Top ten health industry issues of Mexico: A whole-society approach to healthcare

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Introduction

Powerful forces are transforming the Mexican healthcare system. A system that has for decades relied on government initiatives to spark change is opening up to consumer and private industry influence. New tools such as electronic medical records and mobile technology are accelerating this change.

Collaborations between public and private organizations may be the key to solving some of the system’s greatest challenges: universal health coverage, chronic disease management, affordability and value-based care. Fostering these collaborations is crucial for a system in which hospitals often cannot share patient data.

Promising efforts are emerging across public and private institutions and within the government. A new public-private partnership is creating mobile tools for early chronic disease detection and monitoring. Employers are starting to work with private providers to make care more accessible for their employees and families. Public hospitals are engaging with private hospitals to improve efficiency through pay-for-performance arrangements.

These societal changes are persuading public payers to contract out medical services to better meet citizens’ needs. The advent of educational mobile apps to improve treatment adherence and lifestyle habits is a hopeful sign. And pharmaceutical companies are developing risk-sharing agreements with the government for high-cost, high-value drugs.

PwC’s Health Research Institute (HRI) main findings for the Mexican health system are:

- **Underinsurance is a problem that requires innovative policies.** Despite near-universal health insurance coverage, private out-of-pocket expenditures remain inordinately high, and hospital care for over half of the population is not fully covered. Underinsurance creates a financial barrier to care for many patients, and new solutions are being sought to counter this trend. HRI’s consumer survey found that 58 percent of those with public insurance are willing to purchase complementary private insurance policies to supplement their benefits.

- **Society as a whole must focus on combating chronic disease.** Although the Mexican government declared diabetes a national emergency and has made progress toward improving detection and control, HRI’s consumer survey found that only 38 percent of consumers receive nutrition and diet support from health providers. And among patients diagnosed with diabetes, 39 percent have seen public and private health providers in the last year without care coordination between the two.

- **Efficiency must be improved through network integration and incentives.** Seventy-nine percent of patients using public institutions told HRI they would support a system to better link the public and private providers they use. Eighty-four percent of consumers favor universal public hospital access, given that half of them aren’t able to use the nearest hospital because they lack affiliation. The public hospital exchange agreement currently supported by the government could be a step in the right direction.

- **Medical input pricing and distribution must take the whole value chain into account.** The Mexican government has been effective in reducing drug and medical device prices, but access to high-value drugs could be improved. Only 45 percent of consumers told HRI they trust publicly sourced medicines. A large percentage of consumers are willing to pay more to receive higher quality drugs and to support innovation.

- **Health information technology can increase value.** Greater cell phone penetration and the advent of apps mean the health sector has more tools at its command. Twenty-three percent of consumers in large urban areas say they have frequent access to mobile technologies. The HRI survey suggests these technologies can extend and improve digital health records, with 81 percent of consumers supporting their use.

The need for more open collaboration and coordination is at the core of the Mexican health industry’s top challenges. Critical health policy decisions will be made as Mexico approaches its 2018 federal elections, meaning the time is ripe for change. This change should encompass the diverse perspectives of consumers and private stakeholders within a predominantly public health system if it is to succeed. Technology can be harnessed to facilitate and drive change.
Financial sustainability of universal health coverage

Mexico has pledged to attain universal health coverage, but high levels of underinsurance and out-of-pocket expenditures challenge this goal

Issue #1) Challenges for universal financial protection
Challenges for universal financial protection

The Mexican health system has made important progress toward universal coverage. In 2003 Mexico started Seguro Popular, a voluntary insurance program for the uninsured, aiming to achieve universal coverage. Progress has been steady, and the country’s uninsured rate is estimated at 16 percent. Mexican consumers now face the problem of “underinsurance.” Many consumers incur high out-of-pocket costs stemming from the use of private services not covered by public payers and from gaps in the services that public insurance programs cover.

While universal coverage has reduced catastrophic healthcare expenditures for households by 25 percent, the percentage of out-of-pocket expenditures in Mexico is significantly higher than in other Organization for Economic Co-operation and Development (OECD) countries (See Figure 1). Also, 17 percent of hospital care and 39 percent of outpatient consultations occur through private providers, largely because publicly funded services lack capacity and have a reputation for low quality.

A recent study by the Mexican Association of Insurance Institutions (AMIS) suggests that half of the remaining uninsured—about 9 million people—are independent workers, many of them small business owners at risk of bankruptcy from health costs. And Seguro Popular has major financial protection gaps; it covers only 59 percent of members’ hospitalizations.

The Mexican Health Foundation and AMIS have suggested that out-of-pocket expenditures could be cut by half—around 19 billion USD, or 1.6 percent of GDP—by reallocating private expenditure to public insurance and by encouraging complementary private insurance products. Specifically, AMIS is proposing innovative models in which interventions not covered by Seguro Popular can be covered through private insurance, reimbursing both public and private providers. Such a major step would require linking additional contributions to consumer satisfaction and increasing public-private collaboration. Recaredo Arias, general director of AMIS, told HRI this is a “top priority, as it could offer protection for up to 9 million independent workers and their families with capacity to pay—including the uninsured as well as those affiliated to Seguro Popular but underinsured—while supporting health financing overall.”

Julio Frenk, former health minister and Seguro Popular founder, has emphasized that the challenge for Mexico’s health system is to increase the separation of payment from healthcare delivery so that services are focused on patients’ needs and preferences. One solution would be for all Mexicans to have a national health card to enable payments across insurers and a uniform package of health services for all.

The HRI survey of urban residents suggests widespread support for universal health coverage. Ninety-nine percent of respondents said all Mexicans should have the same opportunities for healthcare, and 84 percent said public hospitals—regardless of insurance affiliation—should be open to all. Among social security affiliates and those with Seguro Popular, 53 and 58 percent, respectively, are willing to purchase complementary, private insurance to access better, more comprehensive services.

Implications:
• Bolster complementary private insurance. In other emerging economies, such as Brazil or South Korea, complementary private insurance has proven viable in improving health coverage and quality. Private insurance companies have expertise in marketing policies, and in paying providers and monitoring their performance. But private insurers need to move beyond covering only the wealthiest consumers to cover the emerging middle class through low-cost products. New insurance products can be supported through cross-selling with existing insurance, using appropriate channels and agent networks, and offering incentives to all parts of the value chain.

• Target small businesses. Small businesses contain a high proportion of the employed and uninsured. To successfully grow the small business insurance market, three challenges must be addressed: aligning product design with business owners’ risks, distribution strategies and gaining trust to stimulate demand.

• Encourage alternative forms of private insurance. The Mexican government encourages microfinancing through nonprofit Cooperative Associations of Lending and Credit (SOCAP). SOCAPs can sell various insurance products, but health insurance has not been a priority so far. SOCAPs can be used as a mechanism to encourage for-profit health insurance, nonprofit microinsurance and public health institutions to target those who remain uninsured.

Figure 1: Mexico has the highest national out-of-pocket costs of all OECD countries, 21% above the average

Percent of 2014 household out-of-pocket national healthcare costs

Source: OECD Health Statistics 2015
Mexico’s greatest health challenges

Health organizations—both public and private—can work more collaboratively to foster better nutrition and control the diabetes epidemic.

Issue #2) Nutrition policy: A great opportunity for population health
Issue #3) Responding to the diabetes emergency
An increasing awareness that diet and nutrition are key contributors to obesity and healthcare costs is supporting a growing consensus that food production, processing, distribution and consumption policies should be coordinated. The Mexican government is working to increase public health education, improve food labeling, and tax sugar consumption to curb the obesity epidemic.

Seventy-two percent of adults and 33 percent of children in Mexico are considered overweight or obese.\(^{10}\) In a recent National Institute of Public Health survey, half of consumers said vegetables and fruits are too costly to be consumed regularly. Compared with regular fruit and vegetable consumption, sugary drink consumption is reported twice as frequently in adults, and—alarming—four times more among children, to be a regular part of a diet.\(^{11}\) Although legumes in Mexico are far more affordable than in other countries, per capita bean consumption fell 50 percent in the last three decades.\(^{12}\) Furthermore, Mexico’s consumers generally don’t feel that their community or healthcare system supports them in maintaining a healthy diet (see Figure 2).

The Mexican government is working to address the obesity trend. In 2010, the Ministry of Health (SSa) established the National Council for the Prevention and Control of Non-Transmissible Chronic Diseases, which aimed to coordinate government actions on diseases such as hypertension and diabetes.\(^{13}\) Also, the SSa convened food industry leaders, consumer groups and major universities to sign a national agreement for food health, aiming to increase physical activity and access to health information and healthy food and water. The agreement led to voluntary guidelines for healthy food consumption in schools, and restrictions on advertising unhealthy food to minors.

In 2014, the administration of President Enrique Peña Nieto replaced the agreement with the more focused National Strategy for the Prevention and Control of Overweight, Obesity and Diabetes, targeting public health, medical care and regulation of unhealthy foods.\(^{14}\) The strategy led to mass media campaigns, the enactment of a special tax on sugary drinks and unhealthy foods, and more regulation for school foods and packaged food labeling.

The special tax was an opportunity for the federal government to increase taxation through eliminating food tax exemptions, for a total of US$ 2.3 billion in 2014.\(^{15}\) Results have been positive. It was credited with a six percent reduction in sugary drink consumption, with the potential to prevent 30,000 cases of obesity per year.\(^{16}\) “According to beverage industry sources, the tax eliminated six daily calories from the average diet, which is more than all other measures combined,” said Simon Barquera, executive director of the Centre of Nutrition and Health at the National Institute of Public Health.

Fifty-six percent of adults consult daily amount food guidelines developed by the government and industry when purchasing food, and 24 percent report them useful.\(^{17}\) A voluntary nutrition quality seal was also created to help consumers readily identify healthy foods.\(^{18}\) But challenges remain. Questionable modifications were made to the daily food guideline methodology, making it difficult to understand, according to Barquera. In a recent case pitting consumer advocates against the federal health and food regulator, the court decreed misleading food labeling unconstitutional, arguing that it violates citizen information rights.\(^{19}\)

### Implications:

- **Address nutrition on a societal level.** Nutrition policy in Mexico is currently focused on food consumption. But social determinants, such as food production and retail quality, have not been sufficiently addressed. The food industry, consumer advocates and health providers should cooperate in developing better policies that support good health.

- **Identify food industry solutions that align commercial interests with public health objectives.** Developing a more participatory, transparent and effective food labeling process could help spur demand for more nutritious food among consumers. If more consumers demand nutritious food, the food industry will be motivated to produce more of it. Food retailers should be more involved in educating the public about affordable healthy food.

- **Introduce economic incentives for consumers.** Social security contributions by employers and employees could be linked to body-weight measures to encourage healthy behaviors. Health insurers and retailers could collaborate on financial incentives for consumers to make healthy purchases, something that’s being done in South Africa with positive results.\(^{20}\)

### Figure 2: Few consumers feel supported to maintain a healthy diet

<table>
<thead>
<tr>
<th>Source of Support</th>
<th>Percentage of Consumers</th>
<th>Source: PwC Health Research Institute Consumer Survey, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare providers</td>
<td>37.6%</td>
<td></td>
</tr>
<tr>
<td>Community</td>
<td>17.1%</td>
<td></td>
</tr>
<tr>
<td>Supermarkets</td>
<td>14.8%</td>
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</tbody>
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Percentage of consumers who say they feel supported to have a healthy diet by source of support.
Responding to the diabetes emergency

In 2016 diabetes and chronic kidney diseases cost the Mexican Social Security Institute (IMSS) 11 percent of its health budget and 0.25 percent of the country’s GDP.\(^2\) Up to 80 percent of deaths are caused by chronic diseases, with diabetes alone causing nearly 100,000 deaths a year.\(^2\) As a result, Mexico’s Ministry of Health (SSa) declared a national epidemiological emergency for diabetes on Nov. 1, 2016.\(^2\) Now, new care strategies, technological investments and cross-organization collaboration may help to curb the epidemic.

Diabetes growth is decelerating, according to Jesús González Roldán, general director of the National Center for Disease Control and Prevention (CENAPRECE). The percentage of adults reporting diabetes grew only two percent from 2006 to 2012.\(^2\) Yet the epidemic is still growing in rural areas, and disease prevention challenges remain. Less than a fifth of patients nationwide have their eyes or feet checked in primary care, leading to about 50,000 avoidable hospitalizations per year in IMSS alone.\(^2\) Among the Institute’s 3.8 million diabetics, only two-thirds visit family medical units, and 26 percent of those diagnosed discontinue care, said Victor Hugo Borja, IMSS primary care director. According to the US Chamber of Commerce, chronic diseases in Mexico account for productivity losses equivalent to 5.3 percent of GDP.\(^2\) Standardized care for the prevention, treatment and control of diabetes “are still far from being achieved,” according to The National Institute of Public Health.\(^2\)

Efforts to mitigate the disease’s growth have begun. The SSa initiated the National Strategy for the Prevention and Control of Overweight, Obesity and Diabetes in 2013, combining public health, medical care, and fiscal and regulatory policies.\(^2\) The SSa established the Mexican Observatory of Non-Communicable Diseases and partnered with the Carlos Slim Foundation to develop a chronic disease information system known as MIDO. It includes mobile health tools, a patient monitoring system and modules to monitor drug supplies and personnel training.

MIDO is the “Papanicolaou [Pap Smear] for chronic diseases … offering the opportunity to stay healthy,” said Héctor Gallardo, Carlos Slim Foundation director for operational solutions. On average, ten years elapse from the onset of pre-diabetes to the disease’s late diagnosis; with appropriate care and lifestyle changes, it can be averted. MIDO has been installed in more than 12,000 SSa primary care centers nationwide, enabling monitoring of diabetes quality indicators. Monitoring resulted in an increase of A1c tests—the gold standard for diabetes control—to 48 percent of patients from 14 percent, according to González Roldán. In light of the promising results, the SSa is considering expanding MIDO nationwide, with a target of achieving a composite score of 70 percent for diabetic patient retention, effective care and health impact by the end of 2017.

IMSS is developing a pilot program to conduct medical and wellness interventions in its primary care units that screen and track at-risk workers, Victor Hugo Borja told HRI. Employer premium reductions may be provided to persuade employers to support employee health. A community liaison team will help support health service access and adherence.

The HRI consumer survey suggests that those with diabetes regularly use a mix of public and private providers. Pharmacy doctors are a frequent source of ambulatory care in Mexico, including care for chronic diseases. Yet very few visits are focused on chronic disease prevention (see Figure 3)—a factor that requires renewed efforts.

**Implications:**

- **Integrate best practices.** Because diabetes and other chronic diseases affect so many Mexicans, closer cooperation across health institutions could reduce costs and improve continuity of care and disease detection and management.
- **Involve all sectors of society.** The public and private sectors could coordinate their efforts better to meet demand and improve patient flow and adherence. Employers could receive incentives to encourage employees to participate in lifestyle changes and disease control programs.
- **Enhance regulation and targeted financing.** The government can spur innovation through tax incentives, funding and regulation. Evidence suggests that creating a national chronic disease management fund could generate competition among institutions to improve outcomes, according to Recaredo Arias.

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**Figure 3: Consumers with diabetes or hypertension often visit both public and private providers yet nearby pharmacy doctors hardly participate in early disease detection**

<table>
<thead>
<tr>
<th>Type of provider consulted for those with diabetes or hypertension</th>
<th>Motive of visit to pharmacy doctor*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute care</td>
<td>82.5%</td>
</tr>
<tr>
<td>Diabetes and hypertension</td>
<td>12.2%</td>
</tr>
<tr>
<td>Chronic disease prevention</td>
<td>0.6%</td>
</tr>
</tbody>
</table>

Source: PwC Health Research Institute Consumer Survey, 2017

* Consumers with a visit to a pharmacy doctor within past year
Efficiency: more health for the money

New care models, pay-for-performance programs and open access for public hospitals are creating value in the health system.

Issue #4) New care models move into the community
Issue #5) Improving hospital efficiency through portability and integration
Issue #6) Putting a price on positive outcomes
More than 79 percent of the Mexican population is concentrated in often-congested cities, making it difficult for many people to travel to stand-alone, distant health facilities. Alternatives are growing rapidly. They include innovative community clinics adjacent to pharmacies (CAF), retail-based primary care clinics, and clinics in the workplace. Public providers also are strengthening community outreach programs and investing in disease detection and monitoring technology to address care gaps.

The CAF model emerged in the late 1990s to boost generic medicine sales. By 2010, the number of CAFs had tripled, largely in response to prescription regulations that threatened antibiotic sales. Today over 15,000 CAFs employ 33,000 physicians and provide low-cost care amounting to 16 percent of total primary care visits. However, many consumers visiting CAF clinics also visit public doctor offices and would like to see greater coordination with them (see Figure 4). Yet most CAFs lack basic equipment and medical records. Conflicts of interest also are a concern because physician income is often tied to drug sales. A study in Mexico City concluded that 63 percent of patients with streptococcal pharyngitis (strep throat) were prescribed inappropriate—often third-generation—antibiotics, and 79 percent of patients with a viral infection were needlessly prescribed antibiotics, said Anahí Dreser, researcher at the National Institute of Public Health. Only 19 percent of patients reported blood pressure or weight measurements. CAFs seldom refer patients for diagnostic tests, which cast doubt on their ability to address chronic diseases, according to Jose Carlos Pérez, CEO of Grupo Pron, one of the largest diagnostic test providers in Mexico. COFEPRIS, Federal Commission for the Protection Against Sanitary Risk, plans to increase regulation enforcement to address CAF quality issues and disease prevention.

Large employers also are bringing new care models closer to consumers. Some Mexican companies are investing in innovative wellness and chronic disease management programs for their employees. Previta, a private primary care group, started a program 12 years ago to make healthcare more accessible for workers and their families, said CEO Morgan Guerra. Using mobile phones, the Internet and E-healthtracker, an app for managing chronic diseases, Previta organizes health campaigns and fairs to promote health, detect disease and identify patients at early risk. “Technology is vital to manage appointments and patient follow-up, providing workers with access to their own health records and chronic disease monitoring through accessible technologies,” Guerra said.

Public providers are creating more community outreach programs such as Mexico City’s “Doctor in your Home,” in which multidisciplinary teams visit high-risk patients in their homes and use a call center to follow up. The state of Hidalgo, with funding from Seguro Popular, is contracting out primary care services in an effort to better meet urban population needs. “The health team is committed to a segment of the population, whom they identify, treat and follow up, accounting for indicators and results,” said Marcos Morales, director of the initiative, which is operated by MediAccess, a private firm. Like Previta, the model relies on health fairs and information technology to identify at-risk patients and offer provider outreach incentives.

Implications:
- Healthcare networks can benefit from community outreach. Public providers have well-developed specialist and hospital networks but concentrate primary care in large clinics remote from their patients. Providing services closer to patients’ daily lives would help, because proximity is key in treating acute illnesses and enabling early detection and chronic disease management.
- Consider community outreach through public-private collaboration. Private healthcare providers in communities can be an intermediate step for effective access and service coordination. A study sponsored by the Pan American Health Organization identified a number of strategies that can improve primary healthcare in urban areas through public-private collaboration. They include identifying service priorities, developing simple contracts, collaborating on public health programs, and focusing on patient needs and capabilities.
- Regulation of CAF requires a proactive approach. CAF regulation is based on general sanitary and infrastructure guidelines. Potential benefits of this model may be outweighed by the risks posed by conflict of interest. The business model can be transformed through incentives to participate in public health programs, referrals to public primary care and specialist providers, and—eventually—more integral primary care services paid through a mix of out-of-pocket and public funding.
Public and private hospitals in Mexico provide care to relatively few patients. Mexican consumers have less access to inpatient hospital treatments compared with consumers in other OECD countries; they have about 7 discharges per 100 persons in Mexico versus the 14 expected after adjusting for Mexico’s lower chronic disease burden.36 But progress is being made. Public-private collaborations are building and operating new hospitals; a cross-institutional patient exchange program is addressing public hospital capacity imbalances; and integrated contracting with medical equipment distributors is reducing down time and cost duplication.

Nevertheless, the challenges are considerable. Inefficiency is tied to centralization, and bureaucracy is hampering an effective response. Specialty Mexican Social Security Institute (IMSS) hospitals are decentralized and have governing boards, but fundamental decisions—such as purchasing and hiring—are made by regional offices.37 GHZ, the private operator of a Ministry of Health (SSa) specialty hospital, receives a fixed payment for general hospital services regardless of occupancy rates (about 50 percent for such hospitals nationwide), said GHZ director Ismael Ceballos.38 This problem is mostly due to poor coordination between state and federal bureaucracies, according to Malaquías López Cervantes, director general for planning and development in health at the SSAs.

Another challenge is segmentation of public health institutions, which hampers planning.

IMSS hospitals operating at full occupancy often coexist with underused SSa facilities.39 The federal government launched a service exchange agreement program in 2011 to address this challenge. It established federal and state coordinating commissions and undertook capacity assessments based on patient guarantees and a catalog of interventions and prices.40 Eleven state agreements have been signed to date, López Cervantes said, and he pointed to the Baja California Sur general services agreement as a success story. “Decision-makers and health personnel are motivated as funding is flexibly allocated to strengthen hospital capacity,” he said.

Offering incentives and reducing red tape are key, said Guadalupe Ramírez, researcher of the Maternal Mortality Observatory. She added that only ten percent of the patients expected to use the service exchange agreement-based maternal care in the country actually do so. Consumers support incentives; 72 percent of those surveyed by HRI agree that public hospitals should provide clinical services to patients covered by all public insurers. The current administration recently renewed the hospital service agreement framework with the goal of extending agreements to all states. López Cervantes cautioned, however, that SSa hospitals should keep in mind the barriers that limit access by the uninsured when planning for capacity.

Improvements in procuring high-cost equipment are increasing efficiency at IMSS and the Institute for Social Security and Services for State Workers (ISSSTE). Single “integrated” service contracts are assigned to distributors for supplying equipment, consumables, maintenance and technical support. Services such as laparoscopic procedures, cardiac catheterization and lab tests are now charged on a per-case basis. Mariana Aquino from Siemens Healthineers—an equipment and service provider—pointed out that integrated agreements enable hospitals to concentrate on medical care while avoiding equipment down time and related costs. Aquino pointed to a large market potential for integrated services in treatment areas such as hemodynamics.

Agreements could be extended to groups of smaller SSa hospitals to achieve economies of scale and increase the range of services near where people live.

Implications:

• Engage hospital decision-makers and patients. To achieve greater efficiency, facility managers must feel engaged and accountable, and patients must feel involved. Inefficiency—even corruption—at higher levels cannot be effectively challenged by salaried hospital managers unless they are sufficiently motivated. Giving patients guaranteed waiting and transportation times is critical for efficiency and can save lives.41

• Develop new management models. A hospital governance structure with management teams that respond to benchmarks and performance indicators can bring more decision-making authority to the facility.42 Decision making could be supported through administrative statutes; legislation can mandate semi-autonomous bodies at state level, as is the case among federal SSa specialty hospitals.

• Improve procurement processes. Integral service agreements can help transform public hospital procurement efficiency, with the potential to increase productivity, obtain savings and attain economies of scale across institutions. Engaging the private sector with mutually beneficial agreements and best practices could achieve more with less. However, integration risks market concentration, which could limit hospital savings and provider margins. Careful oversight would be required to track efficiency gains, regulatory compliance and best practices resulting from these agreements.
Putting a price on positive outcomes

Healthcare policymakers and payers around the world are experimenting with how to ensure healthcare quality using performance incentives tied to payment, or “pay-for-performance” (P4P). The Mexican government has made important progress with P4P, and consumers generally approve of the introduction of P4P programs and tools (see Figure 6). Preliminary results are good, but the arrangements are still relatively undeveloped and underused outside of Seguro Popular and hospitals operating under public-private partnerships (PPP).

Seguro Popular transfers resources to state payers based on performance—specifically, on beneficiary re-enrollment based on satisfaction with services. Specialized hospital service providers are funded per treatment based on disease complexity rather than on services rendered. This formula encourages productivity and efficiency but not quality, especially among captive consumers. P4P arrangements could help improve quality by placing patients at the center of care. A recent evaluation found that public Seguro Popular breast cancer care providers nationwide have poor coordination with primary care providers and treat more than half their patients in late stages. By contrast, a private cancer center also evaluated offers the most timely care. This center must attract its patients to gain Seguro Popular funding, for which it develops its own primary care network.

In Pachuca, about 60 miles northeast of Mexico City, MediAccess—a private firm—receives a capitated payment directly from the state Seguro Popular payer and administers its own P4P program. Up to 25 percent of the healthcare team’s income is paid based on performance using 25 outcome quality indicators, according to Marcos Morales, MediAccess government services director. This payment model results in less costly and more effective primary and diabetes care than comparable salary-based public providers in the state.

Other types of agreements deploy P4P. Six public hospitals in Mexico operate under the PPP program. Within the agreements, P4P is used to adjust payment according to quality of service such as food preparation and infrastructure maintenance. The Mexican Social Security Institute (IMSS) and ISSSTE also pay some contractors according to levels stipulated in service agreements for providing equipment and related maintenance and technical support. In both cases, the private operator is held accountable for key performance indicators and is heavily penalized for underperformance. This contract helps enable adequate maintenance of all equipment and a high satisfaction level for staff and patients, according to Ismael Ceballos, director of GHHZ, the private operator of the SSA specialty Hospital de Zumpango. P4P relies on long-term risk assessment for all responsibility areas and is an integral part of hospital financial performance.

**Implications:**

- **Get the most healthcare for the money.** Given an increasingly constrained budget, health payers must develop new tools to increase value. P4P can be a powerful tool to stimulate service coverage, increase intervention effectiveness and attain higher satisfaction with public health services. Tying increased payments to the achievement of specific targets can be effective in addressing chronic diseases.

- **Increasing the range of pay-for-performance.** Models of PPPs and their associated P4P methods could eventually be developed for hospital renovation as well as for operation of existing infrastructure, according to GHHZ’s Ceballos. “White coat” PPP models—in which the private sector is responsible for clinical care and management—are unattractive given Mexico’s medical specialist shortages and the predominance of collective contracts in the public sector. However, performance incentives could be introduced in medical management models to attain greater quality and efficiency. AMIS is developing a proposal for a national P4P fund to encourage quality of care and lifestyle change among chronic disease patients and providers, said Recaredo Arias, AMIS executive director. Contributors to social security could support a rebate scheme for attaining health standards, which would put Mexico in the forefront of P4P programs.

- **Increasing the depth of pay-for-performance.** Payment programs, such as the capitated payment and P4P contracts being piloted by Seguro Popular, have demonstrated an ability to make care more efficient. Nearly half of all funding that goes to Seguro Popular affiliates is flexible and could be channeled through P4P arrangements.

**Figure 6: Consumers would support initiatives that reward hospitals and physicians for satisfactory services and that support health**

Social security affiliates agree that:

- Contributions should be reduced if he/she is taking care of health
  - 61.9%
- Contributions should be reduced if employer supports employee healthcare
  - 69.3%

Consumers agree that:

- Physicians should receive a bonus/discount based on patient satisfaction
  - 61.4%
  - 56.8%
- Hospitals should be ranked based on quality
  - 85.7%
  - 88.2%

Provider: Private
Provider: Public

Source: PwC Health Research Institute Consumer Survey, 2017
Systems innovation for pharma

Innovative pharmaceutical purchasing and distribution agreements promise to improve treatment and control costs

Issue #7) Risk-sharing coming to drug prices
Issue #8) The drug distribution and dispensing conundrum
Pharmaceutical sales to the Mexican government account for 30 percent of total pharmaceutical industry sales and 27 percent of the government’s annual health budget.48 Government sales are the pharmaceutical industry’s only growth segment—increasing 9 percent from 2010 to 2014—with much of the growth coming from high-cost branded drugs.49 After the 2009 financial crisis brought budget constraints, public payers restricted the introduction of new drugs and introduced price negotiations.50 Risk-sharing agreements for high-value drugs between payers and providers can reduce costs and increase value for patients.

The introduction of new pharmaceutical products by the Mexican Social Security Institute (IMSS) peaked in 2009 and then decreased by 90 percent.51 Out of 75 new molecules approved by the pharmaceutical sector regulator COFEPRIS, IMSS included only 11, with most rejections related to costs.52 The government established two mechanisms to negotiate drug prices: the National Commission for Price Negotiation of Pharmaceutical and Other Health Input; and the annual national consolidated purchases, coordinated by IMSS. The Commission reported 6.8 percent savings in total annual public spending on patent medicines in its first four annual negotiations.53 IMSS reported an average annual savings of 7 percent from consolidated purchasing.54

Both forms of negotiation have achieved significant government savings. But reduced economic growth and exchange rate instability create a need for new negotiation frameworks, said Cristobal Thompson, executive director of the Mexican Association of Pharmaceutical Research Industries (AMIIIF). The industry wants to focus on value for patients as well as for health expenditures. The Commission needs to make much greater use of pharmacoeconomics to demonstrate value for money, said Alexis Serlin, general director of Novartis Mexico and president of CANIFARMA, the pharma industry umbrella association. Approvals could be accelerated through a sectorwide health technology assessment unit.

Opportunities exist to balance high-cost drugs’ price and value through risk-sharing contracts supported by quality metrics. Risk-sharing agreements are viable with IMSS given that high quality data is being produced through the “Catalogue 2 Program,” a centralized clinical review committee that evaluates selected high-cost drugs’ appropriateness and effectiveness, according to Serlin. Reviews could be extended through data mining of electronic clinical records.

Novartis is proposing to IMSS a risk-based contract for purchasing a high-cost drug to reduce kidney transplant rejection and related costs. In essence, the company would absorb a share of medical care costs associated with failed drug treatments that lead to organ rejection. This approach can ease decisions to purchase high-cost drugs by reducing the purchaser’s amount of financial risk.

**Implications:**

- **Focus on outcome measures.** Risk-sharing agreements can help the introduction of high-cost innovative drugs by paying drug manufacturers based on treatment success and giving payers and health providers efficiency incentives. These agreements require monitoring supported by clinical and health data. IMSS, COFEPRIS and pharma representatives recently signed the “Agreement to promote clinical research in Mexico,” which should facilitate the production and use of patient data.55 “This agreement is a trendsetter,” said Rafael Gual, executive director of CANIFARMA. “It established a horizon of opportunity for physicians to experiment with new pharmaceuticals and will open new opportunities for research and development,” he said. Serlin is optimistic that outcome measures can be tested in the Centers of Excellence supported by Novartis in tertiary care institutions such as the Center for the Integral Care of Patients with Diabetes at the National Institute of Medical Sciences and Nutrition Salvador Zubirán.

- **Risk-sharing agreements may be on the horizon.** AMIIIF is now discussing with IMSS the international best evidence on risk-sharing agreements. Secretaría de la Función Pública, the public purchasers’ regulator, is considering a proposal for risk-based reimbursement contracts with public institutions, said AMIIIF’s Thompson. This could introduce risk-sharing agreements and broaden their adoption among more stakeholders.

- **Innovations require consumer support.** Disseminating success stories about innovative, high-value drugs could win consumers’ support for the drugs. Most consumers are willing to pay more for drugs if they know the extra cost is needed for development (see Figure 7). Emphasizing value and reductions in overall healthcare costs could increase acceptance of drug lists that are heavily reliant on generics.

**Figure 7: Consumers are more likely to trust medicines supplied by traditional private doctors and are willing to spend more for the development of better drugs**

Consumers who trust the quality of medicines according to prescriber

- 96.0% Consumers with a private doctor visit
- 64.1% Consumers with a pharmacy doctor visit
- 45.4% Consumers with social security or Seguro Popular insurance

Consumers willing to spend more on medicines to support their development

- 60.2% Willing
- 31.5% Unwilling
- 8.3% Undecided

Source: PwC Health Research Institute Consumer Survey, 2017
The drug distribution and dispensing conundrum

Mexican consumers spend on average $170 a year on drug treatments, 59 percent more than the average in middle-income countries, yet drug shortages frequently occur among public providers.65 About a quarter of all chronic disease outpatient visits resulted in a drug prescription that could not be filled, while 58 percent of pharmacists reported shortages of essential diabetes and hypertension medications.56 One workaround: Mexican consumers spend their own money to buy treatments in the private sector. But shortages have ramifications beyond out-of-pocket spending; they can result in poor healthcare delivery and missed treatments. Innovative approaches focusing on the end of the value chain may offer hope.

The government’s chief effort to improve drug availability is now coupled with expenditure control through a national consolidated purchasing program.58 However, distributors failed to deliver on 26 percent of their commitments in 2016.59 Furthermore, little effort has been made to address the entire value chain, from production to consumption, which reduces pharmaceuticals’ value. Indeed, drugs are being overprescribed across health providers. Thirty-four percent of patients with chronic diseases treated at Ministry of Health (SSa), 43 percent of those treated privately and up to 58 percent of those treated at the Mexican Social Security Institute (IMSS) receive are prescribed four or more prescriptions per visit—a practice, called polypharmacy, that research suggests poses a risk for major drug interactions.60 State and federal initiatives have tried different strategies to alleviate shortages. During his campaign, President Peña Nieto offered to give patients private pharmacy vouchers for out-of-stock medicines. Finding it difficult to fulfill that promise, IMSS set up special distribution programs, and state SSa allowed emergency community pharmacy purchases for up to 5 percent of the pharmaceutical budget.59 Private distribution programs are now in place among a few state ministries of health, with mixed results.62 They also are present at selected SSa hospitals and throughout PEMEX (the Mexican-owned petroleum company) health services. The SSa is scaling up monitoring of medicine stocks for hypertension and diabetes, which has led to improvements, according to Héctor Gallardo, operational solutions director at the Carlos Slim Foundation.

The Mexican Institute for Competitiveness has recommended analyzing the benefits of separating public drug purchasing from distribution to address drug shortages.63 This could be possible given that “public and private distribution schemes serve the same purpose: ensuring the availability and safety of medicines where and when required, at the least possible cost,” said Tomás Rodríguez Weber, director of DIPROFAR, the umbrella organization for the largest distributors to private sector pharmacies. Community pharmacies could deliver public sector medicines with a list of reference prices and an electronic prescription system. Yet Rafael Gual, executive director of CANIFARMA, pointed out that “public and private sector distributors work with vastly different methods and prices, challenging market integration.”

Implications:

• Separation of drug purchasing and distribution. The Mexican government could legally separate pharmaceutical purchasing contracts from distribution contracts. This reform may initially result in higher total costs, but increased transparency could allow public institutions to set rigorous standards for distribution quality and efficiency, reducing long-term uncertainty and costs.

• Integration of public and private distribution. Though changes to purchasing laws and government investment would be necessary, developing an integrated public-private distribution system could spur efficiency. This system could combine the government’s retrospective planning and large-scale drug purchasing with the private distributor’s competence in high-frequency, low-volume distribution. The trend is to distribute closer to clients, said Otto Kroboth, CFO of Fármacos Especializados, one of the main government distributors.

• Invest at the end of the value chain. Public institutions could consider working with laboratories and distributors to ensure just-in-time distribution coupled with rational prescription, effective dispensing, patient compliance and pharmacovigilance. Private companies could engage with patients and health professionals in the public sector to learn more about patients’ needs and their risk tolerance in return for access to new, better treatments. The HRI consumer survey indicated that 55 percent do not consider the medicines provided by public doctors to be of high quality, but 73 percent would be more willing to use public services if medicines were privately dispensed (see Figure 8). This could, in turn, help increase availability and reduce overprescription.

Figure 8: The perception of the quality of medicines prescribed influences health service utilization

Percentage of social security or Seguro Popular affiliates
more willing to consult providers if informed of quality of medicine

![80.1%](image)

![73.3%](image)

Percentage of consumers more willing to use public providers if medicines were privately dispensed

Source: PwC Health Research Institute Consumer Survey, 2017
Reaping benefits from information technology and analytics

Information technology and data analytics offer the opportunity to deliver more efficient, patient-centered care

Issue #9) From digital medical records to apps: Healthcare industry catching up to tidal wave of emerging tech

Issue #10) New databases can improve patient care and consumer health
Consumer industries such as retail, banking and telecommunications use digital technologies to connect with customers, understand their needs and respond to them. Technology offers great promise in healthcare to increasingly engage patients, but the technology has to be an integral part of improvements that lead to better, more efficient patient-centered care. The Mexican government wants to expand telehealth capabilities in public institutions and is developing user-friendly apps for chronic disease prevention and care. Better healthcare information technology could enable health access for 15.5 million additional patients per year in Mexico and reduce spending by $3.8 billion USD. Use of digital health records (ECE) is uneven. The Mexican Social Security Institute (IMSS) has made the greatest progress, with separate systems covering all primary care and hospital facilities. The Ministry of Health (SSa) has ECE coverage in about 25 percent of its public hospitals and a handful of primary care systems. The SSa has tried to regulate ECE development to ensure that information can be transferred across hospitals and institutions. Seguro Popular funded ECE efforts, but funding shortages since 2009 led to a marked slowdown in new projects. Given these challenges, the SSa refocused efforts on telehealth for professional training and clinical and administrative support in community and specialty hospitals. In 2015 telehealth was present in 671 public medical units, the majority—450—of which are in the SSa. A total of 45,000 consultations were provided at SSa facilities in 15 states, supporting mostly mental health and internal medicine. In Oaxaca—a highly rural state—19 telehealth-equipped peripheral units and one central hospital offered 53 teleconferences and close to 5,000 consultations across five specialties, with maternal health being a priority. The SSa is concentrating on deploying the National System of Basic Health Information (SINBA), according to Juan Carlos Reyes Oropeza, director general for Health Information. Some IT applications are being developed through this system, such as Radar CI-Salud, an app used to help patients find over 28,000 public and private health provider units nationwide. IMSS is focused on making the most of its existing digital infrastructure, improving employer registration and developing a medical prescription system. It also developed an app to support early diabetes detection in high-risk individuals.

The Carlos Slim Foundation (FCS) has contributed to SINBA’s consolidation of diabetes and hypertension reporting, said Héctor Gallardo, FCS operational solutions director. FCS has also developed MIDO-Mi Salud, an app for chronic disease prevention, detection and care. The Inter-American Development Bank funded a pilot to improve adherence to diabetic treatments and lifestyle recommendations through cell phone messaging, according to César Vélez, expert in information technology for health at the Mexican Health Foundation. The pilot is addressing cultural and socioeconomic diversity. Along the same lines, FCS is developing Apprende, a free access, cartoon-based patient education app.

The chief challenges for health app development are data costs and continuity of use, said FCS’ Gallardo. Companies and institutions that develop apps must be prepared to provide support to health providers that adopt their apps, and to supply dosing information and free content access for patients.

**Implications:**

- **Integrate technology benefits across the health system.** Technology integration success depends on collaboration among many players to design projects, set the pace of adoption and share benefits. Success in transforming healthcare models will require many tools and methods, and large investments.

- **Support health service quality, equity and efficiency.** Digital technology policy has increasingly been created in the context of wider system transformations. Telemedicine is growing in scale and scope, which improves service delivery and increases access to specialized medical care. IMSS’ digital medicine prescription platform and diabetes detection app represent progress toward improving quality and efficiency.

- **Reap the potential of health apps.**

**Figure 9: Close to a quarter of consumers use information technology for health at least once a month**

How often do you use technology to look up information or to support your health?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>54%</td>
</tr>
<tr>
<td>Once a year</td>
<td>13%</td>
</tr>
<tr>
<td>A few times a year</td>
<td>7%</td>
</tr>
<tr>
<td>Once every two weeks</td>
<td>5%</td>
</tr>
<tr>
<td>Once a month</td>
<td>10%</td>
</tr>
<tr>
<td>Once a week</td>
<td>5%</td>
</tr>
<tr>
<td>Once every two weeks</td>
<td>10%</td>
</tr>
<tr>
<td>Few times a week</td>
<td>9%</td>
</tr>
<tr>
<td>Daily</td>
<td>4%</td>
</tr>
<tr>
<td>Search for health information in computer, tablet or cell phone</td>
<td>45%</td>
</tr>
<tr>
<td>Use health and wellness apps on your cell phone, tablet or smart watch</td>
<td>10%</td>
</tr>
</tbody>
</table>

Source: PwC Health Research Institute Consumer Survey, 2017
New databases can improve patient care and consumer health

Every day the Mexican Social Security Institute (IMSS) gathers digital data on over 450,000 outpatient visits and 4,000 surgeries. This vast amount of medical data has the potential to transform and improve healthcare. Data analytics can lead to better understanding of diseases and the best treatment and care patterns. But health analytics are hampered by multiple, uncoordinated databases with poor quality reporting. And Mexicans use diverse public and private health providers, making medical record portability essential for effective care.

Most consumers correctly understand the value of electronic medical records and want providers to share their health information to coordinate their care and develop new policies and treatments (see Figure 10). Data management and analytical innovations are underway to monitor patient health and improve care protocols.

“Private healthcare providers are making progress with health analytics. Forty thousand private physicians receiving clinical tests can use time-series and clinical analytics to identify and monitor disease management programs,” said José Carlos Pérez, CEO of Grupo Proa Diagnostics. Data analysis enabled Grupo Proa to demonstrate a surge in service demand following government health promotion campaigns, and to respond accordingly with an increased supply of diagnostic services. Previta, a private primary care group, has a healthcare model supported by E-healthtracker, a proprietary patient record database that integrates business intelligence analytics, said CEO Morgan Guerra. Data analysis helps Previta predict the demand for diagnostics and health services triggered by public health campaigns; it also helps them engage in P4P programs.

The government is investing in SINBA, the National System of Basic Health Information. It is a data clearinghouse responding to the national digital strategy encouraged by the current federal administration. SINBA is learning from financial information clearinghouses to support competitive practices and ensure regulatory compliance, said Juan Carlos Reyes, general director for Health Information at the Ministry of Health (SSa).

The system will collect data from public and private institutions such as vital statistics, affiliation, infrastructure and service use. A central component is a personal identifier that coordinates institutional registries and enables patients to be followed for prevention and disease management, and supports their movement across providers and insurers.

SINBA is already supporting the Mexican Observatory of Non-Transmissible Diseases (OMENT), part of the National Strategy for Prevention and Control of Overweight, Obesity and Diabetes. OMENT analytics help discover diabetes and hypertension healthcare patterns and establish performance benchmarks. Plans are underway to extend OMENT to include drug distribution logistics and providers beyond the SSa, according to Héctor Gallardo, operational solutions director for the Carlos Slim Foundation.

Implications:

- **Data analytics are key to achieve policy objectives.** Mexico, like most countries, faces a deficit of resources to address growing healthcare demands.

Data analytics are vital to attracting and coordinating public and private sector investments and to creating effective prevention and disease management strategies. They will be key in combating infrastructure duplication and mitigating administrative errors and fraud. They also help citizens make informed choices.

- **Data repositories can coordinate a fragmented health system.** Health policy is being enacted to focus the national health system on patients. SINBA’s development as a data clearinghouse with obligatory reporting and enforceable quality standards promises to help payers and providers monitor patients across multiple interactions.

- **Data must be widely shared and developed.** The challenge is to promote the widest possible use of routine health data for decision-making by public and private actors at all levels, from top executives to local network coordinators and citizens. Public institutions should foster the use of health data by making it available securely to public and private data management service providers.

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**Figure 10: Most consumers identify electronic medical records and support their use**

<table>
<thead>
<tr>
<th>Percentage of consumers identifying electronic medical records correctly</th>
<th>Percentage of consumers who agree all doctors should have an electronic medical record</th>
</tr>
</thead>
<tbody>
<tr>
<td>63.0%</td>
<td>81.1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percentage of consumers who agree their provider should share health information for the following uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop new treatments</td>
</tr>
<tr>
<td>83.8%</td>
</tr>
</tbody>
</table>

Source: PwC Health Research Institute Consumer Survey, 2017
Acknowledgments

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PwC’s Health Research Institute (HRI) releases an annual report entitled Top Health Industry Issues. This annual report discusses the top issues for healthcare providers, health insurers, pharmaceutical and life sciences companies, new entrants and employers.

This year, for the first time, HRI identified ten issues that are affecting the Mexican health industry. Issues were selected from an assessment of public policy and market trends. A total of 25 interviews with top-level public and private sector leaders informed issue development, together with a literature review from Mexico’s research institutions and government publications.

In winter 2017, HRI commissioned a survey of 500 consumers representing a cross-section of the urban population in terms of insurance status, age, gender and income. The survey collected data on consumers’ perspectives on the healthcare landscape and preferences related to healthcare usage in random samples in three representative cities: Mexico City, Hermosillo and Tuxtla Gutiérrez.

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PwC’s Health Research Institute (HRI) provides new intelligence, perspectives and analysis on trends affecting all health-related industries. The Health Research Institute helps executive decision-makers navigate change through primary research and collaborative exchange. Our views are shaped by a network of professionals with executive and day-to-day experience in the health industry. HRI research is independent and not sponsored by businesses, government or other institutions.
Endnotes


11. INSP. ibid.


17. INSP, Encuesta Nacional de Salud de Medio Camino, op. cit.


24. INSP, Encuesta Nacional de Salud de Medio Camino. op. cit.

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