

The End of Insurance?

Mexico's Seguro Popular, 2001–2007

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Abstract Health system reforms that introduce insurance principles into public health systems (such as national health insurance, internal markets, and separation of purchasers and providers) have been popular in the last two decades. Little is known, however, about the political complexities of transforming existing health services into health insurance systems in developing countries. Mexico's Seguro Popular (Popular Health Insurance) program, introduced in 2003, was an attempt to do exactly this: radically alter the country's existing health service and convert it into health insurance. Popular Health Insurance (PHI) has garnered international attention and has been held up as a model for other countries to follow. Yet little has been written about the political process that led to the reform or the difficulties of implementing it. This article fills that lacuna, offering an assessment of the reform context as well as of the process of formulating, adopting, and implementing it. It argues that, while the reform has improved Mexico's public health service, it has thus far failed to transform that health service into a true insurance system. Limited institutional reform has also left PHI severely underfinanced. The Mexican case is a cautionary tale for reformers who want to transform extant health services into health insurance systems.

There are a great many people who have helped me understand the Mexican reform over the years. Some would not want their names revealed publicly, other names have been forgotten or were never known. The following list of people helped, in one way or another, to make this research possible, but not all of them would agree with my conclusions, and none of them share responsibility for any remaining errors: Maritza Ordaz, Mariana Barraza, Cristina Gutierrez, Héctor Hernández Llamas, Emmanuela Gakidou, Manett Vargas, Christopher Murray, Gary King, Jorge Domínguez, Steve Levitsky, Torben Iversen, William Hsiao, Norman Daniels, Michael Reich, Gisela Morales, Agustina Giraudy, Nirmala Ravishankar, Ryan Moore, Clayton Nall, and two anonymous reviewers.

Introduction

Since the end of the cold war, there is no longer serious debate about the inferiority of completely state-run, market-free industries. And yet, particularly in the health sector, few believe that a purely market-based approach is sufficient, given equity concerns and endemic market failures (Arrow 1963). As a result, the focus of most health systems analysts and reformers has been to find a middle ground, one in which the needs of the poor and sick are attended to, but in which sclerotic bureaucracies that drive up costs for low-quality care do not dominate (WHO 2000). Various analysts have suggested that it is possible to maintain a strong government commitment to health care financing while still introducing some market discipline to improve efficiency (OECD 1992; Frenk and Londoño 1997).

A number of hybrid approaches that incorporate both equity and efficiency considerations have been tried in the past two decades. These approaches, variously known as “public contracting,” separating purchaser and provider, or creating “internal markets,” have been experimented with in countries as diverse as the United Kingdom, New Zealand, and Colombia. In some of these cases, reformers have tried to convert existing Beveridge-type health services (i.e., systems modeled on the U.K.’s National Health Service) to Bismarck-type national health insurance systems (i.e., systems modeled on Germany’s health system). This kind of transformation is frequently justified on the grounds that it will impart competition, efficiency, and improved quality to poorly functioning, monopolistic health systems (Baeza and Packard 2006). While the theoretical underpinnings of introducing market principles into public systems may be reasonable, we know relatively little about how these hybrid reforms actually work in practice. In particular, how difficult is it to change a country’s institutions in the health sector?

This article attempts to partially fill this lacuna by investigating in detail the politics surrounding one case of health system reform in Mexico in 2003. In that year, Mexico formally introduced Seguro Popular, or the Popular Health Insurance (PHI) program. The goal of PHI was to transform Mexico’s public health service for the uninsured into a health insurance program. The ambitious reform, launched by then secretary of health Julio Frenk, has since received considerable international attention. For example, a special series in the *Lancet* in 2006 focused on the reform, and former President Bill Clinton extolled its virtues at the International HIV/AIDS Conference in Mexico City in 2008. Despite the high level of

international recognition achieved by PHI, there is surprisingly little independent analysis of the program by scholars. Furthermore, there has been meager institutional or political analysis of the challenges of introducing a bold reform of this type in a large, middle-income country.

In this article, I look at the reform from the policy adoption phase through to the initial policy implementation phase. Most of the analysis presented is based on data from 2000–2007 or early 2008. My analysis of the implementation is not a final assessment, however, because the reform is not supposed to be fully implemented until 2010. Still, by 2007, implementation had already passed the halfway mark, and the primary implementation task yet to be undertaken was to expand the program geographically. Thus, while the analysis here is not final, it pertains to the state of reforms that have been under way for some time in large parts of the country and that should not necessarily be affected by the geographic expansion of the reform model.

The article attempts to provide a balanced picture of the reform's goals and accomplishments thus far. The emphasis is on the reformers' attempts to change the nature of the Mexican health care system, not the reform's impact on health. Whether improvements in health were achieved by PHI is a question best left to a formal impact evaluation. An evaluation of this type is in fact ongoing, and preliminary results were published in the *Lancet* last year (King et al. 2009). The purpose of this article is, instead, to consider the institutional aspects of the reform. Impact evaluations are useful for telling us whether a reform worked, but not why. If the institutional reforms envisioned at the outset of a policy change are not fully implemented, the reform may still have an impact on health, but to understand why, we have to look not at the initial proposals but at the actually existing policy.

Assessing the success of PHI from an institutional perspective requires us to understand the reformers' own goals. Although the program's designers undoubtedly wished to have a positive impact on health, they also had a specific vision of institutional and financial, or what they have called "structural," reform when they created PHI (Secretaría de Salud 2004). What were the core elements of this vision? First, the reformers opted for an insurance design because they wanted to introduce a "culture of prepayment" in Mexico, which they believed would reduce costly out-of-pocket payments and medical impoverishment (Secretaría de Salud 2001). The mechanism for introducing prepayment was to be a publicly subsidized, progressively structured insurance premium. Second, the reformers wanted to create an explicit package of services so that they could

rationally allocate limited resources in ways that were more cost-effective. Thus the premium was to be tied to a new, guaranteed basic package. Third, the reformers wanted to introduce a separation of purchaser and provider, along with explicit contracts between public purchasers and both public and private providers. The motivation for this aspect of the reform agenda was to introduce market discipline, and therefore greater efficiency, into the public health service (Secretaría de Salud 2004, 2005a). Some version of these three principles of health reform had also been present in the Zedillo administration's 1990s decentralization reform, but they were never fully implemented (Homedes and Ugaldé 2006).

The reform team also had other broad goals unrelated to the insurance aspect of PHI. In other words, these goals could logically have been accomplished without the "structural" transformation of Mexico's health service to a health insurance program, but they were linked to the overall reform agenda. One such goal was to increase the percentage of Mexico's gross domestic product that is allocated to health spending. The reformers believed that Mexico invested too little in health relative to other Latin American nations, and especially too little in the informal sector that was not covered by social security (Instituto Nacional de Salud Pública 2008: 16). Another goal was to alter the federal formula for distributing funds to the states. That formula tended to favor wealthier and healthier states, rather than, as the reformers preferred, those with the greatest health needs (Secretaría de Salud 2004).

The reform has been most successful with respect to its broadest goals: increasing health spending and altering how that spending is distributed. Total health spending in Mexico has increased substantially, and that spending has been somewhat more equitably distributed. There is also some evidence of increased access to health services and reduced out-of-pocket expenditure by the poor. At the same time, the set of goals related to transforming Mexico's health service into a health insurance system has not been realized. The attempt to introduce a culture of prepayment has failed, and the guaranteed basic package has not, in practice, been fully guaranteed. There is some limited evidence of a separation of purchaser and provider functions, but the introduction of new public management has lagged. While health spending has increased, expected contributions from states and families have not materialized, leaving the program severely underfinanced and its long-term sustainability threatened. The net result of these changes has been an improved version of the national health service but a failure, as of at least 2008, to transition to an insurance system.

PHI's successes owe much to the ability of the reformers at the policy adoption phase, where they carefully built support at the presidential level and lobbied or weakened opponents in the executive and legislature. PHI's limitations, however, are due at least partly to limited political support for key aspects of the reform from providers, implementers, and civil society. This lack of broad social support was less important at the policy adoption phase, where reformers were able to marginalize opposition, than at the implementation phase of reform, where opponents could no longer be sidelined. The reform process was also constrained by Mexico's institutional legacy, particularly its federal constitution and decentralized health system.

Background to Reform

Existing accounts of the reform process imply that the introduction of PHI was relatively straightforward. By these accounts, the reformers used years of accumulated evidence to build a broad coalition in favor of reform with little opposition (Horton 2006; Frenk 2006; USAID 2008). This narrative, propagated by the reformers and a handful of other analysts, elides substantial disagreement about the problems with Mexico's health system and the benefits of PHI. To understand the actual politics surrounding the reform, it is useful to understand something about the nature of Mexico's health system prior to the creation of PHI.

Just as in much of Latin America, Mexico's health system is fragmented among different social security funds and providers. As of 2000, the largest provider in the country was Instituto Mexicano del Seguro Social (the Mexican Institute of Social Security, or IMSS), which serves formal workers in the private sector. Somewhere around 40 percent of Mexico's population of 100 million was served by IMSS in 2000 (OECD 2005). Various smaller, occupationally distinct funds serve smaller groups of workers, such as public employees. Most of these funds basically function as contributory social insurance, in which employees and employers pay a payroll tax premium, subsidized by the state. Note two important facts. First, access to these social security institutions was (and continues to be) based on employment status. Second, although these institutions are described as social *insurance*, this is somewhat misleading. Each one functions more like a miniature health service. Within each institution, there is no guaranteed package of services, and affiliates must use clinics operated by their insurance fund, meaning there is no competition among providers.

For those not covered by social security (about half the Mexican population in 2000, mainly informal-sector workers, the unemployed, etc.), services were provided by the numerous clinics and hospitals of the Ministry of Health (MOH). The MOH was run as a health service, in which there were no premiums, no guaranteed package of services, and no contracting. The service was decentralized in the 1980s and 1990s, so that Mexican states had control over the MOH infrastructure and workers in their territory. The MOH suffered from several deficiencies, however, in common with such systems throughout the developing world. Services were limited, frequently unavailable, and, contrary to the spirit of a national health service, often required out-of-pocket payments (user fees) at the point of service. Both these payments, and those made to private-sector providers that were relied on when the public sector failed, sometimes drove Mexican households into poverty. An estimated 55 percent of health expenditure in 2000 was out-of-pocket, and between 2 and 4 million Mexicans per year fell into poverty as a result of this spending (Secretaría de Salud 2004).

When Frenk became Mexico's secretary of health under President Vicente Fox in 2000, he initially signaled that he would pursue health system integration. The first statement of the new administration's health goals was elaborated in the National Health Plan of 2001. The plan put forth the goal of increasing "prepayment" for health through an insurance program. The desire for prepayment was consistent with a belief that families should insure themselves against catastrophic expenditures, which would reduce medical impoverishment. The notion of a Seguro Popular was detailed, and a strategy was proposed to make use of a provision in IMSS, known as Family Health Insurance (FHI). FHI started in the late 1990s and allowed Mexicans not covered by another fund to buy into social security by paying both the employee and part of the employer payroll contribution. Services were then similar to those provided by IMSS, though preexisting conditions were not covered. Given the high cost of this program, few informal-sector workers were both able and willing to join (González-Rosetti and Mogollon 2000; González-Rosetti and Bossert 2000). Frenk's plan, which seemed to augur greater health system integration, proposed subsidizing participation in FHI as a way to increase coverage for those with limited resources (Secretaría de Salud 2001).

Simultaneous with these calls for using IMSS to provide greater coverage and more equitable financing, Frenk's plan also insisted on shifting the budget to demand-based allocation of health resources and choice of providers. Demand-based allocation meant that the budget would be dis-

tributed based on the use of services by patients, not simply the existence of services. (Supply-side allocation refers to distributing funds based on the extant supply of services, regardless of demand.) This was consistent with “structured pluralism,” as described in previous work by the secretary (Frenk and Londoño 1997). It meant creating a true insurance system within IMSS with a competitive market for provision. As I showed above, IMSS has never functioned as insurance, except in its reliance on payroll tax premiums.

Despite these early signs that Frenk wished to work with IMSS, the goal of health system integration had been abandoned by 2002. When it was finally legislated in 2003, the PHI program no longer envisioned working closely with the social security institutes. What had happened to the secretary's plans for integration?

Frenk did initially attempt to coordinate with IMSS. Formal meetings were held with the institute in 2001 to push the idea of using FHI to cover the uninsured through IMSS. But while the IMSS provider union might have been willing to consider an expansion of FHI that allowed it to receive funds for, and treat patients in, its own facilities, the secretary envisioned a more open system of public contracting, in which IMSS would finance coverage in both IMSS and MOH facilities (Miguel Angel Lezana, interview by the author, Mexico City, June 29, 2005). This demand-driven model, separating provider and purchaser functions, would have transformed IMSS's internal organization. It would have required the institute to compete with the MOH, and possibly the private sector, and it would have radically altered labor relations within the institute. The IMSS union was not interested.

This was not the first time that IMSS had killed integrative reform in Mexico. The institute had also managed to quash various reform proposals in the 1990s, including one Frenk had developed at a private research institute, FUNSALUD (Cruz and Carrera 2004; González-Rosetti and Mogollon 2000). Institutional fragmentation in the Mexican health care delivery system makes it difficult for policy makers in the MOH to radically change that system on their own. All such changes must be acceptable to IMSS, which has a high degree of autonomy and a large and powerful union that has tended to prefer the status quo (González-Rosetti and Mogollon 2000).

Since the secretary was unwilling to hand over the bulk of his budget to IMSS without any kind of public contracting, the goal of integration was jettisoned. IMSS also became implacably opposed to the idea of PHI and continued to oppose it even when it no longer had any direct impact

on the social security institutions (Muñoz 2003). This first reform failure is highly suggestive of how difficult it is to reform labor relations to transform a health service model into a health insurance program.

The reformers were careful to avoid a similarly public reaction from the MOH's own provider union by sidelining it at the design phase of PHI. Undoubtedly, the MOH expected that its own workers would offer the same kind of resistance as those of IMSS. The reform would affect provider workloads, requiring them to see more patients (because of the expansion of insurance coverage) and potentially threatening the jobs of those who did not. The MOH union did immediately reject the reform upon learning about it through the press, after the program had been designed and adopted (Marco Antonio García Ayala, interview by the author, Mexico City, July 13, 2005). To minimize union resistance at the implementation phase (as well as to reduce the reform's price tag), the MOH permitted only temporary workers to be hired under the new program. These workers lacked benefits and tenure, and, critically, the union's backing. They were hired on short-term contracts and could be sacked for poor performance. They were more likely, it was assumed, to accept the kind of demand-based insurance payment system that the reformers had in mind. I consider how successful this tactic was below.

Toward Popular Health Insurance: The Policy Dialectic

After integration failed, Frenk and his team turned in earnest to creating an alternative. Notably, Frenk's team did not include traditional bureaucrats from the MOH. These bureaucrats were expected to resist attempts to introduce economic analysis or insurance principles into the health service. To sideline them, Frenk assembled a parallel "change team" of outsiders with technical, particularly economic, skills and insulated them from the rest of the ministry in a newly created "Economic Analysis Unit," where they were free to design a radical reform (Mauricio Bailón, interview by the author, Mexico City, June 30, 2005). This strategy resembled the way that economic technocrats had implemented liberalization in Mexico and Latin America in the 1980s and 1990s (González-Rosetti and Mogollon 2000).

The result of the change team's deliberations was the Popular Health Insurance program. PHI would restructure the MOH health service, transforming it into a health insurance program. It would not touch the social security sector. It was therefore not a comprehensive or universal reform,

nor did it address quality issues or organizational deficiencies within IMSS or the other social insurance funds.

How would PHI work? Frenk has often explained the idea behind PHI as an attempt to make the MOH health service function similarly to the social insurance institutes (Secretaría de Salud 2005a). This analogy with social security is incomplete. True, PHI was supposed to provide pre-paid insurance coverage to everyone who lacked access to social security, based on a subsidized premium. Like affiliates of social security, PHI affiliates would be eligible to receive services in institutions controlled by the MOH upon presentation of their policy number.

As I have shown, however, the ambition of the minister of health went beyond creating a parallel social security institution. IMSS does not function as insurance, but the PHI program was explicitly designed to operate according to insurance principles. Thus it was created with several additional characteristics that differentiated it from social security. First, the insurance program would actually cover a defined set of primary- and secondary-level benefits, unlike social security: at the time, there were 91 medical interventions; in 2008, there were 266 primary care and basic hospital services covered (Secretaría de Salud 2008). There is also a defined drug list. Second, PHI would be based on a separation of the provider and purchaser function, which does not exist in the social security institutes. States, which run the health services in Mexico's decentralized system, would be required to create a new PHI office to purchase health services from clinics and hospitals on the basis of explicit contracts. These two aspects of PHI distinguished the program from social security. They were intended to create a true insurance system in the MOH sector. They were joined to a third element: a national catastrophic expenditure fund that would create a national risk pool for a small number of expensive interventions.

PHI also possessed other important features less central to the program's insurance nature, but still critically important to its implementation. First, since informal-sector workers do not pay payroll taxes or have formal employers, there was a need to substitute the payroll-tax premium used by social security. Frenk's solution was to preserve the tripartite financing model used by social security (federal government, employer, employee), but to substitute state contributions for the employer payroll tax (Knaul and Frenk 2005). Forcing states to pay for the program was controversial. In the program's pilot phase (2002–2003), states were not asked to contribute to PHI. Many states resisted participating precisely because they feared that the federation would ultimately ask them to contribute,

so federal officials were forced to make explicit promises that this would not occur (Rafael Aragón Kuri, interview by the author, Oaxaca City, October 15, 2007; Bailón, interview). When the PHI bill was presented in congress, therefore, many states expressed anger and surprise that the final bill included a state contribution. Legislators from states already in the pilot program but not contributing were much more likely to oppose the PHI bill than those from states who had not yet entered the program and did not experience the new state contribution as a “loss.”¹

Other changes were added at the legislative phase. The premium schedule initially envisioned by Frenk was subsidized, but when the proposed legislation went to the Mexican Senate, legislators argued that the poor should be exempt from premiums altogether. It was agreed that the bottom two deciles of the income distribution would not pay for the insurance program (*Diario Oficial de la Federación* 2004). Finally, the creation of PHI was designed to recentralize federal control over the decentralized health system. During the decentralization of the 1990s, the federal government had begun giving block grants to the states to run their health systems with few strings attached. PHI would add new strings as well as alter the formula for distributing federal money to make it more equitable than the block grant formula (Homedes and Ugalde 2009; Lakin 2009).

In Mexico a health reform like PHI has to pass through congress and be signed into law by the president. Frenk and his team at MOH understood that this would not be easy. They engaged in extensive lobbying with members of congress to gain support for the bill. But serious opposition came from several sources. First, although PHI no longer directly involved social security, IMSS remained profoundly distrustful of the program. The institute’s union claimed that PHI would divert resources from social security, leaving it in “grave danger of collapsing.” Union leaders fought the reform in the media and through congressional allies (Muñoz 2003; *Milenio Diario* 2003).

Another major source of opposition to the reform was the Ministry of Finance. Finance opposed PHI on fiscal grounds from the very beginning

1. The vote in the lower house of congress split the Partido Revolucionario Institucional (PRI). The Partido Acción Nacional voted unanimously for the bill, and the Partido de la Revolución Democrática unanimously against. Analysis of the PRI vote (excluding party list members without single-state constituencies) reveals that 93 percent of the plurality PRI members opposing PHI were from states that already had access to the program at the time of the vote. Likewise, while twenty-six out of sixty (43 percent) PRI members from states already in the program voted against PHI, only two of twenty-six (8 percent) from states not yet in the program opposed the bill. The data derive from the author’s analysis of roll call voting results obtained through the H. Congreso de la Unión Web site, at www.congreso.gob.mx (pages now discontinued).

(Carlos Hurtado, interview by the author, Mexico City, July 18, 2005). Unable to quash the program directly, the Ministry of Finance attempted to attach a rider to the bill as it moved through congress to make program implementation conditional on a broader fiscal reform to raise more government revenues. Given that President Fox had already tried and failed to pass a fiscal reform, this would have been the kiss of death for PHI.

Finally, Mexico's largest left-wing party, the Partido de la Revolución Democrática (PRD), opposed the reform on ideological grounds. Like many leftists, the party preferred a health service to a health insurance model. The PRD was wary of competition and of a possible increase in the private sector's role in health service provision. It also objected to premium payments, arguing that health was a right that should be "free" (meaning it should be financed entirely by general revenues). Some PRD members supported the reform after the poor were exempted from premiums, but most argued that the exemption should apply to everyone (Asa Cristina Laurell, interview by the author, Mexico City, August 4, 2005). Finally, the PRD had self-interested reasons for opposing the reform: PHI would eventually render obsolete a health service program the party had started in Mexico City, its largest stronghold. The party did not want to lose the ability to take credit for that program. Like congressional representatives with ties to Finance and IMSS, PRD members tended to vote against the reform.

Frenk and his team at the MOH managed to marginalize the opposition to the reform and get PHI through congress. Although they have presented this as a successful case of persuasion on the basis of "evidence" (Frenk 2006), this actually understates the degree of political skill the reformers mustered in defense of their policy. The main opponents of PHI did not find the reformers' evidence compelling and continued to oppose PHI even after the legislation had passed. As a result, Frenk and his team did not rely only on evidence to best their enemies; they opted instead for a much broader, politically astute set of tactics.

Consider the opposition from the Ministry of Finance. Initially, the reformers presented data to convince Finance that if the current health budget were simply allowed to continue to grow at current rates of increase, it would reach a similar level in 2010 as the proposed budget for PHI. These figures were presented in a way that made the program look particularly inexpensive. Finance was unconvinced and refused to accept that sufficient financing for the reform could be found without a broader fiscal reform, which was not forthcoming (Fernando Chacón Sosa, interview by the author, Mexico City, June 24, 2005; Hurtado, interview; Ignacio Ibarra Espinosa, interview by the author, Mexico City, July 14, 2005). The

reformers then abandoned attempts to convince top-level Finance officials and tried instead to cultivate Finance-related support in the congress. For example, the reformers worked closely with the head of the Senate Finance Commission, who was from the same party as the president. The commission head was tapped to draft the legislative language to build support among potential Finance-minded opponents (Ibarra Espinosa, interview).

Ultimately, however, Frenk and his team came to believe that they would never get the support of Finance. The reformers therefore downplayed their attempts to persuade through evidence and reverted to an overtly political strategy. They worked with the president's office to try to marginalize Finance, and they misrepresented Finance's position on the bill (claiming that Finance had supported the bill when it had not) to other government agencies to build wider support. These tactics worked. Finance was so enraged, however, that it continued to try to sabotage the program even after it was passed, warning state governments not to enter PHI and threatening to cut state transfers if they ignored the warning (Chacón Sosa, interview).

The MOH eventually triumphed, and PHI was passed into law. The states disregarded Finance's warning, and by 2006 they had all joined the program. Passage of the reform had not been easy because of substantial opposition from various quarters. But the reformers had been savvy. They had not relied only on evidence and persuasion. They had also relied heavily on secrecy (hiding the reform agenda from top bureaucrats and from the provider union) and sabotage (trying to undercut Finance's position within the government). Policy adoption, however, was just the first step in the process of creating PHI.

Implementing PHI: The End of Insurance

After PHI made it out of congress, it looked like it might have a bright future. The president was increasingly behind the program, Mexico was flush with oil revenues that bolstered the federal budget, and an energetic, well-connected team was ready to push the reform forward. But even at the policy adoption phase, there were signs that implementation would not be easy.

The nature of the reform angered two groups. First, the MOH provider union had been left out of the policy process and did not like the new arrangements, which it assumed would mean more work for the same pay. If the insurance program worked, there would be more demand for

clinical services. While the MOH was claiming there would also be more money and more personnel to support the increased demand, providers were unconvinced (Alma Suarez, interview by the author, Comitán, July 20, 2005; Mario Félix Pacheco, interview by the author, Oaxaca City, November 30, 2007; José Manuel Santiago Eligio, interview by the author, Chilpancingo, November 26, 2007). Second, the requirement of a state contribution, the so-called State Solidary Contribution, was opposed by most state governments from the beginning. They argued that they did not have the funds to make this payment. The Ministry of Finance had stoked their concerns by suggesting that they might not be able to afford the program.

Faced with this kind of opposition and desirous of fast results, the federal government decided to back off on some key provisions of the reform. This decision was driven by the politics of implementing a poorly understood, top-down reform in a decentralized health system where the federal government has few sticks to force politicians, providers, or consumers to do what it wants them to do. According to the law, the program, which officially began in 2004, could affiliate only 14 percent of the eligible population per year. This had been one of the few concessions Finance had extracted to make sure the program's budget did not get too far ahead of government revenues. Both Frenk and the Fox administration knew they needed to get as many Mexicans into the program as possible by 2006, before the presidential transition. If the program was not well entrenched by then, the next administration might eliminate it. At the same time, the Fox administration wanted to exploit the program's political appeal in advance of the 2006 election to bolster support for the ruling party (Eduardo Sojo Garza Aldape, interview by the author, Mexico City, January 17, 2006). Speed was of the essence, and the goal was to affiliate at least as many citizens as allowable under the law.

Opposition to implementation from providers and states was incompatible with speedy affiliation. So the federal and state governments began to engage in behavior that violated the spirit, if not always the letter, of the law. In the first place, PHI money was originally passed to the states with strict rules about how much could be spent on nonclinical service costs. Only a fraction of the money, about 30 percent, was to be used for salaries for existing personnel; investment in new infrastructure was not allowed. Opposition from providers, however, quickly made it necessary to spend more than expected on pacifying personnel (Ricardo Forero Paez, interview by the author, Chilpancingo, October 2, 2007). Good data are not available from most states, but in Chiapas at least 44 percent of PHI funds

went to labor between 2000 and 2006, substantially more than the 30 percent limit (Instituto de Salud 2007; SPSS Chiapas 2006).² Worse still, while the initial strategy behind PHI had been to hire contract workers to lower labor costs and improve efficiency, this effort had failed by 2007. In that year, the MOH union succeeded in securing the eventual “regularization” of contract hires for PHI, meaning that they would be brought closer to the union structure with similar benefits and privileges (Forero Paez, interview).

If states struggled to get providers to do their part for PHI, the federal government struggled to get the states to do theirs. When the program was launched, PHI’s guaranteed service package was costed out and then divided up between the federal government, the states, and the family premiums. Initially, PHI funds were supposed to be used to pay for personal health services, and they were calculated based on the variable cost of providing a basket of services, assuming the existence of appropriate infrastructure. These funds could be used, therefore, for rehabilitation and maintenance, but not for new clinic or hospital construction (Secretaría de Salud 2005a). Other federal funding (the so-called Fund for Budgetary Preparedness, or Fondo de Previsión Presupuestal) is available for new infrastructure, but this is separate from the state contribution to PHI. This arrangement makes sense: insurance policies typically reimburse providers for services rendered, and those services may include the variable costs of production. Insurers do not reimburse providers for building new infrastructure, however.

Under PHI, each state signs a contract obligating it to make a contribution, the State Solidarity Contribution, to pay for health services. The law sets out how much each state is required to pay. In 2004 the contribution was about \$113 (U.S. dollars) per affiliated family, though it was to rise with inflation each year. As PHI was rolled out, states proved reluctant to make these payments. Faced with this resistance, the federal government was in a weak position to force states to pay up. The federal-state PHI contracts became the site of nontransparent negotiations with states that ultimately reduced the effective state contribution. The federation

2. While the reformers hoped that the existing personnel would become more efficient to deal with increased demand for health services, states have tended to instead increase salaries and hire more workers. By 2007, according to data obtained in Oaxaca and Chiapas, the former had increased its medical personnel by 450 people, the latter by 1,500 (data from anonymous source at Oaxaca PHI, interview by the author, 2008; Ramos Jara, interview by the author, Tuxtla Gutiérrez, Chiapas, February 20, 2008). According to other sources, in 2006 Chiapas spent about 70 percent of its PHI budget on personnel, while Oaxaca spent 18 percent (INSP 2008).

Table 1a Required and Actual Contributions to Seguro Popular in Three States (in U.S. Dollars)

	Required Contribution (per Household)	Liquid Contribution			Total Contribution		
		2004	2005	2006	2004	2005	2006
Chiapas	113	73	51	26	86	67	75
Guerrero	113	26	54	67	101	54	70
Oaxaca	113	0	0	0	75	74	69

Source: Carlos Gracia, director general of finances, Mexico's National Commission for Social Protection in Health (CNPSS), electronic correspondence with author, February 5, 2008.

Notes: Figures in U.S. dollars, using an exchange rate of 1 peso = 0.091 dollar. Estimate of average exchange rate between 2004 and 2006, based on an average of averages from 2004–2006 (using OANDA tools at www.oanda.com, accessed January 10, 2010). The required contribution is inflation indexed, so it should go up each year. The value in the table was the required contribution in 2004. Because the contribution should rise, reporting only the 2004 amount for comparison with 2005 and 2006 is conservative and underestimates the financing gap. For ease of presentation, I do not present inflation-adjusted numbers. Liquid contribution is the amount of new money the state put in, not including money that was credited. Total contribution is liquid plus credited contribution. Total contributions therefore include some funds that were credited toward the insurance package (e.g., infrastructure investment).

quickly decided to allow states to credit part or all of their State Solidarity Contributions from infrastructure investments they had made in the five years prior to entering the PHI program, or any ongoing investments (Secretaría de Salud 2005b). Note that this contravened the original intent of the state contribution to PHI, which was to pay for personal health services. It also drew money away from the costed-out package toward other expenditures.

The actual data on how much individual states pay have never been made fully public. We may rely on data from two sources. For the period between 2004 and 2006, data were obtained for three states through field research. Those data are reported in table 1a below. For all states, a report by a government auditor, CONEVAL, includes an appendix with state contributions for 2007 only. Those data are reported in table 1b below.

Table 1a demonstrates the failure of these states to make the full contribution required by law. All three states have credited part of their State Solidarity Contribution by investing in infrastructure. Credits are not exclusively for infrastructure: Chiapas, for example, took credits for funds spent on trachoma and HIV prevention. In general, however, because of the high cost of capital investment, infrastructure credits have tended to dwarf credits for state-funded health services (SPSS Chiapas 2006). In both Oaxaca and Chiapas, the states have credited investments in specialty

hospitals located in major cities. Even if we were to accept these credits as legitimate, however, states are still underfinancing PHI. Neither the part of the State Solidarity Contribution paid directly in cash (labeled “liquid” in table 1a) nor the total resources (including credits for infrastructure) reach the level of the required contribution for any of these states in any year. In short, the PHI package was underfinanced in these states in these years.

Hard data on other states are lacking for this period, but interview evidence suggests that lack of state financing has been widespread (Juan Carlos Ávila, interview by the author, Morelia, August 8, 2005; Jorge Flores Beristain, interview by the author, Tlaxcala, August 7, 2005). Perhaps more important, in 2008, the federal government itself explicitly acknowledged that states had been crediting most of their State Solidarity Contributions and that this was leading inexorably to a financing gap for health services in PHI. In 2006, 92 percent of the total value of all State Solidarity Contributions was credited for other investments; in 2007 the figure had improved only marginally to 88 percent. New rules for 2009 were crafted to force states to make liquid payments to PHI, though it remains to be seen whether these will be enforced (Secretaría de Salud 2008).

The data in table 1b provide information on this crediting problem, and the overall commitments, for 2007. In 2007 the required state contribution per family had risen to \$130.40 (U.S. dollars). Using the data in table 1b, we can estimate the financing gap caused by the states’ failures to make their required contributions. Let us start with a conservative estimate, using the total amount that states have paid, including the credits they have taken. These credits are, as I have shown, frequently for infrastructure not included in the costing of PHI, but some fraction of the credits may be related to actual services. Even if all credits taken by the states were legitimate, there was a financing gap, as in column 8, of approximately \$171 million in 2007.

If we now assume, as is likely, that the vast shares of state credits were inappropriate (i.e., not used to directly provide services) and should not be counted, then the financing gap would rise to \$858 million (column 7). In other words, in 2007, when states should have made, based on their affiliation figures, a contribution of approximately \$953 million, they fell short by somewhere between \$171 and \$858 million, depending on the degree to which the credits they took were related to services versus infrastructure or other inappropriate expenses.

A further perversion should be noted: when states take a credit for infrastructure investment (or direct health services provided), that investment

should be coming out of the state's own funds. But it is not clear that this is occurring. Infrastructure investments at the state level are often financed out of federal transfers. When a state takes a credit for an infrastructure investment paid with federal funds, there is no net increase in health funding overall by the state or the federation. If a state takes a credit against own-source spending on health, that spending should be identifiable in the state's budget. But this is not necessarily the case.

There are insufficient data to track the extent of this problem, but to understand its potential magnitude, consider the case of Oaxaca. Oaxaca has, as I have shown, credited its entire contribution to PHI from the beginning. In 2007 the state took a credit for \$435 million pesos (Urbina 2008). In that same year, the state of Oaxaca brought in about \$4 billion pesos in own-source revenues (i.e., not including federal transfers) (Gobierno de Oaxaca 2008). Thus the credit represents just under 11 percent of the state's entire own-source revenue in that year. We have no way to know what the credit was taken for, since neither the federation nor the state report this information. Nor can we be sure that the state actually spent \$434 million itself, out of its own funds, to receive the credit.

It is theoretically possible for the state to have spent the credited amount on health out of its own resources. How likely is this? Let us first assume that the bulk of the credit was taken for infrastructure investment. In 2007 the state spent \$278 million pesos on health infrastructure, about 64 percent of the total credit taken (Gobierno de Oaxaca 2008). As the state's own budget numbers show, however, only about \$17 million (6 percent) of that infrastructure investment was paid out of state resources. Virtually the entire project (94 percent) was funded out of federal transfers. Oaxaca did not, therefore, spend anything like \$434 million of its own money on health infrastructure. Because states may roll over capital investments in PHI and because Oaxaca has invested heavily in some health infrastructure in recent years, I checked previous budgets to see how much of that investment came out of the state's own resources. In 2006 it invested just under \$2 million pesos in health infrastructure (out of a total of \$318 million). In 2005 it did not invest any of its own resources in health infrastructure (out of a total of \$84 million). In 2004 the state spent about \$15 million (out of a total of \$149 million); in 2003, \$26 million (out of \$143 million); in 2002, nearly \$13 million (out of \$73 million). Even if the state received a credit for own-source investment in health infrastructure for the entire period from 2002 to 2007, that credit would be no larger than \$73 million, or about 17 percent of the actual credit.

Let us then suppose that the credit was for other health spending. The

Table 1b State Contributions and Finance Gap, 2007 (U.S. Dollars)

State	Liquid		Total	Liquid		Overall	Liquid		Overall
	Contribution per Affiliated Family	Contribution per Family		Contribution per Affiliated Family	Contribution per Family		Families Affiliated	Gap Total	
Aguascalientes	0.0	130.4	123.2	130.4	7.2	114,796	14,969,982	821,822	
Baja California	93.1	37.3	119.4	37.3	11.0	229,946	8,577,727	2,527,527	
Baja California Sur	127.2	3.2	127.2	3.2	3.2	36,597	118,435	118,435	
Campeche	0.0	130.4	105.9	130.4	24.5	95,769	12,488,764	2,343,044	
Chiapas	41.2	89.2	116.0	89.2	14.4	488,502	43,597,862	7,017,422	
Chihuahua	0.0	130.4	111.7	130.4	18.7	149,966	19,556,328	2,801,928	
Coahuila	0.0	130.4	89.7	130.4	40.7	92,320	12,038,997	3,754,877	
Colima	0.0	130.4	127.0	130.4	3.4	82,073	10,702,736	277,776	
Distrito Federal	0.0	130.4	94.3	130.4	36.2	170,846	22,279,186	6,176,346	
Durango	0.0	130.4	86.2	130.4	44.2	85,291	11,122,380	3,769,060	
Guanajuato	0.0	130.4	120.2	130.4	10.2	568,573	74,144,808	5,824,088	
Guerrero	89.2	41.2	89.2	41.2	41.2	279,618	11,518,168	11,518,168	
Hidalgo	14.3	116.1	109.4	116.1	21.0	207,678	24,103,706	4,370,746	
Jalisco	0.0	130.4	104.3	130.4	26.1	318,726	41,563,490	8,333,930	
México	23.0	107.4	108.1	107.4	22.3	529,518	56,858,357	11,807,637	
Michoacán	0.0	130.4	90.5	130.4	39.9	211,961	27,640,791	8,466,311	
Morelos	23.7	106.7	103.4	106.7	27.0	164,786	17,579,572	4,455,292	
Nayarit	1.2	129.2	104.4	129.2	26.0	111,783	14,446,759	2,904,839	
Nuevo León	0.0	130.4	87.2	130.4	43.2	145,151	18,928,428	6,269,548	
Oaxaca	0.0	130.4	104.7	130.4	25.7	386,585	50,412,648	9,922,848	

Table 1b (continued)

State	Liquid Contribution per Affiliated Family	Total Contribution per Affiliated Family	Liquid Gap per Family	Overall Gap per Family	Families Affiliated	Liquid Gap Total	Overall Gap Total
Puebla	0.0	114.1	130.4	16.3	390,029	50,861,763	6,369,523
Querétaro	0.0	77.1	130.4	53.3	112,235	14,636,014	5,979,574
Quintana Roo	0.0	91.9	130.4	38.6	61,816	8,061,120	2,383,240
San Luis Potosí	0.0	110.8	130.4	19.6	231,794	30,227,115	4,537,035
Sinaloa	0.0	118.8	130.4	11.6	187,317	24,427,088	2,180,968
Sonora	0.0	109.2	130.4	21.2	209,672	27,342,294	4,444,614
Tabasco	0.0	120.8	130.4	9.6	412,942	53,849,735	3,958,855
Tamaulipas	0.0	108.9	130.4	21.5	294,772	38,439,766	6,327,166
Tlaxcala	0.0	80.6	130.4	49.8	101,661	13,257,111	5,066,071
Veraacruz	0.0	98.6	130.4	31.8	540,183	70,442,607	17,200,847
Yucatán	0.0	105.1	130.4	25.3	154,099	20,095,292	3,899,372
Zacatecas	31.2	95.6	99.2	34.8	140,168	13,903,859	4,875,099
Total						858,192,888	170,704,008

Sources: State contributions from Urbina 2008; affiliation data from Secretaría de Salud 2008; author's calculations using exchange rate of 1 peso = 0.09308 dollar. Exchange rate on June 1, 2007, according to OANDA (www.oanda.com, accessed January 10, 2010).

Notes: First two columns represent liquid and total (liquid plus credited) state contributions divided by number of affiliated families in each state. The gap is based on the required state contribution of \$130.40 (U.S. dollars) in 2007. The last two columns represent the total difference between the required state contribution for all families and the actual state contribution (liquid or total) for all families.

total funding spent on health in the 2007 Oaxaca budget was as follows: \$517 million for the Secretary of Health, \$2.417 billion for state health services, \$10.4 million for an HIV program, and \$37.2 million for the Children's Hospital (Gobierno de Oaxaca 2008). This amounts to a total budget of \$2.982 billion pesos. The Cuenta Pública does not report how much of these funds came from the state. However, we know roughly how much the state received in federal transfers for health in 2007. There are two main sources of federal funding: Fondo de Aportaciones para los Servicios de Salud (Contributory Fund for Health Services, or FASSA) and PHI. From FASSA, the state received \$1.958 billion pesos. From PHI, according to CNPSS, the state received \$961 million pesos (Secretaría de Salud 2008). This totals \$2.919 billion pesos. Assuming there were no other off-budget federal transfers, this means that the maximum amount Oaxaca could have spent on its own health system with its own resources in 2007 was \$63 million pesos. Even assuming that the capital budget is separate (which cannot be determined from the Oaxaca Cuenta Pública), this would mean that Oaxaca spent \$17 million on infrastructure and \$63 million on health services, for a total of \$80 million pesos. Let us further assume that Oaxaca did receive an infrastructure credit not just for 2007 but for 2002–2007. Then the state's spending would rise to \$63 million (services) plus \$73 million (infrastructure), or \$136 million. It is difficult to see how the state could have received a \$434 million peso credit for spending \$136 million pesos, unless most of the credit was against federal transfers, rather than own-source expenditure. This example suggests that state credits for infrastructure may in fact be credited against other federal transfers.³

Meanwhile, the diversion of resources to pay for hospital infrastructure does not lead only to underfinancing of the basic package. It may also negatively affect equity. The diversion reflects a common development problem sometimes known as “urban bias” (Lipton 1977). In many developing countries, organized, better-off interest groups in cities are better able to lobby the government to spend money on the services they want, while the rural poor suffer underinvestment in services that are often less expensive but vital for their survival. PHI is supposed to finance a basic

3. It is possible that the state spent other off-budget funds on health that help explain part of this gap. States may also take credit for municipal expenses on health and do not have to report these to the public anywhere. Given the paucity of resources at the municipal level, it seems unlikely that municipalities in Oaxaca could have contributed nearly 300 million pesos to health to make up for the gap that I have found. To the extent such off-budget resources do reduce the size of the gap, however, this points to the lack of transparency in the system of payments and credits for the State Solidarity Contribution.

package of services, few of which are provided in the specialty hospitals that some states, such as Chiapas and Oaxaca, have supported in recent years. Essentially, allowing states to credit so much of their contribution means that funding designed to bolster basic care for the poor is being diverted to serve other constituents. In general, the federation has not been able to sufficiently monitor states or compel them to direct financing in the progressive ways envisioned by the reformers in Mexico City.

Why has the federal government failed to force states to comply with the initial regulations for financing? States in Mexico have limited tax capacity, and therefore limited own-source revenue. Under the set of laws governing taxes and federalism, the federal government assumes most of the taxing power in Mexico, but states are guaranteed a share of resources and have sovereignty within their borders to spend tax transfers that they receive back from the federation. The government had neither the political power nor the inclination to completely rewrite the rules of federalism in Mexico for the purposes of the PHI reform. As a result, the states could not be forced to join PHI and had to be induced to do so (Ibarra Espinosa, interview). Part of the strategy pursued by the federal government to incentivize participation has been to relax the fiscal requirements.

Finally, Mexican citizens have also rebelled against the strictures of PHI. States found it nearly impossible to convince most Mexicans to pay for the program. As a result, and to meet affiliation targets, they misclassified Mexicans as poor whose incomes were actually high enough to warrant charging them a premium. The federal government has been complicit in this misclassification. Initially, the PHI program used a sophisticated income evaluation survey designed for, and validated over several years of use with, Mexico's highly successful antipoverty program, PROGRESA (Secretaría de Salud 2002). Shortly after the initial launch of PHI, however, the program's administration passed from the reformers to a team of partisan loyalists (Bailón, interview). These partisans were more interested in rapidly expanding the program than in targeting accuracy. Soon the sophisticated instrument inherited by PROGRESA was discarded, and the regulations governing how the program designed its survey were loosened up (*Diario Oficial de la Federación* 2004; World Bank 2008). The result was, by the end of the program's first year, a much shorter and simpler form than that used by PROGRESA. The simpler form is subject to relatively simple manipulation both by field officers trying to meet affiliation targets and by families trying to avoid premium payments.

While the government has classified 93–97 percent of PHI affiliates as poor since the program began in 2004, meaning they fall in the bottom

two deciles of the income distribution and do not pay a premium, independent analysts have found that these numbers are substantially inflated. One study found that only 46 percent of affiliates were actually properly classified as poor; another found the number was only 40 percent (Scott 2006; Gakidou et al. 2006). Ironically, the PRD objection to the program—that families should have to pay a premium—has turned out to be moot in practice. This poses a fundamental problem for PHI: yet another source of underfinancing. Calculations of program cost were based on receiving contributions from the nonpoor. Those contributions have not materialized, meaning that there is a developing financial gap.

It is possible to estimate the size of this gap in 2004–2005, using an estimate of the degree of mistargeting from the studies mentioned above and the size of the premium for those who should have been paying in that year. Let us use the more conservative estimates of mistargeting found in Scott 2006 for these calculations to provide a lower-bound on the financing gap.⁴ Scott finds that, net of transfers, 45.8 percent of households with PHI were poor in 2004 and should have been exempt from payments. Therefore 54.2 percent of affiliated families were in other income classes and should have been paying. But, according to the government, only 7.2 percent of affiliated families were paying in June 2005. Table 2 reports percentage of households by income decile in 2005 according to PHI administrative records, alongside estimates by Scott from late 2004. The next column shows the gap between the two.

How many families are in the denominator of this percentage? This requires an estimation because PHI figures are from administrative records in June, while Scott's figures are from late 2004. In June 2005 there were approximately 2 million families in PHI. At the end of 2004 there were 1.5 million. Scott's (2006) survey, from somewhat earlier in 2004, found just over 890,000 families. We may use the 1.5 million figure, which falls in between the PHI estimate from June and Scott's estimate from late 2004. Using the premium schedule in 2005 (column 5), we can estimate how much families should have been paying. Thus the number of "gap" families that correspond to each decile, and therefore each premium

4. Because of the timing of the survey used to estimate the percentage of families in each decile, we are forced to rely on administrative records from PHI in June 2005, compared with an independent government income survey (ENIGH) from late 2004. There is bound to be some error as a result of this time disjuncture. As of 2008, however, the federation still reported 97 percent of PHI affiliates in the bottom two deciles, and this figure has always hovered between 93 and 97 percent (Secretaría de Salud 2008). There is little reason to have expected major changes in the income distribution profile between late 2004 and mid-2005, given that there have not been major changes in the profile between 2004 and 2008.

Table 2 Finance Gaps: Administrative Income Decile Estimates versus Independent Estimates (Deciles 3–10)

Decile	PHI Administrative, June 2005	ENIGH 2004 (Net of Transfers)	Gap (Percent)	Premium Schedule, 2005 (U.S. Dollars)	“Gap” Families (Number)	Finance Gap (“Gap” Families × Premium)
3	5.5	14.8	9.3	58.8	139,500	8,202,600
4	1.0	11.2	10.2	115.3	153,000	17,640,900
5	0.3	8.1	7.8	170.9	117,000	19,995,300
6	0.2	7.0	6.8	233.4	102,000	23,806,800
7	0.1	5.4	5.3	300.5	79,500	23,889,750
8	0.1	3.3	3.2	465.5	48,000	22,344,000
9	0.0	3.8	3.8	619.4	57,000	35,305,800
10	0.0	0.6	0.6	937.4	9,000	8,436,600
Total			47.0		705,000	159,621,750

Sources: Scott 2006; National Commission for Social Protection in Health (CNPSS) 2005; author's calculations using exchange rate on June 1, 2005: 1 peso = 0.0919 dollar.

Notes: PHI = popular health insurance; ENIGH = Encuesta Nacional de Ingreso y Gasto de los Hogares [National survey of household income and expenditure]; PHI Administrative is the percentage of families falling into each decile according to the PHI program's administrative records. ENIGH 2004 is the percentage according to Mexico's income and expenditure survey in 2004. Gap is the difference between the two. “Gap” Families is the number of families represented by the gap percentage, which is based on an estimate of the total number of families at the end of 2004 and beginning of 2005 of 1.5 million.

amount, is in column 6. Multiplying the gap families by their premium, we can estimate the amount of underfinancing. The figure is substantial: there was an estimated financing gap in late 2004 from family premiums of nearly \$160 million (U.S. dollars).

Without figures from later years on the degree of mistargeting in PHI, we cannot be certain whether this financing gap has remained the same or not. We do know, however, that an even smaller percentage of PHI families paid any premium in 2008 (3 percent). We also know that, according to the 2005 population count, there are approximately 25 million households in Mexico as a whole and therefore about 5 million in the bottom two deciles of the income distribution.⁵ Yet in 2008 there were more than

5. There is no estimate of households in 2008, but we can use an estimate based on population growth between 2000 and 2005, assuming that the trend does not change from 2005 to 2008. In 2000 there were 22.3 million households. In 2005 there were 24.8 million. This constitutes about an 11 percent change. Household growth per year was therefore about 2.1 percent. Assuming similar growth between 2005 and 2008, there would have been 26.4 million families in 2008, and 5.3 million families in the bottom two deciles. This still leaves a gap of over 2 million families between independent estimates and PHI administrative records.

7.5 million households in PHI that were classified as falling into the bottom two deciles (Secretaría de Salud 2008). There are, therefore, good reasons to believe that the program continues to be mistargeted. If the mistargeting were similar to that found in 2004, then, given a rise in the premium schedule, the financing gap would have grown. Without further data, however, we can only speculate about the severity of the problem today.

But what about federal financing? Has the federation actually done its part to supply adequate resources for PHI? This is actually a rather difficult question to answer because of the complexities of the federal formula introduced by the reform. We will answer it at the highest level of aggregation only, using data from 2007. In that year we know that the federation transferred a total of \$18.898 billion pesos (US\$1.76 billion) to the states through PHI (Secretaría de Salud 2008). It also transferred \$44.231 billion pesos (US\$4.1 billion) through FASSA, for a total of \$63.129 billion (US\$5.9 billion).⁶ The formula for the federal transfer consists of the Cuota Social (CS) and the Aportación Solidaria Federal (ASF). The CS is a fixed amount per family in every state; the ASF varies by state and represents the redistributive part of the formula. In 2007 the CS was roughly 2,801 pesos/family (US\$261), and the average ASF was 4,202 pesos/family (US\$391) (Secretaría de Salud 2007). The complication in the formula is that the federation can credit part of its FASSA expenditure toward the ASF because many services funded through FASSA are identical to those that the ASF is supposed to fund.

There were 7.3 million affiliated families in 2007, so the federation should have transferred a total of \$20.4 billion pesos (US\$1.9 billion) for CS, and \$30.7 billion pesos (US\$2.9 billion) for ASF to the states, for a total of \$51.1 billion pesos (US\$4.8 billion). Clearly, the federation transferred more (\$63.1 billion pesos) than the CS and ASF combined (\$51.1 billion pesos). Equally evidently, the federation did take a credit for part of the FASSA grants to the ASF, else the total federal expenditure would have been closer to \$95 billion pesos (US\$8.8 billion)—\$51.1 billion for CS and ASF combined, plus \$44.2 billion for FASSA, is \$95.3 billion—than \$63 billion pesos. There is, therefore, no evidence of federal underfinancing from the aggregate data.

There are concerns, however, about lack of transparency and misuse of federal financing through several of PHI's new funds. For example,

6. Data on FASSA is available from the Ministry of Finance Web site, www.hacienda.gob.mx.

Table 3 Centralization of Health Resources for the Non-Social Security Population in Mexico, 2001–2006 (Millions of U.S. Dollars)

	2000	2001	2002	2003	2004	2005	2006
Central funds	1,919	2,061	1,950	2,102	1,421	2,961	3,665
State block grants	2,763	3,131	3,188	3,506	3,423	3,576	3,543

Source: Centro de Estudios de las Finanzas Públicas [Mexico's Center for Studies of Public Finances] 2006.

Note: U.S. dollar values based on exchange rate of 1 peso = 0.091 dollar applied to constant 2006 peso values; 2006 numbers are approved budget figures, not actual expenditures.

there appears to have been substantial underspending of funds allocated to improve infrastructure in poor states through the national infrastructure fund, the Fondo de Previsión Presupuestal mentioned above (Lavielle 2009). And resources channeled to the catastrophic fund have been used for various noncatastrophic purposes since its inception, including cataracts and vaccine purchases (Hector Peña Jiménez, interview by the author, Mexico City, November 15, 2006).

Despite the financial obstacles documented above, the program has had some important successes. First, the MOH has recentralized funding by taking money away from state block grants and forcing states to negotiate in order to receive their annual budgets. We have seen that the states have managed to negotiate their way out of making their full contributions, but they have nevertheless been forced to follow some of the rules set by the federal government for where and how they can spend their health budgets. In addition, the federation has managed to capture control over resources generated by PHI but not returned to the states: infrastructure funds, catastrophic insurance funds, and so on. Table 3 shows the centralization of the budget between 2001 and 2006. By 2005 relative health spending was increasingly shifting toward funds controlled by the federal government and away from block grants. In 2000 the block grants totaled 144 percent of the size of the central funds. By 2005 the ratio had fallen to 121 percent. Estimates for 2006 suggest that the central funds had finally outstripped the state block grants in that year.

The majority of the centralized funds reported here are not simply sent back to the states for service provision. In 2005, for example, table 3 shows that the federal government captured nearly \$3 billion (U.S. dollars) for health expenditures. The MOH reports show that of that funding, only about 27 percent was used for PHI and, of that, 73 percent was transferred back to the states to run their health services (Secretaría de Salud 2008). In other words, of the centralized health funding reported in 2005, only

about 20 percent was returned to states for direct service provision. The federal government decided how to spend the other 80 percent. Even as the state block grants have continued to grow over time, then, the federation has maintained control over the new funding channeled to PHI.

A related accomplishment has been to alter the formula for distributing federal funds so that it is more redistributive toward poorer and unhealthier states than the old formula (Secretaría de Salud 2005a). The redistributive nature of the new formula has been implemented gradually, as states increase their affiliation rates and as central funding replaces the old block grants. Access to funds is now conditioned in part on state performance in affiliating more families, not only the health needs of the state population. It will therefore take some time before the total amount of health money received by poorer states is greater than that received by wealthier states.

Table 4 provides a rough sense of how the new formula is distributing health funds compared with the old. The budget for health in Mexico continues to be complex and not fully transparent. Nevertheless, one can estimate the impact of the new formula. Prior to the introduction of PHI, states received a block grant, FASSA, and that was their primary source of funding for state health services. Table 4 reports each state's marginality ranking (a measure of relative poverty) and rank for FASSA funds received (per uninsured family) in 2000. The data make clear that FASSA in 2000 was not distributed progressively. Marginal states like Chiapas, Oaxaca, and Veracruz received relatively little compared with better-off states like Colima or Aguascalientes.

After the reform, states continued to get FASSA grants for part of their health services and PHI money to cover their newly insured population. The PHI reform did not transform the formula for FASSA funding, but the new funding formula for PHI is progressively distributed. This is reflected in the dramatically improved position of states like Chiapas, Oaxaca, and Veracruz in table 4 under the column "PHI 2007 Rank."

To assess the total impact of the new formula, the last column of table 4 combines the resources from FASSA and those from PHI and divides them by the total non-social security population in 2007. This results in an estimate of the total resources going to provide health services for the previously uninsured and is a reasonable measure of the degree of change since 2000. This column gives an indication of the slow rate of change. States like Oaxaca and Veracruz are only doing marginally better in 2007 when FASSA is combined with PHI; the position of Chiapas has not improved. Table 4 refers only to relative position; overall, all states

Table 4 Before and after PHI: Relative Distribution of Funds across States (2000 and 2007)

State	2000 State Marginality Rank	FASSA 2000 Rank	FASSA 2007 Rank	PHI 2007 Rank	2007 Rank FASSA + PHI
Aguascalientes	28	3	4	22	5
Baja California	30	19	24	4	13
Baja California Sur	27	1	2	20	3
Campeche	8	4	3	26	4
Chiapas	1	24	27	6	27
Chihuahua	26	16	19	13	22
Coahuila	29	7	12	30	18
Colima	22	2	1	18	1
Distrito Federal	32	28	30	8	32
Durango	17	8	9	31	11
Guanajuato	13	29	26	1	10
Herrero	2	14	18	17	21
Hidalgo	5	22	17	16	19
Jalisco	25	20	23	10	26
México	21	25	29	5	30
Michoacan	10	30	31	11	31
Morelos	19	21	22	9	14
Nayarit	14	10	5	21	6
Nuevo León	31	13	16	28	23
Oaxaca	3	26	25	12	25
Puebla	7	32	32	2	29
Querétaro	16	12	13	32	20
Quintana Roo	20	5	11	29	17
San Luis Potosí	6	27	20	15	16
Sinaloa	15	17	10	14	9
Sonora	24	6	7	25	7
Tabasco	9	18	6	3	2
Tamaulipas	23	9	8	23	8
Tlaxcala	18	15	21	24	24
Veracruz	4	31	28	7	28
Yucatán	11	11	14	27	12
Zacatecas	12	23	15	19	15

Sources: Marginality data from Consejo Nacional de Población 2000; FASSA data from Secretaría de Hacienda y Crédito Público 2009; PHI data from Secretaría de Salud 2008; population data from Instituto Nacional de Estadística y Geografía 2006.

Notes: States and federal district ranked 1 to 32; 1 is most marginal or most funds received. Marginality is an index of poverty created by the Mexican government (where rank of 1 is poorest). FASSA, or Fondo de Aportaciones para los Servicios de Salud [Contributory Fund for Health Services], is the block grant given to states to cover their uninsured populations. The 2000 ranking is based on FASSA divided by each state's uninsured population in 2000. The 2007 FASSA ranking is based on 2007 FASSA divided by 2005 uninsured (INEGI reports this number for 2000 and 2005). PHI 2007 is the funding given to states for their PHI-affiliated population, divided by the number of PHI-affiliated families. It therefore reflects the new funding formula for the affiliated population only. The 2007 FASSA + PHI is the sum total of funding for each state for its entire non-social security population, divided by the total number of non-social security individuals. This number represents the main flows from the federal government for the entire non-social security population. This ranking therefore reflects the changes in the PHI formula and the lack of change in the FASSA formula.

Table 5 Actual Expenditure, 2000 versus 2007 (2007 Constant U.S. Dollars)

State	State Marginality Rank 2000	FASSA / Uninsured 2000	FASSA / Uninsured 2007	PHI / Affiliated Person 2007	PHI / Uninsured 2007	FASSA + PHI / Uninsured 2007	Growth (FASSA + PHI 2007 / FASSA 2000)
Aguascalientes	28	103	192	58	63	254	2.46
Baja California	30	54	72	127	54	126	2.34
Baja California Sur	27	188	247	58	33	280	1.49
Campeche	8	103	229	47	43	272	2.63
Chiapas	1	44	57	98	40	98	2.22
Chihuahua	26	58	83	80	25	108	1.88
Coahuila	29	81	104	39	14	118	1.46
Colima	22	150	297	69	83	380	2.53
Distrito Federal	32	40	54	87	11	65	1.62
Durango	17	81	122	36	13	135	1.67
Guanajuato	13	36	58	118	81	140	3.91
Guerrero	2	63	89	49	21	111	1.75
Hidalgo	5	50	90	60	28	118	2.35
Jalisco	25	53	74	83	25	99	1.87
México	21	43	56	85	19	75	1.74
Michoacan	10	35	52	71	18	70	2
Morelos	19	52	78	92	46	124	2.4
Nayarit	14	78	162	58	49	211	2.71
Nuevo León	31	66	92	49	14	106	1.61
Oaxaca	3	42	67	93	33	100	2.38
Puebla	7	25	45	107	36	81	3.28

Table 5 (continued)

State	State Marginality Rank 2000	FASSA / Uninsured 2000	FASSA / Uninsured 2007	PHI / Affiliated Person 2007	PHI / Uninsured 2007	FASSA + PHI / Uninsured 2007	Growth (FASSA + PHI 2007 / FASSA 2000)
Querétaro	16	66	103	32	15	117	1.77
Quintana Roo	20	100	106	41	13	119	1.19
San Luis Potosí	6	41	81	71	40	121	2.95
Sinaloa	15	57	116	61	41	157	2.74
Sonora	24	85	140	59	39	178	2.09
Tabasco	9	57	149	111	189	338	5.95
Tamaulipas	23	79	132	57	45	177	2.25
Tlaxcala	18	58	81	49	22	102	1.75
Veracruz	4	30	57	94	34	91	2.99
Yucatán	11	69	102	45	25	127	1.85
Zacatecas	12	45	92	55	30	123	2.74

Sources: Marginality data from Consejo Nacional de Población 2000; FASSA data from Secretaría de Hacienda y Crédito Público 2009; PHI data from Secretaría de Salud 2008; population data from Instituto Nacional de Estadística y Geografía 2006; author's calculations using exchange rate of 1 peso = 0.09308 dollar.

Notes: Uninsured = uninsured individuals. Figures may not sum due to rounding.

receive more funding than they did before the reform. This can be seen in table 5, which provides the underlying financial resources that determine the rankings in table 4. An estimate of the growth in financing for the uninsured is the ratio in the last column, which compares combined resources from FASSA and PHI in 2007 with FASSA in 2000.

If the new formula is substantially more progressive, what explains this modest overall change in the distribution of health resources across states? Essentially, the culprit is the sluggish transition away from the older, regressive formula for distributing FASSA block grants as the primary source of health service financing. Using 2007 constant U.S. dollars, the total size of FASSA in 2000 was about \$2.88 billion. By 2007 the combined value of FASSA and PHI funds had more than doubled to \$5.88 billion, a substantial increase in overall financing. Of that total, however, 70 percent (about \$4.1 billion) consists of regressively distributed FASSA block grants. As table 5 shows, there is still a disparity in FASSA funds per uninsured such that the state receiving the most (Colima) has 6.6 times the resources of the state receiving the least (Puebla). Over time, of course, the percentage of total funding accounted for by FASSA should fall, and the proportion represented by PHI should rise, but this is happening very slowly.

This gradual transition from FASSA to PHI has been a mixed blessing. A sudden and radical shift in the distribution of health financing may well have met with serious opposition from the states, undermining the reform from the start. By slowly phasing out FASSA and phasing in PHI and by being lenient in terms of state contributions, the Mexican government has injected substantial new resources into the health sector and moderately improved the progressivity of those resources without eliciting a state revolt (Héctor Hernández Llamas, interview by the author, Mexico City, June 22, 2005). Indeed, so innocuous was the program that, by 2005, Mexican governors, many of whom had initially been skeptical of the program, had begun to push for a constitutional amendment to guarantee continued federal funding for PHI (Conferencia Nacional de Gobernadores [CONAGO, the national conference of governors] 2005). Nevertheless, the cost of building broad state support has been that the federal government is only very slowly making the distribution of health resources more progressive.

Despite the slow progress on equity, the increased funding from PHI appears to have had some success in both increasing access to health services and decreasing out-of-pocket expenditures. Evidence from my own fieldwork, as well as data from a field experiment published last year in

Lancet, suggests that out-of-pocket, point-of-service expenditures on medical care have come down (King et al. 2009). As more money has flowed to clinics and hospitals and as point-of-service fees have been eliminated, PHI has met a key goal: reducing the kind of spending that can lead the sick into poverty. Other studies have found substantially increased access to medications, even if short of the guaranteed package (Garrido-Latorre, Hernández-Llamas, and Gómez-Dantés 2008), and improved access to treatment for some chronic diseases (Bleich et al. 2007).

But Is It Insurance?

We have seen that the premium aspect of the insurance program has been severely compromised. Virtually no one in Mexico pays for PHI. Given the voluntary nature of affiliation, it seems unlikely that many people will ever sign up for the program if they have to pay. Thus the goal of creating a culture of prepayment through introducing an insurance premium has not been met.

What of the other insurance-related goals—guaranteed benefits and separation of purchaser and provider? The implementation of the benefits package has suffered from the beginning. Indeed, while it was claimed that the program would provide a single benefit package for all Mexicans, the government quietly permitted Chiapas to implement a smaller package at the outset (Norma Esther Sánchez Pérez, interview by the author, Tuxtla Gutiérrez, Chiapas, October 22, 2007; SPSS Chiapas 2006). The exception was made because it was recognized that Chiapas, Mexico's poorest state, would have trouble providing all of the guaranteed services. My fieldwork in southern Mexico revealed that, in 2006–2007, many clinics and hospitals in the program fell short of being able to offer all of the interventions or all of the medicine allegedly guaranteed. Officials in Chiapas and Oaxaca readily acknowledged these limitations (José Sebastián Escandón Guillén, interview by the author, Las Margaritas, February 1, 2008; Martín Estevan Altamirano, interview by the author, Oaxaca City, January 7, 2008). Officials in Guerrero admitted that most of their health units had never been certified as able to provide the services in the basic package (Forero Paez, interview).

These states continue to suffer from limited management capacity to effectively purchase and distribute supplies. Neither the national government nor the states have reliable information on the true unit costs of providing services (Urbina 2008). At the same time, the failure to provide services in facilities that are part of PHI is related to the failure to reform

labor relations in the health sector. Absenteeism continues to be a problem in many clinics and hospitals. Union rules make it difficult to shift workers around to get the right set of providers to offer covered services. For example, at Las Margaritas hospital in Chiapas, the gynecologist and anesthesiologist did not work the same shifts, so it was not possible to treat complications from pregnancy (Escandón Guillén, interview). In general, most officials argue that PHI has meant more resources for their health system, which has led to improvements in what they can offer, but few patients are guaranteed a basic set of services on a regular basis. This is consistent with the studies on access cited above, which show improvements in access to services that are shy of a true guarantee. It is also consistent with other research documenting only small improvements in access for affiliates versus nonaffiliates (Urbina 2008) and continued lack of universal access to preventive services or medication (Homedes and Ugalde 2009).

What has happened to the separation of functions? All of the states have created purchasing offices as required by law. Few of the states had actually separated purchasers from providers in a meaningful way by the time I completed my field research (Octavio Avendaño Carbellido, interview by the author, Mexico City, June 21, 2005; Lakin 2006). In 2007, I found little use of formal, enforceable contracts, and in rural Chiapas, Oaxaca, and Guerrero, few patients had a real choice of provider that would render the separation particularly meaningful. Because of the failure to reach a systemwide accord with social security, the original vision of contracting across the public sector remained largely theoretical. At the same time, there had been only sporadic attempts to contract with the private sector, though broader efforts have been made in some states (e.g., Jalisco).

By 2008 other investigators reported more significant advances in the separation of functions. One report suggests that attempts to contract for at least some services have emerged in nearly every state; in most states, there was some evidence of the use of management contracts in the public sector, and in twenty, there was also contracting with private providers. Yet little is known about the depth or significance of this contracting (i.e., what percentage of actual services provided are provided through contracts with either public or private providers?), and many states continue to lack the capacity to enforce contracts or hold public or private providers accountable (INSP 2008). Most states also have trouble paying public or private providers in a timely manner, which has resulted in liquidity problems and reduces the appeal of contracting for the providers. My observations from Chiapas and Oaxaca suggested that payment delays led to a lack of electricity and repairs in local clinics (Escandón

Guillen, interview; Karina Martínez Siga, interview by the author, Santa Cruz Xoxocotlán, January 21, 2008). Recent reports also indicate that the health sector has contracted with private hospitals for specialty care in a few wealthier states, yet this is still a relatively small part of the overall health system, even in those states, and it does not generally cover services provided through PHI (Ramírez 2009).

Two attempts to contract from my own research should be noted. First, in 2007, Chiapas finally did sign an agreement with a part of IMSS to offer some services. The agreement is not with the main part of IMSS, however, but with a special IMSS program for the poor, IMSS-Oportunidades (Karla Lorena Ramos Jara, interview by the author, Tuxtla Gutiérrez, Chiapas, February 20, 2008). Nevertheless, it represents a small triumph for the notion of public contracting. Second, in 2008 Chiapas began contracting with the private sector for pharmaceuticals. Initial indications were that the experiment had so far led to heavy undersupply of pharmaceuticals in early 2008, but it was too early to assess its viability.

In sum, as of 2007, over three years after the program started, several of the key goals of the PHI reform had not been implemented. The program had channeled new resources to state health services, modestly improved the equity of the distribution of those finances, and reasserted some control over how these funds were spent. But the program was also underfinanced, and the larger vision of transforming Mexico's health service into a health insurance system had yet to be realized.

Conclusion

This review of the politics surrounding formulation, adoption, and implementation of PHI in Mexico suggests that transforming a public health service into a public health insurance program is fraught with difficulties. An effective insurance program requires several, simultaneous conditions to function. First, there must be sufficient infrastructure and human resources to provide the guaranteed services. Of course, Mexico's existing health service possessed inadequate infrastructure and human resources; these problems were not created by PHI. But the PHI reform was advertised as a partial solution to these problems, and its legitimacy must therefore rest in part on its ability to solve them.

The same argument applies to the subsidized premium schedule. If no one pays a premium for an insurance program, and services are not guaranteed, how is the insurance program different from the health service that preceded it? Mexico's reformers wanted to instill a "culture of pre-

payment” for health services, but the lack of that culture seems to have impeded the reform. In general, the Mexican case suggests that, without a campaign to inform citizens and providers about the structure of the insurance program, and without strong incentives to change their behavior, it is difficult to legislate behavioral change from above. To a certain extent, the reform team was a victim of its own success at the policy formulation and adoption phase, when pushing the reform behind closed doors and without broad participation was a boon to legislative passage. Later, however, at the implementation stage, when support from citizens, providers, and states was essential, the federal government had not adequately cultivated that support. In addition, the novel premium structure in PHI was predicated on an increase in state financing that has only partially materialized. States have preferred either to not pay at all or to credit other spending on infrastructure toward their contributions.

Finally, to achieve a true separation of functions, purchasers must be independent from local political pressure, and they must have true choices when it comes to contracting. Neither of these conditions holds in many parts of Mexico. One reason for this is that, after the health system was decentralized in the 1980s and 1990s, the federal government’s ability to shield state purchasers from local politicians is rather low. Some states in Mexico are still run as patrimonial and even authoritarian regimes, where local purchasers answer directly to the governor, and it is impossible to establish true autonomy for efficient contracting (Gibson 2005). At the same time, while these purchasers can theoretically contract with any institution they would like, there is little provider competition in many parts of Mexico. In addition, there has been little success at creating the conditions for contracting with other public-sector institutions like IMSS, and local provider unions would make it very difficult for purchasers to contract with anyone else even if there were other options.

While PHI has largely failed as an insurance program thus far, it has proven a successful tool for mobilizing resources for the health sector. Former president Fox latched on to the program as a major campaign plank and trumpeted it as one of his few concrete accomplishments in office (*El Universal* 2003). The Partido Acción Nacional (PAN) came to see the reform as a successful gambit to increase its appeal among lower-class voters on an issue where the party has tended to lose out to the Left. The program was thought to be so successful that Fox’s successor, President Felipe Calderón, also of the PAN, who took office in 2006, decided not only to keep it but to expand it.

Ironically, the creation of a dysfunctional insurance program has bolstered Mexico's national health service. Continued political support for PHI has resulted in its expansion through federal, general revenue financing, even if it remains underfinanced. Most Mexicans with access to PHI now pay neither user fees nor premiums. Many still do not have guaranteed access to services, but they have access to more services and drugs than before at a lower price. Sound familiar? PHI looks a lot like an improved version of the old health service. That is not quite what the reformers had in mind, but it is still an accomplishment.

Appendix

Interviews

This section provides additional information about the formal positions held by interviewees referenced in the text.

- Altamirano, Martín Estevan. Health jurisdiction chief, jurisdiction 1, Oaxaca.
- Anonymous. Administrative assistant, PHI Oaxaca, Oaxaca City. January 2008.
- Aragón Kuri, Rafael. Former state secretary of health, Oaxaca.
- Avendaño Carbellido, Octavio. Deputy legal director, federal Ministry of Health.
- Ávila, Juan Carlos. PHI deputy director, Michoacán.
- Bailón, Mauricio. Director general, international relations, federal Ministry of Health.
- Beristain, Jorge Flores. PHI administrator of affiliation, Tlaxcala.
- Chacón Sosa, Fernando. General director of program, organization and budget, federal Ministry of Health.
- Escandón Guillén, José Sebastián. Director, General Hospital of Las Margaritas, Chiapas.
- Forero Paez, Ricardo. Deputy director of affiliation and operations, Guerrero.
- García Ayala, Marco Antonio. President, MOH Health Workers' Union.
- Hernández Llamas, Héctor. Ex-director of PHI, federal Ministry of Health.
- Hurtado, Carlos. Deputy secretary of expenditures, federal Ministry of Finance.
- Ibarra Espinosa, Ignacio. Legal director, federal Ministry of Health.
- Laurell, Asa Cristina. Secretary of health, Mexico City. Member, PRD.
- Lezana, Miguel Ángel. Chief of staff to secretary of health, federal Ministry of Health.
- Martínez Siga, Karina. Medical resident, health clinic, Oaxaca.
- Pacheco, Mario Félix. Private secretary to the director of Health Workers' Union, Oaxaca.
- Peña Jiménez, Hector. Director of financial administration of PHI, federal Ministry of Health.
- Ramos Jara, Karla Lorena. Director, PHI Chiapas.
- Sánchez Pérez, Norma Esther. PHI Chiapas.
- Santiago Eligio, José Manuel. Adviser to the director of Health Workers' Union, Guerrero.
- Sojo Garza Aldape, Eduardo. Director of public policy, Office of the President of Mexico.
- Suarez, Alma. Nurse, General Hospital of Comitán, Chiapas.

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