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# ***Lessons from Latin America:***

The early landscape of healthcare  
public-private partnerships

*Healthcare public-private partnerships series, No. 2*



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## List of key acronyms

AUGE—Universal access with explicit guarantees, Acceso universal con garantías explícitas (Chile)	IHSS—Honduran Social Security Institute, Instituto Hondureño de Seguridad Social	PFI—Private finance initiative
BAML—Bank of America–Merrill Lynch (Peru)	IMSS—Mexican institute of social security, Instituto Mexicano del Seguro Social	PIAPPEM—Program to drive public-private partnerships in Mexican states, Programa Para el Impulso de Asociaciones Público Privadas en Estados Mexicanos
Banobras—Mexican national works and public service bank, Banco nacional de obras y servicios públicos	INE—Chilean national statistics institute, Instituto Nacional de Estadística	PNP—Peruvian national police force, Policía nacional de Perú
CAO—Certificates of completion, Certificados de avance de obra (Peru)	IPS—Health providing institutes, Instituciones prestadoras de servicios (Colombia)	POS—Colombian mandatory health plan, Plan obligatorio de salud
CAU—Helpdesk, Centro de atención al usuario (Mexico)	Isapres—Chilean health insurance institutes, Instituciones de salud previsual	PPIP—Public-private integrated partnership
Conapo—Mexican national population council, Consejo nacional de población	ISSEMyM—Social security institute of the State of Mexico, Instituto de Seguridad Social del Estado de México y Municipios	PPP—Public-private partnership
CTAR—Committee for equipment procurement and replacement, Comité técnico de adquisición y reposición (Chile)	ISSSTE—Mexican institute of social security and services for government employees, Instituto de Seguridad y Servicios Social de los Trabajadores del Estado	RPI—Investment repayment, Retribución por inversiones (Peru)
DBOD—Design, build, operate, deliver	IT—Information technology	RPO—Payments for operations, Retribución por operaciones (Peru)
DBOT—Design, build, operate, transfer	MEF—Peruvian ministry of finance, Ministerio de Economía y Finanzas	SAPP—Honduran superintendent for public-private partnerships, Superintendencia de Alianza Publico-Privada
DNP—Colombian national planning department, Departamento Nacional de Planeación	MINSAL—Peruvian ministry of health, Ministerio de Salud	SEDENA—Mexican secretary of defense, Secretaría de Defensa
EPS—Colombian health promoting agencies, Entidades promotoras de salud	MinSal—Chilean ministry of health, Ministerio de Salud	SEMAR—Mexican marine secretary, Secretaría de Marina
EPS—Peruvian private health insurance companies, Entidades prestadoras de salud	MOP—Chilean ministry of public works, Ministerio de Obras Públicas	SESA—Mexican state health services, Servicios estatales de salud
EsSalud—Peruvian health social security agency, El sistema de seguridad social en salud	NGO—Nongovernmental organizations	SGSSS—Colombian general health social security system, Sistema general de seguridad social en salud
FFAA—Peruvian armed forces, Sanidades de las fuerzas armadas	OECD—Organization for economic co-operation and development	SIC—Chilean communication information system, Sistema informático de comunicación
FOSGYA—Colombian solidarity and guarantee fund, Fondo de Solidaridad y Garantía	OPD—Decentralized public organizations, Organismos públicos descentralizados (Mexico)	SIS—Peruvian comprehensive insurance plan, Seguro integral de salud
Fonasa—Peruvian national health fund, Fonda nacional de salud	OPIP—Peruvian agencies for the promotion of private investment, Organismo promotor de la inversión privada	SS—Honduran secretary of health, Secretaría de Salud
GDP—Gross domestic product	PEMEX—Mexican petroleum, Petróleos Mexicanos	SSa—Mexican health secretary, Secretaría de Salud
HRAE—Mexican regional specialty hospital, Hospital Regional de Alta Especialidad		UF—Chilean unit of account, Unidad de fomento

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# UCSF/PwC report series on public-private partnerships

## **About the report series**

This market landscape study of current and planned healthcare public-private partnership (PPPs) projects in Latin America (excluding Brazil, the Caribbean and Suriname) is the second in a series of publications on PPPs jointly authored by the UCSF Global Health Group and PwC.

This series aims to document and raise awareness of innovative PPP models in health globally and to disseminate lessons learned to inform current and future healthcare partnerships.

## **About public-private partnerships**

PPPs are a form of long-term contract between a government and a private entity through which the government and private party jointly invest in the provision of public services. PPPs are distinguished from other government private contracts by: the long-term nature of the contract (typically 15+ years); the shared nature of the investment or asset contribution; and the transfer of risk from the public to the private sector.

Under a PPP arrangement, the private sector takes on significant financial, technical and operational risks and is held accountable for defined outcomes. PPPs provide governments with alternative methods of financing, infrastructure development and service delivery. By making capital investment more attractive to the private sector, PPPs can reduce the risk for private investment in new markets and ease barriers to entry.

In the past three decades, governments from low- to high-income countries have increasingly sought long-term partnerships with the private sector to deliver services in sectors such as transportation, infrastructure and energy. Healthcare partnerships have emerged more cautiously but have rapidly expanded in the last 10 years. The emerging partnerships have tackled a range of healthcare system needs—from construction of facilities, to provision of medical equipment or supplies, to delivery of healthcare services.

Most PPPs operate under a “DBOT” model (design, build, operate and transfer), under which the private

partner is responsible for the infrastructure throughout the life of the contract. The private partner then transfers this responsibility back to the government upon expiration of the contract. The private partner is responsible for operating the hospital, including services such as laundry and cafeteria. However, the government retains responsibility for the delivery of healthcare services throughout. The most common form of PPPs in health has been the private finance initiative (PFI) model used to build many hospitals in the United Kingdom<sup>1</sup>.

Recently, however, an increasing number of governments are exploring more ambitious models such as public-private integrated partnerships (PPIPs), under which the private partner is additionally responsible for delivering all clinical services in one or more health facilities, often including an acute care hospital, as well as one or more primary care facilities. The private partner designs, builds, operates and delivers clinical care, including recruitment and staffing of healthcare professionals.<sup>1,2</sup> This model is commonly called “DBOD” (Design, Build, Operate and Deliver) model.

### ***Scope and methodology***

This study reviewed the healthcare PPP landscape across 17 countries located in Central, North and South America (excluding Brazil, the Caribbean and Suriname). With more than 18 healthcare PPP projects in the pipeline in 2014, the scale and scope of Brazil's infrastructure needs creates a rich environment for PPPs and warrants further future research to uncover lessons learned in recent years.

Desk research was conducted on each of the 17 countries to gain an overview of the different healthcare systems (including recent reforms), summarize existing PPP legislation and identify current and planned facility-based PPP healthcare projects. Five countries—Chile, Colombia, Honduras, Mexico and Peru—were identified as having current or planned projects. In early 2013, more than 50 key stakeholders were interviewed in four of these five countries (excluding Honduras).

Interviewees included senior leaders in government ministries, private consortia, financing institutions and nongovernmental organizations (NGOs) as well as academic thought leaders, and financial, legal and technical advisors.

### ***Audience***

The primary audiences for this report are Latin American governments that have undertaken or are considering healthcare PPP projects, international donors and policy makers involved in health in Latin America, as well as private sector investors, insurers and healthcare organizations, each of which seek to capitalize on the experience and lessons learned from countries within the region.

This report may also be helpful to other countries that are exploring private sector roles in their health systems, as well as to private sector investors looking to enter this emerging market.

# Introduction

Across Latin America, demand for health services has outpaced supply. Many countries lack the adequate clinical and technological resources and infrastructure to address this increased demand. Significant investments are needed in healthcare infrastructure to replace aging facilities and/or construct new facilities to address current access gaps. Governments are also seeking innovative ways to quickly expand their networks of partners. Healthcare PPPs have become an attractive option for expanding healthcare services while requiring only limited up-front capital investment from the public sector.

PPP projects in Latin America have traditionally focused on transportation, telecommunications, and energy; however, in the last decade, governments have started to use PPPs to address social infrastructure needs, including healthcare. A nascent market for healthcare PPPs has emerged, driven by the following:

- **Changing demographics:** Most countries in Latin America are experiencing an aging population driven by lower birth rates and longer life expectancy. Meanwhile, the overall population continues to grow, though at a slower pace than in the past. In addition, increased employment and an overall reduction in poverty rates, as a result of improving economies, have contributed to a wealthier and healthier population.
- **Changing epidemiology:** The distribution of causes of death in most Latin American countries is moving away from communicable diseases and accidents to noncommunicable and chronic diseases. Treatment of chronic diseases requires additional healthcare resources and an increase in expenditure.
- **Growing economy:** Over the last 10 years, the economies of many Latin American countries have demonstrated strong performance and have continued to show gains, despite the global financial crisis affecting other regions of the world. Gross domestic product (GDP) has grown on average 4% per year since 2003 and is projected to grow at an annual rate of 3.25% through 2017.<sup>3</sup> Interest from the private sector is strong in these emerging markets and continues to grow.
- **Expanding healthcare coverage:** Healthcare coverage in many Latin American countries is tied to employment. Strongly performing economies have driven increases in formal employment and, consequently, access to healthcare. In addition, countries such as Chile, Colombia and Mexico have passed initial healthcare reform measures with the aim of achieving universal healthcare coverage.
- **PPP legislation:** Within the last decade, several governments across Latin America have passed, or are in the process of passing, PPP legislation that encourages and incentivizes the participation of the private sector. The formality and structure of these PPP tender processes facilitates the execution of PPP contracts.

The following sections provide an overview of the healthcare PPP markets in each of the 17 countries, as well as an in-depth analysis of the five countries studied—Chile, Colombia, Honduras, Mexico and Peru. Topics covered within the country profiles include: summary of key factors of mature healthcare PPP markets, and an overview of healthcare PPP projects tendered to date, including their tender processes, financing schemes, key performance indicators, supervision and monitoring, as well as country specific successes and challenges with the PPP projects underway at the time of the study.

# Regional summary

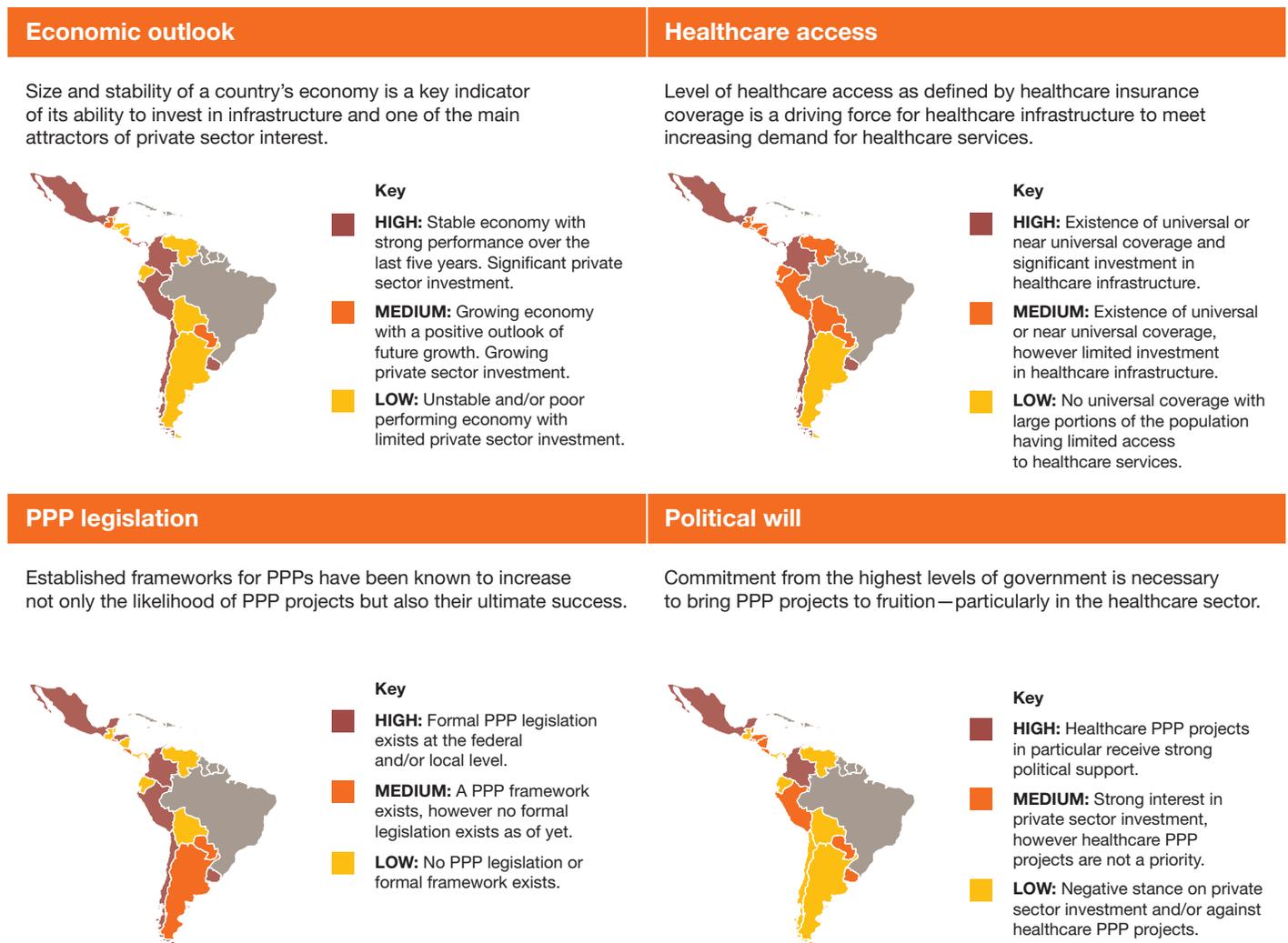
The maturity of the healthcare PPP markets varied across the 17 countries within the scope of this study, with some countries having more favorable markets than others. For example, Colombia and Mexico each have a stable economy, expanding healthcare coverage and infrastructure investment, formal PPP legislation and a favorable political environment (see Figure 1).

Market maturity was evaluated based on four main criteria that were identified as key indicators of healthcare PPP opportunities. Three criteria—economic outlook, PPP legislation and political will—were obtained from the 2012 Infrascopes PPP readiness assessment published by the Economist Intelligence Unit.<sup>4</sup> Healthcare access was added as an additional reference point to reflect the healthcare PPP market. Each country

was given a rating of high, medium or low for each criterion.

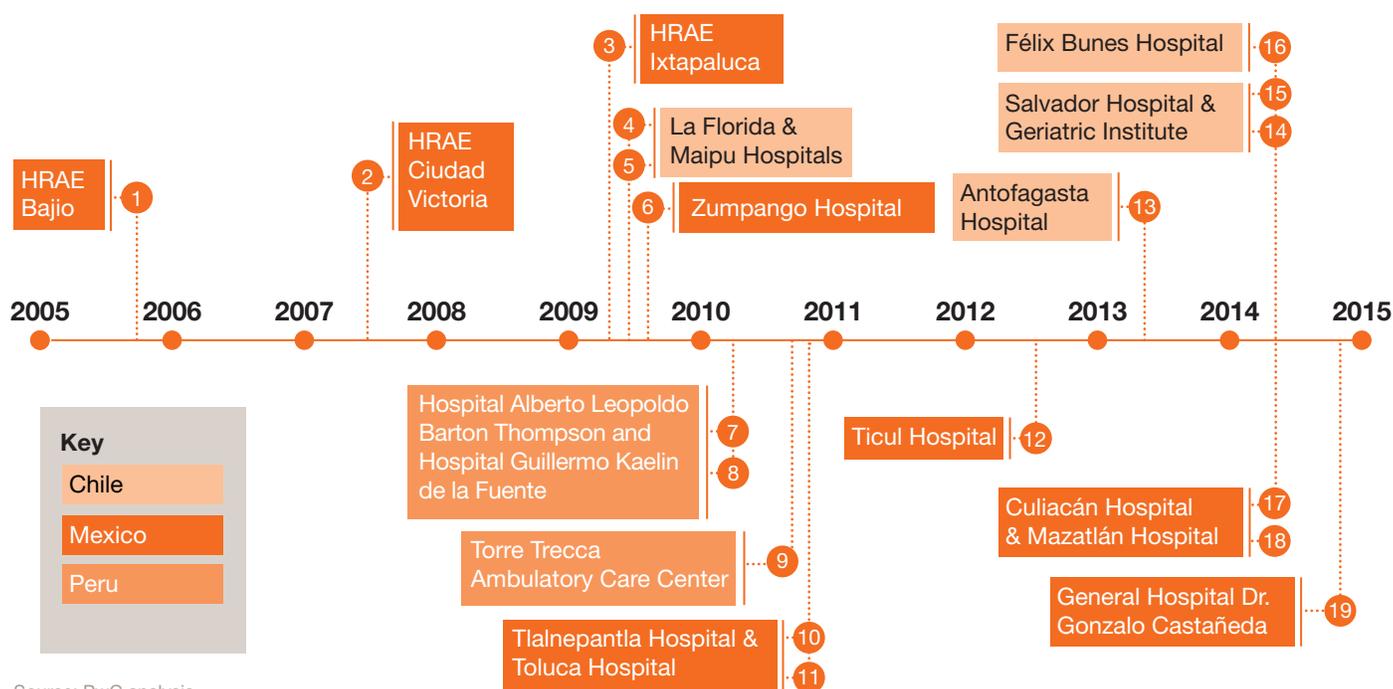
In 2013, three countries led the pack in healthcare PPP maturity: Chile, Mexico and Peru. However, a change in administration in Chile in 2014 has resulted in a hold on healthcare PPPs for the next four years. This 180-degree shift highlights the importance of political will and is discussed in further detail in Chile's country profile.

**Figure 1: Summary of healthcare PPP market maturity factors**



A summary of ratings by country is included in Appendix B. Source: Economic Intelligence Unit, "Evaluating the environment for public-private partnerships in Latin America and the Caribbean: the 2012 Infrascopes," 2012

**Figure 2: Healthcare PPP projects tendered to date**



Source: PwC analysis

As of April 2015, 19 projects had been carried out across these three countries, including the first PPIPs in the region in Peru, which will help Peru to move beyond infrastructure toward population health management (see Figure 2).

### Countries with active PPPs

#### Chile

At the time of research for this report, Chile had committed to a robust PPP strategy to take forward a number of health infrastructure projects. Chile had tendered five PPP hospitals and announced plans to tender an additional nine hospitals in 2014. However, the change in administration in 2014 closed the PPP pipeline for the next four years and the country

withdrew the tenders for seven of the remaining nine hospitals.

Two hospitals—La Florida and Maipu, located in the Santiago metropolitan region—were bundled together and tendered in 2009, comprising Chile’s healthcare PPP pilot program. Construction of both hospitals was completed in the last quarter of 2013. The La Florida Hospital was inaugurated in November 2013; the Hospital El Carmen de Maipu was inaugurated a month later. The second project was tendered in late 2012— a replacement hospital in the northern mining region of Antofagasta. The timing between the pilot program and the subsequent tenders allowed the government to incorporate lessons learned from the pilot program into subsequent contracts. Two additional

hospitals—Salvador Hospital and Geriatric Institute and Félix Bunes Hospital—were tendered in early 2014.

As a result of the government’s comprehensive and transparent bidding process, each tender announcement received multiple bids, both domestic and international. All six hospital PPPs fall under the traditional DBOT scheme and are of 15 years’ duration from the initiation of operations. In addition to infrastructure maintenance, the contracts include nonclinical services such as housekeeping, laundry, security, parking and cafeteria. Replacement hospitals also included change management services to facilitate staff transition.

**Table 1: Snapshot of PPP activity in the five focus countries** (*most recently available data*)

Measurement		Countries with healthcare PPPs			Countries to watch	
		Chile	Mexico	Peru	Colombia	Honduras
Economic outlook	GDP (USD)*	\$277.2B	\$1,261.0B	\$202.3B	\$378.4B	\$18.6B
	Health expenditure (% of GDP) <sup>2</sup>	7.4%	6.1%	5.1%	6.8%	8.6%
Healthcare access	Hospital beds/1,000**	2.2	1.6	1.5	1.5	1.0
	Healthcare coverage	Defined robust benefits package	Universal coverage	Fragmented—35% uninsured	Defined minimum benefits package	Universal coverage in policy but not in practice
PPP activity	Current healthcare PPP projects	2 in operation; 4 in construction	6 in operation; 4 in contracting	2 in operation; 1 on hold	None	None
	Future outlook	On hold	More projects expected	7 hospitals	2 hospitals	2 hospitals

Sources: \*CIA The World Factbook, \*\*World Bank

While medical equipment and information technology (IT) were excluded from the pilot program contracts to reduce complexity, Chile has bundled these services into subsequent PPP contracts, starting with the Antofagasta tender. Experience from the pilot program demonstrated that these services were too integral to effective hospital operations to be managed separately.

### Mexico

Mexico was the first country in this study to launch healthcare PPP projects, tendering its first pilot program in 2005. It is also the only country in the study to have hospitals with several years of operating experience. The country aggressively implemented PPP projects, tendering 10 PPP projects over the course of 10 years—six of which are currently operating and four that are in the contracting phase. Four of the projects were sponsored at the federal level and six at the state level.

Three of the federal hospital projects, as well as the state hospital of Zumpango, are regional tertiary care hospitals (*hospital regional de alta especialidad—HRAE*); the other six are general hospitals. All of Mexico's projects fall under the traditional DBOT scheme and include medical equipment. Two of the hospitals are also LEED-certified “green hospitals.” All contracts are of 25 years' duration and include nonclinical services such as housekeeping, laundry, security, parking and cafeteria. Later contracts incorporated additional patient care services such as laboratory, hemodialysis and medical gases; these services are traditionally outsourced to third-party vendors, but were included in the PPP contracts to be managed by the private partner.

Since opening, some of the Mexican PPP hospitals have faced challenges with low occupancy rates, and recruitment and retention of healthcare professionals. A key lesson learned was to better

match healthcare resources with infrastructure expansion.

### Peru

Peru is a more recent entrant into the healthcare PPP market but is applying the PPP model in innovative ways, experimenting with different models to meet its growing healthcare needs. Peru is the first country in Latin America to undertake the more ambitious PPIP model and is also the first country to include nonacute care facilities within the scope of a PPP project.

To date, the country has awarded three projects—all at the federal level and carried out by EsSalud, an autonomous, decentralized government agency that provides coverage to the formally employed and retired sector of the population and their families. EsSalud's unique status allowed it to bypass the country's formal PPP tender process, though it did consult with the country's PPP

## ***The Alzira model***

The La Ribera hospital and clinics comprised the first PPIP, established in Spain between the Government of Valencia and Ribera Salud Temporary Union of Businesses (UTE-Ribera). The model focuses on a four-pronged approach—public control, public property, public funding and private management. The government provides the private partner a capitated payment per inhabitant and is required to provide a package of clinical services that complies with pre-agreed quality standards.<sup>7</sup> The third paper of this healthcare public-private partnerships series—*Innovation Rollout: Valencia’s experience with public-private integrated partnerships*—provides further details on this model and subsequent variations.

agency, *ProInversión*, throughout the process. Two projects, modeled after the Alzira PPIP model in Spain (see text box—*The Alzira model*), involve the building and operation of new hospitals in the Lima metropolitan region (Hospital Alberto Leopoldo Barton Thompson and Hospital Guillermo Kaelin de la Fuente), each with corresponding primary and urgent care centers. A third project (Torre Trecca in Lima) involves the renovation of an existing abandoned high-rise building into an ambulatory care center.

All three projects follow the DBOD (PPIP) scheme and have adopted an innovative financing model that decouples the risk of construction from that of operations, and minimizes risk to EsSalud by tying payment to specific project milestones. Although the projects were adjudicated in 2010, they faced significant setbacks during a change in administration that occurred within EsSalud in 2011. The two hospital projects were completed

and went into operation in April 2014; however, the ambulatory care center project was still stalled, and as of this publication it is unclear when construction will commence.

### ***Countries to watch***

Two additional countries—Colombia and Honduras—were identified through this study as “countries to watch.” Both countries exhibited strong performance in the market maturity assessment and have announced plans to tender healthcare PPPs within the next one-to-two years. Their economic outlooks and levels of national healthcare access point to ripe environments to explore partnerships between the government and private entities.

## Overall lessons learned

Although many of the healthcare PPP projects in Latin America outside of Mexico are still in their infancy, several overall lessons have emerged from these early experiences, particularly around project design, project management, aligned incentives and communications.

### Project design

#### Transparency boosts public perception and private sector confidence

In all five countries studied, transparency stood out as a key component of PPP legislation. In Chile, Honduras and Peru, information on all PPP projects, including tender announcements, contracts and progress reports, can be easily found on a public website.

Transparency is a critical requirement for PPP projects, as it helps to assure the public that their tax dollars are being well spent. This is particularly important for healthcare PPP projects, which can be highly politicized.

Transparency also boosts private sector confidence and encourages participation. Responding to public bids is an expensive endeavor; in most cases, private sector partners will only consider making an investment if they are assured that the tender process is fair and free of corruption. This can be an important hurdle to overcome, especially for low- and middle-income countries whose economies are less than stable. Greater private sector participation also leads to increased competition and the potential for higher-quality and more cost-efficient bids.

#### Pilot programs allow for fine-tuning of PPP contracts

Healthcare PPP contracts are complex and challenging to implement, especially for the first time in a country. Pilot programs allow countries to experiment and gain experience with PPP structures and determine the best model to meet their needs before embarking on

more complex arrangements or more widespread adoption.

Chile and Mexico each employed different approaches to healthcare PPP pilots. Chile started with a pilot program comprised of two general acute care hospitals bundled together as one contract. Mexico, on the other hand, planned to tender eight tertiary care facilities in various regions across the country. Due to limited resources, only three were ultimately tendered.

While both countries incorporated lessons learned into subsequent contracts, each did so at different rates. For instance, Chile was able to address several of the challenges faced with the hospitals of La Florida and Maipu, particularly around IT and medical equipment, in its second PPP contract. Mexico had to wait to incorporate many changes, as the subsequent tender processes were already too far underway: contract changes around medical equipment did not occur until the third and fourth projects were tendered.

**Figure 3: Summary of overall lessons learned**

Project design	Project management	Aligned incentives	Communications
<ul style="list-style-type: none"> <li>• Transparency boosts public perception and private sector confidence</li> <li>• Pilot programs allow for fine-tuning of PPP contracts</li> <li>• Social need and availability of resources should drive project design decisions</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledgeable and skilled supervisors are critical to project success</li> <li>• Engage hospital management as early in the process as possible</li> <li>• Change management and capacity building should be incorporated into the process</li> </ul>	<ul style="list-style-type: none"> <li>• Risk transfer of medical equipment and IT must be properly managed</li> <li>• Payment mechanisms should balance operating and financial risk</li> <li>• Financial incentives based on performance metrics can drive outstanding performance</li> </ul>	<ul style="list-style-type: none"> <li>• Maintain an open dialogue when managing contract terms</li> <li>• Knowledge sharing mechanisms across the region should be formalized</li> </ul>

### **Social need and availability of resources should drive project design decisions**

Design decisions such as size, location and facility type should be driven not only by social need but also by availability of healthcare resources to staff and operate a facility, as this ultimately impacts a project's success or failure. Chile and Peru set up their pilot programs for success by starting with general acute care hospitals in attractive, well-established cities. In contrast, Mexico's initial projects involved tertiary facilities located outside of the capital region, where social need was high but availability of resources was low. Consequently, these hospitals have struggled with physician recruitment and low occupancy rates during their initial years of operation.

Healthcare PPP projects are inherently risky to both the government entity and private partner. It is critical that governments clearly define their project goals and carefully evaluate their available resources and healthcare network interdependencies prior to embarking on a PPP path. Although PPP legislation outlined prerequisite analyses such as cost-benefit, social impact, financial effectiveness and value for money, these studies were not always completed with the required level of rigor—and in some cases were susceptible to political influence.

### **Project management**

#### **Knowledgeable and skilled supervisors are critical to project success**

Supervision and monitoring, during both construction and operation phases, ensure that PPP projects adhere to contract terms. Given the complexity of PPP contract terms and the uniqueness of the healthcare sector, the individuals or organizations charged with supervision and monitoring should be highly skilled professionals with specific healthcare experience, in order to assure all parties that monitoring is fair and accurate.

Jointly selecting supervisors and addressing conflicts of interest caused by method of payment are critical factors to be addressed during tender design. As PPP projects become more widespread, it will also be important for countries to invest in developing a robust pool of well-trained supervisors to provide appropriate and independent oversight.

#### **Engage hospital management as early in the process as possible**

Early engagement of hospital management enables a smoother transition from construction to operations. Key benefits include:

1. Management understands the contract details, roles and responsibilities prior to kick-off of hospital operations;
2. Management is able to provide end-user input on hospital design decisions up front;

3. Engagement allows development of working relationships with the private partner; and

4. Engagement helps to create buy-in and investment in the ultimate success of the PPP project.

For example, Mexico engaged multidisciplinary teams at the beginning of its projects, which gave the management team time to fully prepare for operations. Chile's approach of engaging hospital management in the final stages of construction contributed to a four-month delay in the opening of La Florida and Maipu hospitals.

#### **Change management and capacity building should be incorporated into the process**

Under PPP arrangements, hospital management teams must shift from an “owner's” mentality (where they make all key decisions related to hospital infrastructure and nonclinical operations) to a “renter's” mentality (where they report issues to the private partner, who is then responsible for resolving them in accordance with contract terms). Most hospital management teams have not had exposure to this style of management and could benefit from training and capacity building. Chile was the only country within the scope of this study to incorporate change management into its PPP contracts, starting with the Antofagasta tender. Since the Antofagasta project is still in the construction phase, it is too soon to know whether this will provide significant benefits to workers and management teams; however, it is a start.

## *Aligned incentives*

### **Risk transfer of medical equipment and IT must be properly managed**

One of the most important lessons learned from the experience in Latin America was that medical equipment and IT should be bundled into the PPP contracts for the life of the contract. Although this transitions additional risk and consequently increases cost, the inherent interdependencies between infrastructure, IT and equipment outweigh the minimal gains of excluding both from the contract. This transition of risk must be closely managed and the roles and responsibilities of both parties clearly delineated in the contract. Medical equipment and IT fall into a grey area where the distinction between clinical and nonclinical services is blurred. It is important that both parties have an active role in the procurement and management process, and that they maintain an open dialogue throughout.

Chile and Mexico both faced challenges related to medical equipment and IT during their pilot programs and made adjustments to future contracts based on these early experiences. Chile excluded both IT and equipment altogether from its initial PPP contract, and subsequently had to procure IT and medical equipment via a parallel tender process. The government thus faced managing two contracts with two different partners, as well as managing the relationship between both entities due to the inherent interdependencies between infrastructure, IT and medical

equipment. In the case of Mexico, early contracts included medical equipment and IT for a limited amount of time. The contract terms were unclear, and the private partner and government found themselves at odds over the type and quality of equipment, not only during the procurement phase, but also during the transition of responsibility from the private partner to the government.

### **Payment mechanisms should balance operating and financial risk**

The PPP projects assessed during this study employ a wide range of approaches to balance operating and financial risk. Both Chile and Peru separate payments for construction from those of operations, whereas Mexico bundles both together in one payment. In the case of Chile and Peru, when the lower risk of construction is separated from the higher risk of operations, private partners are able to obtain financing at more favorable rates. This was particularly important for Peru where clinical services were included within the scope of the PPIP contract. Mexico transferred full risk to the private partner, since poor performance during operations can impact payments related to construction.

There are pros and cons to both methods of financing and contracting; governments will need to weigh the benefits of additional risk transfer with that of increased cost. If governments choose to limit risk transfer, they will need to build strong financial incentives and penalties

into the contract to ensure high-quality performance during the operations phase.

### **Financial incentives based on performance metrics can drive outstanding performance**

Financial incentives can be used to drive performance results that go beyond contract compliance. For example, Chile offers incentives to private partners for procuring medical equipment at prices below budget, and Peru incorporates patient satisfaction as part of its performance bonuses. Contracting government agencies should take into consideration their desired outcomes for the PPP contract and build incentives based on performance metrics that reward private partners for achieving and exceeding these goals.

## *Communications*

### **Maintain an open dialogue when managing contract terms**

While defined contract terms and conditions are imperative to a PPP contract's success, open lines of communications are equally important to resolve common issues unforeseen at the time of contracting. These may be operations-related, or derive from changing technology, evolving medical practices and/or epidemiologic shifts.

Contract changes are often difficult and time-consuming to implement as they require several levels of approval. Flexibility and an open dialogue help address concerns in a more timely fashion. Management of PPP

contracts should focus on obtaining optimal results for both parties and not on imposing penalties or deductions in payment. For example, during the first year of operations, the Zumpango Hospital's public and private partner management teams struggled to find a way to effectively work together. Initially, the government team reported all issues directly to the contract supervisor, rather than first alerting the private partner. This proved to be ineffective in dealing with minor issues that could have been easily resolved without such escalation.

The government and private partner management teams therefore began to hold regular meetings to discuss and address ongoing concerns. By working collaboratively, both public and private partners will be able to achieve the ultimate goal of the PPP project—to provide increased access and high-quality care to patients.

### **Knowledge sharing mechanisms across the region should be formalized**

Lessons from early PPP experiences in Latin America will continue to emerge as additional hospitals begin operations. New and existing players in the region could benefit from formal exchanges on PPP project successes and challenges. Although this is done on a global scale for healthcare PPPs by organizations such as the World Bank and for general PPPs in Latin America by the Interamerican Development Bank, there is currently no forum for discussion of healthcare PPPs in Latin America.

Given the size of the region, the unique nature of healthcare projects compared to other construction projects and regional similarities in demographics and health system structure, formalizing knowledge sharing could enable strong business and operating models to emerge as leading practices for the region.

## Country profile: Chile

### Economic outlook and national health status

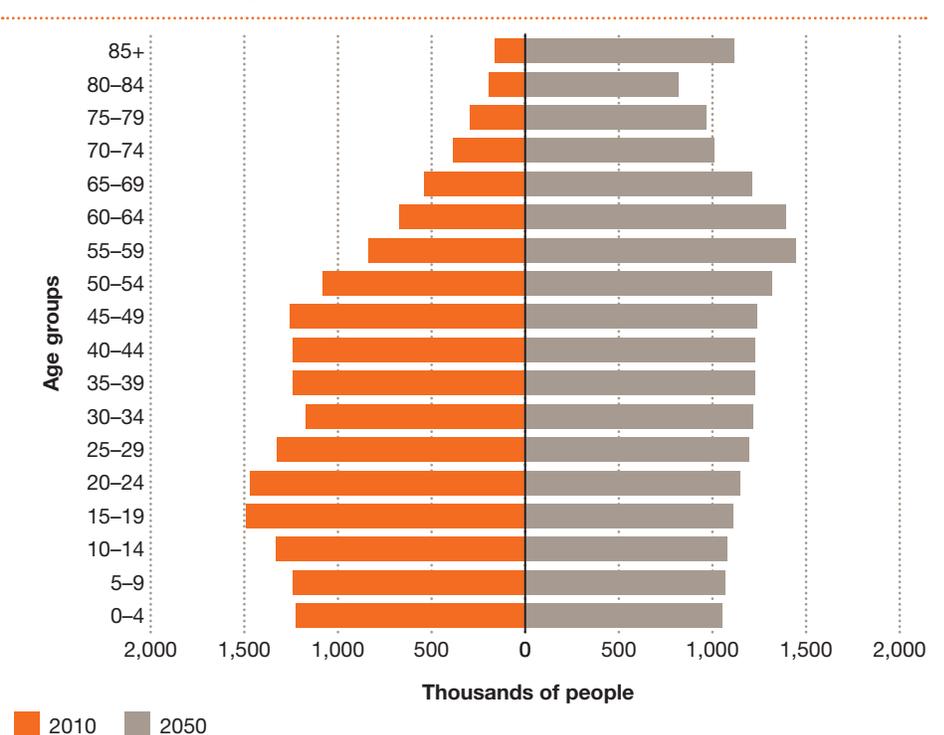
Chile is located on the southwest coast of South America, bordered by Peru and Bolivia in the north, and Argentina to the east. It has a population of over 17 million people. The country is divided into 15 regions, and its capital is the city of Santiago.

Chile has one of the strongest economies in the Latin American region, with an estimated gross domestic product (GDP) of US\$277.2 billion—driven mostly by high-performing industries such as business services, mining and manufacturing. The unemployment rate in 2014 was estimated at 6.4%. It also has one of the lowest poverty rates in Latin America with 14.4% of the population living at or below the poverty line.

The country's population pyramid reveals a population with a low birth rate and long average life expectancy (79.6 years at birth)—consistent with that of a developed nation. Median age in Chile is 33.3 years. As in other developed nations, an aging population is driving an increase in prevalence of chronic diseases. According to the National Statistics Institute (*Instituto Nacional de Estadística—INE*), the top three causes of death in 2010 were cerebrovascular diseases, ischemic heart disease, and cirrhosis and other liver diseases.



Figure 4: Demographic structure in Chile, 2010–2050



Source: United Nations, Department of Economic and Social Affairs, Medium Fertility Rates

**Table 2: Chile summary statistics, 2012** (most recent available unless otherwise noted)

Economy*		Health expenditures**	
Gross domestic product (GPD) (USD)	\$277.2B (2013)	Total expenditures on health as % of GDP	7.4%
GPD per capita (USD)	\$15,732 (2013)	% Public	48.6%
Population	17.6M (2013)	% Private	51.4%
Unemployment rate***	6.4% (2014)	% of Private expenses that are out-of-pocket	62.5%
Poverty headcount ratio at national poverty line	14.4% (2013)	Per capita expenditures on health (USD)	\$1,103
Median age*	33.3 (2014 est.)		
Health status		Health resources***	
Life expectancy at birth*	79.8 (2013)	Total hospitals****	318 (2011)
Cause of death**		% Public	67.0% (2011)
Communicable diseases and maternal, prenatal and nutrition conditions	8.0%	% Private	33.0% (2011)
Injury	8.3%	Hospital beds per 1,000	2.2
Non-communicable diseases	83.7%	Physicians per 1,000	1.6 (2011)

Sources: \*CIA The World Factbook, \*\*World Bank, \*\*\*Organization for Economic Co-Operation and Development (OECD) \*\*\*\*Instituto Nacional de Estadística INE Chile

**Table 3: Key attributes of Fonasa and Isapres health plans (Chile)**

Fonasa	Isapres
<ul style="list-style-type: none"> <li>Provides only basic AUGE coverage to all covered persons</li> <li>Covered persons are stratified into four income categories (A-D) with varying copayments for services; care for the indigent population (category A) is free</li> <li>Funded by the federal government plus individual contributions of 7% of total annual salary for income categories B-D</li> <li>Provides care through a network of public providers; those in categories C and D may pay a fee and seek care at private providers that have agreements with Fonasa</li> <li>Healthcare providers are reimbursed through a combination of case payments, capitation and fee-for-service</li> </ul>	<ul style="list-style-type: none"> <li>Offers more than 12,000 plans varying in price and coverage which can be grouped into three major categories: <ul style="list-style-type: none"> <li>Basic AUGE coverage—base price with no risk-adjustment</li> <li>Complementary health plan—basic AUGE plan + additional coverage where the price for additional services is based on individual risk factors</li> <li>Catastrophic events—additional non-AUGE benefits with price tied to the type of benefit</li> </ul> </li> <li>Funded solely through individual contributions—costing on average 10% of total annual salary</li> <li>Provides care through networks of contracted private providers; however, covered persons may also seek care at public providers</li> <li>Healthcare providers are reimbursed mostly on a fee-for-service basis</li> </ul>

Source: Bitrán, R., Urcullo, G. 2006. Good Practice in Expanding Health Care Coverage—Lessons from Reforms in Chile. Washington, DC: World Bank.

## The AUGE program<sup>6</sup>

In 2005, Chile passed significant healthcare reform that sought to provide universal coverage to its population. The *Universal Access with Explicit Guarantees* law, known as AUGE (*Acceso Universal con Garantías Explícitas*), defines a minimum benefits package for all Fonasa (public insurer) and Isapres (private insurer) members. The number of disease categories included in the benefits package has grown significantly over the years, and as of April 2015 covered 80 pathologies. The law guarantees:

- **Access:** Fonasa and Isapres must provide the defined-care protocols for each covered pathology to all of its enrollees.
- **Opportunity:** Maximum wait times (hours, days or months) for treatment after diagnosis are defined for each covered disease state.
- **Quality:** All healthcare providers must be registered and accredited by the Ministry of Health (Ministerio de Salud—MinSa).
- **Financial protection:** Out-of-pocket healthcare spending is capped to limit financial barriers to care; low-income families are exempt from payment.

## Healthcare access

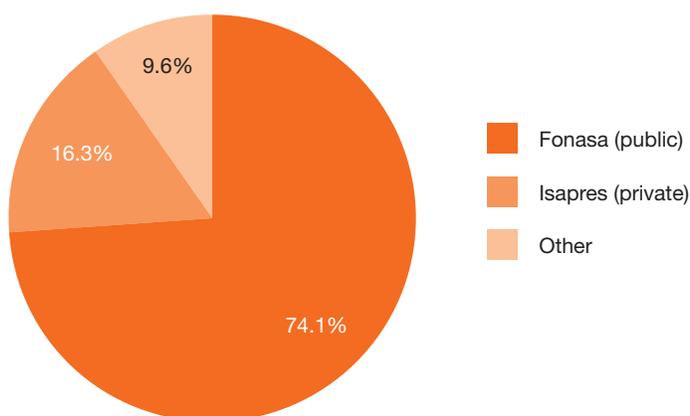
In 2012, Chile spent 7.4% of its GDP on healthcare services. Healthcare in Chile is provided by both the private and public sectors. The National Health Fund, also known as Fonasa (*Fondo Nacional de Salud*), is the agency in charge of public healthcare services, and it provides care to approximately 74% of the population.<sup>5</sup>

Individuals seeking greater coverage and additional provider options opt for care from a network of private for-profit healthcare insurers known as Isapres (*Instituciones de Salud Previsional*). Approximately 16% of the population is enrolled in an Isapres plan.<sup>5</sup>

The remaining 10% of the population is covered either through a different government system (e.g., armed forces, police), has commercial insurance only or is uninsured.

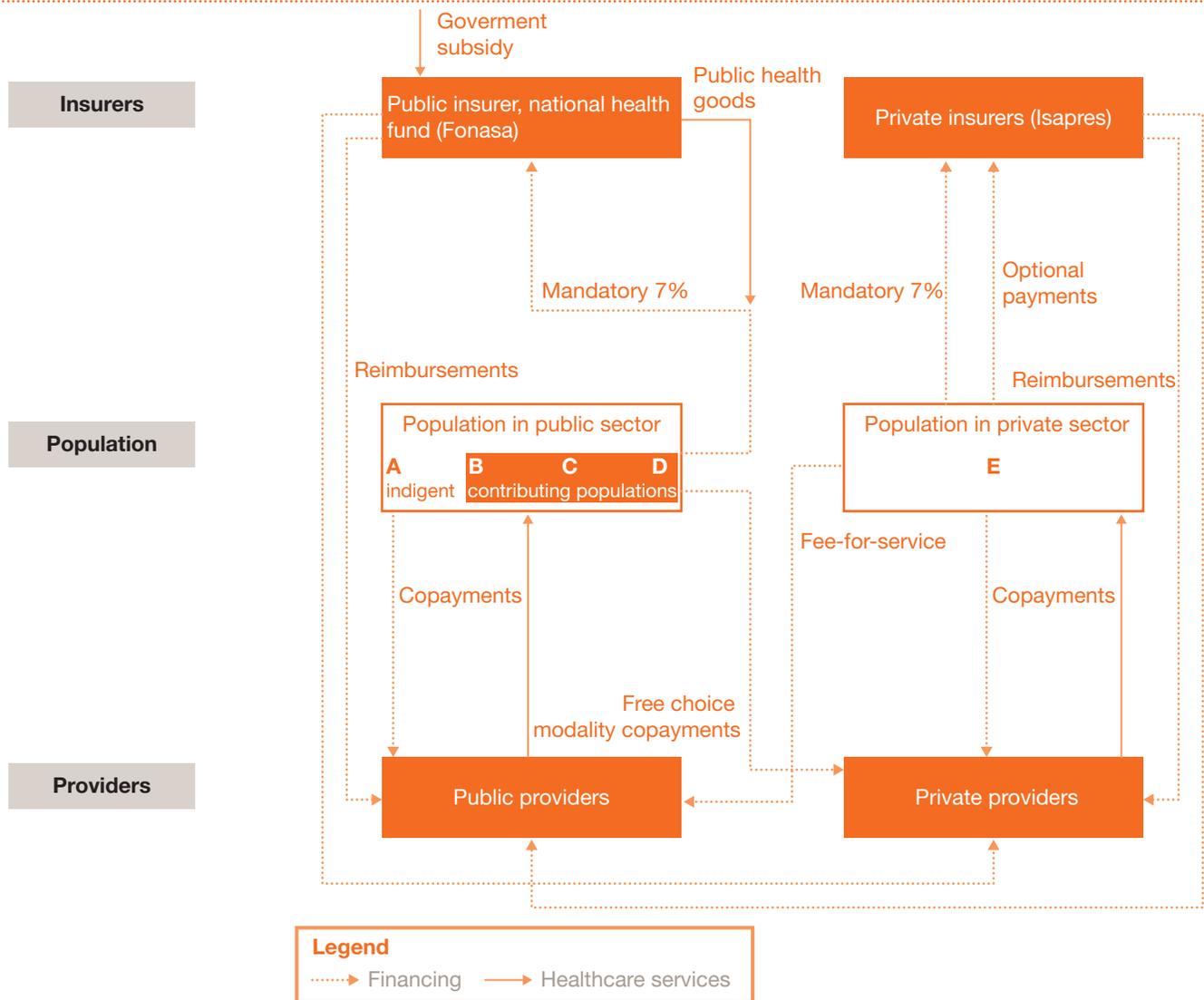
All those covered by Fonasa and Isapres are guaranteed a minimum benefits package as defined by the *Universal Access with Explicit Guarantees* law, known as AUGE (*Acceso Universal con Garantías Explícitas*) (see text box). Table 3 and Figure 6 outline the key attributes of the Fonasa and Isapres plans.

Figure 5: Healthcare coverage by type of insurance (Chile)



Source: Bitrán, R., Urcullo, G. 2006. Good Practice in Expanding Health Care Coverage—Lessons from Reforms in Chile. Washington, DC: World Bank.

**Figure 6: Overview of the Chilean healthcare system**



Source: Bitrán, R., Urcullo, G. 2006. Good Practice in Expanding Health Care Coverage—Lessons from Reforms in Chile. Washington, DC: World Bank.

As of 2011, there were an estimated 318 hospitals in Chile, of which 67% were public institutions. In general, private hospitals are more well-regarded than public hospitals. Public healthcare institutions are characterized as having insufficient personnel and outdated equipment, which results in long wait times and waitlists.<sup>7</sup> The public sector hospitals often cannot attend to patients within the specified timeframes outlined in the AUGE plan, and must therefore refer patients to the private networks.

Healthcare infrastructure was significantly impacted during the 2010 earthquake, which damaged and/or destroyed an estimated 79 hospitals in the most populous regions of the country; some of these hospitals remain closed at the time of research for this report. As of 2012, there were 2.2 hospital beds per 1,000 inhabitants, which is one of the highest in the region but far below the OECD average of 5.0.<sup>8</sup> Chile also has a significant physician shortage with only 1.6 physicians per 1,000 inhabitants, significantly below the OECD average of 3.2.<sup>8</sup>

### **PPP legislation**

Chile passed its first PPP legislation in 1991 and most recently amended it in 2010. It has the longest track record of PPP projects in Latin America, tendering a total of 71 projects worth US\$12.6 billion as of 2011.<sup>10</sup> The legislation created a highly standardized and transparent legal framework for the concession process and empowered the Ministry of Public Works (*Ministerio de Obras Públicas*—MOP) to enter directly into contracts with private partners. This PPP legislation covered various industries that did not already have specific PPP legislation, such as healthcare.

## **2010 earthquake<sup>9</sup>**

On February 27, 2010, Chile experienced the second largest earthquake in its history and the sixth strongest ever recorded in the world. The 8.8 magnitude earthquake, with an epicenter off the central coast, could be felt strongly in six of Chile's regions and impacted approximately 80% of the population. The earthquake also triggered a tsunami, which caused severe coastal damage. The United States Geological Survey estimated total economic loss as a result of the earthquake and tsunami at US\$30 billion. The earthquake had a significant impact on healthcare infrastructure, damaging and/or destroying an estimated 79 hospitals.

All PPP tenders, both at the federal and local level, are coordinated through the MOP, which coordinates as necessary with the corresponding sector ministries (e.g., Ministry of Health for hospital concessions).<sup>11</sup> Although the MOP is responsible for contract coordination, supervision of the contract is handled by the designated sector ministry.

The law outlines that several reports and analyses must be completed prior to tender, including a social need study, a financial feasibility, a cost benefit analysis, and operational and business plans. A “value for money” study is not required. Transparency, during both the tender process and the contracting phase, is a key aspect of the PPP legislative framework. All bid documents, contracts, progress reports, etc. are made publicly available on the MOP website in an organized and easy-to-navigate format.

Unsolicited proposals from the private sector are allowed under the law. A private partner may present an idea to the corresponding sector ministry which either approves or rejects the

proposal. If the proposal is accepted, then the private partner is required to complete the compulsory pre-tender analyses to determine project viability. The cost of producing these reports may be reimbursed if the project comes to fruition. The government reviews the reports, and if the project is considered viable, then a competitive tender process is initiated by the MOP. While the private partner submitting the proposal is awarded extra points in its tender evaluation, it is not guaranteed the project.

### **Political will**

Despite its long, solid history of PPPs, Chile has been slow to apply the PPP model to social infrastructure projects such as schools, prisons and hospitals due to the increased complexity and highly politicized nature of these types of contracts. Opponents of social infrastructure PPP projects argue that the private sector should not play a role in the provision of fundamental public services. In recent years, Chile has also had a large healthcare infrastructure budget—US\$959 million in 2015<sup>12</sup>—which

allowed the country to undertake infrastructure projects fully funded by the government.

Chile first contemplated healthcare PPPs in 2005 under the administration of President Ricardo Lagos (2000–2006), as part of the healthcare reform that expanded coverage. The MOP approved the construction of an initial three hospitals under the PPP model; however, a change in leadership at the Ministry of Health resulted in the postponement of these projects.<sup>13</sup> Two of the three hospitals were eventually tendered four years later during the tail end of President Michelle Bachelet's first term (2006–2010).

The administration of President Sebastian Piñera (2010–2014) strongly supported healthcare PPP projects and reignited the PPP pipeline, committing to tendering 11 hospitals during his four-year term. The 2010 earthquake, however, shifted the administration's focus and only four of the 11 hospitals were successfully tendered during his tenure. The compulsory analyses were completed and the tender process was kicked off for the remaining seven projects; however, the administration of President Michelle Bachelet withdrew these projects shortly after she took office again in March 2014.

The remaining seven hospitals will be constructed using solely public funds rather than through a PPP model. Furthermore, the Bachelet administration announced it would not employ the PPP model for hospital infrastructure during its four-year term (2014–2018).<sup>14</sup>

## PPP projects

### Overview

Chile tendered its first healthcare PPP pilot program in 2009. The hospitals of La Florida and Maipu were bundled together and tendered as one single project. Construction was completed in late 2013, and the La Florida Hospital was inaugurated in November 2013 while the Hospital El Carmen de Maipu in December 2013.

Both hospitals experienced significant delays in construction due to administrative hurdles related to land permits and financing, as well as delays in obtaining operating licenses due to miscommunication between the federal and local governments. These delays were acknowledged by the MOP, and the private partner was not penalized.

In late 2012, Chile issued its second healthcare PPP, the construction of a replacement hospital in the northern mining region of Antofagasta. Those interviewed for this report felt this project was higher risk because the mining industry drives increases to the average salaries in the area, which many felt could increase the labor costs of the project. The winning bidder submitted an aggressively-priced proposal that included innovative cost containment measures to counterbalance this effect. Hospital construction began in 2014, and the project is expected to be completed in 2017.<sup>15</sup>

Chile tendered three additional replacement hospitals in 2014: the Salvador Hospital, the National Geriatric Institute and Félix Bunes Hospital. The Salvador Hospital and National Geriatric Institute were

damaged during the 2010 earthquake and were bundled together as one project. Construction of these hospitals is expected to commence in mid-2015. These hospitals were in the pre-tender phase during the time of interviews; therefore, there is limited coverage on these projects within this report.

All six hospitals fall under the design, build, operate and transfer (DBOT) model and are of 15 years, duration from the initiation of operations. In addition to maintaining the infrastructure, the contracts include nonclinical services such as housekeeping, laundry, security, parking, cafeteria, etc.

The replacement hospitals also included change management services in the contract. Change management, or the systematic approach to ensuring change is both accepted and sustainable, was deemed necessary because all hospital staff and clinicians would be transitioning from the old hospital to the new hospital and the move would require training and buy-in to ensure success.

The pilot program contracts of La Florida and Maipu did not include medical equipment or IT, but these costs were included in all subsequent tenders.

### Tender process

Chile has a highly standardized tender process, including a template bid document that outlines the general requirements of all healthcare PPP projects with specific details relating to individual projects included in a set of annexes. For healthcare PPPs, the Ministry of Health (*Ministerio de Salud—MinSal*), local healthcare

**Table 4: Chile healthcare PPP projects as of 2015**

Name (new/replacement)	Year contract signed (current status)	Location (city, region)	Government entity	Private partner (country of origin)	Hospital type (no. of beds)	Initial investment (USD)	Medical equipment/ IT
La Florida Hospital and Maipu Hospital (New)	2009 (In operation)	La Florida, Santiago, Metropolitan Region Maipu, Santiago, Metropolitan Hospital	Ministry of Health/ Ministry of Public Works	Technocontrol (Spain/Italy)/ Constructoras de San Jose	La Florida: General Hospital (391 beds) Maipu: General Hospital (375 beds)	\$313 million	Not included
Antofagasta Hospital (Replacement)	2013 (In construction)	Antofagasta, Antofagasta Region	Ministry of Public Works/ Ministry of Health	Consorcio Salud Siglo XXI (Spain)	Regional Tertiary Hospital (671 beds)	\$300 million	Included for life of contract (15 years)
Salvador Hospital and National Geriatric Institute* (Replacement)	2014 (In construction)	Providencia, Santiago, Metropolitan Region	Ministry of Public Works/ Ministry of Health	Consorcio de Salud Santiago Oriente (Spain/Mexico/Chile)	Tertiary Hospital (640 Beds)	\$254 million (estimated)	Included for life of contract (15 years)
Félix Bunes Hospital (Replacement)	2014 (In construction)	Cerro Navia, Santiago, Metropolitan Region	Ministry of Public Works/ Ministry of Health	Astaldi Concessioni S.R.L. (Italy)	Tertiary Hospital (588 Beds)	\$211 million (estimated)	Included for life of contract (15 years)
Dr. Sótero del Río Hospital* (Replacement) and Puente Alto Hospital (New)	Withdrawn	Puente Alto, Cordillera, Metropolitan Region	Ministry of Public Works/ Ministry of Health	N/A	Sotero del Río: Tertiary Hospital Puente Alto: General Hospital (1,050 beds combined—estimated)	N/A	N/A
Region V Hospital Network (New)	Withdrawn	Magra Magra & Quillota/Petorca Valparaiso Region	Ministry of Public Works/ Ministry of Health	N/A	Two General Hospitals (500 beds combined—estimated)	N/A	N/A
Southern Hospital Network (New)	Withdrawn	Curicó & Linares, Maule Region; Chillán, Biobio Region	Ministry of Public Works/ Ministry of Health	N/A	Three General Hospitals (1,300 beds combined—estimated)	N/A	N/A

Source: Ministry of Public Works

\*Hospital was damaged during the 2010 earthquake

authorities and the MOP work collaboratively to develop the bid documents, which must also be approved by the Ministry of Finance and the President of the Republic.

The PPP tender process includes a prequalification phase, whereby interested bidders submit documentation to demonstrate that they meet the technical and financial requirements as outlined by the MOP. If approved, the bidder may then submit a formal bid response to the tender. Given the high cost of

bid responses, this prequalification phase is used as a method to prevent potential bidders from being disqualified due to technicalities.

Once the tender is officially announced, an open competitive bidding process commences. Prequalified bidders must submit technical and financial proposals. Technical proposals are evaluated by a multidisciplinary team to ensure that they meet the minimum evaluation criteria and are scored on a scale from 1 (unacceptable) to 7

(excellent). Those bids scoring below a 5 are disqualified.

Bidders are then evaluated on their financial proposals with key consideration given to the total contract amount and construction cost. The financial proposal bears the majority of the weight in the overall bid evaluation; therefore, the bidder with the most competitive economic bid is usually awarded the contract.

All of Chile's tenders received multiple bids—both domestic and international. Two of the winning

**Table 5: Snapshot of prequalified bidders—Chile PPP tenders**

Consortium	Private partner	Country of origin
<b>La Florida &amp; Maipu Hospital tender</b>		
Abengoa Chile/Begar/Inabensa	Begar	Spain
	Abengoa Chile	Spain
	Instalaciones Inabensa S.A.	Spain
Acciona Concesiones Hospitalarias Chile	Acciona	Spain
Dalkia/Inso	Dalkia	France
	INSO S.P.A.	Italy
San Jose/Tecnocontrol*	Constructoras de San Jose Tecnocontrol	Spain Italy
<b>Antofagasta Hospital tender</b>		
Astaldi	Astaldi Group	Italy
FESSA	Sigro	Chile
	EllisDon Corporation	Canada
	Fengate—LPF Infrastructure Fund	Canada
Antofagasta Salud	Ferrovial	Spain
	MNII Chile, LLC	United States
Infraestructura de Salud Antofagasta	ACS	Chile
	Claro Vicuña Valenzuela	Chile
	Mena y Ovalle	Chile
	Dragados SA	Spain
Hospitalario Anto-Andino	Inversiones Hospitalarias	El Salvador
	San José Andina	Chile
Consorcio Salud Siglo XXI*	SNC-Lavalin**	Canada
	Sacyr Concesiones	Spain

Source: Infradeals (www.infradeals.com)

\* Designates winning bidder.

\*\* SNC-Lavalin left the consortium in June 2014. Sacyr Concesiones is now 100% responsible for the contract.

consortia were interviewed for this report; both felt the process was fair and transparent and that they would participate in future tenders. This is further supported by the fact that the Astaldi Group, which lost the Antofagasta tender, participated in the subsequent Félix Bunes Hospital tender and won.

### Financing & payment mechanisms

All of Chile's healthcare PPP projects have similar financing schemes, with slight variations. Commonalities across projects are outlined below:

- All amounts quoted in the contract are in UF (*Unidad de Fomento*), a unit of account that is used in Chile for international secured loans. The UF is converted to Chilean pesos at the time of payment using an exchange rate that accounts for inflation.
- The government does not provide any up-front investment and only begins to pay for services once construction is complete and the hospital begins operations, resulting in a lag of approximately 18 to 24 months.
- The private partner is responsible for the initial investment—10–20% in direct capital investment and 80–90% in debt financing through a financial partner via a project finance scheme.
- The private partner issues financial guarantees to the MOP during the construction phase and continues to do so during the operation phases. The value of the financial

guarantee decreases over time and is contingent on the private partner's performance.

- The private partner is scheduled to receive separate payments to cover construction, operations and medical/nonmedical equipment (if applicable) costs as outlined in the winning bidder's financial proposal.
- The MinSal pays a fixed payment (annual or semi-annual) to the private partner to cover construction costs over a shorter period of time than that of the contract.
- The corresponding local health authority, responsible for the provision of care, pays the private partner semi-annual payments to cover the fixed and variable costs of operations, and payments for medical/nonmedical equipment costs (if applicable) once the hospital begins operations.
- The payments for operations have fixed and variable components. The fixed payment is a prospective payment for the cost of operations, assuming a minimum occupancy rate. The variable component is based on actual activity and comprises the following:
  - Occupied bed days: additional payments per occupied bed day above the defined base occupancy rate
  - Additional services: payments for additional services as requested by the government to not exceed a specified amount
  - Outcomes: payments for exceeding the established base performance metrics within a six-month period

- Excess occupancy: additional payment for each day occupancy rate exceeds 110%
- Additional catering services (non-pilot hospitals only): monthly payments for additional catering services that exceed the amounts outlined in the contract

Financial risk is minimized in several ways. First, the private partner seeks funding only for construction and medical equipment (if applicable). Second, the government provides two separate payments for construction/equipment and operations, thereby separating the risk of construction from the higher risk associated with operations. The government is also committed to paying back the cost of construction over a shorter period of time. Lastly, the government provides certain financial guarantees, should there be an early termination of the contract.

In general, financing was easy to obtain for the pilot program (La Florida and Maipu Hospitals) given Chile's strong economy, its favorable track record of prior non-healthcare PPP projects and the perceived minimal risk of the DBOT project structure. When the research for this report was conducted, the Antofagasta project was in the process of seeking financing. Interviewees explained that the perception was Antofagasta would face greater difficulties in completing the project on time and within budget due to higher risk components, such as desired medical equipment and technology, as well as the aggressive timeline proposed by the winning bidder. The project eventually secured financing in November 2014, more than a year after adjudication.

**Table 6: Sample performance metrics (Chile)**

Category	Description	Monitoring methods
Cleaning services	Contracted personnel comply with specifications established in contract	Audits and documents review
Patient & employee meals	Provide specified quantity and quality of meals to the defined population as outlined by the contract	Visual inspection, audits, SIC, surveys and user complaints
Administration & maintenance of medical equipment	Maintain all medical equipment in conformance with standards outlined in the tender document	Audits, documents review, SIC and user complaints
Linen & clothing supply	Attain an annual user satisfaction rating greater than 80%	Audits and surveys

**Performance metrics**

Performance during construction and operations is measured through a unique system of rewards and penalties. The private partner is responsible for implementing a communications information system known as the SIC (*Sistema Informático de Comunicación*) to help supervise and monitor performance. The contract defines an extensive set of performance metrics that can be grouped into two major categories:

1. Delivery of services: a set of metrics that measures the availability and quality of services outlined in the contract and as committed to by the private partner’s winning bid. Operational service standards are grouped into categories and further classified into basic and speciality services. These are monitored on a periodic basis (daily, monthly, yearly, etc.) as defined by the contract. There are two levels of noncompliance with operational service standards:

- Level 1 “Nonconformity”: failure to deliver a certain service or noncompliance with defined quality standards. If this is

corrected within the designated time frame, the “nonconformity” is lifted.

- Level 2 “Noncompliance”: failure to correct a level 1 incident within the specified time as defined by the contract or failure to deliver a pass/fail service with no associated grace period for correction.

2. “Never events”: events that should not occur under any circumstances in a health facility because they put patients in grave danger or they have a significant impact on the functionality of the health facility.

Fines of varying amounts—depending on the service area and gravity of noncompliance—are imposed for all “never events” and level 2 noncompliance events. Fines must be paid to the MOP within 30 days of notification. If payment is not received, the MOP may obtain payment from the financial guarantees posted by the private partner.

Performance is also measured through a points system that assesses service level and overall quality during a six-month period. A hundred-point system is established for each of

the service areas and points are deducted for level 1 and level 2 noncompliance incidents. The number of points deducted varies depending on the service area and gravity of noncompliance. If the private partner scores less than 85 in any of the service areas then it must pay an additional fine. An overall global score is determined based on a weighted average of the individual service specific scores.

The overall global score determines a private partner’s eligibility for a bonus payment. To receive this, they must also meet the following criteria:

- Zero “never event” fines
- A score of 85 or better in each of the basic service areas
- A score of 92 or better in speciality services
- No fines for failure to deliver required services

At the time of research for this report, none of the hospital PPPs were operational; therefore, no data was available on experiences related to the operational performance metrics and reward system.

## Supervision & monitoring

Supervision and monitoring of the contract is carried out by an Inspector General (*Inspector Fiscal*) who is appointed by the MOP for each hospital during the construction and operations phases. The Inspector General may seek the assistance of external third parties to carry out his or her supervision and monitoring responsibilities. Although the Inspector General is employed directly by the MOP, the private partner pays the MOP an administrative fee to cover the cost of supervision and monitoring.

A steering committee is also established during each phase and led by the Inspector General. This committee is comprised of the Inspector General, the director of the local health authority and the general manager of the private partner during the construction phase. During the operation phase, the director of the

local health authority is replaced by the hospital director. The steering committee meets on a monthly basis and is responsible for facilitating the efficient execution of the contract. The financing institution may also choose to employ a third party to conduct supervision and monitoring, as is the case for the Hospitals of La Florida and Maipu.

The Inspector General role is the standard method employed by Chile for supervision and monitoring across all PPP projects. Those interviewed felt the process was overall effective; however, a high turnover rate among Inspector Generals was cited as an area of concern. In addition, given the unique nature of healthcare PPP contracts, those interviewed felt that the Inspector General needed to have significant healthcare experience or have additional training to take on this role.

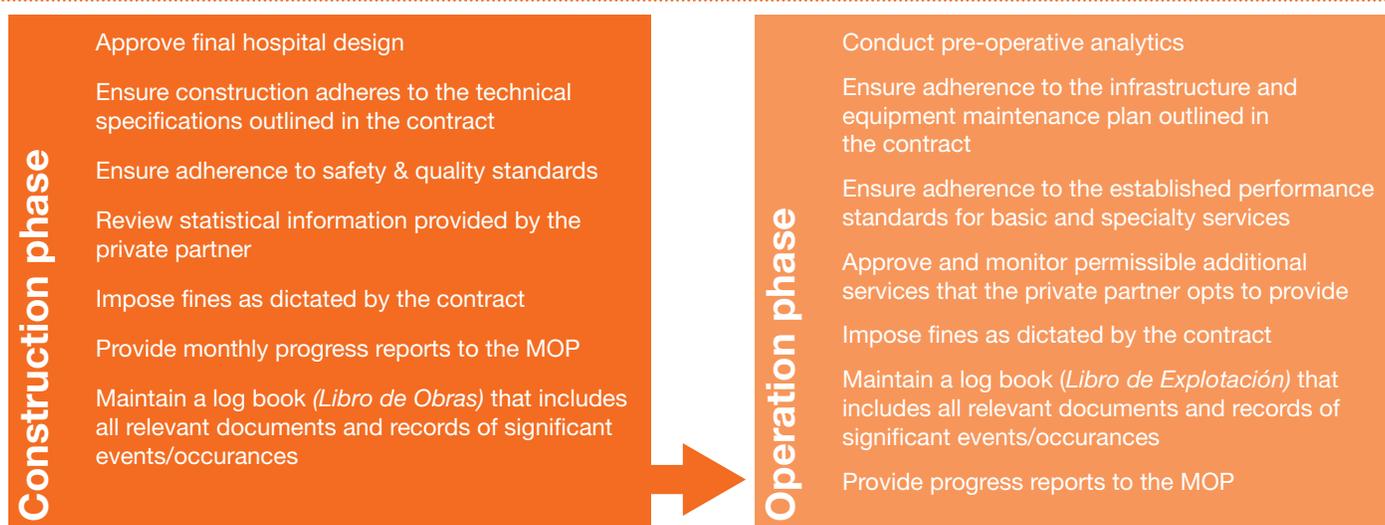
## Successes

### Open dialogue related to IT, medical equipment & consumables

IT and medical equipment were not included in the pilot program (La Florida and Maipu hospitals). Reasons cited for the exclusion were reduced price, risk and complexity of the PPP contract. This decision was seen by all those interviewed as a fundamental flaw and one of the most important lessons learned from the pilot program. “It is like buying a car with no engine,” noted one of the former government workers interviewed.

In 2012, the MOP carried out a separate tender process to source IT and equipment for the two hospitals. Subsequently, the government had to work with two separate private partners, as well as coordinate and monitor the interaction between them

**Figure 7: Key responsibilities of the Inspector General by phase (Chile)**



Source: Hospitals of La Florida & Maipu and Hospital of Antofagasta tender documents.

due to the inherent interconnectivity of infrastructure and medical equipment. The initial benefits of excluding IT and medical equipment were therefore short-lived.

Based on the experiences of the pilot program, Chile developed a detailed and comprehensive framework to include IT and equipment in all future tenders, starting with the Hospital of Antofagasta. The framework clearly delineates roles and responsibilities, as well as defines the procurement process, maintenance expectations and financing requirements. The framework was tested with the Antofagasta Hospital and was updated in the subsequent tenders. It is a potential area for future study. Highlights of the framework include:<sup>16</sup>

#### *Procurement*

- The MinSal works closely with the local health authority to define the equipment requirements, including quantity, technical specifications and maximum yearly budget.
- The contract mandates a technical committee for equipment procurement and replacement (*Comité Técnico de Adquisición y Reposición—CTAR*) comprising the Inspector General, a Ministry of Health representative and the director of the local health authority. This committee is responsible for reviewing and approving all equipment procurement.
- There is flexibility within the contract to adjust the equipment needs throughout the life of the contract as long as these changes do not exceed the maximum budget defined.

- Consumables remain the responsibility of the local health authority; however, the government has an active role in equipment procurement through its role in the CTAR.

#### *Funding*

- The private partner must have sufficient funds to cover the defined maximum yearly equipment budget outlined in the contract.
- Although yearly budgets vary greatly from year to year, depending on equipment need, the MOP pays the private party a flat fixed fee yearly to cover equipment expense.
- The private partner is required to have an additional fund (*Fondo de Reserva para actividades no previstas*) for unexpected replacements and/or procurement expenses.

#### *Maintenance*

- The private partner must submit a plan for equipment procurement and maintenance, including timelines for installation, inspection and testing, training and an estimated “go live” date.
- The private partner must guarantee the availability of equipment, defined by target uptime percentages, as well as the continuous functionality of the equipment, providing a detailed equipment maintenance plan, as well as a contingency plan should there be equipment failure.

#### **Payments tied to occupancy rates**

The payment mechanism employed in Chile includes fixed and variable

components that tie payment to occupancy rate. The risk of overpayment due to low occupancy rates is thereby minimized for the government partner, while still covering the private partner’s fixed costs. Conversely, the contract penalizes the local health authority for mismanagement of hospital census by providing the private partner with an extra add-on payment for every day occupancy rates exceed 110%. These checks and balances encourage active management of hospital occupancy rates and allow for risk sharing between parties.

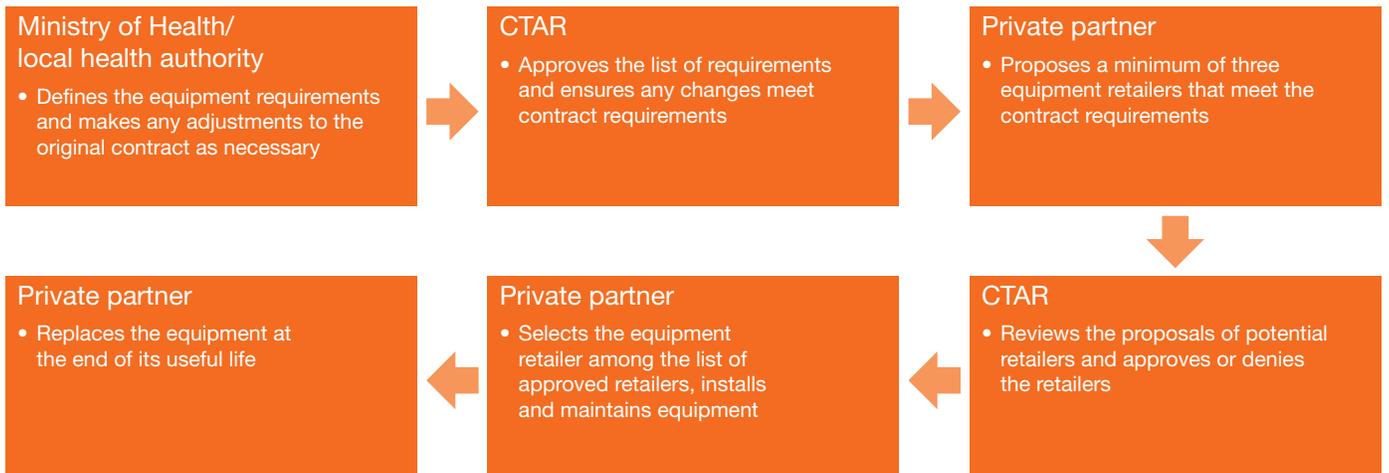
#### **Financial incentives to reward outstanding performance**

Chile created a robust, defined set of performance metrics that not only penalize the private partner for poor performance and noncompliance with the contract terms, but also incentivize and reward exceptional performance.

A global rating system defines four categories of performance: deficient, normal, good and excellent. Overall performance is measured every six months, and the private partner has the opportunity to obtain one of three tiers of bonuses based on their rating. A deficient rating results in a fine. The private partner therefore has a continuous incentive to deliver high-quality services.

In addition, contracts are structured so that private partners receive an incremental financial bonus related to the procurement of medical equipment. Should actual yearly cost be lower than the defined maximum budget, the private partner may retain 30% of these savings, and the remaining 70% is deposited in a fund for unexpected

**Figure 8: Medical equipment procurement process (Chile)**



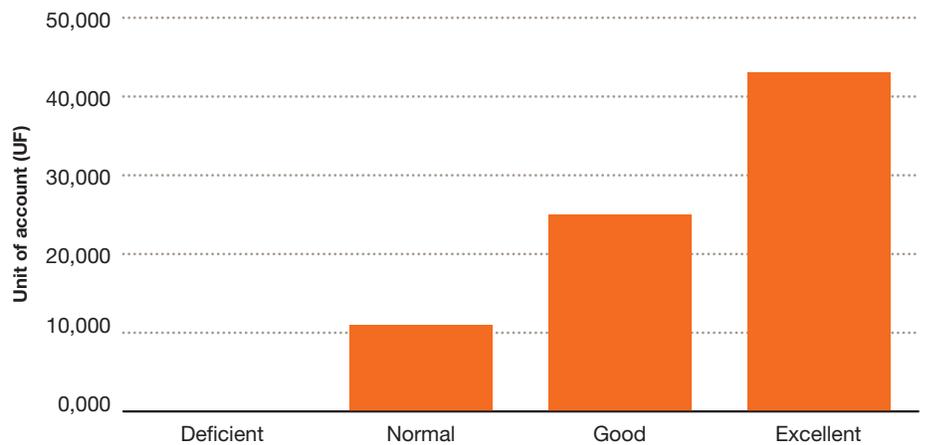
Source: Modelo de Adquisición del Equipamiento Médico y Mobiliario Clínico. s.l. : MOP-MINSAL Gobierno de Chile, 2012.

expenses. Private partners therefore also benefit from obtaining the best price when purchasing equipment. The government minimizes its risk of obtaining poor-quality equipment by playing an active role in the procurement process through the CTAR.

**Change management included within the contract**

Chile was the first country within the scope of this study to tender a replacement hospital (Antofagasta) and, therefore, will be the first to transition hospital management and staff from the existing hospital to a new PPP hospital. Transitioning from a traditional hospital to a PPP hospital will be challenging for the public sector, as the focus will shift from managing all aspects of the hospital to focusing primarily on clinical care and managing all other aspects via contract. Based on experience from other health PPPs outside this study, adjusting traditional behaviors is

**Figure 9: Sample incentive bonus payments—Antofagasta**



Source: Antofagasta tender document

difficult and can be more of a hurdle for a replacement hospital than a new hospital.<sup>17</sup>

The Antofagasta tender anticipated these challenges and included change management services within its contract: the private partner is responsible for conducting training and education on the new performance monitoring system included in the contract, as well as IT and equipment. Although the contract does not go into detailed specifics regarding these change management services, it is a starting point and will be an archetype for future tenders for both replacement and new hospitals.

## Challenges

Chile's pilot PPP hospitals were still in the construction phase when research for this report was conducted; therefore, challenges noted relate only to project planning and the tender process.

### PPP projects need dedicated sponsors to bring them to fruition

Chile's healthcare PPP program has a history of stop-and-go progress, based on the political will of the current administration. For example, there was a four-year lag between project conception and successful tender of the initial pilot program due to the change in leadership within the MinSal at a critical time of project development. An additional three years passed between the pilot program launch and the Antofagasta tender, despite strong support from the leading administration.

While these delays provided an opportunity to incorporate lessons learned from the pilot program,

they prevented the administration from carrying out all of the intended projects before there was another change in administration in 2014. As a result, a once healthy pipeline of 12 hospitals was reduced to three tenders covering five hospitals.

The current stance of the Bachelet administration puts Chile at a healthcare PPP impasse. The future of the healthcare PPP program will be highly dependent on the political will of the next party in office (2018 or later). Chile's experience demonstrates the critical impact of political will on the success and continuous development of a country's healthcare PPP program.

### Cumbersome tender process can result in prolonged timelines

Many of those interviewed for this report cited the cumbersome tender process as one of the largest challenges for health PPP projects. While necessary for these complex projects, coordination of several agencies—such as the MOP, MinSal and local health authorities—proved to be challenging and time-consuming. Although the roles and responsibilities for these agencies are clearly defined in tender documents for construction and operations, there is a lack of clarity during the tender, adjudication and preconstruction phases. This caused delays in timelines and resulted in drawn-out tender and adjudication processes for several projects.

## Future outlook

The future outlook of healthcare PPP projects in Chile is uncertain. Although the country has a strong PPP framework in place and there is a high level of interest from the private sector,

the lack of political will has halted the development of future healthcare PPP projects until at least 2018.

Most of those interviewed felt that the potential for more advanced PPIPs (including clinical services) was low, especially given the resistance to health PPP projects in general. However, many believed there was a possibility of select clinical services, such as laboratory and diagnostic services, being transferred to private sector management in future PPP contracts.

At the time of research, Chile's PPP hospitals were all in the construction phase. Further research should be conducted in two to five years to evaluate the experiences related to performance measurement, IT, medical equipment procurement and transition of hospital services for the replacement hospitals.

## Country profile: Mexico

### Economic outlook and national health status

Bordered by the United States in the north and Guatemala in the south, Mexico is the largest Spanish-speaking nation in Latin America, with a population of over 122 million people. The country is divided into 31 states and one federal district, where the nation's capital, Mexico City, is located.

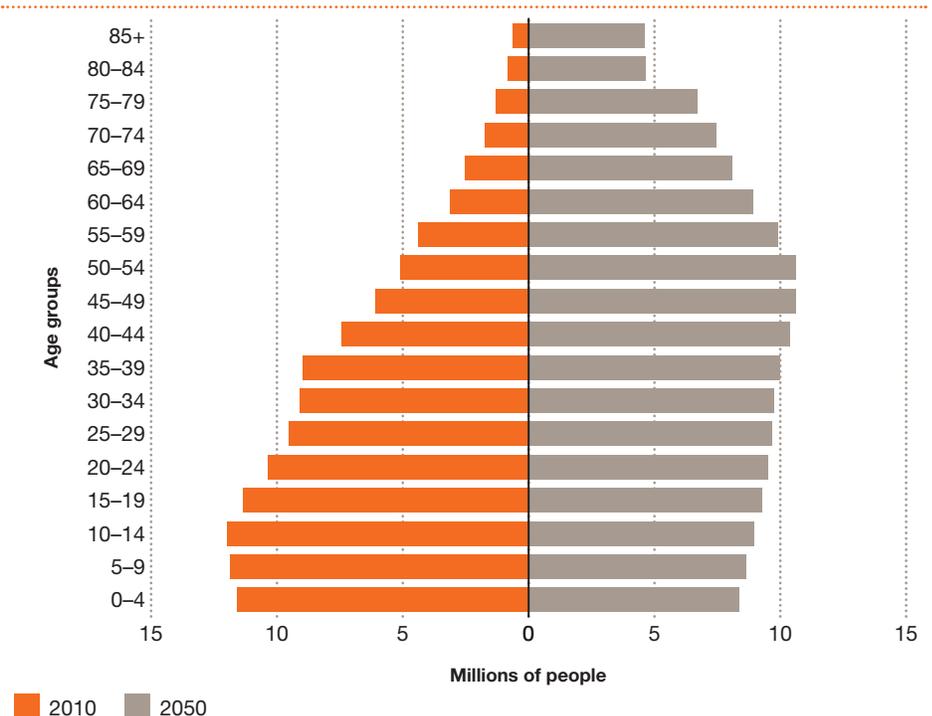
In 2013, Mexico's GDP was valued at approximately US\$1,261 trillion. It ranked 11<sup>th</sup> in the world and is the highest-ranked country in this study. Income inequality continues to be a problem, however with over 50% of the population living at or below the poverty level.

The National Institute for Statistics and Geography (*Instituto Nacional de Estadística y Geografía*) reported an unemployment rate of 4.9% in 2013; however, this rate more than doubles to 11.4% when taking into account underemployment. In addition, approximately 27.9% of the population is employed in the informal sector.



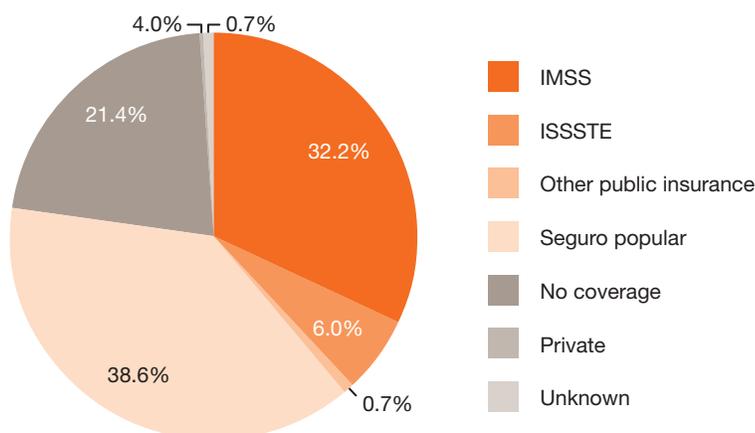
● PPP Hospital

Figure 10: Demographic structure in Mexico, 2010–2050



Source: United Nations, Department of Economic and Social Affairs, Medium Fertility Rates.

**Figure 11: Healthcare coverage by type of insurance (Mexico)**



Source: Ensanut Survey 2012

Median age in Mexico is 27.3 years and average life expectancy at birth is 77.1 years. A declining fertility rate and longer average life expectancy are causing a shift in Mexico's demographics. The National Population Council (*Consejo Nacional de Población—CONAPO*) projects that Mexico will experience negative population growth (more deaths than births) over the next 40 years, and by 2050 median age is expected to rise to 42.7 years.

This change in demographics is also causing changes in epidemiology, with increased prevalence rates of chronic diseases. Obesity, and its associated health impacts, is a growing problem in Mexico, with 32.8% of the adult population considered obese. The

**Table 7: Mexico summary statistics, 2012 (most recent available unless otherwise noted)**

Economy*		Health expenditures**	
Gross domestic product (GDP) (USD)	\$1,261T (2013)	Total expenditures on Health as % of GDP	6.1%
GDP per capita (USD)	\$10,307 (2013)	% Public	51.2%
Population	122.3M (2013)	% Private	48.2%
Unemployment rate*	4.9% (2013 est.)	% of Private expenses that are out-of-pocket	91.5%
Poverty headcount ratio at national poverty line	52.3%	Per capita expenditures on health (USD)	\$618.26
Median age*	27.3 (2014 est.)		
Health status		Health resources****	
Life expectancy at birth*	77.1	Total hospitals*****	4,407 (2013)
Obesity rates among adults***	32.8% (2008)	% Public	30.3%
Cause of death*		% Private	69.7%
Communicable diseases and maternal, prenatal and nutrition conditions	10.5%	Hospital beds per 1,000	1.6
Injury	12.2%	Physicians per 1,000	2.2
Non-communicable diseases	77.3%		

Sources: \*CIA The World Factbook, \*\*World Bank, \*\*\*Food And Agriculture Organization of the United Nations, \*\*\*\*Organization for Economic Co-Operation and Development (OECD), \*\*\*\*\*The Mexican Ministry of Health—Dirección General de Información en Salud.

top three causes of death in Mexico are diabetes, ischemic heart disease and stroke.

### Healthcare access

In 2012, Mexico spent 6.1% of its GDP on healthcare services, 48.2% of which was public expenditure and 51.2% private. Of total private health expenditures, the vast majority (91.5%) comprises out-of-pocket expenses. This is a result of many services requiring a contribution from the individual—either toward a premium or at the point of service.<sup>17</sup>

Healthcare coverage is provided predominately by the public sector. The major insurance coverage types are described below:

- **Formal sector employees:** The Mexican Institute of Social Security (*Instituto Mexicano del Seguro Social—IMSS*) provides coverage to over 80% of employees and their families (as well as retirees) in the formal sector. It is funded by government, employer and employee contributions. The IMSS has its own network of providers and those affiliated with this program must receive care through this network.<sup>17</sup>
- **Federal and state employees:** The Institute of Social Security and Services for Government Employees (*Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado—ISSSTE*) and its state counterparts, such as the Social Security Institute of the State of Mexico (*Instituto de Seguridad Social del Estado de México y Municipios—*

*ISSEMyM*), cover an additional 18% of salaried employees. They are financed through government and employee contributions. The ISSSTE and its state counterparts also have their own network of providers, through which those affiliated with this program must receive care.<sup>17</sup>

- **Other government employees:** The remaining 2% of salaried employees and families (as well as retirees) are covered by an array of government entities, each with its own network of providers. These include the Mexican state-owned petroleum company Mexican Petroleums (*Petróleos Mexicanos—PEMEX*), the Secretary of Defense (*Secretaría de la Defensa—SEDENA*) and the Navy (*Secretaría de Marina—SEMAR*), among others.<sup>17</sup>
- **Seguro Popular (see text box):** *Seguro Popular* is an insurance program available to all those who are not covered by one of the
- **Private insurance:** Those with the ability to pay may enroll in private insurance. In 2012, less than 1% of the population was enrolled in private insurance.<sup>17</sup>
- **Uninsured:** According to the Ensanut Survey in 2012, approximately 21.4% of the population reported having no insurance coverage, despite eligibility for *Seguro Popular*. The majority of those uninsured were young adults between the ages of 15 and 30.

In Mexico, healthcare services are provided through both public and private entities, with over 85% of

### Seguro Popular<sup>18</sup>

In 2003, approximately 58% of Mexico's population was uninsured and had limited access to healthcare services. To address this inequity, Mexico created *Seguro Popular*, an insurance scheme implemented in 2004, with the goal of achieving universal coverage by 2010. *Seguro Popular* provides healthcare coverage to the population not otherwise covered by the public sector. Financing is provided by the government plus individual contributions to “premiums” that vary depending on income. As of June 2012, approximately 53 million people, or 38.6% of the population, were enrolled in *Seguro Popular* and evidence indicates there has been a significant improvement in healthcare access.<sup>19, 20</sup> Although a portion of the population remains uninsured, the country continues to make strides to increase outreach and enrollment.

citizens receiving care through the public sector. Insurance is not required to access private entities; therefore, a greater percentage of the population seeks private care directly from providers than is formally enrolled in a private insurance plan. Affordability of out-of-pocket fees is the deciding factor that drives whether people seek care in a public vs. a private setting.<sup>17</sup>

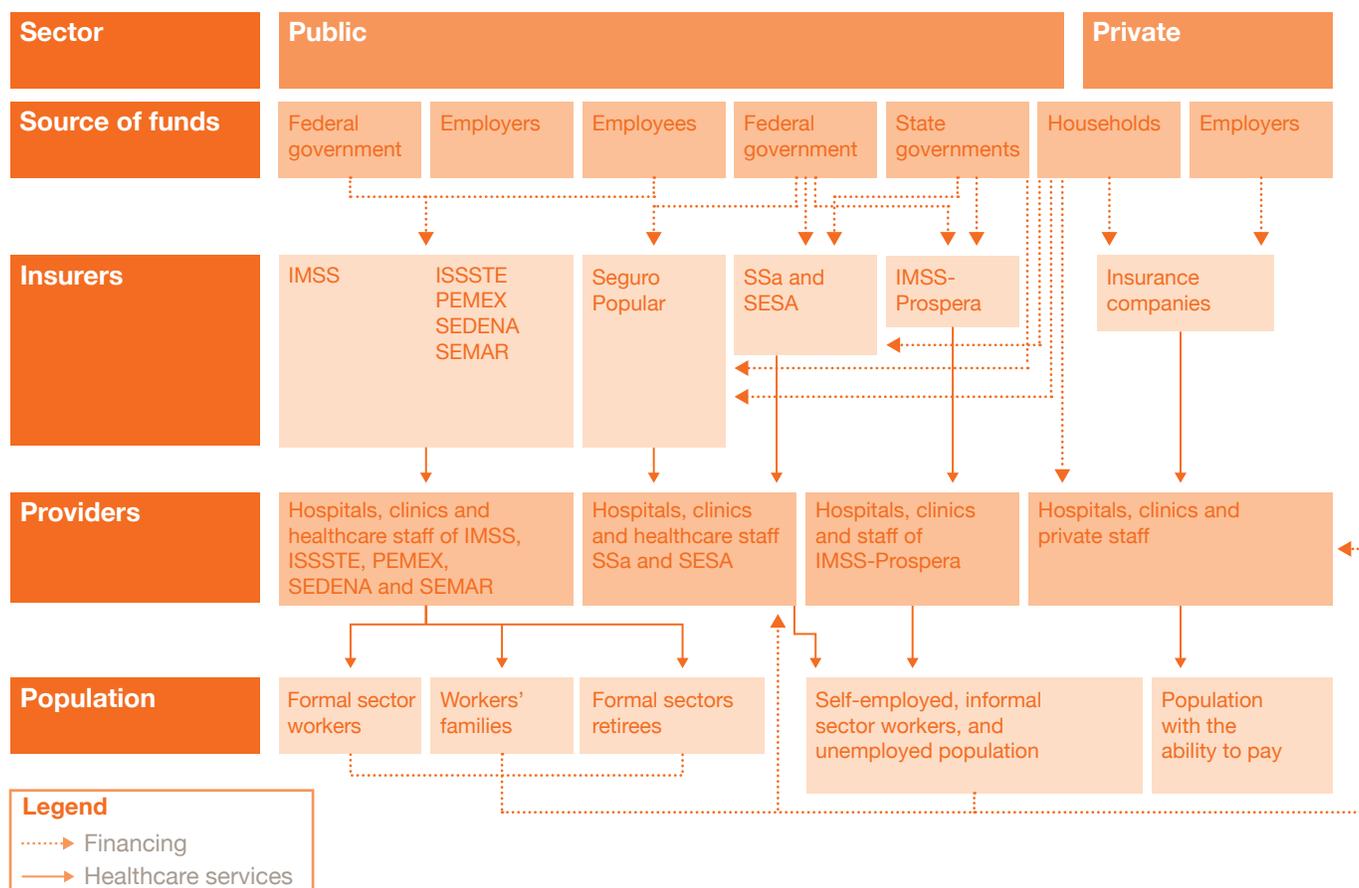
Many public sector entities (e.g., IMSS, ISSSTE, etc.) serve not only as insurers but also as providers

of healthcare services for their designated beneficiaries. In addition, there is a network of public facilities—run by the secretaries of health at the national (*Secretaría de Salud—SSa*) and state level (*Servicios Estatales de Salud—SESA*)—that provides services to those enrolled in Seguro Popular. The uninsured may still access care at public facilities run by SSa and SESA provided they pay an out-of-pocket fee at the time of service. In general, this fee is greater than the fee paid by those enrolled in Seguro Popular.<sup>17</sup>

As of 2013, Mexico had 4,407 hospitals, of which 69.7% were private hospitals (95% of which had fewer than 50 beds) and 30.3% were public institutions.<sup>21</sup> In 2012, there were approximately 1.5 hospital beds per 1,000 people, which was one of the highest ratios in the region studied, but far below the OECD average of 5.0.<sup>8</sup> Similarly, there were 2.2 physicians per 1,000 people, again one of the highest ratios in the region studied, but below the OECD average of 3.2.<sup>8</sup>

**Figure 12: Overview of the Mexican healthcare system**

National healthcare system structure



Source: PwC Mexico. Based on a model developed in Sekhri N, Gomez-Dantes O, MacDonald T, in Cross Border Health Insurance: An Overview. Published by the California HealthCare Foundation and Healthcare Redesign International, Oakland, CA. 1999.

In general, the Mexican health system is highly fragmented, with various organizations providing care to different segments of the population. Each organization has its own network of physicians, clinics and hospitals, with very few referrals between networks. This results in duplication of healthcare services in a system with limited healthcare resources.

### **PPP legislation**

In January 2012, the Mexican congress approved a new federal PPP law, which went into effect in December 2012. The PPP legislation defined a framework for PPP projects and built on the Rules for Carrying Out Projects for the Furnishing of Services (*Reglas para la Realización de Proyectos para Prestación de Servicios*) established in 2003.<sup>11</sup> The law applies to PPPs in all sectors and/or industries that are not otherwise governed under a separate legislation. Below are selected highlights of the law:

- Reinforced pre-tender requirements, such as a social impact study, cost-benefit analysis, financial feasibility and “value for money” study, among others.
- Made an attempt to condense the timeline of the tender process by defining strict deadlines for government agencies to grant permits (with the exception of environmental permits) and respond to tenders.
- Allowed for increased flexibility of PPP contracts by permitting changes that meet certain criteria and are within defined financial limits, as long as there are no changes in the allocation of risk.

- Authorized and defined a process that incentivizes unsolicited proposals.
- Increased transparency by requiring all tender documents and results to be published and made publically available on the website, *CompraNet*; however, the final contracts are not publicly available.

Although the law set out many standards for PPP activities, it did not go so far as to create one central agency for PPP oversight. While all federal projects must be approved by the Ministry of Finance, sector ministries are still responsible for identifying projects, coordinating the tender process and supervising the projects.<sup>11</sup>

In Mexico, PPP projects may be tendered at all levels of government, including the national, state and municipal levels, depending on the source of funding. The majority of the 31 states, including the federal district, have adopted state-level PPP legislation to govern these contracts.<sup>22</sup>

### **Political will**

Mexico has benefited from strong political will toward PPPs in general, and healthcare PPPs in particular. It was the first country in this study to launch healthcare PPP projects, tendering its first pilot program in 2005 under the administration of President Vicente Fox (2000–2006). The subsequent administration of President Felipe Calderón (2006–2012) picked up the torch and included expansion of healthcare services and infrastructure investment in its political agenda. Two additional PPP hospitals were tendered at the

federal level during Calderón’s tenure.

Healthcare PPP projects have also received support at the state level. The State of Mexico tendered three PPP projects that are now in operation, under the leadership of former governor Enrique Peña Nieto (2005–2011). The states of Yucatán and Sinaloa have also launched healthcare PPP tenders; however, they have experienced delays in adjudicating the contracts due to political debate over contract terms and payments.

Healthcare infrastructure investment continues to be a top priority of the current administration of President Enrique Peña Nieto (2012–2018). In April 2014, the President announced a US \$600 billion infrastructure plan, of which \$4.8 billion was earmarked for healthcare, and includes private sector investment. The federal government tendered a PPP hospital in 2014 and plans to tender an additional hospital in 2015.

### **PPP projects**

#### **Overview**

Mexico launched its first healthcare PPP pilot program in 2005 and over a period of 10 years tendered a total of 10 projects. Four of the projects are sponsored at the federal level and six at the state level. Mexico announced that it will tender an additional federal hospital in 2015. Of the ten hospitals, six are currently in operation while the remaining four are in the contracting phase.

All of Mexico’s projects fall under the traditional DBOT scheme and include medical equipment. The

contracts are of 25 years' duration and include nonclinical services such as housekeeping, laundry, security, parking, cafeteria, etc. Subsequent contracts have transferred additional services such as laboratory, haemodialysis and medical gas services to the private partner. These services are traditionally outsourced to third-party vendors; therefore, adding them to the PPP contracts was not new territory for the government. The contracting government agency retains responsibility for overall hospital management as well as all clinical services, including recruitment and retention of all medical personnel.

Three of the federal hospitals, as well as the state hospital of Zumpango, are regional specialty hospitals (tertiary care hospitals), whereas the rest are general acute care hospitals. Additionally, all four of the tertiary hospitals were set up as Decentralized Public Organizations (*Organismos Públicos Decentralizados—OPDs*), a status that provides the hospitals additional management and fiscal autonomy. Although OPD status is not unique to PPP hospitals, it reduces added levels of government approvals and streamlines management of the contract.

Although there is no standard healthcare PPP tender or contract in Mexico, as there is in Chile, all of the projects followed a similar structure in terms of payment mechanisms, performance measurement, and supervision and monitoring. These standards were developed at the federal level during the first round of

PPP hospitals, and later adopted at the regional level as a result of knowledge sharing across government agencies.

At the time of field interviews, Mexico was the only country within the scope of this study with hospitals in operation. This report covers only the seven federal and state hospitals tendered between 2005 and 2012. Subsequent hospitals are mentioned for completeness but were not analyzed.

### Tender process

Each of the seven tenders analyzed received multiple bidders—both domestic and international (mostly from Spain). The tender process for each PPP project was similar, though the evaluation framework varied slightly depending on the contracting government agency.

All bidders were required to meet minimum qualification criteria prior to evaluation of the formal bids, such as financial viability, experience in healthcare and experience in PPP projects.<sup>23</sup> In several documented cases, bidders were disqualified late in the tender process for failing to meet these criteria. When interviewed, stakeholders suggested that the introduction of a prequalification phase would be one way to reduce the risk and high costs associated with preparing a bid. Bidders would then know if they met the initial qualifications before investing in the proposals.

Bidders were required to submit both technical and financial proposals. The weight of the technical proposal varied from 50% to 70%. Likewise, the weight of the financial proposal varied from 30% to 50%.

The technical proposals were evaluated using a point system. The total maximum points a bidder could receive on the technical proposal was 100; points were allocated across categories such as design, construction plan, service offerings, prior experience, etc. Bidders were awarded points depending on how well their offer compared to predefined standards, and those that received a total score of 70 or below on the technical proposal were disqualified.<sup>23</sup>

Each economic proposal was first evaluated against a base reference amount (above which the project would not be economically feasible for the government). Proposals with an economic offer above the reference amount were disqualified. The proposal with the lowest economic offer was awarded the maximum amount of points, and other bidders were awarded a fraction of these points based on how their offers compared to the lowest economic offer.

The bidder with the highest score when combining the technical and economic scores was awarded the contract.<sup>23</sup> The tender processes put a heavy emphasis on the technical proposal over the financial proposal; therefore, the bidder with the lowest economic offer did not always win.

**Table 8: Mexico healthcare PPP projects as of 2015**

Federal or State	Name (new/replacement)	Year contract signed (current status)	Location (city, state)	Government entity (provider network)	Private provider (country of origin)	Hospital type (no. of beds)	Initial investment (USD)	Medical equipment/IT
Federal	Regional Specialty Hospital—Bajío (New)	2005 (In Operation)	Leon, Guanajuato	Secretary of Health (SSa Provider)	Acciona, S.A. (Spain)	Regional Tertiary Hospital (184 beds)	\$65.6M	5 years
Federal	Regional Specialty Hospital—Ciudad Victoria (New)	2007 (In Operation)	Ciudad Victoria, Tamaulipas	Secretary of Health (SSa Provider)	Marhnos IGSA Consortium (Mexico)	Regional Tertiary Hospital (100 beds)	\$75.0M	5 years
Federal	Regional Specialty Hospital—Ixtapaluca (New)	2009 (In Operation)	Ixtapaluca, State of Mexico	Secretary of Health (SSa Provider)	Assignia Consortium (Spain, Mexico)	Regional Tertiary Hospital (246 beds)	\$147.0M	Varies—depends on useful life of equipment
State	Regional Specialty Hospital—Zumpango (New)	2009 (In Operation)	Zumpango, State of Mexico	State of Mexico (SESA Provider)	Teya Constuction, S.A. (Mexico)	Regional Tertiary Hospital (124 beds)	\$96.3M	Varies—depends on useful life of equipment
State	Toluca Regional Hospital (Replacement)	2010 (In Operation)	Toluca, State of Mexico	ISSEMyM (State Employee Provider)	Prodelmex Consortium (Mexico)	General Hospital (120 beds)	\$60.0M	Included for life of contract (25 years)
State	Tlalnepantla Regional Hospital (Replacement)	2010 (In Operation)	Tlalnepantla, State of Mexico	ISSEMyM (State Employee Provider)	Marhnos Engineering & Construction (Mexico)	General Hospital (120 beds)	\$60.0M	Included for life of contract (25 years)
State	Ticul General Hospital (New)	2012 (On Hold)	Ticul, Yucatan	State of Yucatan (SESA Provider)	Marhnos Engineering & Construction (Mexico)	General Hospital (90 beds)	\$87.2M	Included for life of contract (25 years)
State	Dr. Bernardo J. Gastélum Hospital* (New)	2013 (In Contract)	Culiacán, Sinaloa	State of Sinaloa (SESA Provider)	Prodemex (Mexico)	General Hospital (150 beds)	\$231.0M	Included for life of contract (25 years)
State	Dr. Martiniano Carvajal Hospital* (Replacement)	2013 (In Contract)	Mazatlán, Sinaloa	State of Sinaloa (SESA Provider)	GIA Infraestructura (Mexico)	General Hospital (120 beds)	\$345.0M	Included for life of contract (25 years)
Federal	General Hospital Dr. Gonzalo Castañeda* (Replacement)	2014 (In Contract)	Mexico City, Federal District	ISSSTE (Federal Employee Provider)	Tradeco IGSA Consortium (Mexico)	General Hospital (120 beds)	\$77.3M	Included for life of contract (25 years)
Federal	New Hospital Clinic Mérida* (New)	TBD	Mérida, Yucatán	ISSSTE (Federal Employee Provider)	TBD	General Hospital (66 beds)	\$44.3M	TBD

\*Hospital not analyzed as part of this report.

## Innovative financing schemes<sup>25</sup>

In 2012, *Project Finance* magazine named Tlalnepantla Hospital the Latin American PPP Deal of the Year 2011. The hospital was given this designation because of its innovative financing scheme. It was the first instance where pension funds were able to invest in a greenfield hospital project from the start, rather than at the initiation of operations, through the issuance of development capital certificates (*Certificados de Capital de Desarrollo—CKDs*). Approximately 70% of the US\$7.5 million equity investment was raised by Marhnos, the private partner, through the issuance of a CKD. This is noteworthy because they were able to secure this financing despite the fact that this was a state-level project financed by only one local bank.

### Financing & payment mechanisms

All of the healthcare PPP projects have similar financing schemes, with slight variations depending on the contracting agency and source of financing. Commonalities across all projects include:<sup>23</sup>

- The government did not provide any investment up front and did not begin to pay for services until construction was complete and the hospital began operations—allowing for a lag of approximately 18 to 24 months.
- The private partner was responsible for the initial investment—20–40% direct capital investment and 60–80% debt financing through a financial partner via a project finance scheme.
- A bank trust (*fideicomiso*) was set up to manage the payments between the government and the private partner.
- Base annual payments were laid out in the contract and adjusted annually for inflation.
- Private partners were paid a single monthly payment for services rendered, which covered the cost of construction, equipment, financing and operations.
- Guarantees were not required for federal projects due to the strong performance of the Mexican economy; however, they were required for state-level projects where the source of funding was less secure.\*

In order to minimize the financial risk associated with PPP contracts and to ensure the projects could obtain financing, two important factors were built into the contracts:<sup>24</sup>

1. **Caps on monthly deductions:** Most were capped at 10% of the total monthly payments for the life of the contract; however, this was modified slightly in the State of Mexico contracts where caps were increased to 15% and 20% in future years.
2. **Early termination clause:** In case the contract needed to be terminated prior to the end date, the government assumed the risk of paying those agreed-to nonrecoverable expenses that had been incurred to date by the private partner and were not otherwise covered by insurance.

In general, private partners were able to easily secure financing for these projects. Those interviewed noted that there is interest from financial institutions to continue to participate in healthcare PPPs, as long as the risks around IT/medical equipment and clinical services are properly mitigated.

### Performance metrics

Performance metrics were developed and outlined in detail for each of the services offered in the contract. Failure to meet defined standards resulted in monthly deductions in payments of varying amounts, depending on the service category. Performance metrics can be grouped into two categories:<sup>23</sup>

1. **Quality standards—failure to deliver the services outlined in the contract or to meet the defined quality standards specified in the contract.**
2. **Performance standards—failure to address incidents/complaints within the specific timeframe defined in the contract.**

Quality standards were monitored on a periodic basis (monthly/quarterly/yearly) as defined by the contract. Performance standards were tracked and managed by a help desk (*Centro de Atención al Usuario—CAU*), which the private partner was responsible for operating and maintaining. Anyone working at the hospital was allowed to report an incident/complaint either via telephone or via an internal IT system

\* The National Works and Public Services Bank (*Banco Nacional de Obras y Servicios Públicos, SNC—Banobras*), the state-owned development bank in Mexico, partially financed the Ixtapaluca hospital and provided financial guarantees for the state-level Ticul and Zumpango hospitals. They have also committed to financing the two Sinaloa state hospitals of Ciliacán and Mazatlán.

**Table 9: Sample performance metrics (Mexico)**

Category	Performance metric	Supervision method
Information services	The partner should respond to general service requests in agreement with the established response times. Such obligations include, but are not limited to, technical support for IT teams	Measured and supervised through inspections with hospital personnel and/or through CAU reports
Disinfection, fumigation and animal control services	The provider will make sure that the chemicals used in fumigations: <ul style="list-style-type: none"> <li>a) Are approved by the hospital</li> <li>b) Are used in accordance with hospital policies</li> <li>c) Do not represent a risk for patients and visitors of the hospital or its personnel</li> </ul>	Monthly audit of systems and procedures
General standards	All of the partner's personnel should use appropriate clothing and uniforms, such as gloves, protective gear, appropriate shoes, etc. in conformance with their functions and with the specific applicable standards	Measured and supervised through inspections and CAU reports
Cleaning services	The partner should assure that all of the equipment used to carry out cleaning services is cleaned in accordance with the sanitation and intrahospital infection control policies	Supervised with regular and random inspections by hospital personnel and/or reports from the CAU
General services and public services	The partner should guarantee that the integrity of the water supply, gas supply and other consumables and their corresponding distribution networks are maintained appropriately	Measured and supervised by personnel as designated by the appropriate local authority using a list of controls

that was developed by the private partner. Patients were unable to report incidents/complaints directly to the CAU, but rather had to file through a hospital employee.

All reported incidents were reviewed on a weekly basis by a committee composed of representatives from the private partner, hospital management, and the supervisor. The committee evaluated the response times to incidents to determine if they were addressed within the timeframe

specified in the contract. The private partner could request an extension if it believed the timeframe defined in the contract was insufficient to resolve the issue. Failure to resolve an incident within the specified timeframe was considered noncompliance with the performance metric and resulted in a deduction.<sup>23</sup>

All deductions were agreed on by the private partner and hospital management before being formally documented by the supervisor.

At the time of interviews for this study, minimal deductions had been applied to the monthly payments. Those interviewed felt that the CAU functioned well, though some cases of users overreporting minor issues was noted. Additional training on the CAU and its function was suggested by some of the interviewees. Both private partners and hospital management interviewed commented on the importance of an open dialogue to manage performance.

## Supervision & monitoring

Ongoing supervision and monitoring of the contract is done by a third party, which the private partner is responsible for contracting. The costs associated with project monitoring are included in the price of the contract and are paid for directly by the private partner. The contracting government agency, however, retains the right to select and/or approve the third-party contractor. Roles and responsibilities of the third-party supervising agency include:<sup>26</sup>

- Ensuring that the final design of the hospital meets the specifications outlined in the tender document;
- Supervising the construction phase and ensuring that the process meets quality, time and cost standards;
- Providing ongoing supervision during the pre-operation phase and operations for the life of the contract; and
- Assisting with contract disputes throughout the life of the contract.

In addition, the financing institution may choose to appoint its own supervisor to ensure that risks are being properly mitigated by the private partner. This supervisor may review the private partner's annual operating budget, actual operating costs and budget to actual variances. The supervisor may also conduct facility inspections to ensure adherence with the facility maintenance requirements in the contract.<sup>27</sup>

Overall, those interviewed felt that contracting a third party to carry out supervision was critical because the contracting government agency lacked the resources to conduct this function.

However, there was some concern with the separation of financing and accountability under the current scheme. Even though the third-party supervisor was accountable to the government agency, he or she was paid directly by the private partner, which some stakeholders interviewed felt could result in a bias toward the private partner.

## Successes

In general, everyone interviewed considered the PPP projects successes because they were all completed relatively on time and within budget. The facilities are all well maintained and equipped with the latest medical technology, unlike other traditional public hospitals. Mexico has been able to incorporate lessons learned from early projects into subsequent contracts as a result of knowledge sharing through organizations such as the Program to Drive Public Private Partnerships in the Mexican States (Programa para el impulso de Asociaciones Público Privadas en Estados Mexicanos—PIAPPEM).

## Multidisciplinary teams engaged early on

A successful feature of the PPPs was that multidisciplinary teams were assembled by the government during the pre-tender phase to design the project, assess feasibility and create the tender documents; during the tender phase the teams evaluated the bids. In addition to the traditional legal and financial advisors, these teams included clinical, engineering, systems and architectural experts, among others. Teams were usually a blend of government workers and contracted third parties paid for by the contracting government agency.

On some of the projects, a small hospital management team was also contracted early on to work with the private partner during the construction phase. Those interviewed felt that engaging the hospital management team early was critical because these teams would be the ultimate “users” of the facility. In several cases the teams' input resulted in useful adjustments to the hospital design, which averted costly changes postconstruction. Involving the hospital management team at the onset of the project also allowed for the formation of strong working relationships and fostered mutual feelings of investment in the project's success.

## Transferring additional services and risk to the private partner

PPP contracts in Mexico have evolved over time, transferring additional services and risks to the private partner. For example, the original federal pilot project did not include laboratory, hemodialysis and medical gas services; however, these services were nonetheless subcontracted to third parties. This meant that the government was still responsible for managing not only the PPP contract, but also these subcontracted services.

The risk of managing these additional services was therefore fully allocated to the private partner in subsequent PPP contracts. Current PPP contracts are contemplating transferring still more services, such as chemotherapy and radiology. It should be noted, however, that providing the personnel to conduct these additional services is still the responsibility of hospital management (and consequently the government entity) rather than the private partner, which poses challenges in managing performance.

### Gradual inclusion of IT, medical equipment & consumables

Similarly, in the first two federal PPP contracts, the private partner was responsible for IT and medical equipment only for the first five years of the contract, after which the responsibility reverted to the government. These limits were put in place to manage the high risk associated with the uncertainty of changing technology in future years. In future contracts these terms were adjusted; for the Ixtapaluca and Zumpango hospitals, the time of transfer was tied to the useful life of the equipment and varied by equipment type. In all subsequent contracts, the private partner was responsible for IT and equipment for the life of the contract. This decision increased the cost of the later contracts, but in the long run ensured that equipment would be maintained over the life of the contract, rather than being susceptible to potential government budget constraints in future years.

Consumables also presented high risk to both the government and the private partner. Consumables are closely tied to medical equipment, the latter often dictating the type and cost of the former. In early contracts, private partners resisted taking on the risk of consumables because they would have no control over utilization guidelines, since healthcare professionals are managed by the government. However, despite owning all of the risk, the government had few options to manage the types of consumables used because they had limited control over the types of equipment purchased by the private partner. Tlanleplantla and Toluca hospital contracts addressed

this issue and transferred the consumables to the private partner by setting caps on consumables expense within the contract: by working together, the private partner and contracting government agency were able to find a common ground that allowed for additional risk transfer with the appropriate safeguards.

### Going “green”—innovation in hospital architectural design

PPP contracts have evolved from simply creating infrastructure to creating energy-efficient and environmentally friendly infrastructure. The hospital at Zumpango was the first PPP hospital in Mexico to be designated a “green” hospital, followed by the hospital at Tlanleplantla. Both facilities meet LEED certification requirements and will result in significant cost savings in energy as well as a reduced carbon footprint. The government has therefore been able to achieve both health and environmental policy goals through these healthcare PPPs.

## Challenges

### Aggressive timelines drive unnecessary government spending

In 2005, the office of the Secretary of Health announced that it planned to build eight regional specialty hospitals under its new PPP scheme. It decided to focus on tertiary hospitals due to a general shortage across the country, which had resulted in patients traveling long distances to receive care in Mexico City. By expanding the tertiary network, it also hoped to alleviate the overburdened hospitals in the capital city.

Consultants were hired to conduct feasibility studies for all eight

hospitals. In retrospect, the plan was too aggressive, and the Secretary of Health did not have the resources necessary to carry out all of the projects in such a short period of time. Ultimately, only three of the eight hospitals were tendered. Producing the pre-tender documents for all eight hospitals was costly; and should the new administration decide to continue with these projects, there will be additional costs to update these studies.

### Hospital infrastructure with insufficient healthcare professionals

Under current Mexican PPPs, recruitment and retention of physicians is the responsibility of the contracting government agency. This has proven to be a challenge at many of the PPP facilities for two main reasons:

- **Geography:** The hospitals currently in operation are located in areas that were previously underserved, and consequently have a low supply of local healthcare professionals. In some cases, the hospitals are located in areas that are also considered undesirable for relocation, as in the case of the hospital of Ciudad Victoria, which is located in a high drug trafficking area. Hospitals in the State of Mexico also experienced these challenges, despite their close proximity to Mexico City: long commutes, traffic congestion and limited transportation options dissuaded many healthcare professionals from considering employment outside the capital district.
- **Physician shortages:** As previously mentioned, four of the ten tendered hospitals are specialty hospitals. Mexico faces a shortage of specialty

physicians generally, which exacerbated problems in recruiting and retaining physicians to less desirable settings. In addition, specialty physicians are in such high demand that they are able to be selective about where they practice medicine—thus making it still harder to recruit them to new PPP hospitals.

While recruitment is an operational challenge faced by all hospitals in Mexico and not directly attributed to the PPP scheme, it nevertheless had an impact on the ability of the PPP hospitals to achieve their ultimate goal of increasing access to healthcare services. Some of those interviewed felt that transferring responsibility for recruitment to the private partner (which could provide additional incentives, not permissible for the government to provide) could be an option to attract healthcare professionals.

### Fixed operating costs despite low occupancy rates

The biggest problem that all the PPP hospitals currently in operation have faced is low occupancy rate. At the time of interviews, not one hospital had an occupancy rate greater than 60%. One senior government official interviewed noted that the Hospital of Ixtapaluca, which had been in operation for almost a year at the time—, had yet to have any admissions; all patients seen at the hospital were seen on an outpatient basis. In addition to the challenges related to recruitment and retention of healthcare professionals (described

above), three additional factors contributed to the low occupancy rate:

- **Fragmented healthcare system:** There are several government bodies that provide healthcare for citizens, and each has its own network of providers; patients who are covered by one entity are not covered if they go to a hospital or provider of another entity. This leads to duplication of services in a market that already faces a limited supply of healthcare resources.
- **Inefficient feeder system:** Four of the six hospitals currently in operation are specialty hospitals. Patients cannot be directly admitted, but rather must be referred to these hospitals by physicians or general hospitals. However, the referral system does not function well due to a lack of coordination between the general hospitals and the specialty hospitals.
- **Misconception of PPP hospitals:** Several of those interviewed also commented on public and patient perception regarding the status of the PPP hospitals; they felt that many patients did not frequent the hospitals because the buildings' beautiful aesthetics led them to believe that they were private, rather than public facilities. Patients feared high out-of-pocket expenses associated with private care and therefore avoided the PPP hospitals.

The Zumpango Hospital is trying to address the first of these two issues by signing agreements with other government agencies—such as *Seguro Popular*—to provide care, and by strengthening referral relationships

with local hospitals and physicians. The hospital also has a wing that will be for private patients (approximately 10 beds). Those interviewed felt the public perception issue could be addressed by a local public relations campaign to provide further clarity on the funding of the PPP hospitals.

Despite low occupancy rates the PPP contracts require the private partner to operate the hospital as if it were 100% occupied. This has significantly increased operating costs per occupied bed for the contracting government agency. At the time of interviews, however, no adjustments to contract terms were planned to account for low occupancy rates.

### Decisions driven by politics instead of social need

The downside of strong political will is that it can often influence decisions and outweigh social need, resulting in increased costs without additional benefits. The Zumpango Hospital was described by many as the “crown jewel” of Enrique Peña Nieto’s term as governor. The hospital is LEED gold certified and visually stunning (see cover of this report). Its windows are an interpretation of a Náhuatl poem in braille. However, several of those interviewed questioned the decision to build such an extravagant hospital. One interviewee noted, “They built a Rolls-Royce when all we needed was a Honda.” Therefore, although the project was completed on time and within budget, some of those interviewed felt the same results could have been achieved for less.

In addition, several felt that politics influenced the decision to build a large speciality hospital instead of smaller general acute care hospitals, which would have expanded access to care to a larger proportion of the population. Large speciality hospitals are more politically favorable, as they provide access to the sickest patients most in need. In both of these cases, the perception was that politics, and not social need, influenced the design decisions of the PPP hospitals.

### Shifting from an “owning” to a “renting” mentality

PPP hospitals are relatively new in Mexico, and few hospital management teams appointed by the government have experience managing in this type of environment. “It’s like shifting from owning a house to renting a house,” noted one expert interviewed. The role of the hospital management team shifts from focusing on all aspects of running a hospital to running only the clinical services and simply supervising the nonclinical services. This can be a difficult transition and requires a different management approach. Yet to date, minimal training has been provided to management staff on this transition. There is little knowledge sharing among the hospital management teams of the PPP hospitals in operation; hospital managers could benefit greatly from exchanging success stories and lessons learned from their experiences.

### Future outlook

The future outlook of healthcare PPP projects in Mexico is positive. President Enrique Peña Nieto was the former governor of the State of Mexico, where the majority of PPP projects have

been carried out at the state level. He continues to put expansion of health infrastructure at the top of his agenda. There is also a high level of interest from the private sector. All private partners and financial institutions interviewed noted that they would participate again in future projects.

Most of those interviewed felt that the potential for inclusion of clinical services in the PPPs (the more complex Public-Private Integrated Partnership, or PPIP, model) at the federal level was low, but could possibly be achieved at the state level where there is additional flexibility. Resistance from healthcare unions and physicians were the primary reasons cited for the low probability.

Within the scope of this study, Mexico has the most experience in PPP hospitals; specifically, Mexico has hospitals currently in operations. Future areas of research include in-depth case studies of hospitals currently in operation to capture lessons learned and areas for improvement. Particular areas of interest include, but are not limited to:

- Relationships between the private partner and the hospital management team
- Experiences during the first 100 days of operations
- Effectiveness of additional risk transfer to the private partner, such as select clinical services and consumables
- Effectiveness of performance metrics
- Financial and operational

efficiencies gained through the PPP contracts

## Country profile: Peru

### **Economic outlook and national health status**

Located on the western coast of South America, Peru is bordered by Ecuador to the north, Chile to the south, and Colombia, Brazil and Bolivia to the east. The country is divided into 25 regions, and the capital district of Lima.

The country has a population of approximately 30.4 million and a GDP of US\$202.3 billion. Between 2002 and 2013, Peru's economy grew steadily, averaging a growth of 6.2% per year.<sup>28</sup> Despite a deceleration in growth in 2014, Peru is still considered by the International Monetary Fund as one of the best performing economies in the region.<sup>29</sup>

Peru's urban and coastal regions have reaped the greatest benefits from its robust economic growth; however, social, health and economic inequalities continue to be a problem in rural areas. GDP per capita spend at US\$6,662 is well below Mexico (US\$10,307) and Chile (US\$15,732)—the other two countries within the scope of this study with PPP projects currently underway. In addition, approximately 24% of the population lives in poverty.

Peru has a relatively young population with a median age of 27 years and a life expectancy at birth of 74.5 years. Its population pyramid indicates that Peru will undergo a shift in its population, marked by a decline in birth rates and an increase in life expectancy. According to the Ministry of Health (*Ministerio de Salud*—



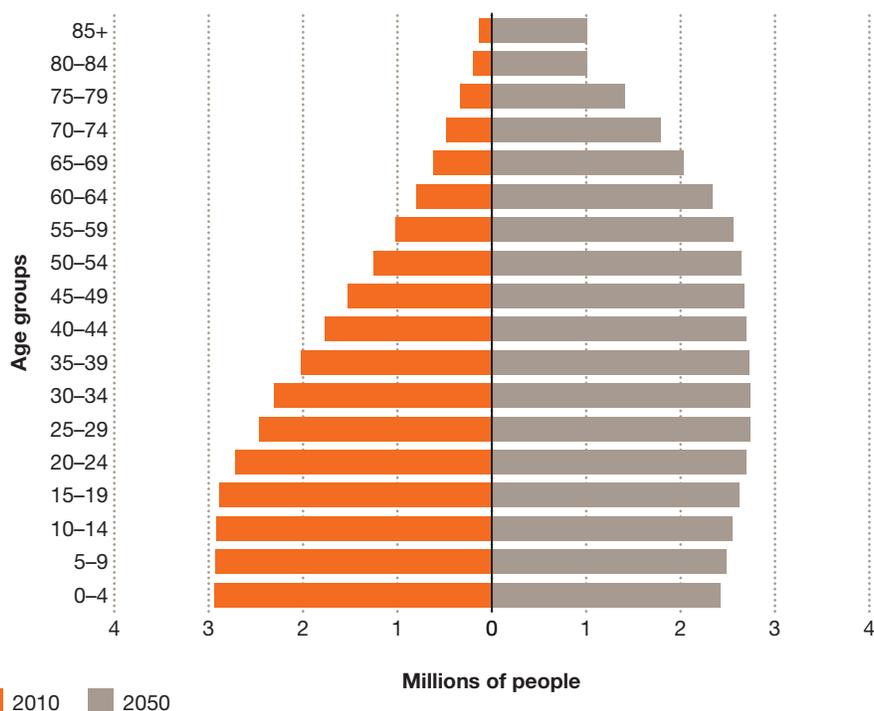
*MINSA*), the top three causes of death in 2012 were malignant tumors, flu and pneumonia, and other bacterial infections. As life expectancy increases, the health system will be further burdened by increased incidence in chronic diseases.

### **Healthcare access**

Peru spent 5.1% of its GDP on the provision of healthcare services in 2012, one of the lowest percentages in the region and significantly below the OECD average of 9.5%.<sup>8</sup> Public spending accounted for 58.9% of health expenditures, and out-of-pocket expenses represented 86.9% of total private spending.

In 2009, Peru passed the Universal Assurance Framework Law (*Ley Marco de Aseguramiento Universal en Salud*), which stated that all Peruvians have the right to healthcare services. While the poor and formally employed have access to healthcare insurance through government programs (outlined below), the self-employed and informally-employed are left without coverage. As a result, in 2012, approximately 38.1% of the population remained uninsured. Healthcare is funded and provided through a network of public and private providers. Public provision of care can be classified into three major categories:

**Figure 13: Demographic structure in Peru, 2010–2050**



Source: United Nations, Department of Economic and Social Affairs, Medium Fertility Rates

**Table 10: Peru summary statistics, 2012 (most recent available unless otherwise noted)**

Economy*		Health expenditures**	
Gross domestic product (GDP) (USD)	\$202.3B (2013)	Total expenditures on health as % of GDP	5.1%
GDP per capita (USD)	\$6,662 (2013)	% Public	58.9%
Population	30.4M (2013)	% Private	41.1%
Unemployment rate*	3.6%	% of Private expenses that are out-of-pocket	86.9%
Poverty headcount ratio at national poverty line	23.9% (2013)	Per capita expenditures on health (USD)	\$555
Median age*	27.0 (2014 est.)		
Health status		Health resources**	
Life expectancy at birth*	74.5	Total hospitals***	576 (2013)
Cause of death**		Ministry of Health—public	171 (2013)
		Other public & private	405 (2013)
Communicable diseases and maternal, prenatal and nutrition conditions	23.7%	EsSalud hospitals****	90 (2014)
Injury	10.0%	Hospital beds per 1,000	1.5
Non-communicable diseases	66.3%	Physicians per 1,000	1.1

Sources: \*CIA The World Factbook, \*\*World Bank, \*\*\*The Peruvian Ministry of Health—Ministerio de Salud—Oficina General de Estadística e Informática, \*\*\*\*EsSalud Oficina Central de Planificación y Desarrollo.

- **Ministry of health (*Ministerio de salud—MINSA*):** The MINSA serves as both insurer and provider of healthcare services through its national network of healthcare facilities. The MINSA is financed through general taxes (79%), copayments (15%) and donations (6%). Those living in poverty and extreme poverty have zero copayments and are covered by a Comprehensive Health Insurance Plan (*Seguro Integral de Salud—SIS*), administered by MINSA, which covered 31.4% of the population in 2012. Those without insurance can also access care at MINSA facilities in exchange for copayments that are determined by the institution providing care.<sup>30</sup>
- **Health Social Security Agency (*El sistema de seguridad social en salud—EsSalud*):** EsSalud (see text box) is an autonomous, decentralized government agency that provides coverage to the formally employed and retired and their families, a segment that encompasses approximately 24.4% of the population. It obtains over 95% of its revenues from employers (9% of total salary for active employees) and individual contributions (4% of total cost of insurance plan for retirees) and therefore does not rely on federal funds for its operations. In addition to its own network of healthcare facilities, EsSalud also contracts with a network of private providers (*Entidades Prestadoras de Salud—EPS*) to provide care to its beneficiaries.<sup>30, 31</sup>

- **Other government agencies:** The armed forces (*Sanidades de las Fuerzas Armadas—FFAA*) and police department (*Policía Nacional del Perú—PNP*) provide coverage to their employees and their families and have their own network of providers. Those covered by this scheme are part of the 6.1% of the population covered by other insurance.<sup>30</sup>

Given the large percentage of uninsured, private provision of care also plays a large role in the Peruvian health system. For-profit entities include the EPS, private clinics, medical centers, labs, diagnostic centers and informal providers such as shamans and traditional healers. These services are financed mostly through out-of-pocket-payments and to a smaller degree private insurance (included in the 6.1% of the population covered by other insurance). Not-for-profit care is provided by NGOs and religious organizations, among others, and is funded through donations and

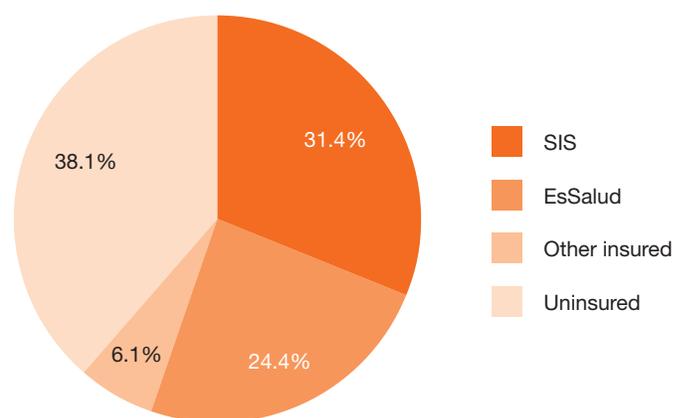
government and international grants aimed at improving healthcare access for the impoverished.<sup>30</sup>

As of 2013, there were 576 hospitals in Peru, of which 171 were run by the MINSA. An additional 90 hospitals were part of the EsSalud network as of 2014. In general, Peru has a shortage of healthcare resources, with only 1.5 hospital beds per 1,000 inhabitants—which is significantly below the OECD average of 4.9.<sup>8</sup> Similarly, in 2012 there were 1.1 physicians per 1,000 inhabitants, which is less than the OECD average of 5.0.<sup>8</sup>

### PPP legislation

In 1996, Peru passed its first public works concession law, which was replaced in 2008 with PPP law No. 1012. The law has been updated several times since then to provide further clarity to the PPP framework, foster private sector investment, promote competition, define set timelines to streamline the process and expand the scope of projects that can

**Figure 14: Healthcare coverage by type of insurance, (Peru)**



Source: Instituto Nacional de Estadística Informática Peru, 2012

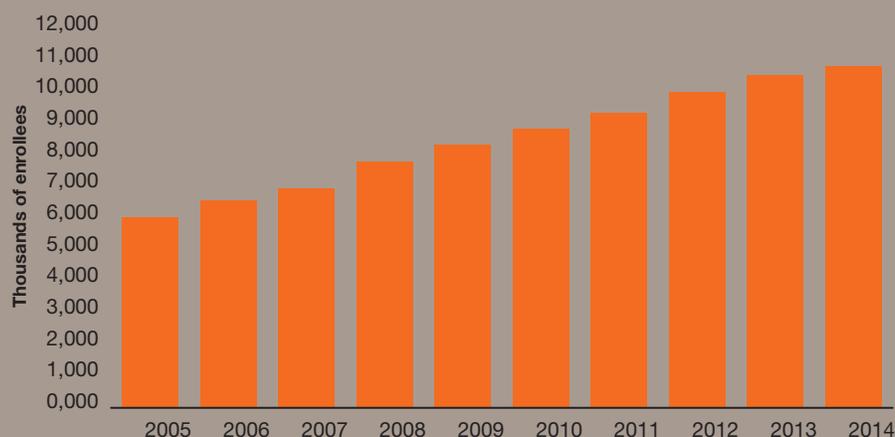
## Health social security agency—EsSalud

EsSalud is an autonomous, decentralized government authority, which provides healthcare coverage to formally-employed and retired individuals and their families.<sup>31</sup> It provides beneficiaries with both public and private options for obtaining care. The public option is financed solely through employer contributions (5% of total salary) and is comprised of a network of providers maintained and operated by EsSalud. Those choosing the EsSalud network are assigned to a primary care center and hospital within their home district.

The private option is a separate insurance plan known as *Entidades Prestadoras de Salud—EPS*. EPSs can be public or private entities, providing care through their own network of providers and supplemented through contracted providers. EPSs offer employees a choice of providers, reduced wait times and additional healthcare services.<sup>32</sup>

Employees choosing to enroll in an EPS have their employer contribution split between EsSalud (6.8%) and the EPS (2.3%).<sup>30</sup> Employees may also be required to make a contribution toward the premium and/or make copayments, depending on the plan.

### EsSalud enrollment (2005–2014)



Source: EsSalud

Peru's recent economic growth has resulted in an increase in formal sector employment and, consequently, EsSalud enrollment. The total number of enrollees has increased from 5.9 million in 2005 to 10.6 million in 2014—an increase of nearly 80% in 10 years. This rapid growth has resulted in significant gaps in healthcare resources. In 2011, EsSalud estimated needing an additional 4,276 physicians and 1,418 beds to adequately meet demand for services.<sup>33</sup>

In addition, EsSalud bears a disproportionate amount of Peru's healthcare burden, due to patients' accessibility to medical technology compared to the MINSA and other payers. It is estimated that 95% of all dialysis patients, 65% of AIDS patients and nearly 100% of all heart, liver and bone marrow transplant patients are treated by EsSalud.<sup>30</sup>

In 2014, EsSalud provided healthcare services through 29 networks. The three largest networks—Almenara, Rebagliati, Sabogal, located in Lima—provided services to nearly half, or 47%, of their enrollees. In total, EsSalud has 407 healthcare facilities, of which 313 provide primary care services, 81 are general hospitals and 13 are tertiary care facilities. Two of the general hospitals are run as PPIPs.

be carried out under a PPP scheme to include public services.

The law defines two types of projects:

- **Self-sustaining PPPs:** contracts that require no or minimal public funding to be financially viable, including:

- Contracts that are financed through user fees (e.g., tolls), thereby requiring no public funds

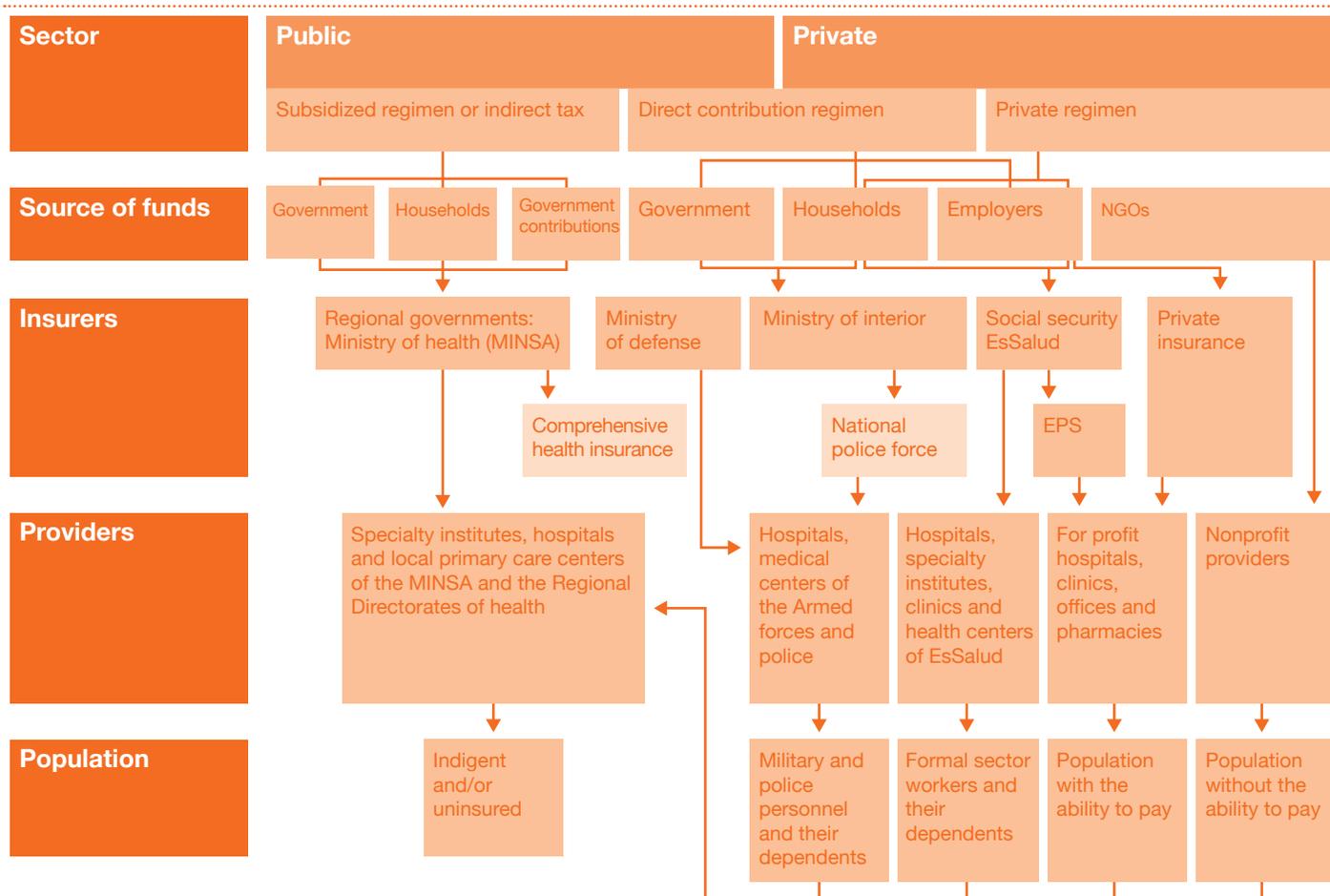
- Contracts requiring minimal financial guarantees from the government (less than 5% of investment amount)
- Contracts requiring non-financial guarantees that have a low probability of requiring public resources (less than 10% probability in each of the first 5 years)<sup>34</sup>
- **Cofinanced PPPs:** Contracts that require government

funding, resources and/or guarantees, including:

- Contracts requiring periodic payments to a private partner for construction and/or operation and maintenance
- Contracts requiring non-financial guarantees with a high probability of requiring public resources

PPP projects may be tendered at all levels of government (local, regional

**Figure 15: Overview of the Peruvian healthcare system**



Source: J. E. Alcalde-Rabanal, O. Lazo-González and G. Nigenda, "Sistema de salud de Perú," *Salud Pública de México*, vol. 53, no. 2, pp. 243 - 254, 2011. Based on a model developed in Sekhri N, Gomez-Dantes O, MacDonald T, in *Cross Border Health Insurance: An Overview*. Published by the California HealthCare Foundation and Healthcare Redesign International, Oakland, CA. 1999.

and national) through their respective Agency for the Promotion of Private Investment (*Organismo Promotor de la Inversión Privada—OPIP*) or through Sector Ministries via their established Investment Committee (*Comité de Inversión*).

At the national level, *ProInversión*, an autonomous government agency, serves as the OPIP for all projects worth more than 15,000 UIT (tax units) and/or involving multiple sector ministries. In addition, contracting government agencies at all levels of government may also solicit the assistance of *ProInversión* in the tender process, which is subject to approval of *ProInversión*'s steering committee.<sup>35</sup>

Prior to project approval, cost and resource estimates must be determined and several studies completed, including cost-benefit, social impact and financial-effectiveness. All cofinanced projects must also complete a “value for money” study.<sup>36, 37</sup>

If a project is considered viable, a promotion plan (*plan de promoción*) is created that outlines, at a minimum: the type of project, PPP model to be employed, selection process for the private partner, financing plan, due date and timeline. This promotion plan must be approved by the contracting government agency and, if the project is cofinanced, by the Ministry of Finance (*Ministerio de Economía y Finanzas—MEF*).<sup>35</sup>

Once the promotion plan is approved, the bid and contract are drafted and approved by various government agencies. The PPP project is awarded through a competitive and transparent

tender process, which includes a prequalification stage. Prequalified bidders submit both technical and financial bids. The technical bid is evaluated first and, if it is deemed acceptable, then the financial bid is evaluated. The private partner that has an acceptable technical bid and the best economic bid is awarded the contact.<sup>35</sup>

Tender documents and contracts are publicly available, but are dispersed on various sites depending on the coordinating web agency (e.g., *ProInversión*, *EsSalud*). A 2014 update to the PPP law calls for the creation of a national registry of PPP projects, which will establish one central repository.<sup>38</sup>

Unsolicited proposals are accepted for both self-sustaining and cofinanced PPPs and are evaluated by the respective OPIP, depending on the scale of the project. If approved, the government issues a Declaration of Public Interest, after which third parties can submit competing proposals within a 90-day time period. If the government proceeds with a private partner's unsolicited proposal and the contract is adjudicated to another third party, the private partner may seek reimbursement for its proposal costs.<sup>36, 37</sup>

### **Political will**

The current administration of President Ollanta Humala (2011– ) has demonstrated strong support for PPP projects and has approved key updates to the PPP law that have strengthened the framework and fostered continued private sector investment. In 2013,

the administration also passed a supreme decree giving high priority to private sector cofinanced initiatives that address the current gap in infrastructure and public services, including healthcare.

For the year 2014–2015, *ProInversión* has proposed a pipeline of private sector infrastructure projects estimated at US\$12 billion across 51 projects.<sup>39</sup> While projects at the federal level have focused on transport infrastructure and energy, the changes in the PPP law have opened the door to social infrastructure projects. Included in *ProInversión*'s plan for 2014–2015 are seven healthcare projects in conjunction with the Ministry of Health and *EsSalud*.<sup>40</sup> In addition, several private sector healthcare proposals have been received and are under evaluation by *ProInversión*.

## **PPP projects**

### **Healthcare overview**

Peru has demonstrated innovation in its approach to health PPPs by experimenting with different models to meet its growing healthcare needs. Not only is Peru the first country in Latin America to embark on PPIPs, it is also the first country to include nonacute care facilities within the scope of a PPP project. The country is also looking toward private investment in other healthcare-related infrastructure projects, such as hospital waste management plants, medical distribution centers, as well as hospital management-only contracts. These latter set of projects are mentioned for reference but are not included within the scope of this

**Figure 16: Summary of services included in the PPP contracts (Peru)**

Hospital Alberto Leopoldo Barton Thompson and Hospital Guillermo Kaelin de la Fuente	Torre Trecca
<ul style="list-style-type: none"> <li>• Emergency room</li> <li>• Outpatient services</li> <li>• Inpatient services</li> <li>• Obstetric center</li> <li>• Surgical center</li> <li>• Diagnosis &amp; treatment center</li> <li>• Critical care unit</li> <li>• Inpatient hemodialysis</li> <li>• Ambulatory surgical center</li> <li>• Home care</li> <li>• Urgent care center</li> <li>• Nonclinical services</li> <li>• IT &amp; medical equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Outpatient visits—900,000/year</li> <li>• Urgent care visits—350,000/year</li> <li>• Diagnostic image readings—634,974/year</li> <li>• Center for surgical risk—81,127/year</li> <li>• Outpatient procedures—up to US\$10.7 million/year</li> <li>• Nonclinical services</li> <li>• IT &amp; medical equipment</li> </ul>

Source: Technical specs of the Hospital Alberto Leopoldo Barton Thompson and Hospital Guillermo Kaelin de la Fuente

report as they do not relate directly to patient care and/or do not include infrastructure investment.

To date, Peru has awarded three healthcare PPP projects—all at the federal level and all carried out by EsSalud.\*\* Two projects involved the building and clinical operation of new hospitals (Hospital Alberto Leopoldo Barton Thompson and Hospital Guillermo Kaelin de la Fuente), each with corresponding primary and urgent care centers. Both projects follow a DBOD PPIP scheme and are located within the greater Lima metropolitan area. Each hospital expanded coverage to 250,000 beneficiaries in the Sabogal and Rebagliati networks, respectively.

Although the projects were adjudicated in 2010, they faced

significant setbacks during a change in administration at EsSalud that occurred in 2011. Construction was delayed, but the two projects were eventually completed and went into operation in April 2014. Both projects were in the construction phase at the time of interviews; therefore, the analysis does not include early operations experiences at these hospitals.

The third project (Torre Trecca) followed a similar DBOD scheme; however, it involved the transformation of an existing abandoned high-rise building into an ambulatory care center. This new center was intended to provide coverage to EsSalud’s three Lima networks—Sabogal, Rebagliati and Almenara—with approximately 4 million beneficiaries. The ambulatory

\*\* EsSalud also awarded a PPP contract for a medical distribution center in Lima with Salog S.A., a consortium of two Brazilian firms, Funcional Card Ltda. and Unihealth Logística Ltda. The contract includes construction and equipment of two warehouses, as well as warehouse and distribution services of strategic and nonstrategic (as defined by EsSalud) medical supplies. In addition, ProInversión and MINSa tendered a management only PPP contract for the National Children’s Hospital in San Borja in 2014. These contracts are mentioned in order to be comprehensive; however, due to the nature of services, they are outside the scope of this study.

**Table 11: Peru healthcare PPP projects as of 2015**

Project name (type)	Year contract signed (current status)	Location (city, province)	Government entity (network)	Private provider (country of origin)	Project Type (no. of beds)	Initial investment (USD)	Contract type	Contract duration
Hospital Alberto Leopoldo Barton Thompson & Primary care center (New)	2010 (In operation)	Callao, Lima	EsSalud (Sabogal Network)	Callao Salud S.A.C. (Spain)	General hospital (200 beds)/ Primary care center	\$39.9M	PPIP/DBOD— with medical equipment	32 years from financial close
Hospital Guillermo Kaelin De La Fuente & Primary care center (New)	2010 (In operation)	Villa María del Triunfo, Lima	EsSalud (Rebagliati Network)	Villa María del Triunfo Salud S.A.C. (Spain)	General hospital (200 beds)/ Primary care center	\$40.2M	PPIP/DBOD— with medical equipment	32 years from financial close
Torre Trecca (Renovation of existing infrastructure)	2010 (On hold)	Lima, Lima	EsSalud (Sabogal, Rebagliati and Almenara Networks)	Consorcio Trecca S.A.C. (Peru/United States)	Ambulatory care services	\$43.5M	PPIP/DBOD— with medical equipment	20 years from date of contract
National Children's Hospital (New)	TBD (Public initiative— pre-tender)	Lima, Lima	EsSalud (National)	TBD	Specialty hospital (256 beds)	TBD	DBOT— with medical equipment	TBD
Chimbote Specialty Hospital (New)	TBD (Public initiative— pre-tender)	Chimbote, Santa	EsSalud (Ancash Network)	TBD	Specialty hospital (108 beds)	TBD	DBOT— with medical equipment	TBD
Piura Specialty Hospital (New)	TBD (Public initiative— pre-tender)	Piura, Piura	EsSalud (Piura & Tumbes Network)	TBD	Specialty hospital (184 beds)	TBD	DBOT— with medical equipment	TBD
Hospital Cayetano Heredia (New)	TBD (Private initiative— pre-tender)	North Lima, Lima	MINSA (Lima)	TBD	Specialty hospital	TBD	DBOT— with medical equipment	25 years
Clinical Pathology Services (New)	TBD (Private initiative— pre-tender)	Lima, Lima	MINSA (Lima Metropolitan Area)	TBD	Clinical pathology lab	TBD	PPIP/DBOD— with medical equipment	20 years
Hospital Huaycán (New)	TBD (Private initiative— pre-tender)	Lima, Lima	MINSA (Lima)	TBD	General hospital	TBD	DBOT— with medical equipment	20 years
National Hospital Hipólito Unanue (New)	TBD (Private initiative— pre-tender)	Lima, Lima	MINSA (Lima)	TBD	General hospital	TBD	DBOT— with medical equipment	18 years
Hospital Complex Sergio Bernales (New)	TBD (Private initiative— pre-tender)	Comas, Lima	MINSA (Lima)	TBD	Two general hospitals & mobile field hospital	TBD	DBOT— with medical equipment	28.2 years
Diagnostic Imaging Centers (New)	TBD (Private initiative— pre-tender)	Lima, Lima	MINSA (National)	TBD	Diagnostic imaging center	TBD	PPIP/DBOD— with medical equipment	TBD

the two parties, the contract was signed in March 2010.

All three projects were tendered by EsSalud directly, though EsSalud did consult with *ProInversión* throughout the process. EsSalud had the authority to carry out the tender directly because it is a decentralized autonomous government agency that does not rely on government funds for its operations. Therefore, by law (passed in 2008), EsSalud has the right to enter into long-term contracts, including PPP contracts, without obtaining prior federal approval. Former EsSalud representatives interviewed noted that the agency decided to bypass *ProInversión* for two main reasons:

- **Healthcare expertise:** Although *ProInversión* is the subject matter expert for PPP contracts, at the time of tender the agency lacked healthcare experience. Given the nuances of healthcare projects compared to traditional infrastructure projects, EsSalud felt it was better equipped to lead and manage the tender process, relying on *ProInversión* only as a technical advisor when needed.
- **Streamlined process:** By leading the tender process itself, EsSalud avoided the involvement of additional government officials and additional layers of approval. The organization was therefore able to move from project conception to adjudication in a much shorter time frame than the traditional route.

The Torre Trecca project, on the other hand, was an unsolicited proposal, received from a consortium that included Grupo Salud del Peru S.A.C.

and American Hospital Management Co. EsSalud published its formal declaration of interest in February 2010 and, having received no counteroffers, awarded the contract to the consortium, and signed the contract in August 2010.

Those interviewed noted that proposals initiated by the private sector were the preferred method for project identification due to the high cost of hiring technical and financial advisors to carry out the prerequisite studies for PPP projects.

EsSalud has solicited *ProInversión* to carry out several of its future PPP projects. Since 2010, the PPP law has been amended to streamline the national process and *ProInversión* has acquired subject matter expertise in healthcare. These two changes have positioned the agency to coordinate PPP tenders for both EsSalud and MINSA.

### Financing & payment mechanisms

EsSalud developed an innovative financing mechanism for the PPIP projects. Unlike most healthcare PPP projects, Peru's projects are not financed via Project Finance, but rather through an iterative financing scheme tied to achieving predefined milestones during the construction period. Key aspects of the financing model include:<sup>43</sup>

- The financial institution, Bank of America—Merrill Lynch (BAML), raised capital by issuing 18-year zero coupon senior secured class A notes valued at US\$229 million via Peru Payroll Deduction Finance Limited. Proceeds from this

transaction totaled US\$146 million, representing a 63.7% discount rate with a yield of 5.5%.<sup>44</sup>

- The notes were backed by EsSalud through financial guarantees in the form of Certificates of Completion for Investment Repayment (*Retribución Por Inversiones—Certificado de Avance de Obras RPI-CAOs*) for both construction and equipment.
- The issued notes were given a Fitch Rating of BBB(EXP)—Outlook Stable, and therefore BAML did not seek further financial guarantees from EsSalud.<sup>44</sup>
- Prior to construction, the private partner submitted two plans that established the basis for the CAOs:
  - Construction plan (*Programa de Ejecución de Obra*): defined 10 milestones in the construction timeline
  - The equipment acquisition plan (*Plan de Equipamiento*): defined two milestones for two separate groups of equipment for the hospitals and defined four milestones for a single equipment group for the ambulatory care center
- Once a milestone was reached, the private partner sought a CAO from EsSalud, which it then sold to BAML. BAML in turn paid the partner, using the capital raised through the issued notes.
- The private partner was responsible for the initial investment necessary to reach the first construction and equipment milestones, after

which they obtained financing through the exchange of CAOs. No financing was obtained during the operations phase.

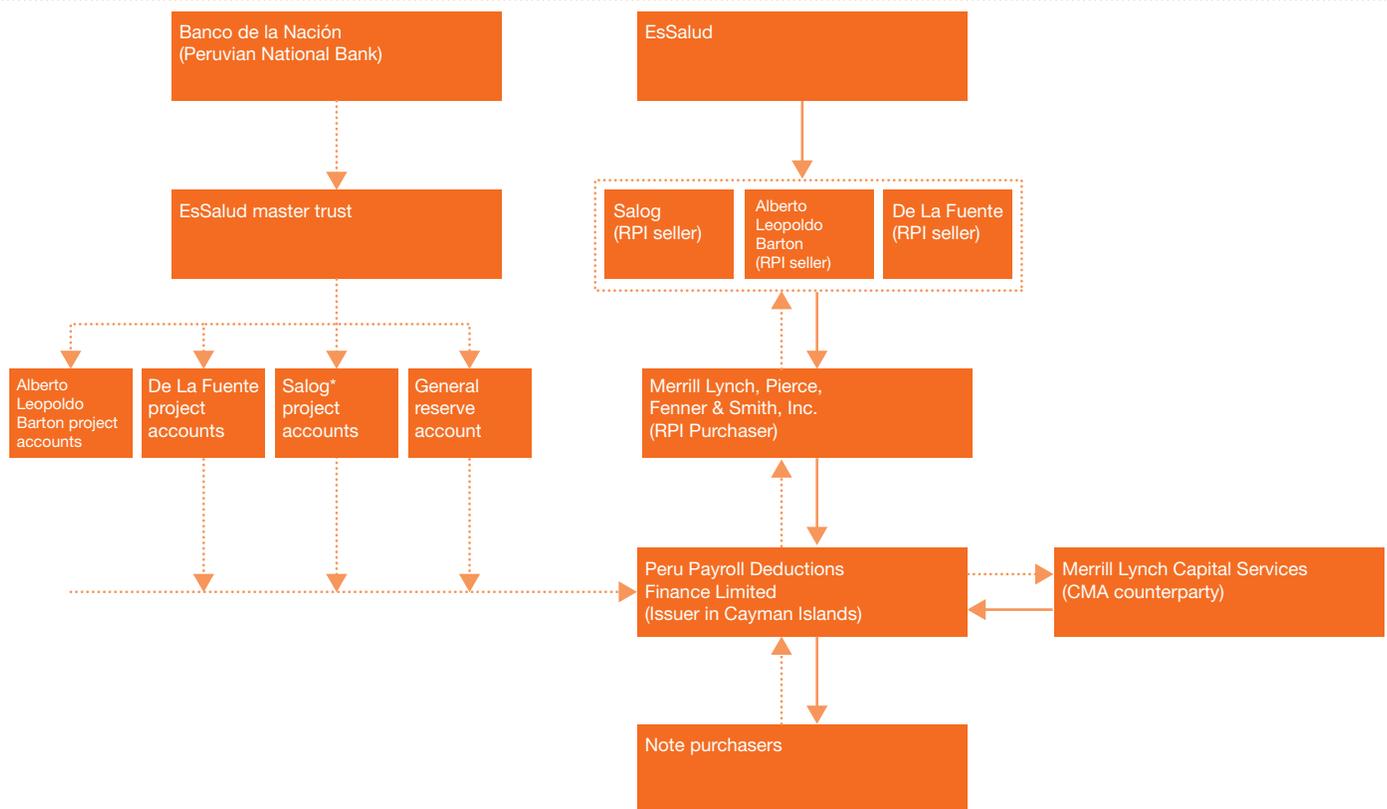
- The government did not provide any investment up front; however, it provided a financial guarantee through the creation of a master trust, to which it contributed the greater of the following: 1.25 of the total debt service or 12% of monthly premium collections.

The payment mechanism between EsSalud and the private partner varied depending on the facility type. In general, there were separate monthly payments for construction, equipment and operations. EsSalud did not begin payment on construction until a designated number of months following the start of the construction. These payments were made to the owner of the CAOs, which in these contracts was BAML, not the private partner.

Payments for operations (*Retribución por Operaciones—RPO*) were made on a capitated basis for the hospitals and on a per unit of service basis for the ambulatory care center. A bank trust (*Fideicomiso de Administración y Garantía*) was set up to handle the payments between EsSalud and the private partners.

Fines were imposed if the private partner failed to deliver services outlined in the contract. If the total fines exceeded 10% of the contract

**Figure 17: EsSalud PPP transaction structure (Peru)**



Source: Fitch Ratings, "Peru Payroll Deduction Finance Limited," Fitch Ratings, 2012.  
\* See footnote on page 52

**Table 12: Summary of payment types by facility type (Peru)**

Hospitals Alberto Leopoldo Barton Thompson & Guillermo Kaelin De La Fuente		Torre Trecca
Construction payment: <i>(retribución por inversiones—infraestructura—RPI-I)</i>		
Timing	Paid on a monthly basis over a period of 15 years starting on the 31 <sup>st</sup> month post the start of construction	Paid on a monthly basis over a period of 10 years starting on the 20 <sup>th</sup> month post the start of construction
Equipment payment: <i>(retribución por inversiones—equipamiento—RPI-E)</i>		
Timing	<p><b>Group 1:</b> Bio-medical equipment, electro-mechanical equipment and clinical and nonclinical fixtures paid on a monthly basis over a period of 10 years</p> <p><b>Group 2:</b> IT equipment, other medical equipment excluding consumables and surgical equipment paid on a monthly basis over a period of three years</p>	Bio-medical equipment, electro-mechanical equipment, clinical and nonclinical fixtures, IT equipment, other medical equipment excluding consumables and surgical equipment paid on a monthly basis over a period of five years
Equipment replacement	Contemplated at the end of payment for each group and agreed upon between the private partner and EsSalud	Contemplated after five years and agreed upon between the private partner and EsSalud
Operations payment: <i>(retribución por operaciones—RPO)</i>		
Timing	Two monthly capitated payments starting at the initiation of operations covering a total of 250,000 beneficiaries and up to an additional 1% (2,500 patients) at no extra charge	Monthly payments based on guaranteed minimum utilization rates grouped into five different payment types
Payment types	<p><b>Patient care payments:</b> <i>(Retribución Por Operaciones Asistencial—RPOA)</i> based on estimated costs of healthcare professional salaries, medical supplies, drugs, consumables and other general costs related to patient care as determined by EsSalud and agreed upon by the private partner</p> <p><b>Non patient care payments:</b> <i>(Retribución Por Mantenimiento y Operación—RPMO)</i> based on estimated costs of administrative salaries, procedures, diagnostic support, intermediate care, maintenance, general services and other nonclinical care costs as determined by EsSalud and agreed upon by the private partner</p>	<p><b>Office visits</b> <i>(Retribución Por Operación de Consulta Externa—RPMO-CE)</i></p> <p><b>Urgent care visits</b> <i>(Retribución Por Operación de Urgencias—RPMO-U)</i></p> <p><b>Outpatient procedures</b> <i>(Retribución Por Procedimientos Especializados—RPMO-PE)</i></p> <p><b>Surgical risk evaluations</b> <i>(Retribución Por Operación de Riesgos Quirúrgicos—PMO-RQ)</i></p> <p><b>Diagnostic image readings</b> <i>(Retribución Por Operación de Lectura de Imágenes—RPMO-LI)</i></p> <p>Payments are based on estimated costs including physician salaries, drugs, consumables, supplies, other patient care and non-patient care salary expense, procedural costs, customer service expense, maintenance and other operating expense</p>
Excess coverage	If the total number of beneficiaries exceeds the amount outlined in the contract, the private partner will be paid an additional RPO payment on a per capita basis. Total beneficiaries cannot exceed 350,000	Should utilization rates exceed the guaranteed amounts, the private partner will be paid additional per unit of service payments
Payment adjustments	A request to adjust the RPO calculation can be proposed by either party after five years of operations. Adjustments to payment can be made due to: <ul style="list-style-type: none"> <li>a) inflation</li> <li>b) increased salary costs</li> <li>c) increased number of covered beneficiaries</li> </ul>	A request to adjust the RPO calculation can be proposed by either party after five years of operations. Adjustments to payment can be made due to: <ul style="list-style-type: none"> <li>a) inflation</li> <li>b) increased salary costs</li> <li>c) increased utilization rates</li> </ul>

Source: Hospital Alberto Leopoldo Barton Thompson, Hospital Guillermo Kaelin de la Fuente, and Torre Trecca contracts

value, EsSalud had the right to terminate the contract. The private partner was responsible for financial guarantees during the construction and operation phases equal to a maximum of 15% of the reference price for each phase. If the private partner failed to pay fines in a timely manner, EsSalud could obtain payment from the financial guarantee.

Financing proved to be a challenge initially because the contracting agency was not a federal or regional government, but rather a single government agency. EsSalud had no previous experience with PPP projects, and as an autonomous decentralized agency was not backed by federal funds. Financing institutions therefore saw this as a greater risk. BAML initially sought a guarantee from the Multilateral Investment Guarantee Agency (MIGA), part of the World Bank, but later did not proceed with this after Fitch rated the investment BBB—Outlook Positive. Those interviewed felt this rating would facilitate obtaining financing for future projects.

### Performance metrics

Under the Peru PPIPs, the private partner is responsible for delivering uninterrupted patient care 24 hours

a day/365 days a year. Performance metrics defined in the contract are aligned with EsSalud’s overall patient care performance goals and can be grouped into three major categories: satisfaction, quality and outcomes. Satisfaction and quality are measured starting the first year of operations, whereas outcomes are measured starting the second year. The contract defines a goal, reporting method and frequency of evaluation for each performance metric. The contract, however, does not define a time frame for resolving noncomplaint-based issues.

Performance results are also used to calculate a global service index (*Índice Global de Servicios*), which is a weighted average of all the prioritized performance metrics. The private partner is expected to achieve a minimum score of 85%. In addition, the contract also defines minimum staffing requirements and productivity ratios for inpatient, emergency care and outpatient services.

The private partner is responsible for developing an internal controls plan to track the performance metrics, which must be approved by EsSalud on a yearly basis. This includes establishment of a department to handle and follow up on complaints.

The private partner must also record all information related to patient activity on a daily basis using IT software that is compatible with EsSalud’s audit software.

In addition, the private partner is required to submit monthly and yearly operational reports. Fines are imposed for failure to submit these reports, as well as a fixed fine imposed every day if one or more of the performance metrics is not met. Fines may be reduced by 25% if the private partner accepts responsibility for the infraction and accelerates resolution.

### Supervision & monitoring

EsSalud has created a Project Management Office for PPP projects (*Oficina de Seguimiento de Ecuación de Contratos APP*) to monitor the contracts and conduct audits of the information provided by the private partner during the operations phase. This office has the liberty to engage as it sees fit in various aspects of contract supervision and monitoring. In addition, two separate, independent third-party contractors were selected to supervise and manage during the construction phase, and the operations and maintenance phase.

**Table 13: Sample performance metrics (Peru)**

Performance metric	Description	Measurement/reporting tool	Goal
Quality of medical services	Patient’s perceived quality of the care from admission to discharge	Patient satisfaction survey submitted every trimester	90% of surveyed users are satisfied
Decreased breast cancer mortality	Early detection of breast cancer by means of routine breast cancer screenings	Monthly operational report	At least 60% of women over 40 years old with breast cancer receive an early diagnosis
Dispensation of prescription drugs	Ensures patients have access to the necessary prescription drugs for their treatment of care	Monthly operational report	99% of prescriptions and refills are fulfilled

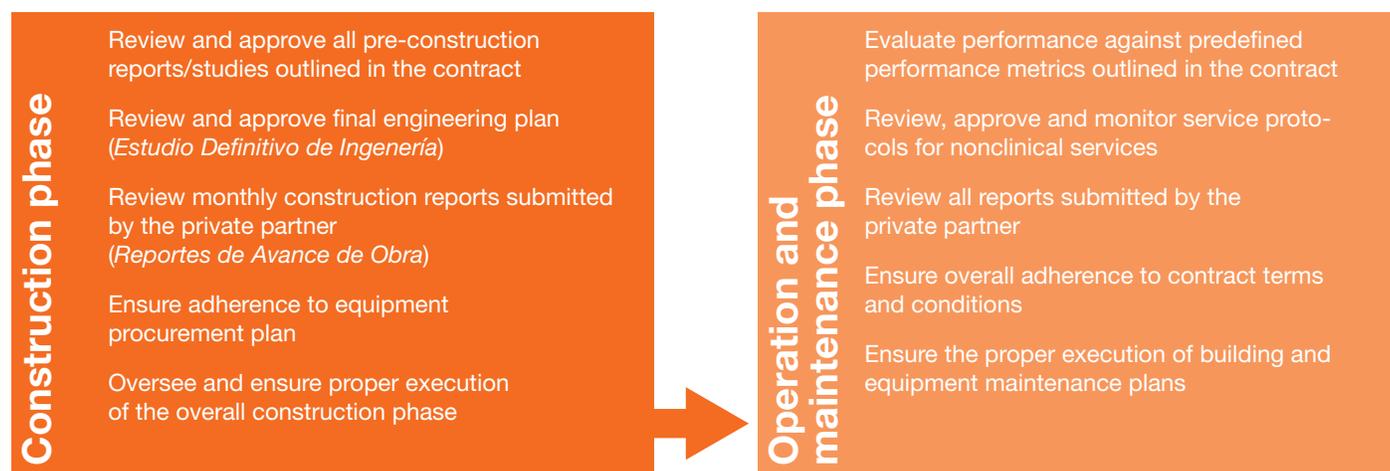
Source: Hospital Alberto Leopoldo Barton Thompson and Hospital Guillermo Kaelin de la Fuente contracts

**Figure 18: Sample performance metrics by category (Peru)**



Source: Hospital Alberto Leopoldo Barton Thompson and Hospital Guillermo Kaelin de la Fuente contracts

**Figure 19: Roles and responsibilities of the supervising agencies (Peru)**



Source: Hospital Alberto Leopoldo Barton Thompson and Hospital Guillermo Kaelin de la Fuente contracts

## **Torre Trecca**<sup>41</sup>

Torre Trecca is a high-rise building, centrally located in the Jesus María municipality of Lima. Construction of the building facility began in 1969 and has been halted several times throughout its history. The 23-story tower was finally abandoned in 1990 and has remained unoccupied since construction began. In 1999, a study was done by the National Engineering University (*Universidad Nacional de Ingeniería*), which declared the tower unsafe for use, citing the need for foundational reinforcement to meet seismic standards. In 2008, the government tried to sell the building, but was unable to identify any interested buyers.

In August of 2010, EsSalud signed a PPIP contract with Consorcio Trecca SAC to invest US\$43.5 million to convert the tower into a 160-physician office ambulatory care center. The new center would provide outpatient office visits, urgent care services, as well as serve as a central agency for diagnostic image reading and surgical risk evaluation in Lima.

The project has encountered two main administrative hurdles since the contract was signed in 2010. The first relates to the building's engineering plan. By Peruvian law, all health facilities must have a "regular" shape (e.g., square, rectangular). Torre Trecca has an "L" shape. EsSalud argued that this law only applied to inpatient facilities and therefore did not apply to Torre Trecca, which would be an outpatient facility only. But without approval of the engineering plan, the project cannot commence.

The second hurdle related to the municipality of Jesus María, which denied EsSalud a construction license due to an inadequate traffic impact study (*estudio de impact vial*). Three blocks of city streets, surrounding Torre Trecca, were slated to be closed off to public access and converted to EsSalud private parking. The municipality argued that the new ambulatory care center would impact traffic in the area and therefore the three blocks on Miller Street must remain open to public access.

Both of these administrative issues remain unresolved, and it is unclear as to whether and when construction will commence.

care center was expected to relieve congestion at other EsSalud primary and urgent care centers in the greater Lima metropolitan area, as well as serve as a central location for reading diagnostic images and providing surgical risk evaluation. However, as of early 2015 the project remained stalled and it was unclear when construction would commence (see *Torre Trecca* text box).

### **Tender process**

In 2008, EsSalud's strategic investment plan (*Plan Estratégico de Inversiones*) committed US\$390 million to infrastructure projects to expand coverage and meet the demands of its rapidly growing beneficiaries. This included the construction and/or expansion of 28 hospitals. EsSalud decided to pilot two of these hospitals and two corresponding primary care centers under a PPIP scheme. In March of the same year, it published an international solicitation for proposals for the two projects.<sup>42</sup>

The agency received two proposals, one for each hospital, from a consortium that included Ribera Salud S.A., the creators of the *Alzira model* in Spain (see text in Regional Summary). In October 2008, EsSalud published a formal declaration of interest, inviting other partners to submit counterproposals. In the absence of a competitive counterproposal, EsSalud awarded both contracts in February 2009 to the BM3 consortium, which included Ribera Salud S.A., Mensor Consultoría y Estrategia S.L., BM3 Obras y Servicios, Exploraciones Radiológicas Especiales ERESA and IBT Health. After negotiations between

The private partner was allowed to suggest a supervising entity; however, the final decision was made solely by EsSalud. The supervising entity signed a contract with and is paid by EsSalud. The costs for supervision and monitoring are included within the contract and comprise a portion of the RPI or RPO payments. The private partner is required to reimburse EsSalud for these payments prior to the initiation of operations. Once the operation and maintenance phase has commenced, payment to the supervisor is made directly via the bank trust (*Fideicomiso de Administración y Garantía*).

The private partner works directly with the supervisors and/or the project management office to resolve any issues related to contract terms and compliance. Should these parties not be able to resolve these issues internally they may seek a resolution through arbitration, the cost of which is split by both parties. The type of arbitration is dependent on the issue to be resolved and can range from a single mutually agreed-upon judge to a three-person panel with one representative selected by each party and the third selected by mutual agreement from the two representatives. Any resulting fines are determined by the supervising entity.

One additional committee (*Comité de Recepción y Aceptación de Infraestructura y Equipamiento*) was formed to provide the final approval of infrastructure and equipment and to deem the construction phase complete. This committee was comprised of three members of EsSalud, plus any contracted third party experts.

Once construction was certified as complete the final CAO was issued and operations commenced.

### **Successes**

Both of the PPIP hospitals were in the construction phase at the time of interviews, therefore successes and challenges noted here are limited to the tender and contracting phases.

### **Due diligence prior to embarking on PPP projects**

At the time interviews were conducted, the MINSAs were in the process of working with *ProInversión* to define future health PPP projects. Prior to embarking on their current PPP projects, representatives from the MINSAs made site visits to the PPIP Alzira and Torre Vieja hospitals in Spain as well as the PPP regional specialty hospital, Zumpango, in Mexico. Through these site visits to facilities that were in operation, the MINSAs gained a deeper understanding of two types of PPP models on opposite ends of the spectrum. This information guided the decision on which model, or a hybrid thereof, better suited Peru's future needs and policy objectives.

### **Integration with primary care from the start**

Spain's original Alzira model included only hospital services. Four years into the ten-year contract, it was refinanced to correct improper budgeting and cost shifting between primary and secondary care caused by unnecessary hospital admissions.<sup>45</sup> EsSalud recognized such cost shifting as a potential problem within Peru's similar PPIP capitated model, and therefore included one primary care

center in each hospital contract to give the private partner full control over the hospital's feeder system.

In addition, each contract requires an urgent care center be included, to minimize the high cost of unnecessary emergency department visits. The private partner interviewed noted concern in having only one primary care center to cover the same number of beneficiaries as the acute care center. Former government officials involved with the project responded that the primary care centers were large enough in size to adequately handle this volume. There is also flexibility in the contract that allows for the construction of new infrastructure, should there be a need for expanded square footage.

### **Incorporation of patient satisfaction into performance metrics**

Peru is the only country within the scope of this study to go beyond complaint-based performance metrics to formally include metrics tied to patient satisfaction. Patient satisfaction is measured through surveys conducted on a quarterly basis that measure both clinical and nonclinical services. The private partner must obtain an aggregate annual satisfaction rating of 90% or higher across all areas or be subject to fines. This metric aligns with EsSalud's overall goal to improve patient satisfaction across all facilities.

### **Inclusion of a physician exchange program**

Ribera Salud, a part of the consortium that was awarded the two hospital contracts, has a long history of

managing PPIP hospitals. It originated the Alzira model in Spain in 1999, and has been an integral part of consortiums responsible for nine different PPIP hospitals in the autonomous communities of Valencia and Madrid in Spain.<sup>46</sup>

As part of its proposal, Ribera Salud included the opportunity for a physician exchange program between the new PPIP hospitals in Peru and the PPIP hospitals in Spain. This program allows physicians in Peru to go to Spain to learn new techniques and procedures firsthand, as well as allowing physicians from Spain to travel to Peru to conduct training sessions and provide additional coverage if necessary. This program will not only facilitate knowledge sharing, but will also provide an additional pool of healthcare resources in a country with a physician shortage.

### **Opportunity for private partner to service additional patients**

The Torre Trecca contract will allow the private partner to service non-EsSalud patients, as long as it does not interfere with the ability to meet the contract terms and conditions or impact the availability of services to EsSalud patients. This flexibility allows the private partner to minimize its operational risk and increase its profit margin by offering services to an additional pool of patients. The private partner may achieve this through contracts with EPS or by providing services directly to patients who pay out-of-pocket. (This arrangement, is not permissible under the hospital contracts).

### **Innovative approach to minimize risk for a PPIP project**

Financing institutions view PPIP projects as a higher risk due to the inclusion of clinical services. In Peru, this was further compounded by the fact that the contracting government agency (EsSalud) was a decentralized autonomous government agency rather than the federal government, which is viewed as a more secure source of funding.

To overcome these financing hurdles, EsSalud separated the risk of operations from the risk of construction and equipment by offering different payments for each and providing financial guarantees for both. EsSalud minimized its own risk by tying these guarantees to the private partner's achievement of specific construction and equipment milestones.

The private partner was able to obtain the necessary funding for construction from the financing institution by selling the guaranteed RPI-CAOs issued by EsSalud. BAML in turn received payment directly from EsSalud rather than relying on payments from the private partner—eliminating any potential nonpayment due to operational risks of the contract. The favorable rating issued by Fitch also helped BAML establish confidence in the project.

## **Challenges**

### **Political hurdles stalled projects**

All three PPP projects tendered faced significant delays due to political hurdles. The projects were initially stalled when the then president of EsSalud was accused of corruption (2010–11).

A new president of EsSalud was appointed in August 2011. Due to the previous allegations of corruption within the agency, PPIP contracts were thoroughly reviewed to ensure that the tender and adjudication processes adhered to EsSalud's policies and procedures. All three projects were found to have followed the proper procedures and were cleared to continue. However while construction was completed on the two hospital projects, the Torre Trecca project is still on hold due to additional administrative hurdles between EsSalud, the federal government and the local municipality.

### **Knowledge sharing & capacity building beyond EsSalud**

At the time of interviews, Peru's PPP projects were being implemented outside of the traditional framework for government PPP projects; therefore, all the experience and knowledge existed within EsSalud. As other government agencies, particularly the MINSA and *ProInversión*, embark on PPP projects, it will be imperative for these agencies to engage in cross-agency knowledge sharing and capacity building. The early lessons learned and successes of EsSalud's PPP projects should be used not only to benefit future EsSalud projects but also for broader government healthcare projects.

### **Duplication of supervision and monitoring services**

EsSalud's direct role in supervision and monitoring of the PPIP hospital is unclear and open to interpretation. The private partner interviewed noted that this often led to additional layers of approvals that sometimes resulted in

contradictory results. A prime reason cited for the duplication was EsSalud's resistance to rely solely on the services and opinions of the contracted third party, which could have stemmed from EsSalud's prior allegations of corruption within the organization.

The private partner felt that having external supervisors with the knowledge and capacity to monitor specific aspects of the contract was a key aspect of success. However, the private partner felt that either further autonomy in decision making should be given to these contractors, or EsSalud's roles and responsibilities in supervising and monitoring should be more clearly defined.

### ***Future outlook***

The future outlook of healthcare PPP projects in Peru is positive. As the pioneer of PPIP projects in Latin America, Peru's projects will be closely monitored by other countries in the region. The projects have a solid foundation in their contract terms and conditions and the flexibility included therein. The ultimate success or failure will depend upon the execution and monitoring of these contract terms.

Both EsSalud and MINSA have announced plans to carry out additional healthcare PPP projects through *ProInversión*. Projects will include not only public sector initiatives, but also private sector proposals that will be evaluated for inclusion in the entities' respective pipelines. Early reports indicate the majority of these projects will be Greenfield hospitals that fall under the traditional DBOT scheme and may include select clinical services. As of April 2015, *ProInversión* has identified

nine patient care projects in their pipeline (three public and six private) in the pre-tender study phase.<sup>35</sup>

A stable economy and strong political will continue to spur private sector investment in PPPs across healthcare sectors. The increase in the number of healthcare private sector proposals is a positive indicator of this continued trend.

## Country to watch: Colombia

### Economic outlook and national health status

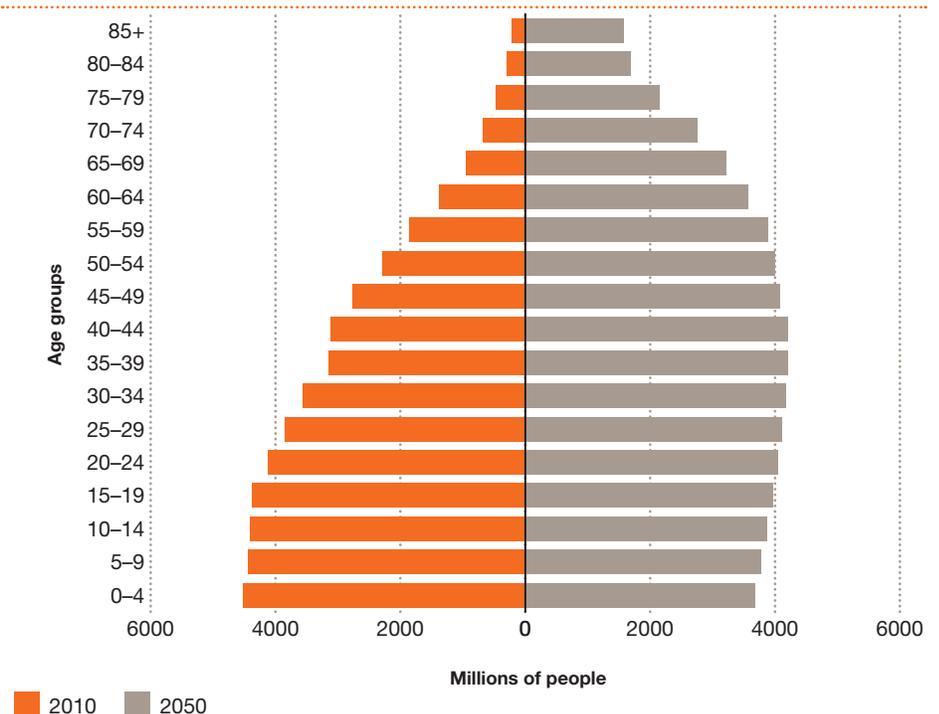
Colombia is located on the northwestern tip of South America. It is bordered by Ecuador and Peru to the south and Venezuela and Brazil to the east. It is the only country in South America with access to both the Pacific and Atlantic oceans, giving it easy access to both the United States and Europe. The country is divided into 32 departments and has a population of 48.3 million. The nation's capital of Bogotá is located in the Capital District.

The country has demonstrated strong economic performance in recent years, regaining investment grade status from all three major US rating agencies in 2011.<sup>49</sup> GDP has grown by over 4% year on year and in 2014 was estimated at US\$378.4 billion. Despite this positive economic performance, unemployment, while trending downward, remains high at 9.7%. In addition, nearly a third of the population (30.6%) lives below the poverty line.

Colombia's population pyramid reveals a country that is in the midst of a demographic shift. Fertility rates are decreasing and life expectancy is increasing as a result of increased access to healthcare. Colombia's healthcare challenges include rising chronic diseases, persistent infectious diseases and worsening inequity.<sup>50</sup> Median age in Colombia is 28.9 years and average life expectancy at birth is 73.8 years. The top three causes of death in 2011 were coronary disease, interpersonal violence and cerebrovascular disease.<sup>51</sup>



Figure 20: Demographic structure in Colombia, 2010–2050



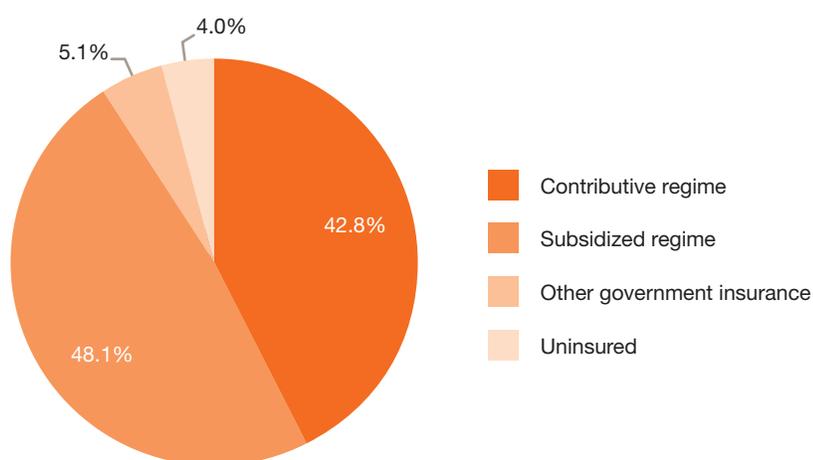
Source: United Nations, Department of Economic and Social Affairs, Medium Fertility Rates

**Table 14: Colombia summary statistics, 2012** (most recent available unless otherwise noted)

Economy*		Health expenditures**	
Gross domestic product (GDP) (USD)	\$378.4B (2013)	Total expenditures on health as % of GDP	6.8%
GDP per capita (USD)	\$7,831 (2013)	% Public	75.8%
Population	48.3M (2013)	% Private	24.2%
Unemployment rate*	9.7% (2013 est.)	% of private expenses that are out-of-pocket	60.9%
Poverty headcount ratio at national poverty line	30.6% (2013)	Per capita expenditures on health (USD)	\$529.82
Median age*	28.9 (2014 est.)		
Health status		Health resources**	
Life expectancy at birth*	73.8	Total beds***	64,234 (2011)
Cause of death**		%Public	44.0% (2011)
Communicable diseases and maternal, prenatal and nutrition conditions	12.6%	%Private	54.4%(2011)
		%Mixed	1.5%(2011)
Injury	18.1%	Hospital beds per 1,000	1.5
Non-communicable diseases	69.3%	Physicians per 1,000	1.47 (2010)

Sources: \*CIA The World Factbook, \*\*World Bank, \*\*\*Registro Especial de Prestadores de Servicios de Salud.

**Figure 21: Healthcare coverage by type of insurance, (Colombia)**



Source: Ministerio de Salud y Protección Social, 2013

## Healthcare access

In 2012, Colombia spent 6.8% of its GDP, or approximately US\$530 per capita, on healthcare services. Government expenditures on health as a percentage of total expenditure on health were 75.8%. Private expenditures accounted for 24.2% of the total spend, of which out-of-pocket expenses represented 60.9%.

Colombia was one of the first countries in Latin America to pass healthcare reform in an effort to achieve universal healthcare coverage. In 1993, the country passed “Law 100,” which transformed the way healthcare was funded, mandated individual enrollment in a healthcare insurance plan and unified disparate social security, public and private healthcare systems under one General Health Social Security System (*El Sistema General de Seguridad Social en Salud—SGSSS*).<sup>52</sup>

Healthcare coverage is coordinated by both public and private insurance companies collectively known as Entities Promoting Health (*Entidades Promotoras de Salud—EPS*). Plans can be classified into three main categories:

- **Contributive regime:** Covers the formally employed, retirees and self-employed, which represent approximately 43% of the population. It is funded through employer and employee contributions amounting to 12.5% of an individual’s annual salary.

- **Subsidized regime:** Covers the poor, unemployed and indigent who cannot otherwise afford coverage—approximately 48% of the population. It is funded by national and local taxes, royalties from oil and mineral sales, and also 1.5% of the 12.5% from the contributive regime.
- **Other government insurance:** Approximately 5% of the population is covered by other government plans such as the military, national police and national oil company.

Despite the legal mandate for healthcare insurance enrollment, approximately 4% of the population remains uninsured. This population includes those recently unemployed or those self-employed who cannot afford to pay the 12.5% contribution.<sup>53</sup> In addition, a small subset of the population with the ability to pay purchases private insurance and/or services directly from private providers.

Funds for the subsidized and contributive regime are collected by the Solidarity and Guarantee Fund (*Fondo de Solidaridad y Garantía—FOSGYA*), which in turn distributes the funds to the EPS. All EPSs are required to provide coverage for a defined benefit plan known as the Mandatory Health Plan (*Plan Obligatorio de Salud—POS*), which differs for the contributive and subsidized regimes. All of those enrolled in the contributive and subsidized regimes have the freedom to elect an EPS that provides the respective coverage.

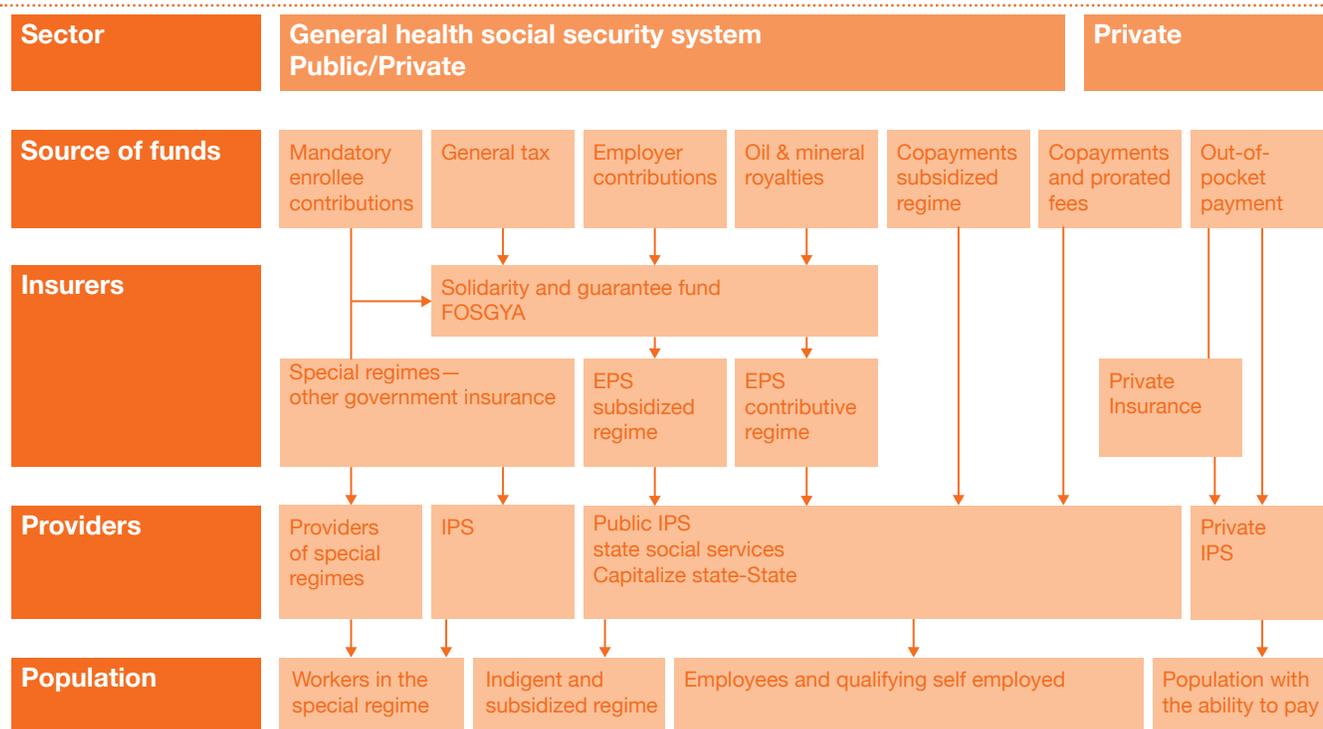
The EPS contracts with a network of public and private providers, collectively referred to as Health Providing Institutions (*Instituciones Prestadoras de Servicios—IPS*) for the provision of healthcare services. In addition, individuals make copayments at the time of services of varying amounts, based on type of service and the individual’s income.

As of 2011, there were 64,234 hospital beds in Colombia, of which 28,283 (44%) were public, 34,971 (54%) were private and 980 (2%) were mixed. The standard of medical facilities provided by private hospitals in Bogotá and other major cities is viewed highly. Outside of major cities, however, facilities can be very limited and in some rural regions, nonexistent.<sup>54</sup> There are 1.5 beds and 1.5 physicians for every 1,000 Colombians, significantly lower than the OECD average of 5.0 beds and 3.2 physicians, respectively.<sup>8</sup>

## PPP legislation

Colombia has the longest history of non-health PPP projects in Latin America, launching its first project in 1993.<sup>57</sup> However, the project experienced significant issues related to renegotiations of contract terms and ineffective supervision and monitoring. The country strived to improve its PPP regulations in order to foster continued private investment and worked to reform its PPP framework with the support of the World Bank. In 2012, the country passed a new PPP legislation known as Law 1508, which more clearly defined

**Figure 22: Overview of the Colombian healthcare system**



Source: R. Guerrero, A. I. Gallego, V. Becerril-Montekio and J. Vásquez, "Sistema de salud de Colombia," *Salud Pública de México*, vol. 53, pp. 144-155, 2011. Based on a model developed in Sekhri N, Gomez-Dantes O, MacDonald T, in *Cross Border Health Insurance: An Overview*. Published by the California HealthCare Foundation and Healthcare Redesign International, Oakland, CA. 1999.

the PPP tender process at the national, department and municipal levels and sought to correct the mistakes of past contracts. Highlights of the law include:<sup>49</sup>

- Created a new National Infrastructure Agency (*Agencia Nacional de Infraestructura—ANI*) charged with centrally managing PPP tenders for multiple sectors
- Expanded the types of projects that can be carried out under a PPP scheme—including social infrastructure projects that were

previously prohibited

- Introduced availability payments commencing once a project is operational and contingent on attainment of defined service and quality standards
- Established a 30-year contract term limit, including extensions, unless otherwise approved by the government
- Limited contract extensions beyond 30 years to 20% of the initial

contract term and to 20% of the initially committed public resources

- Conferred step-in rights to lenders in the event of default under the loan agreement
- Required early termination provisions for all PPP contracts
- Permitted submission of unsolicited proposals and defined clear approval and bidding processes

All potential PPP projects, whether government-initiated or unsolicited from the private sector, must demonstrate viability via the completion of feasibility studies. In addition, proposals initiated by the government must also complete “value for money” studies.<sup>58</sup> The National Planning Department (*Departamento Nacional de Planeación—DNP*) works with the ANI to complete these studies for government proposals, and to review unsolicited proposals from the private sector.

Since passing the new law in 2012, Colombia has launched over 80 PPP projects focused mostly in the transport sector, which will improve access and connect vital cities across the country. It expects private investment in infrastructure to reach US\$1.7 billion in 2015. In addition, the agency has received 61 unsolicited proposals, a subset of which have gone through the prefeasibility and feasibility phases. Colombia awarded

## Ongoing healthcare reform

While Law 100 put a universal healthcare system in place, Colombia faces an ongoing healthcare crisis due to collusion and abuse of funds by EPS, as well as a lack of federal regulation.<sup>55</sup> More recently, the government has passed additional laws in an attempt to remedy the situation:<sup>50</sup>

- Law 1122 (2007)—Aimed to strengthen regulation; clarify benefit packages; stop people underdeclaring income to maintain publicly subsidized insurance; and improve financial flows by decentralizing budget management and establishing deadlines by which insurers are required to reimburse partners.
- Law 1438 (2011)—Sought to improve healthcare based on principles of universality, equity, solidarity, quality, transparency, participation and sustainability by improving governance and interministerial coordination. It placed greater focus on prevention and health promotion, offering the same level of coverage in the publicly subsidized and private contributory schemes, and providing universal coverage.

Additionally, in 2012, President Santos liquidated several EPSs, injected 1.2 billion pesos to revive public hospitals and adopted a National Pharmaceutical Policy (*Política Farmaceutical Nacional*).<sup>56</sup> Most recently, in 2015, the president signed into effect a Statutory Health Reform law (*Ley Estatutaria de Reforma a la Salud*) that will further increase access to healthcare services by increasing the services covered by the Mandatory Health Plan (*Plan Obligatorio de Salud—POS*).

its first unsolicited proposal in 2014 and expects to award an additional seven in 2015.<sup>59</sup>

### ***Political will***

President Juan Manuel Santos Calderon (2010– ) has led the efforts to transform PPP contracting in Colombia and put an end to corruption. He is credited with reinvigorating private sector investment in infrastructure, which has resulted in a healthy pipeline of PPP projects both in public works and social infrastructure. PPP projects have also received support at the department and municipal levels, which account for 70% of PPP proposals.<sup>60</sup> Santos' re-election in 2014 ensured that PPP projects will continue to receive political support during his second term.

### ***Healthcare PPP pipeline***

One of the biggest changes of Law 1508 was the inclusion of social infrastructure projects. While the government's primary focus has been on transportation projects, it has started to also include social infrastructure projects in its pipeline. The DNP contracted technical advisors in late 2014 to complete feasibility studies for a healthcare pilot program, consisting of two hospitals. The studies are expected to be completed in June 2015 and will outline the technical, financial, institutional and regulatory

risks of carrying out these projects as PPPs.<sup>61</sup> In addition, those interviewed commented that there is a strong interest in healthcare projects at the department level.

### ***Future outlook***

The passing of the new PPP law in 2012 has helped Colombia become one of the strongest infrastructure investment climates in the region. The law serves to increase accountability for the government and private partners by improving the tender process and limiting contract negotiations, as well as establishing obligatory procedures at national, regional and municipal levels. In addition, the government is working toward healthcare reform, to increase access to additional services offered in the Mandatory Health Plan (*Plan Obligatorio de Salud-POS*) for both the subsidized and contributory regimes. Although Colombia has not yet tendered a healthcare PPP project, these recent reforms have created a ripe climate for healthcare PPP projects to take root. Therefore Colombia is deemed a "country to watch."

## Country to watch: Honduras

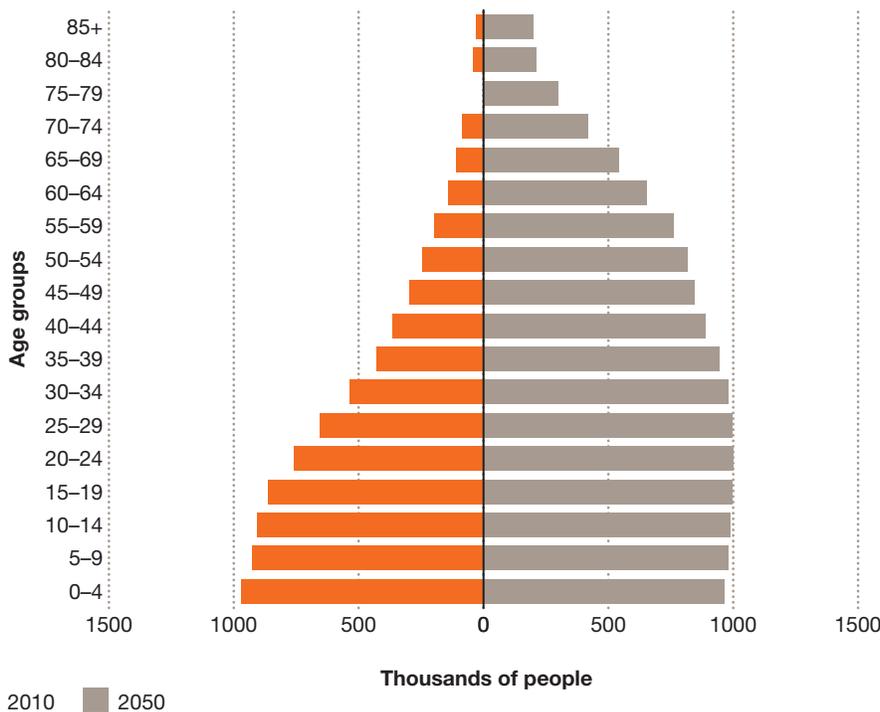


### *Economic outlook and national health status*

Honduras is a republic located in Central America. It is bordered to the west by Guatemala, to the southwest by El Salvador and to the southeast by Nicaragua. The Republic's capital is Tegucigalpa; the country has a population of 8.1 million people.

Honduras is a low- to middle-income country with an estimated GDP of US\$18.6 billion, driven by the production of minerals, coffee, tropical fruit, sugar cane and the exportation of clothing to the international market. Although unemployment in Honduras is estimated at 4.5%, underemployment is a widespread issue. Honduras is the second-poorest country in Central America, with 64.5% of the total population living at or below the poverty line.<sup>62</sup>

**Figure 23: Demographic structure in Honduras, 2010–2050**



Source: United Nations, Department of Economic and Social Affairs, Medium Fertility Rates.

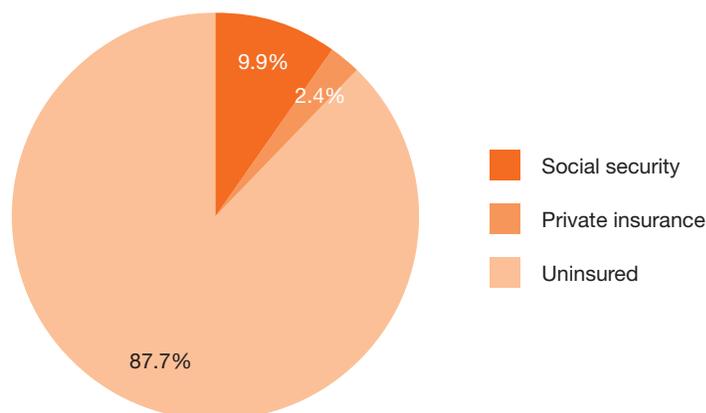
Honduras' population pyramid reveals a population that is relatively young, with a median age of 21.9 years and average life expectancy at birth of 73.5 years. The country is expected to undergo a transformation of its population pyramid over the next 40 years, however, marked by decreases in its birth rate and overall aging of the population. With aging of the population, Honduras will likely experience an increase in the incidence and prevalence of chronic diseases, similar to other developed countries in the region.

### Healthcare access

In 2012, Honduras spent 8.6% of its GDP on healthcare services, of which 50.3% can be attributed to public expenditures. Nearly 92% of private expenditures are a result of out-of-pocket expenditure for copayments required at the time of service.

There is no form of universal public insurance; therefore, the vast majority of the population, 87.7%, is uninsured. However, the uninsured can still access services at public facilities. Although Honduras guarantees the right to healthcare services, poor infrastructure and limited healthcare resources are barriers to access. It is estimated that only 60% of the population has access to these services.<sup>63</sup>

**Figure 24: Healthcare coverage by type of insurance, 2012 (Honduras)**



Source: ENDESA Encuesta Nacional de Demografía y Salud 2011–2012

**Table 15: Honduras summary statistics, 2012 (most recent available unless otherwise noted)**

Economy*		Health expenditures**	
Gross domestic product (GDP) (USD)	\$18.6B (2013)	Total expenditures on health as % of GDP	8.6%
GDP per capita (USD)	\$2,291 (2013)	% Public	50.3%
Population	8.1M (2013)	% Private	49.7%
Unemployment rate***	4.5% (2013 est.)	% of Private expenses that are out-of-pocket	91.7%
Poverty headcount ratio at national poverty line	64.5%	Per capita expenditures on health (USD)	\$195.07
Median age*	21.9 (2014 est.)		
Health status		Health resources**	
Life expectancy at birth*	73.5	Total hospitals***	138
Cause of death**		%Public	21.7%
Communicable diseases and maternal, prenatal and nutrition conditions	23.4%	%Private	78.3%
Injury	15.8%	Hospital beds per 1,000	1.0
Non-communicable diseases	60.8%	Physicians per 1,000	1.0

Sources: \*CIA The World Factbook, \*\*World Bank, \*\*\*ENDESA Encuesta Nacional de Demografía y Salud 2011–2012.

An additional 9.9% of the population with formal employment is covered through the Honduran Social Security Institute. The remaining 2.4% is covered by private insurance.

Healthcare is provided by both the public and private sectors. In the public sector, care is provided through two main entities:

Secretary of Health (Secretarias de Salud—SS)<sup>64</sup>

- Functions as a governing body and healthcare provider to the majority of the Honduran population
- Operates a network of healthcare centers and hospitals throughout

the country and supplements its network with contracts with local partners

- Is funded through federal and regional funds, and as much as 11% from external sources

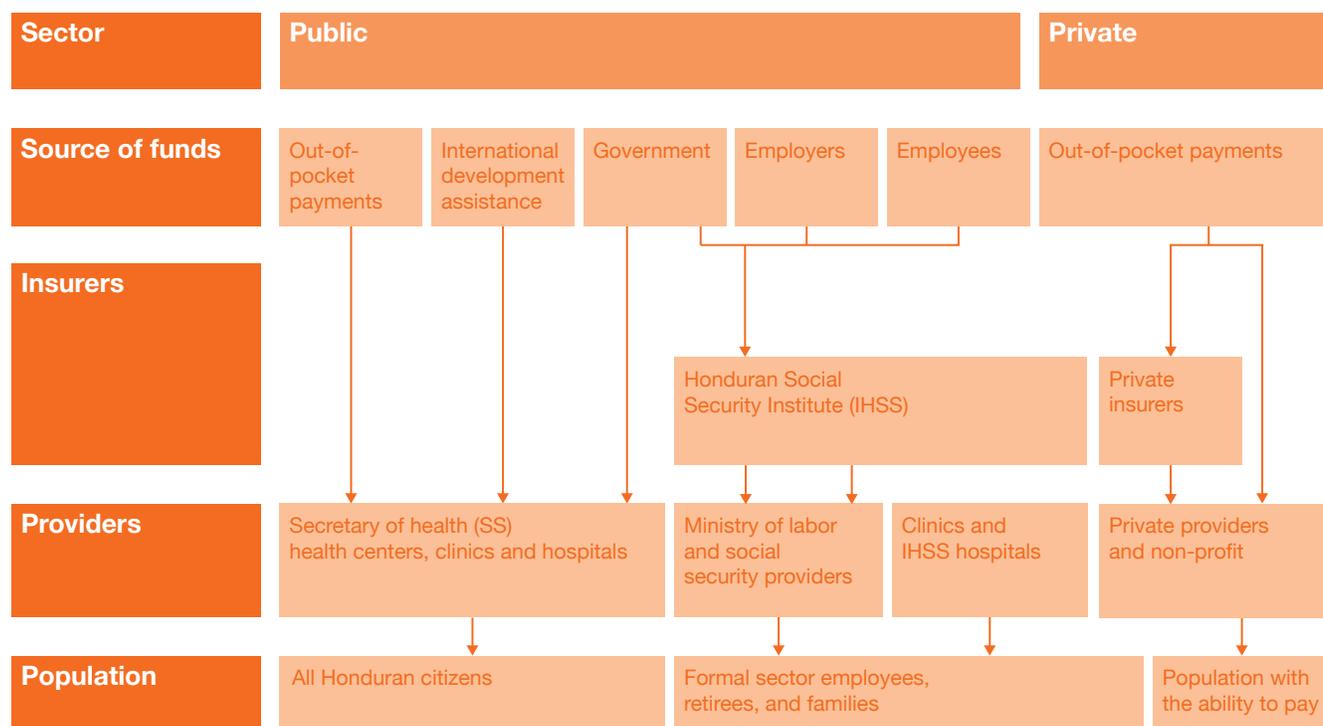
Honduran Social Security Institute (Instituto Hondureño de Seguridad Social—IHSS)<sup>64</sup>

- Has a network of healthcare centers and hospitals throughout the country and supplements coverage with contracts with local providers. These providers deliver care in accordance with the benefits package defined by the IHSS

- In 2010, IHSS had a budget of US\$193.5 million. The health plan is funded through employer (5% of salary) and employee (2.5% of salary) contributions, as well as the state

Private sector healthcare consists of both for-profit and not-for-profit partners offering a variety of services that are paid for by out-of-pocket payments or through private insurance. The private sector covers the very small portion of the population (approximately 3%) that has the means to pay for these services.

**Figure 25: Overview of the Honduran healthcare system**



Source: J. L. Bermudez-Madiz, M. d. R. Saenz, J. Juicer and M. Acosta. "Sistema de salud de Honduras," Salud Publica de Mexico, vol. 53, no. suplemento 2, pp. 209–219, 2011. Based on a model developed in Sekhri N, Gomez-Dantes O, MacDonald T, in Cross Border Health Insurance: An Overview. Published by the California HealthCare Foundation and Healthcare Redesign International, Oakland, CA. 1999.

There is a significant shortage of healthcare infrastructure in Honduras: there are 0.97 beds and 1.0 physicians for every 1,000 Hondurans, significantly lower than the OECD average of 5.0 beds and 3.2 physicians, respectively.<sup>8</sup> There are a total of 139 hospitals, with the vast majority in the private sector—28 belong to the SS, 2 to the IHSS, 1 to the military and 108 to the private sector. In addition to primary care and outpatient facilities, the healthcare system is supplemented by a network of healthcare outreach programs.<sup>64</sup>

### **PPP legislation<sup>11</sup>**

The Honduran government passed a new PPP Promotion Law in 2010 that went into effect in 2011. The law creates a solid legal framework for carrying out PPPs—outlining a tender process, implementing transparency measures, setting budget limits and delineating an arbitration process. A key component of the law is that it allows for both solicited and unsolicited proposals. The law aims to provide greater assurances to the private sector, and thereby incentivize participation.

The law also establishes a PPP agency, known as *Coalianza (Comisión para la Promoción de la Alianza Público-Privada)*. This agency is charged with:

- Working with both sector ministries and the private sector to identify projects
- Carrying out pre-tender studies that take into account economic, engineering and social aspects

- Coordinating tender processes that are comprehensive, transparent and objective
- Executing all PPP contracts and serving as the ultimate signatory authority

Contract compliance is overseen by a separate entity known as *SAPP (Superintendencia de Alianza Público-Privada—SAPP)*. The SAPP also serves as a check and balance to *Coalianza's* power.

Since passing the law, Honduras has successfully adjudicated six projects in the transport sector, including two related to the Port of Cortes and one for the Palmerola International Airport. The country is considering, but has not yet tendered, any healthcare PPPs.

### **Political will**

The new PPP law was passed under the administration of President Porfirio “Pepe” Lobo Sosa (2010–2014), of the conservative National Party, whose election platform included fostering private sector investment in the country. President Juan Orlando Hernandez (2014–), also a part of the National party, took office in January 2014 and is likely to continue the work of his predecessor and favor private sector investment.

### **PPP pipeline**

The 2010 PPP legislation has resulted in a healthy pipeline of projects that span the energy, transportation, security and healthcare sectors. In

addition, Honduras has identified two potential hospital PPP projects. The first will be in the country’s capital city of Tegucigalpa and includes the design and construction of a 130-bed trauma hospital with an estimated value of US\$48.25 million. The second will be located in the second-largest city, San Pedro Sula, located in the northwest corner of Honduras, and includes the design and construction of a 100-bed trauma hospital for US\$35.9 million. Both projects have been in the *Coalianza* portfolio since 2013, and as of March 2015 have not advanced past the preliminary phase during which pre-tender studies are being carried out.<sup>65</sup>

### **Future outlook**

Honduras is the first country in Central America to include a healthcare PPP project within its portfolio of potential projects and therefore is deemed a “country to watch.” The passage of the 2010 PPP legislation outlined and formalized a framework that will promote and facilitate the process for carrying out PPP projects. The country’s most recent PPP tender attracted investors from Argentina, Brazil, China, Colombia, Ecuador, Portugal and South Korea. However, a less than stable economy and continued violence throughout the country threaten private sector interest. The future of PPPs will depend on the success of the current projects underway and the country’s ability to successfully tender and launch the projects in the immediate pipeline.

## Conclusion

Latin America is still a relatively new market for healthcare PPPs, but holds a promising future for innovation in public and private partnerships. Of the seventeen countries studied, three have carried out PPP projects and an additional two are identified as “countries to watch.” As of April 2015, 19 hospital PPPs have been tendered and there are over ten additional healthcare projects in the pipeline across four of the five countries.

The decision to pursue a traditional PPP or a PPIP is highly dependent on political support. PPIPs are an interesting option for Latin American countries that are seeking to expand infrastructure, yet struggle with scarcity of healthcare professionals. The inclusion of clinical services, however, increases the risk, and therefore price, which public entities need to consider in their risk/reward calculations. The region’s first PPIP projects in Peru are now in operation and their success could pave the way for additional projects under this scheme.

The catalyst for continued growth across the region lies in a combination of the economic and political environment, healthcare reform and private companies’ appetite to participate in social infrastructure programs. Further research should be conducted once nascent projects have had a chance to operate and generate lessons and insights around PPP and PPIP implementation.

### *About the Global Health Group*

The Global Health Group at the University of California, San Francisco (UCSF), Global Health Sciences is an “action tank” dedicated to translating major new paradigms and approaches into large-scale action to positively impact the lives of millions of people. The Global Health Group works across a spectrum, from research and analysis, through policy formulation and consensus building, to catalyzing large-scale implementation of programs in collaborating low-and middle-income countries.

One of the Global Health Group’s programmatic focus areas is the role of the private sector in strengthening health systems. The Group studies a variety of innovative delivery platforms that utilize the strengths of the private sector to achieve public health goals. The Global Health Group has identified public-private partnerships (PPPs) in general, and public-private integrated partnerships (PPIPs) in particular, as promising models to improve health systems globally, including in developing countries.

For more information, visit: [www.globalhealthsciences.ucsf.edu/global-health-group](http://www.globalhealthsciences.ucsf.edu/global-health-group).

### *About PwC*

PwC is one of the largest healthcare professional services firms, advising governments and private enterprises on every aspect of business performance, including: management consulting, business assurance, tax, finance, advisory services, human resources solutions and business process outsourcing services.

PwC’s global healthcare practice includes more than 5,500 health professionals with expertise in PPPs, medicine, bioscience, information technology, clinical operations, business administration and health policy.

As healthcare becomes increasingly interconnected with other industries, PwC’s global reach and resources help governments, businesses and industry players accomplish their missions in a dynamic and competitive environment.

For more information, visit: [www.pwc.com/global-health](http://www.pwc.com/global-health).

## Appendix A: Key terms

### Bid response expense

Responding to PPP tenders is an expensive investment for the private sector. Private sector costs can total millions of dollars for each bidder, even for bidders that are not successful. As a result, prior to responding, private parties conduct multiple assessments of a PPP tender to evaluate strategic benefits against risks and costs. The number of projects open for tender can distribute, and thereby reduce, the risk and expense of a failed bid. In addition, the size and scale of the PPP project will also be a key determining factor in the private sector's risk/reward calculation.

An ongoing challenge for governments considering issuing PPP tenders will be balancing policy needs, vision and practical requirements against creating conditions that facilitate broader private sector engagement. Some governments offer varying degrees of bid cost reimbursement to encourage bidding, while others position specific tenders as "pilot" projects or otherwise indicate a pipeline of projects that can give the private sector confidence that the risk in responding will be reduced by the possibility of future opportunities. Some governments have also grouped various projects into one tender to achieve a scale that is enticing to the private sector. These approaches should be assessed on a case-by-case basis and considered in the context of the specific markets and projects.

### Project Finance

Project Finance is a funding scheme for long-term financing of infrastructure and industrial projects based on projected cash flow instead of the project sponsors' general assets or credit-worthiness. Financing involves sponsors or banks that provide nonrecourse or limited recourse loans that are secured by the project's assets, rights and interests.

This type of financing scheme permits the use of up-front capital contributions, and is considered attractive to investors because large-scale projects can be financed off the balance sheet. Financial modeling and analytics are utilized in order to assess the project's potential of producing enough cash to cover all operating and debt-servicing expenses over the life of the project.<sup>16</sup>

### Unsolicited proposals

An unsolicited proposal is a proposal for a specific project originating within the private sector from a private partner or consortium of partners. These proposals have not been requested by the government; companies spend their own money to develop the proposal and then approach the government or regulatory body with the idea.

If the government is interested in the initial proposal, it may ask the private sector to conduct additional studies, which may or may not be reimbursed if the project comes to

fruition. If the government obtains the approvals to proceed with the project, it may also provide an opportunity for other private partners to submit counterproposals prior to adjudication. Governments have started to develop regulatory frameworks to encourage unsolicited proposals and minimize the risks associated with this approach.

#### Pros:

- Requires less government resources to carry out pre-project studies
- Encourages innovative approaches from the private sector to address public policy goals
- Increases the speed of project development and negotiations

#### Cons:

- Less competition can drive up the cost of the project
- Sole-source opportunities have an increased potential for corruption or public perception of corruption
- High risk and cost for the private sector if the proposal is not accepted or is awarded to another partner

## Appendix B: Summary of healthcare PPP environment by country (all countries in this study)

**Table 16: Summary of the healthcare PPP environment by country as of 2015**

Country	Economic outlook <sup>66, 67</sup>	Healthcare access	PPP legislation <sup>4</sup>	Political will <sup>4</sup>	Healthcare PPP market maturity
Argentina	Low—a 40% inflation rate along with the government's nationalization of the country's largest oil company has deterred private investors	Low—decentralized, highly fragmented healthcare system where over one third of the population is uninsured	Medium—legal and institutional frameworks in place since late 1980s; however, few PPP projects have been carried out	Low—current administration relies on government funds for infrastructure need	Low
Belize	Low—poverty and unemployment remain high, while GDP per capita stays stagnant. Private sector interest is low in comparison to other countries in the region	Medium—all citizens have a right to healthcare access; however, there are limited healthcare resources and quality is low	Low—no PPP legal framework exists and few PPP projects have been carried out to date	Medium—the government has formed an Economic Development Council to explore additional opportunities to partner with the private sector	Low
Bolivia	Low—although the country has demonstrated strong economic performance, the political environment has discouraged private sector interest	Medium—launched the Access to Reduce Health Inequities Project in 2008, currently in its third phase, which strengthens regulatory capacity and expands the insurance system, SUSALUD	Low—no PPP legal framework exists and few PPP projects have been carried out to date	Low—averse to private sector investment, the government has been taking over several private concessions and recently passed a law which allowed them to take over private mining concessions without penalty	Low
Chile	High—with one of the most stable and continuously expanding economies in South America, private sector interest is high and continues to grow	High—healthcare reform in 2005 increased access to healthcare services and defined a minimum benefits package for all citizens	High—robust legal framework for PPP and a long track record of projects	Low—although they have several PPP hospitals in construction and operation, the current administration has halted further PPP projects	Medium
Colombia	High—over the past five years, the country has demonstrated strong economic performance resulting in it regaining investment grade status in 2011	High—healthcare reform in 1993 extended health coverage to the entire population. The country is currently considering additional healthcare reform measures	High—recently passed a new PPP law that increases accountability for the government and private partners	High—the current administration strongly supports PPP projects across sectors	High
Costa Rica	Medium—the country has a relatively stable economy and demonstrated growth in recent years as a result of private investment	High—Costa Rica's public health insurance system, commonly known as the Caja, is available countrywide to all citizens and legal residents	Medium—the lead PPP agency has called for reform and a comprehensive PPP bill has been circulated	Medium—the infrastructure deficit has received attention from the president; however, passing of the PPP bill has not emerged as a high political priority	Medium
Ecuador	Low—the country's economy is highly dependent on oil exports and has seen slowed growth in recent years as oil prices have dropped	Medium—Ecuador's free public health service, which began in 2007, is struggling to cope with rising patient numbers and has declared a state of emergency	Low—changes in laws and regulations since 2007–2008 have scaled back much of the PPP framework that had been in place since 1993	Low—the current administration further defined constitutional limits on private-sector participation in strategic economic sectors	Low

Country	Economic outlook <sup>66, 67</sup>	Healthcare access	PPP legislation <sup>4</sup>	Political will <sup>4</sup>	Healthcare PPP market maturity
El Salvador	Low—the economy was slow to recover after the global recession due to low rates of private investment and declining competitiveness. Gang violence and crime rates remain high and deter private investors	Medium—although the government provides coverage to the majority of its residents, there is limited infrastructure and healthcare resources, which is a barrier to access	Medium—pending PPP overhaul bill similar to Guatemala and Honduras' PPP framework	Medium—center-left president has outlined a pragmatic pro-private investment vision and introduced a new PPP legislation to make it a reality; however, has struggled to get this approved by congress	Medium
Guatemala	Medium—Guatemala has recovered well after the global recession and the government is working on fiscal reform policy and has made advancements to curtail violence	Medium—the 1996 Health Services Improvement Program (HSIP) that sought to modernize the Guatemalan health system was completed in 2001; however, the country still has scarce infrastructure and health resources	Low—newly established PPP law creates PPP implementation and oversight agencies to manage the process, but does not apply to the health sector	Low—it has taken over two years to implement the new PPP law; in addition, congressional approval is required for all PPP projects, which can be a hurdle	Low
Honduras	Low—unemployment, poverty and violence are on the rise, which has resulted in decreased private-sector interest	Medium—ongoing Health System Reform Project aims to extend and improve healthcare coverage and quality by implementing the country's health reform strategy	High—new PPP Promotion Law has been implemented and oversight agencies have been created to manage the process	Medium—there has been an evolution in government policy related to PPPs and interest in this scheme remains high	Medium
Mexico	High—strong interest from the private sector due to a positive history of healthcare PPP projects and a stable Mexican economy	High—healthcare reform in 2005 increased healthcare access to 38.6% of the population	High—new law passed in 2012 defines a PPP framework, additional legislation exists at the state level	High—President Enrique Peña Nieto has stated investment and expansion of healthcare infrastructure are high on his agenda	High
Nicaragua	Low—although the country has implemented prudent fiscal policies to strengthen economic stability, the country remains the poorest in Central America and one of the poorest countries in the world	Medium—the country has passed several healthcare reform measures in an attempt to achieve universal healthcare coverage; however, limited infrastructure and healthcare resources continue to be a barrier to access	Low—lacks a unified PPP framework as PPPs are currently governed by sector-specific laws with a myriad of regulations and variations	Medium—there is political support for private investment in select sectors such as renewable energy but this is not consistent across all sectors	Low
Panama	High—the Panama canal expansion project has positively impacted the economy and contributed to a growing and stable economy; private sector interest remains high	High—all citizens are guaranteed access to healthcare, and the government has started to address the infrastructure shortages to increase access to the population	Low—current PPP environment is characterized by a myriad of legislation that varies sector by sector	Low—government sent a new PPP law to Congress in 2011, but had to withdraw it after facing opposition from public-sector workers specifically regarding the inclusion of healthcare	Low
Paraguay	Medium—the country's economy has experienced ups and downs; however, fiscal reform in recent years is expected to stabilize the economy	Medium—healthcare reform in 2008 decentralized healthcare and aimed at universal access; however, lack of infrastructure outside of the capital has resulted in unequal access to healthcare	Medium—New PPP legislation, which incorporates social infrastructure, was passed in November 2013 and is expected to increase PPP activity in the country	Medium—passage of the new PPP law is a good indication that PPP projects are favored by the current administration; however, no healthcare projects are in the pipeline	Medium

Country	Economic outlook <sup>5, 6</sup>	Healthcare access	PPP legislation <sup>4</sup>	Political will <sup>4</sup>	Healthcare PPP market maturity
Peru	High—Peru’s economy has grown significantly over the past 10 years and was declared by the International Monetary Fund as one of the fastest growing and stable economies in Latin America; private-sector interest continues to grow	Medium—although 38.1% of the population remains uninsured, the booming economy has increased formal employment and; therefore, enrollment in the federal employment based insurance program has doubled since 2005	High—robust framework for PPP projects and a long track record of projects	Medium—the recent change in government as well as administrative hurdles have stalled health PPP projects; however, the administration of President Ollanta Humala has expressed interest in additional healthcare PPPs	High
Uruguay	High—the country has a strong and stable economy with large foreign direct investment and continues to be a favorable environment for private investment	High—the National Integrated Health System was created in 2007 with the aim to provide equitable access to healthcare to the entire population	High—passage of new PPP legislation and new PPP unit within the Ministry of Economy and Finance will spur additional PPP activity	Medium—although the current administration favors PPPs, the upcoming change in administration may result in a change in direction	High
Venezuela	Low—uncertainty regarding the direction of government policies and the perceived lack of a stable regulatory framework has led to a deteriorating investment climate	Medium—the established public healthcare system has been undermined by the creation of a parallel Cuba-inspired system of medical clinics (Barrio Adentro) that provide free care from Cuban physicians	Low—although a PPP framework exists, it is ambiguous and few projects have been carried out	Low—the Chavez administration significantly curtailed private investment. The new president is likely to continue the policies of the Chavez administration	Low

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