2013). «Efectos del seguro popular sobre el gasto en salud en hogares mexicanos a diez años de su implementación». *Salud Pública de Mexico*, *55*(SUPPL.2), 91–99.

Bosch, M. and Campos-Vazquez, R. (2014) "The Trade-Offs of Welfare Policies in Labor Markets with Informal Jobs: The Case of the 'Seguro Popular' Program in Mexico," American Economic Journal, vol. 6(4): 71-99.

Carpiano, R., and Kelly, B. (2007). "Scientific knowledge as resource and risk: What does hormone replacement tell us about health disparities". *Annual meeting of the American Sociological Association*.

Consejo Nacional de Evaluación de la Política de Desarrollo Social [CONEVAL]. 2014. *Resultados de pobreza en México 2014 a nivel nacional y por entidades federativas*. Retrieved on november 4, 2015 from http://www.coneval.gob.mx/Medicion/MP/Paginas/Pobreza_2014.aspx.

Consejo Nacional de Población [Conapo]. (2015). *Indicadores demográficos básicos*. Retrieved on November 4, 2015 from http://www.conapo.gob.mx/es/CONAPO/Proyecciones_Datos.

Dirección General de Información en Salud [DGIS]. (2000). *Boletín de información estadística (Recursos financieros, Servicios otorgados y programas sustantivos, Recursos físicos, materiales y humanos)*. Retrieved on November 4, 2015 from http://www.dgis.salud.gob.mx/contenidos/publicaciones/p_bie.htm.

_____. (2006). *Boletín de información estadística (Recursos financieros, Servicios otorgados y programas sustantivos, Recursos físicos, materiales y humanos)*. Retrieved on November 4, 2015 from http://www.dgis.salud.gob.mx/contenidos/publicaciones/p_bie.htm.

_____. (2012). *Boletín de información estadística (Recursos financieros, Servicios otorgados y programas sustantivos, Recursos físicos, materiales y humanos)*. Retrieved on November 4, 2015 from http://www.dgis.salud.gob.mx/contenidos/publicaciones/p_bie.htm.

Esquivel, G. (2015) *Desigualdad Extrema en México: Concentración del Poder Económico y Político*, México: Oxfam. Retrieved on August 11, 2015 from http://cambialasreglas.org/images/desigualdadextrema_informe.pdf.

Flamand, L. and Moreno-Jaimes, C. (2014). *Seguro Popular y federalismo en México: un análisis de política pública*. México: CIDE.

_____. (2015). "La protección social en salud durante el gobierno de Calderón. Una valoración del diseño y la implementación descentralizada del Seguro Popular (2006-2012)". *Foro Internacional* 2015 I (219): 217-261.

Frenk, J. and Gómez-Dantés, O. (2008). *Para entender el Sistema de salud en México*. México: Nostra Ediciones.

Gakidou, E., Lozano, R., González-Pier, E., Abbott-Klafter, J., Barofsky, J., Bryson-Cahn, C., Feehan, D., Lee, D., Hernández-Llamas, H., and Murray, C. (2007). "Evaluación del impacto de la reforma mexicana de salud 2001-2006: un informe inicial". *Salud Pública de México*, 49(SUPPL.1), 88-109.

Galiani, S., and P. Gertler (2009) "Informe Final Sobre los Cambios del Programa 70 y más," Discussion paper, SEDESOL, Instituto Nacional de Salud Pública, commissioned program evaluation.

Glied, S., and Lleras-Muney, A. (2008). "Technological Innovation and Inequality in Health". *Demography*, *45*(3), 741–761.

Gill, S., Packard, T. and Yermo, J. (2005) *Keeping the Promises of Social Security in the Americas*. Washington, D. C.: The World Bank.

González-Pier, E., Barraza, M., Gutiérrez, C. and Vargas, A. (coord.). (2006). *Sistema de Protección Social en Salud: Elementos conceptuales, financieros y operativos*. México: Secretaria de Salud, Fondo de Cultura Económica.

Grogger, J., Arnold, T., León, A. S. and Ome, A. (2014). "Heterogeneity in the effect of public health insurance on catastrophic out-of-pocket health expenditures: the case of Mexico". *Health Policy and Planning* 1-7. (Advanced Access Jun 12).

Holzman, R. and R. Hinz. (2005). *Old-Age Income Support in the 21st Century: An International Perspective on Pension Systems and Reform*. Washington, D. C.: The World Bank.

Knaul, F. M., González-Pier, E., Gómez-Dantés, O., García-Junco, D., Arreola-Ornelas, H., Barraza-Lloréns, M., Sandoval, R., Caballero, F., Hernández-Avila, M., Mercedes, J., Kershenobich, D., Nigenda, D., Ruelas, E., Sepúlveda, J., Tapia, R., Soberón, G., Chertorivski, S. and Frenk J. (2012). "Health Policy The quest for universal health coverage : achieving social protection for all in Mexico". *The lancet 6736*(12), 1–22.

King, G., Gakidou E., Imai, K., Lakin, J., Moore, R., Nall. C., Ravishankar, N., et al. (2009) "Public Policy for the Poor? A Randomised Assessment of the Mexican Universal Health Insurance Programme." *The Lancet* 373: 1447-1454.

Leal, G. (2015) "La salud 'universal' programática de Peña Nieto", *La Jornada*, May 9. Retrieved on August 10, 2015 from www.jornada.unam.mx/2015/05/09/opinion/017a1pol.

Levy, S. and Schady, N. (2013) "Latin America's Social Policy Challenge: Education, Social Insurance, Redistribution", *Journal of Economic Perspectives*, 27(2): 193-218.

Leyva-Flores, R., Servan-Mori, E., Infante-Xibille, C., Pelcastre-Villafuerte, B. E., and Gonzalez, T. (2014). "Primary health care utilization by the Mexican indigenous population: the role of the Seguro popular in socially inequitable contexts". *PloS One*, 9(8).

Link, B. G., & Phelan, J. (1995). "Social conditions as fundamental causes of disease". *Journal of Health and Social Behavior*, *Spec No*(1995), 80–94.

Martinez-Franzoni J. and Sánchez-Ancochea D. (2012) "The Double Challenge of Market and Social Incorporation. Progress and Bottlenecks in Latin America", *desiguALdades.net Working Paper Series*, 27. Retrieved august 16, 2015 from-http://www.desigualdades.net/Resources/Working_Paper/27_WP_Mart__nez_Franzoni_and_Sanchez-Ancochea_online.pdf.

_____ (2014). "Should Policy Aim at Having All People on the Same Boat? The Definition, Relevance and Challenges of

Universalism in Latin America", *desiguALdades.net Working Paper Series*, 70. Retrieved august 16, 2015 from http://www.desigualdades.net/Resources/Working_Paper/70-WP-Martinez-Ancochea-Online.pdf.

Murayama-Rendón, C. (2011). "Adquisición de medicamentos en el Seguro Popular: Ineficiencia e inequidad". *Gaceta Medica de Mexico*, *147*(6), 497–503.

National Public Health Performance Standards Program. (2013). "10 Essential Public Health Services". Last access December 4, 2015, retrieved from http://www.cdc.gov/od/ocphp/nphpsp/essentialphservices.htm.

Office of the Presidency. (2011). *Anexo Estadístico del Quinto Informe de Gobierno de Felipe Calderón*. Retrieved on november 4, 2015 from http://quinto.informe.gob.mx.

_____. (2014). *Anexo Estadístico del Tercer Informe de Enrique Peña Nieto*. Retrieved on November 4, 2015 from http://www.presidencia.gob.mx/segundoinforme/.

Pfutze, T. (2014). "The Effects of Mexico's Seguro Popular Health Insurance on Infant Mortality: An Estimation with Selection on the Outcome Variable". *World Development*, *59*, 475–486.

Phelan, J. C., Link, B. G., & Tehranifar, P. (2010). "Social conditions as fundamental causes of health inequalities: theory, evidence, and policy implications". *Journal of Health and Social Behavior*, *51 Suppl*, S28–S40.

Rivera, J. A., Barquera, S., Campirano, F., Campos, I., Safdie, M., & Tovar, V. (2002). "Epidemiological and nutritional transition in Mexico: rapid increase of non-communicable chronic diseases and obesity". *Public Health Nutrition*, *5*(1a).

Scott, J. (2005). "Seguro Popular: Incidence Analysis". *Decentralized Service Delivery for the Poor*. World Bank. Last access March 3, 2014, retrieved from http://siteresources.worldbank.org/INTMEXICOINSPANISH/Resources/VolIIChapter3.pdf.

Scott, J. (2005a) *Desigualdad en Salud y Recursos para la Salud en México*, Documento de trabajo 302 del Centro de Investigación y Docencia Económicas [CIDE] y DocumentoTécnico de la Comisión Mexicana de Macroeconomía y Salud.

_____ (2005b) "Seguridad social y desigualdad en México: de la polarización a la universalidad" *Bienestar y política social*, 1 (1): 59-82.

Sistema de Protección Social en Salud. (2014). *Informe de Resultados*. Retrieved on November 4, 2015 from http://seguropopular.saludtab.gob.mx/portalsp2014/images/informe_resultado_enero_junio_2014.pdf.

Sosa-Rubí, S. G., Salinas-Rodríguez, A., and Galárraga, O. (2011). "Impacto del Seguro Popular en el gasto catastrófico y de bolsillo en el México rural y urbano, 2005-2008". *Salud Publica de Mexico*, *53*(4).

Whitehead, M. (1990). "The concepts and principles of equity and health". *International Journal of Health Services : Planning, Administration, Evaluation*, *22*(3), 429–445.

Wirtz, V. J., Santa-Ana-Tellez, Y., Servan-Mori, E., & Avila-Burgos, L. (2012). "Heterogeneous effects of health insurance on out-of-pocket expenditure on medicines in Mexico". *Value in Health*, *15*(5), 593–603.

World Health Organization [WHO]. 2015. *Global Health Observatory Data Repository*. Retrieved on November 4, 2015 from http://apps.who.int/gho/data/node.main.75.