CHAPTER 7

Mexico

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Country Description

TABLE 7-1 Mexico

Nationality	Noun: Mexican(s) Adjective: Mexican
Ethnic groups	Mestizo (Amerindian-Spanish) 62%, predominantly Amerindian 21%, Amerindian 7%, other 10% (mostly European) (2012 est.)
Religions	Roman Catholic 82.7%, Protestant 8.0% (Pentecostal 1.4%, Jehovah's Witness 1.1%, other 3.8%), other 1.9%, none 4.7% (2010 census)
Language	Spanish only 92.7%, Spanish and indigenous languages 5.7%, indigenous only (includes various Mayan, Nahuatl, and other regional languages) 0.8%, unspecified 0.8% (2005)
Literacy	Definition: Age 15 and over can read and write. Total population: 95.1% Male: 96.2% Female: 94.2% (2012)
Government type	Federal republic
Date of independence	September 16, 1810
Gross Domestic Product (GDP) per capita	$17,500 (2015 est.)

(*continues*)

TABLE 7-1 Mexico (*continued*)

Unemployment rate	4.4% plus underemployment of perhaps 25% (2015 est.)
Natural hazards	Tsunamis along the Pacific coast; volcanoes and destructive earthquakes in the center and south; and hurricanes along the coasts of the Pacific, Gulf of Mexico, and Caribbean
Environment: current issues	Scarcity of hazardous waste-disposal facilities; rural to urban migration; scarcity of natural freshwater resources, water pollution in the north, and water inaccessibility and poor quality in the center and extreme southeast; raw sewage and industrial effluents pollution in rivers in urban areas; deforestation; widespread erosion; desertification; deterioration of agricultural lands; serious air and water pollution in the national capital and urban centers along the U.S.-Mexico border; and land subsidence in the Valley of Mexico caused by groundwater depletion. The government considers the lack of clean water and deforestation national security issues.
Population	123,166,749 (July 2016 est.)
Age structure	0–14 years: 27.26% (male 17,167/female 16,402,301) 15–24 years: 17.72% (male 11,049,818/female 10,770,843) 25–54 years: 40.69% (male 24,174,900/female 25,938,909) 55–64 years: 7.41% (male 4,187,644/female 4,944,802 65 years and over: (3,827,870/female 4,702,026) (2016 est.)
Median age	Total: 28 years Male: 26.9 years Female: 29.1 years (2016 est.)
Population growth rate	1.15% (2016 est.)
Birth rate	18.5 births/1,000 population (2016 est.)
Death rate	589 deaths/per 100,000 population (2016 est.)
Disease burden	Communicable disease deaths: 57/100,000 population Noncommunicable disease deaths: 468/100,000 population Injury deaths: 63/100,000 population (2016 est.)
Net migration rate	−1.7 migrant(s)/1,000 population (2016 est.)
Gender ratio	At birth: 1.05 male(s)/female Under 15 years: 1.05 male(s)/female 15–24 years: 1.03 male(s)/female 25–54 years: 0.93 males(s)/female 55–64 years: 0.85 male(s)/female 65 years and over: 0.82 male(s)/female Total population: 0.96 male(s)/female (2016 est.)
Infant mortality rate	Total: 11.9 deaths/1,000 live births Male: 13.3 deaths/1,000 live births Female: 10.4 deaths/1,000 live births (2016 est.)

TABLE 7-1 Mexico (*continued*)

Life expectancy at birth	Total population: 75.9 years Male: 73.1 years Female: 78.8 years (2016 est.)
Total fertility rate	2.25 children born/woman (2016 est.)
HIV/AIDS adult prevalence rate	0.24% (2015 est.)
Number of people living with HIV/AIDS	198,200 (2015 est.)
HIV/AIDS deaths	4,000 (2015 est.)

Data from Central Intelligence Agency. The World Fact Book, 2008. https://www.cia.gov/library/publications/the-world-factbook. Accessed November 18, 2008.

History

Mexico is the largest Spanish-speaking country in the world and is the nation with the largest indigenous population in the Americas (10.2 million). Around 5,000 years ago, ancient Mesa-American Indians domesticated corn.[1] This agricultural revolution, among other things, allowed for the construction of advanced civilizations, which were then conquered by the Spaniards in 1519. Independence from Spain was achieved in 1821. A war with the United States from 1846 to 1848 ended with Mexico losing half of its territory.[2] In 1864, the French invaded Mexico and ruled until 1867. A major revolt against a long-standing dictatorship produced the Mexican Revolution in 1910, which resulted in the death of 10% of the nation's population.[3]

Size and Geography

Mexico covers 1.9 million square miles of land, 13% of which is arable.[4] To the north, it borders the United States and to the south Guatemala and Belize (see **FIGURE 7-1**).

Government and Political System

Mexico is a federation with a presidential representative, democratic republic whose government is based on a congressional, multiparty electoral system. The president of the country is both head of state and head of government. The federal government is divided into three branches: executive, legislative, and judicial, as established by the Constitution published in 1917. The 32 constituent states of the federation also have a republican form of government based on a local congressional system.[5]

Business and Economic Environment

Mexico, like many other emerging economies, has been experiencing major changes in social and economic variables that have unfolded the potential for development since the beginning of the 21st century. Democracy has ensued, and the political system is stable. The central bank (Banco de México) has complete autonomy to enhance monetary and fiscal policies, and macroeconomic policies have prioritized fiscal discipline, increasing confidence in the Mexican economy all over the world. Improvements in the industrial base have made Mexico a very competitive manufacturing country with strong exports, and Mexico has embraced free trade with conviction. It is now one of the most open countries in the world.

Mexico is now a predominantly urban country. Most of its 125 million population are still relatively young, with a median age of 27 years old. The educational level in Mexico is more than 8 years of formal education, with significant growth in enrollment in more advanced levels (middle and higher education).

But there are still huge challenges in supporting potential and future development of this country, such as raising education quality, reducing government corruption, controlling drug-related

FIGURE 7-1 Map of Mexico

crime, assuring public safety, catching up on infrastructure backlogs, and above all, relieving poverty and achieving well-being for a large majority of Mexicans.

An economic output of more than US $2.1 trillion (power purchasing parity) in 2015 ranked Mexico among the 15 largest economies in the world. Located in a multilateral free trade area, the Mexican economy has been advancing firmly by developing manufacturing capabilities oriented toward intensive exports, mainly to the U.S. markets. In fact, according to the Office of U.S. Trade Representative, U.S.-Mexico bilateral trade reached a total of $583.6 billion in 2015; exports were $267.2 billion; and imports were $316.4 billion, meaning a U.S. trade deficit with Mexico of $49.2 billion. In 2015, Mexico was the United States' second largest export market and third largest supplier of goods imports.[6]

In terms of annual growth rate, the Mexican economy averaged 2.6% during a period of twenty years, 1995–2015, of which the last five had an average of 2.9%.[6] These growth rates are not impressive compared to what China, India, Brazil, South Africa, and other emerging economies achieved in a similar period of time. However, in favor of Mexico, its economy was singularly resilient to the "reverse gear" trend observed in many emerging countries since. In addition, Mexico managed to keep annual inflation rates under control, well below 5% since the beginning of the century, with an average of 2.5% in 2014–2015. A burden in other times, national debt averaged a reasonable 25% of GDP during the 1990s through 2010, climbing to about one-third of GDP for 2014–2016, as reported by the Minister of Finance.[7]

With a labor force of 52.91 million, an unemployment rate of 4.4%, national reserves of $178 billion, and an industrial production growth rate of 0.9% in 2015, among other relatively positive economic indicators, the Mexican economy looks healthy and promising for future opportunities.[8] As put by the *Economist*:

> Once dependent on oil, [Mexico] has Latin America's largest and most sophisticated industrial base, exporting more cars than any country except Germany, Japan, and South Korea. For two decades its macroeconomic

> management has been impeccably orthodox. Recently, it has thrown open its oil industry to private investment, and has tackled private monopolies. A vibrant Mexican middle class prospers along an industrial corridor running from the American border down to Mexico City. Its political system is essentially stable.[9]

But there is a dark side of this story: economic inequality. According to the food-based definition of poverty, more than 50% of the total Mexican population of 120 million was living below the poverty line in 2012.[8] The benefits of economic progress have been distributed abundantly for the few rich Mexicans at the top of the income structure and miserably for the poor: for the disadvantaged, per capita income has registered an annual growth rate of barely 1% since the mid-1990s when Mexico started its economic strategy of market liberalization and free trade agreements. The *Economist* furthers the "Two Mexicos" argument with "Mexico's duality shows that getting macroeconomic policy right is necessary to success, but not sufficient."[9]

According to The *Economist*, the three lessons behind Mexico's dual economy are: (1) the ineffective centrality of urbanization attracting millions of migrants to large cities from the countryside, but without providing the necessary public services and protection against drug-related crime and exploitation of poor urban communities; (2) the need to double the revitalization of the country's infrastructure—mostly railroads and highways—to efficiently connect industrial cities with the rest of the country, ports, and the northern border; and (3) the failure to bring the informal sector of the economy out of the low-value-added, vicious circle that submerges this huge component of the domestic economy into chronic distrust and low productivity.[9]

Poverty and Economic Equality in Mexico

The limits of minimum economic well-being in Mexico are established by the Consejo Nacional de Evaluación de la Política de Desarrollo Social (CONEVAL, the National Council for the Evaluation of Social Development Policy), which keeps track of the changes in prices of food and nonfood products using the National Consumer Price Index. For instance, the limits in March 2016 were US $1,338 pesos monthly for minimum well-being per person and $2,714 pesos for well-being (about $78 and $159).[10]

The General Law for Social Development in Mexico determined that to measure poverty and well-being, all of the following indicators need to be included: income per capita, access to health services, educational backlog, access to social security, quality of housing and utilities, access and quality of food, and degree of social cohesion. In the analysis of poverty, significant deprivation from any of these indicators are considered social deficiencies. Most recent measurement and evaluation of poverty and well-being by CONEVAL refers to the years 2010–2014 (see **TABLE 7-2**).[11]

Mexico has an estimated population of 123 million as of July 2016 with approximately 46% of the population living below the poverty line.[8] This is the most important challenge facing Mexico's social and economic development. Although this percentage kept stable for nearly a decade, the absolute number of people living in poverty increased from 53.0 million in 2010 to more than 55.0 million in 2014. Behind the disappointing figures, there was some relative progress in the fight against poverty: the reduction of the population living in "extreme" poverty was 13.0 million in 2010 and 11.4 million in 2014. Therefore, it was the population in "moderate" poverty that made the overall number of poor grow from 2010 to 2014.

According to the 2014 evaluation by CONEVAL, there were 40.0 million additional people, apart from those already in moderate and extreme poverty, who have some level of vulnerability to poverty. Table 7-2 shows the reasons for vulnerability under indicators of backlogs and lack of well-being. There were 22.4 million with educational backlogs, 21.8 million with compromised well-being due to poor access to health services, 70.1 million without access to social security services, 14.8 million without adequate housing, 25.4 million without some sort of access to urban services and utilities, and 28.0 million who suffer without quality food and adequate nutrients. Summing up, there were 26.5 million people in Mexico, about 22.0% of its total population, suffering from three or more backlogs in well-being, and 86.9 million, 72.4% of the total population, with at least one backlog in well-being.[11]

Education

Education is compulsory in Mexico through the 9th grade. In 2012, 25.7 million students were enrolled in elementary school and another 4.2 million were enrolled in secondary schools. The postsecondary level (colleges and universities) enrolled 3.5 million students. The youth literacy rate in 2009 was at 98.5% and adult literacy was 93.4%. However, according to OEDC only 53.0% of youth between

TABLE 7-2 Mexican Poverty 2010–2014

Indicators	Percentage			Population (millions)		
	2010	2012	2014	2010	2012	2014
Poverty						
Population in poverty	46.1	45.5	46.2	52.8	53.3	53.3
Due to poor well-being	28.1	28.6	26.3	32.1	33.5	31.5
Due to income	5.9	6.2	7.1	6.7	7.2	8.5
Social well-being						
Lack of access to educational services	20.7	19.2	18.7	23.7	22.6	22.4
Lack of access to health services	29.2	21.5	18.2	3.5	25.3	21.8
Lack of access to social security	60.7	61.2	58.5	69.6	71.8	70.1
Lack of access to quality housing	15.2	13.6	12.3	17.4	15.9	14.3
Lack of access to urban services and utilities	22.9	21.2	21.2	26.3	24.9	25.4
Lack of access to food and nutrients	24.8	23.3	23.4	28.4	27.4	28.0

Data from CONEVAL. Poverty measurement. http://www.coneval.org.mx/Medicion/MP/Paginas/Pobreza_2014.aspx.

the ages of 15 and 19 are actually enrolled in school on an ongoing basis.[12]

Brief History of the Healthcare System

Formal health care in Mexico probably dates to 1791 when the Archbishop of Guadalajara founded the Hospicio Cabañas in the city of Guadalajara. The original hospital is still functioning and may be the oldest continuously operating hospital in the Americas.[12]

The origins of the modern Mexican health system dates back to 1943, when three important institutions were created: the Ministry of Health (MoH), the Mexican Institute for Social Security (IMSS), and Mexico's Children Hospital. The MoH now consists of 12 National Institutes of Health, charged with tertiary care, training of specialists, and performing scientific research. The IMSS was created to tend to the needs of the industrial workforce, and in 1960 a similar institution for federal civil servants was created, the Institute for Security and Social Services for Government Employees (ISSSTE). The MoH was assigned the responsibility of caring for the urban and rural poor.[13]

The prevailing model of healthcare delivery, which was mostly hospital based and specialty oriented, produced a dramatic increase in the costs of health care. In addition, health services were not reaching an important proportion of the rural poor. Furthermore, many households had to mobilize their own resources to access care in an unregulated private market.

Mortality and Morbidity

The increase in life expectancy and the growing exposure to risks related to unhealthy lifestyles are modifying the main causes of disease, disability, and death. Mexico is going through an epidemiological transition characterized by an increasing predominance of noncommunicable diseases and injuries. In 1950, around 50% of all deaths in the country were due to common infections, reproductive events, and ailments related to malnutrition. Today, these diseases represent less than 15% of total deaths.[18] Noncommunicable diseases and injuries are now responsible for more than 85% of total deaths (see **TABLE 7-3**).

TABLE 7-3 Selected Major Causes of Death 1955–2005

Disease or condition	1955 rank order	2005 rank order
Infectious and parasitic	1	6
Diarrheal	2	13
Respiratory	3	7
Perinatal	4	9
Cardiovascular	5	1
Ill-defined	6	14
Injuries	7	4
Malignant	8	3
Malnutrition	9	8
Chronic	10	5
Genitourinary	11	10
Neuropsychiatric	12	11
Congenital	13	12
Diabetes	14	2
Maternal	15	15
Ill-defined	16	16

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In contrast to other developing countries, Mexico's posttransitional ailments coexist with pretransitional diseases. Noncommunicable diseases are increasingly dominating the epidemiological profile, but common infections, reproductive ailments, and diseases related to malnutrition are still affecting a large number of Mexicans, especially those living in poverty. In the central state of Mexico, for example, mortality rates for acute respiratory infections are 11 times higher than those in the northern state of Durango. Maternal mortality figures in the southern state of Guerrero are two times higher than those for the country as a whole and four times higher than those in the northern state of Coahuila. Finally, malnutrition, although decreasing in the general population, is still common among poor children. Mortality rates in 2006 caused by malnutrition in children under 5 years old were 12 times higher in the southern state of Puebla than in the northern state of Nuevo Leon, and stunting, which affected 1.2 million Mexican children under 5 years of age, was five times more frequent in the rural areas of the southern part of Mexico than in the urban communities in the north of the country. Poor populations are also being affected by emerging risks and noncommunicable diseases. The southern state of Yucatan, for example, shows higher mortality rates because of cardiovascular diseases than Mexico City, both in women and men (see **TABLE 7-4**).[15]

New Approaches and Change

As noncommunicable diseases and injuries experienced a sharp increase, there was a perceived need for

TABLE 7-4 Some 2012 Population Health Indicators

Life expectancy	76 years
Life expectancy at age 60	22 years
Crude birth rate	18.80 per 1,000
Crude death rate	5.00 per 1,000
Fertility rate	2.22 per female
Under 5 mortality rate	16.00 per 1,000 live births
Infant mortality rate	14.00 per 1,000 live births

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changes that could adapt the health system to the new health conditions and meet the demands for equitable and cost-effective services. The response to this situation was an effort to extend basic health care to underserved populations through two programs, one for the rural poor and the other for poor urban communities. The economic crisis of the early 1980s, however, limited their prospects.[16]

In the search for new approaches to extend access and improve the efficiency and quality of care, healthcare reform was launched in 1983.[17] A constitutional amendment establishing the right to the protection from health problems was introduced. A new health law was published, replacing an old-fashioned sanitary code. Health services for the uninsured population were decentralized to state governments. Finally, limited coverage of health services resulted in a program that included the construction of health centers and district hospitals. The force guiding this program was the primary healthcare model, which implied a greater emphasis on first-level care, a proper mix of technologies, and the promotion of community participation. However, the possibility of extending comprehensive health services to all was not reached until the initial years of the new millennium. Funding of the system comes from a combination of tax dollars at both federal and state levels and employer and employee contributions.[18]

In the 1990s, several national health studies revealed that more than half of total health expenditures in Mexico were out of pocket. This was due to the fact that half of the population lacked health insurance. The high levels of out-of-pocket expenditure exposed Mexican families to catastrophic financial episodes. In fact, in 2000, nearly 3 million Mexican households suffered catastrophic health expenditures.[19(p57)] Not surprisingly, Mexico performed poorly on the international comparative analysis of fair financing developed by the World Health Organization as part of the *World Health Report 2000*.[20] The poor results motivated the development of additional analysis which showed that impoverishing health expenditures were concentrated within the poor and uninsured households.

While access to health care is guaranteed in the Mexican Constitution, prior to the passage of the Segura Popular law in 2003, approximately 47% of the population was enrolled in one of the existing programs and another 3% had private insurance. There was also inequality in access because only 50% of the population had coverage. In 2003, the Mexican Congress passed the Social Protection in Health.[17] This system mobilized public resources by a full percentage point of GDP for a period of 7 years and continues to provide health insurance through Segura Popular to all of those ineligible for social security. These include the self-employed, those out of the labor market, and those working in the informal sector of the economy.[17]

Organizations

The Mexican health system includes two sectors, public and private.[21] The public sector is composed of the social security institutions (IMSS, ISSSTE, the social security institutions for oil workers [PEMEX], the armed forces [SEDENA and SEMAR]), Segura Popular, and institutions offering services to the uninsured population, including the MoH, the State Health Services (SESA), and the IMSS-Oportunidades Program. These institutions own and run their health facilities and employ their own staff, except for Segura Popular, which buys services for its affiliates from the MoH and the SESA. The private sector includes facilities and providers offering services mostly on a for-profit basis. The states often provide separately funded health care for residents of the state funded by state budgets and through agreements with the Social Security system. **TABLE 7-5** illustrates the organizational structure of the healthcare system.

Social security institutions are financed with contributions from the government, the employer (which includes the government in its role as employer, as is the case for ISSSTE and the social security institutions for oil workers and the armed forces), and the employee. The MoH and the SESA are financed with federal and state government resources, coming from general taxation and small contributions that users pay when receiving care. The IMSSOportunidades program, which is directed to the rural poor of 17 states, is financed with federal resources, although the

TABLE 7-5 Components of the Healthcare System

	Public sector components		Private sector
	Seguridad social	**SESA**	
How funded	Government Employer Contributions Worker Contributions	Federal contributions State government contributions Individuals*	Individuals Employers Private health insurance
Provider organizations	IMSS ISSSTE PEMEX SEDENA MARINA	Secretaría de Salud y SESA IMMS-Opportunidades	Private hospital Private physicians and other qualified providers
Services	Hospital care, clinics and physician services, outpatient and ambulatory services**		Dependent on coverage
Eligible to participate	Employees and their families, retirees***		Population in general who have insurance or resources

* Seguro Popular de Salud is funded by individuals in the private sector electing to participate and by state governments.
** Services are usually all within the system.
*** Not all employers are part of IMSS. Employees not eligible for IMSS, unemployed, and individuals are in Seguro Popular de Salud.
Data from Gomez-Dantes O, Sesma S, Becerril VM, Knaul FM, Arreola H, Frenk J. The health system of Mexico. *Salud pública de México* 2011;53(suppl 2): S220–S232.

program is operated by IMSS. Finally, Segura Popular is financed with federal and state government contributions and family contributions, with total exemption for those families in the bottom 20% of income distribution.

The services of the private sector are financed mostly with out-of-pocket payments. A small portion of private health expenditure in Mexico comes from private insurance premiums. The Social Security system provides more than health coverage; it also provides pharmaceuticals and medications. Also included are unemployment insurance, disability insurance, life insurance, and retirement benefits.

Facilities

The Mexican health system as of 2015 had 23,269 health service units, not counting the medical offices of the private sector; 4,103 were hospitals and the remainder were ambulatory care clinics.[20] Of the total number of hospitals, 1,121 were public and 3,082 were private, for a rate of 1.1 hospitals per 100,000 population; however, there were regional differences. The Mexican state of South Baja California had 3.2 hospitals per 100,000, whereas the state of Mexico had only 0.5 per 100,000. Of the total number of public hospitals, 628 belonged to social security institutions, and the remainder belonged to those institutions that care for the population without social security; 86% were general hospitals, and the rest were specialty hospitals.

In terms of size, public hospitals are classified as either hospitals with 30 beds or less or as hospitals with more than 30 beds. In 2005, around 64.0% of social security hospitals, and 54.0% of hospitals for the population without social insurance, had more than 30 beds. In the private sector, most hospitals are small maternity clinics. Around 69.0% of private hospitals had less than 10 beds and only 6.2% had more than 25 beds. There were 78,643 beds in the public sector; 53.7% belonged to social security hospitals, and the remainder belonged to the MoH, the SESA, and the IMSS-Oportunidades Program. This means that there were 0.74 beds per 1,000 population in the public sector. Public institutions also counted around 19,000 public ambulatory units and 2,990 operating rooms. The number of operating rooms per 1,000 population in the public sector was 2.7, with important differences among states and institutions. No reliable figures for the private sector are available.[23(p57)]

Cost of Health Care

According to the World Bank and OEDC, the total healthcare expenditures in Mexico was 6.3% in 2014 and per capita expenditure on health was US $1,048. This was below the 9.0% of GDP for OEDC countries and the per capita expenditure of $3,450. Public spending on health care is approximately 51.1% of all healthcare expenditures.[22,24]

OEDC reports that there were 2.2 physicians per 1,000 population in 2014, which was still below the average for OECD countries. The distribution of physicians is not equal among the regions of the country. There were 2.4 nurses per 1,000 in 2014, a slight increase from 2005 but still well below the OEDC average of 9.1 nurses per 1,000. There was a decline in the number of medical school graduates in 2014 from a previous average of 11.1 graduates per 1,000 population to 9.9 graduates. The OEDC average is 11.1. For nursing, the graduation rate is 10.8 graduates per 1,000 compared to the OEDC rate of 46 per 1,000.[24]

In 2014, Mexico had 1.6 hospital beds per 1,000 population compared to the OEDC average of 4.8 (the U.S. average was 2.6). The MRI rate was 2.1 per 1,000 while the OEDC rate was 14.3, and the ratio of CT scans was 5.3 per 1,000 while to the OEDC rate was 24.6 per 1,000. Hospital discharges were 4,779 with an average length of stay of 4.0 days.[24]

Quality

Quality of health care has been a permanent challenge of the Mexican health system. A quality assessment conducted between 1997 and 1999 in more than 1,900 public health centers and 214 general public hospitals documented serious problems with waiting lists and waiting times, with drug supply in both ambulatory settings and hospitals, and with medical equipment and medical records. Historically, public health agencies have operated as monopolies with little consumer choice, poor responsiveness to consumer needs, and lack of concern for quality. Furthermore, few health facilities, public or private, were subjected to a formal accreditation process, although the MoH has made great strides in reviewing hospitals and clinics in recent years, especially the public hospitals and major private hospitals. A number of hospitals have sought Joint Commission on Accreditation of Healthcare Organizations International (JCAHO) accreditation.

Several initiatives have been recently implemented to improve technical and interpersonal quality of care. These initiatives have been designed to improve standards of quality in service delivery while enhancing the capacity of citizens to demand accountability. A central component of these initiatives was the strengthening of the certification process for public and private health units, which is now coordinated by the National Health Council, an institution created in 1917 as the highest policymaking body in the sector. In 2006, 223 public hospitals (19.9%) were certified. The institution with the highest percentage of certified hospitals was IMSS, with 42.0%. The National Health Council also certified 304 private hospitals in 2006. This process was reinforced by a disposition incorporated into the General Health Law in 2003 requiring the accreditation of all units providing services to Segura Popular. In 2006, 38 hospitals and 1,408 ambulatory clinics, all from the SESA, had completed the accreditation process.

Initiatives to improve the availability of basic inputs have also been designed. A regular external measurement of the availability of drugs in public institutions was implemented by the government as a monitoring tool designed to improve access to essential drugs in the public sector. In 2002, these measurements showed that only 55.0% of prescriptions in ambulatory clinics of the MoH were fully filled. By 2006, this figure had increased to 79.0% in ambulatory clinics of the MoH and to 89.0% in ambulatory clinics of the MoH that serve Segura Popular beneficiaries.[25] Percentages in ambulatory clinics of social security institutions in 2006 were consistently above 90.0%. A national system of indicators was also implemented to monitor quality of care by state and institution. This monitoring system includes indicators for waiting times for ambulatory and emergency care, waiting times for elective interventions, and distribution and dispensing of pharmaceuticals.

Regarding overall satisfaction, the National Health and Nutrition Survey conducted in 2006 indicates that 81.2% of health service users consider healthcare services "good" or "very good." Social security institutions providing services to oil workers and the armed forces show the highest satisfaction levels (96.6%), followed by private services (91.1%).

According to this same survey, waiting times tended to be too long. IMSS is the institution with the highest average waiting time in ambulatory settings (91.7 minutes), followed by ISSSTE (78.7 minutes). In contrast, average waiting time in the private sector is only 29.2 minutes.

One of the most frequent complaints in the public services sector is related to waiting times for elective surgeries and their cancellation. A national responsiveness survey implemented in 2004 indicates that the percentage of canceled surgeries in public hospitals

was 18.2%, with similar figures for all public institutions.[25] Almost half of these canceled surgeries were canceled after the patient had been hospitalized. The main causes of cancellation were related to problems in health services, including lack of surgery rooms and medical personnel.

Access

The mobilization of additional public resources for Segura Popular created the financial conditions to expand the coverage of health insurance in Mexico. As a result, the proportion of the population with social protection for health increased by 20% between 2003 and 2007. According to Article 4 of the Mexican Constitution, the protection of health is a social right; however, not all Mexicans have been equally able to exercise it. In 2003, half of the population, by virtue of its occupational status, enjoyed the legislated protection of social security, whereas the other half was left without access to any form of health insurance. A very large fraction of this population received health care at units of the MoH, which implies the transfer of health benefits to vulnerable populations under a public charity scheme.

The Mexican health system is a segmented system with three broad categories of beneficiaries: (1) workers of the formal sector of the economy and retired people and their families; (2) self-employed, workers of the informal sector of the economy, and unemployed and their families; and (3) the population with the ability to pay.[25]

The workers of the formal sector of the economy and their families are the beneficiaries of social security institutions, which in 2000 covered 45.6 million people. IMSS covered 80% of this population, ISSSTE another 18%, and social security institutions for oil workers and the armed forces covered the remainder. The second category (self-employed, workers of the informal sector of the economy, and unemployed and their families) was covered until 2003 by services of the MoH, the SESA, and the IMSSOportunidades Program. In 2000, this population amounted to 48.9 million people. The third category is the users of private health services, mostly upper- and middle-class individuals. However, the poor and those affiliated with social security institutions also use them on a regular basis. According to the National Health and Nutrition Survey in 2006, around 25% of beneficiaries of social security institutions regularly used private health services, mostly ambulatory care.[23(p57)]

The System of Social Protection in Health has extended public health insurance. As mentioned previously, in 2000 only 45.6 million Mexicans (45.4% of the total population) had access to social insurance. In 2006, this figure reached 48.9 million. By 2013, around 55.6 million people were enrolled in Segura Popular.

In general terms, those affiliated with social security institutions have access to a broad, but not an explicitly defined, package of health services. This includes ambulatory and hospital care, as well as drugs. Those affiliated with the Segura Popular have access to 255 essential interventions and the respective drugs. In addition, they have access to a package of 18 high-cost interventions for the treatment of acute neonatal conditions, cancer in children, cervical and breast cancer, and HIV/AIDS, among others. The uninsured population has access to a limited package of benefits that vary considerably depending on the population. Uninsured individuals living in large urban areas have access to a relatively large package of services, in contrast with the uninsured rural poor, who tend to have access only to limited ambulatory care on an irregular basis.

Public Health Services

Public health services are provided by the MoH to the entire population, regardless of affiliation with any particular health institution. These services include health promotion, risk control, and disease prevention activities, including vaccination and epidemiological surveillance.

The MoH is also responsible for the generation of information on health conditions and health services and for the evaluation of the national and state health systems, health institutions, health policies, programs, and services. Salient among the monitoring and evaluation activities are the annual publication of *Salud: Mexico,* a report on the performance of state health systems and health institutions, and the *Observatory on Hospital Performance,* which monitors the performance of public hospitals. The Federal Commission for Protection against Health Risks was created in 2001 with the mission of regulating products and services related to health, including drugs and medical equipment, occupational and environmental exposures, basic sanitation, food safety, and health-related advertisements.

Challenges Facing Mexico

Improvements continue to be made in increasing the access and availability of health care in Mexico and in improving the quality of the available services. Evidence shows that the recent reforms are expanding access to comprehensive health care,

with the promise of extending it to all. Mexico, however, continues to face difficulties, mostly related to the challenges posed by emerging diseases. Efforts in controlling common infections and dealing with reproductive problems and malnutrition have yielded significant progress. However, after certain benchmarks were reached, such as increased vaccination coverage and reductions in deaths caused by diarrhea and acute respiratory infections, the prevalence of noncommunicable diseases began to increase, creating enormous pressures on the health system. Salient among the challenges related to the new epidemiological profile is a critical need for additional public funding to extend access to costly interventions for noncommunicable ailments, such as cardiovascular and cerebrovascular diseases, cancer, mental illness, and the complications of diabetes. Another challenge facing the reformed health system is to achieve the right balance between additional investments in public health activities and personal curative health services. Finally, additional improvements in the quality of care are still expected. To accomplish this goal, several areas must be strengthened: technical quality of care; availability of drugs in hospital settings; availability of care during evenings and weekends; and reduction in waiting times for ambulatory, emergency care, and elective interventions.

Narrowing health gaps also remains a challenge. These gaps are concentrated in rural, dispersed, and indigenous communities, especially in the southern states of the country. The main cause of gaps in health care and access is poverty. Its final solution depends on the possibility of improving the general level of well-being in these populations. Nevertheless, the experience of 20 plus years of consistent investments in public health in Mexico shows that, despite the existence of extended poverty, it is possible to reduce the burden of communicable diseases through highly effective and accessible interventions.

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