### **MEXICAN HEALTHCARE SYSTEM 2019**

## 1 GENERAL INFORMATION CONCERNING THE DEMOGRAPHIC AND ECONOMIC STRUCTURE OF THE COUNTRY

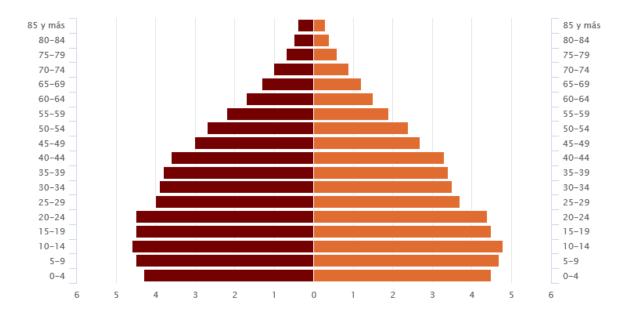
Population and official languages of the country, age-gender dispersion in the country, the share of elderly population (+65) in the overall population

There is no official language in the Federal constitution of the United Mexican States. Mexico has a population of nearly 125 million in 2018 which makes it 11<sup>th</sup> most populous country in world.

### **Age-Gender Dispersion**

In dianta.							Perce	ntage						
Indicator	1910	1921	1930	1940	1950	1960	1970	1980	1990	1995	2000	2005	2010	2015
Percentage of men	49.5	48.9	49.0	49.3	49.2	49.9	49.9	49.4	49.1	49.3	48.8	48.7	48.8	48.6
Percentage of women	50.5	51.1	51.0	50.7	50.8	50.1	50.1	50.6	50.9	50.7	51.2	51.3	51.2	51.4

Source: INEGI



Yellow: Percentage of men, Red: Percentage of women (INEGI)

### Main economic activities and sectors, general import and export figures and their ratio to Turkey

In Mexico, which has a GDP of 1.2 trillion USD, per capita income is around 9,807 USD. In 2018, the inflation rate was 4.9%, the unemployment rate was 3.3% and the GDP growth rate was 2%. 67% of the population lives in cities and poverty is very high in rural areas. 46% of the population is poor throughout the country and with this ratio Mexico ranks the first among OECD countries in terms of the difference between the richest and poorest 10%.

According to the data of 2018, Mexico is our biggest export market in Latin America with a share of 19%. Our bilateral trade volume increased by 1.8% in 2018 and reached USD 1.2 billion. In the same year, our exports to Mexico increased by 36% and imports from this country decreased by 18%, thus the foreign trade deficit against Turkey in our bilateral trade decreased by 90%. In the last 10 years, our bilateral trade volume has doubled and our exports to Mexico have quadrupled.

Mexico is the second largest economy in Latin America after Brazil and the 15<sup>th</sup> largest in the world. Mexico is the world's 12th largest exporter and importer of Latin America and the Caribbean region alone, accounting for 42% of total exports and imports of the region. 77% of the country's exports and 47% of its imports are realized with the USA. In 2018, Turkey ranked 32nd with a share of 0.2% in Mexico's imports.

In the first three months of 2019, FDI inflows to Mexico amounted to USD 10.16 billion. Investments increased by 7% compared to the same period of the previous year. It is estimated that approximately 37 million Mexican people live in the United States. Workers' remittances transferred by Mexicans working abroad have been one of the major sources of foreign currency inflow. It is known that approximately 33.5 billion USD of workers' remittances entered Mexico in 2018, of which 95% was sent by Mexicans living in the USA.

65% of Mexican GDP is composed of services sector, whereas share of industry is 32% and agriculture 4%.

The National Institute of Statistics and Geography (INEGI) reports that based on the results of the Monthly Survey of the Manufacturing Industry (EMIM), in May of the current year 2019, the total employed personnel of the manufacturing sector showed an increase of 0.3% in to the previous month, with data adjusted for seasonality.

The hours worked did not change in the fifth month of 2019 in relation to the previous month, while the average real wages paid, which include salaries, salaries and social benefits increased 0.5% in their monthly comparison, with seasonally adjusted figures.

At the annual rate, total employed personnel grew 1.3%, hours worked were higher by 0.9% and average real wages by 2.2% compared to May 2018.

### Industrial Production (seasonally adjusted figures, percentage change, 2019 May)

Concept	% Variation with respect to the previous month	% Variation with respect to the same month of the previous year
Total	-2.1	-3.1
Mining	-1.3	-8.9
Generation, transmission and distribution of electrical energy, water and gas supply through pipelines to the final consumer	-0.6	1.6

Concept	% Variation with respect to the previous month	% Variation with respect to the same month of the previous year
Building	-6.2	-9.0
Manufacturing industries	-0.2	0.4

Source: INEGI

See Excel Table and IMF (https://www.imf.org/en/News/Articles/2018/11/07/NA110818-Mexico-Economic-Outlook-in-5-Charts) for more information.

The location in and around Mexico City has been chosen by many medical and pharmaceutical companies for their Mexican headquarters. It is not only the central location and the well-developed infrastructure that speak for this region, but also its proximity to the economically strong regions of Puebla and the Bajío. The capital region has attracted companies from the chemical industry such as BASF and Bayer.

**Export-Import Balance of Chemistry Sector (million dollars)** 

Variable	May 2018	May 2019	Variation %
TOTAL EXPORT	34,251.8	36,974.8	8.0
Chemistry Export	908.2	902.9	-0.6
TOTAL IMPORT	34,899.0	34,934.2	0.1
Chemistry Import	2,455.7	2,419.6	-1.5

Source: INEGI

### 2 MAIN HEALTHCARE SYSTEM AND FINANCIAL MODELS FOR HEALTHCARE EXPENDITURES

### What is the number of hospitals in the country? (private and public sector separately)

According to OECD data, there are 4,629 hospitals in Mexico as of 2018. The number of public hospitals is around 1,500. For more information about hospitals in Mexico please refer to Ministry of Health web page <a href="http://www.oic.salud.gob.mx">http://www.oic.salud.gob.mx</a>.

### Particular Health Establishments in Mexico

Period	Number of private health facilities
2004	3,020
2005	3,172

2006	3,131
2007	3,141
2008	3,111
2009	3,108
2010	3,144
2011	3,088
2012	3,064
2013	3,071
2014	3,014
2015	2,960
2016	2,906
2017	2,877

Source: INEGI

What is the number of beds per patient? (private and public sector separately) and what is the number of doctors and nurses per patient? (private and public sector separately)

According to OECD, on average there are 1.4 beds per 1,000 population in 2017. In Mexico City this number increases to 2.4 beds per 1,000 inhabitants whereas in the state of Chiapas it is only 1 bed per 2,000 inhabitants.

### Number of Doctors per Censable Bed

Period	Number of doctors per censable bed
2004	1.51
2005	1.60
2006	1.82
2007	1.88
2008	1.87

2009	1.85
2010	1.97
2011	2.04
2012	2.05
2013	2.20
2014	2.30
2015	2.39
2016	2.32
2017	2.51

Source: INEGI

According to the Organization for Economic Co-operation and Development (OECD), a country should have one doctor for every 333 residents. Based on a 2017 World Bank estimate, Mexico has only one doctor for every 477 people.

President López Obrador says Mexico needs 123,000 more doctors to cover the country's needs. "There are 270,600 general practitioners in the country, and according to international norms, we should have 393,600 doctors," he said during a visit to a rural hospital in Michoacán on July 13, 2019. The president added that the shortage of doctors is related to low admission rates at universities for medicine programs. He said the new "National Institute of Health for Well-Being" will work with universities to train more doctors. The institute, which has not yet been approved by Congress, will operate with a budget of 80 billion pesos (US \$ 4.2 billion) and replace the Seguro Popular (Popular Health Insurance), offering medical services to people who are not covered by social security. <a href="https://mexiconewsdaily.com/news/mexico-short-123000-doctors/">https://mexiconewsdaily.com/news/mexico-short-123000-doctors/</a>

# Are there any foreign national health staff working in the country? From which country foreign medical personnel mainly come from? What is the legal procedure to employ foreign national physicians in the country?

Currently there is no study regarding foreign nationals working in the health sector, the closest study by the Mexican Government is a study called "Foreigners residing in Mexico" by the Center of Migratory Studies at the National Migration Institute, done in 2012, with data from 2009. It classifies foreigners in Mexico as "students, workers, pensioned or other" but it does not specify in which area they work. In 2017, the United Nations Department of Economic and Social Affairs Population Division gave a foreign born population in Mexico of 1,224,169. Unofficial estimates put the total number of foreigners in Mexico closer to four million.

Not all of Mexico's medical offerings are located in major medical centers. Mexico-bound health travelers often seek out smaller clinics run by two or three physicians, some of them second- and

even third-generation family enterprises. Unassuming yet clean and efficient, these clinics are often headed by either expatriate US physicians or practitioners trained in the US or Europe. Such clinics reliably treat tens of thousands of medical travelers each year, with many of their patients returning annually for checkups, dental cleanings, physicals, and a host of other treatments that can be had far less expensively than in the US, Europe, and even many Asian countries.

The legal procedure to employ foreign national physicians in the country is not different. For foreign temporal or permanent residents in Mexico, they must present the following documents to the National Institute of Migration:

- ID card as temporal or permanent resident
- Pay administrative fee
- Present a job offer, in case the foreigner will be self-employed a sworn letter must be stated.

One of the provisions for the National Institute of Migration to approve the work-permit, is that the Institute will verify that the applicable requisites are properly met, in this case this could be interpreted as a valid University Title and a "Cédula Profesional" (Professional Identification) will be necessary. In the Mexican Ministry of Education, the foreign physician must request a validation of his University title (in case he studied abroad) and to be issued a Cédula Profesional.

# What is the role of government in healthcare provision and funding? (Federal state, Territory and Local governments role and Primary-Secondary and Tertiary healthcare services)

Healthcare in Mexico can be through government institutions or private institutions. Any person who is legally employed in the private or public sector has to be inscribed in the Social Security, in general, if the person works for the private sector, they are inscribed into the "Mexican Institute of Social Security" or IMSS due to their initials in Spanish, if they are working for the federal government, they have to be inscribed into the "Institute of Social Services and Social Security for the workers of the State" ISSSTE, the workers of the Mexican Oil state company, (PEMEX) have their own institution, also military personnel in the ground and air forces (SEDENA) have a separate institution, military personnel who serve the navy (SEMAR) are inscribed to a separate institution, all the workers who work not for the federal government, but rather for a state government or local government, each have a separate institution. Additionally, since 2004 there is the option for those people who are not legally employed for whatever reason, to inscribe themselves into a popular social security hosted by the federal government; also, the Ministry of Health has general hospitals specially in each state intended for those who have none of the above, which are more resource-constrained, but can and must care for those uninsured persons.

IMSS, ISSSTE, state institutions, Pemex institutions, Military institutions and state Institutions do NOT share infrastructure or employees.

For private workers who are inscribed to IMSS, the employer and the employee have monthly quotas, the government also adds money to the payment of the social security fee, but only for the retirement account, not for the healthcare share. This, however, does not mean the Federal government does not have a budget for healthcare.

### Population According to Condition of Affiliation to Health Services

Denomination	2015
Affiliate	82.2
Not affiliated	17.3
Not specified	0.6

Source: INEGI

### What is the ratio of total healthcare expenditures to GDP?

According to OECD data, health expenditure share of GDP in Mexico is 5.5% as of 2018.

Year	Health Expenditure as % of GDP	Government/Compulsary Schemes as % of GDP	Voluntary Schemes/Household Out-of-Pocket Payments as % of GDP
2010	6.0	2.9	3.1
2011	5.7	2.9	2.8
2012	5.8	3.0	2.8
2013	5.9	3.1	2.8
2014	5.6	2.9	2.7
2015	5.8	3.0	2.8
2016	5.5	2.9	2.6
2017	5.5	2.8	2.7
2018	5.5	2.8	2.6

Source: OECD

Expenditures of health as % of Total, 2013

General Government = Social Security Private out of Pocket
Private Insurance Other

<sup>&</sup>lt;sup>1</sup> Health care needs and organisation of the health system in Mexico, OECD, Reviews of Health Systems, Mexico, 2016.

Who is covered and how is insurance financed in healthcare delivery? In other words, how is the financial distribution of healthcare expenditures in the country? (Please specify the ratio for each source of supply; publicly financed, out-of-pocket expenditure or privately insured)

Mexico's healthcare system includes small private systems as well as universal health insurance programs. The result is a mixture of private, public, and employer-funded healthcare schemes. Aside from public insurance and the private healthcare sector, state employees and members of the military enjoy separate insurance schemes.

According to the Pan American Health Organization, however, Mexico's healthcare system is relatively unequal. Despite an abundance of high-quality medical services and facilities, many people can only afford basic care. Although the government has begun spending more money on healthcare, it still has one of the lowest per capita expenditures of all OECD countries.

Mexico began its efforts to provide full healthcare coverage in 2004, with a program called Seguro Popular (Popular Health Insurance). This program was designed to make various preventative treatments affordable for the less fortunate. Some people believe that it ensures healthcare equality once and for all, whereas others still see a lack of quality in the services provided.

In addition to the Seguro Popular, there is also a regular healthcare insurance coverage for employees, which is provided by the Institute of Social Security (IMSS). Those covered pay a monthly premium calculated based on their wages, with both the state as well as their employer contribute. The Institute of Social Security also runs its own primary care units and hospitals. The quality of these facilities varies. Not all are as well-equipped as many private hospitals, and the staff mostly speak Spanish.

Residents in Mexico with private medical insurance include mostly foreigners and wealthy or middle-class Mexicans. Private insurance grants access to high-quality services and special treatments. Some Mexicans also pay for private care themselves to benefit from medical services of better quality than their public healthcare coverage provides.

Publicly financed health only covers those who have social security provided by one of the institutions previously mentioned, meaning that any person who has private health insurance, and wishes to use his or her private insurance must attend private institutions. According to Pricewaterhousecoopers<sup>2</sup> in 2012, only 7.6% of the population in Mexico, has private health insurance (Major medical expenses insurance).

A reason for this low percentage is that when you are affiliated to IMSS, ISSSTE, or any other public social security, the health services of those institutions are extensive to your direct relatives (Parents, children, spouse) effectively rendering unnecessary private health services for them.

With these and taking into account Popular Insurance and general hospitals run by the Ministry of Health that must take in people without any kind of insurance, any person in Mexico can receive health care, although the services and resources available in each institution will vary greatly.

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<sup>&</sup>lt;sup>2</sup> http://www.pwc.com/mx/es/industrias/articulos-salud/gastos-medicos.html

### Total population according to right status condition

Indicator	Percentage			
illuicator	2010	2015		
IMSS	48.8	39.2		
Seguro Popular	36.2	49.9		
ISSSTE	9.9	7.7		
Other institutions	5.0	4.8		
PEMEX, SDN o SM	1.5	1.2		

Source: INEGI

### Percentage Distribution of the Population Using Health Services According to Type of Institution

Indicator	Percentage, 2015
Private medical services	23.1
Services to the open population	40.1
Social Security	36.8

Source: INEGI

# Is there any public social insurance organization covering healthcare expenditures? If yes, please explain its structure and operations.

All the afore-mentioned institutions (IMSS, ISSSTE, SEDENA, SEMAR, Popular Insurance, Ministry of Health, etc.) are public and cover health expenditures. The biggest one of them is IMSS which was established in 1943. It is a non-centralized organism, has its own budget and patrimony, fiscally autonomous and its budget is set on the federal level. It is regulated by the "Social Security Law", a federal law that sets its scope, functions, quotas for workers, employees, contributions by the federal government, benefits, retirement, pension, etc. Today, more than half of the Mexican population benefits from the Institute, so far, the largest of its kind in Latin America. http://www.imss.gob.mx

# Is there a private healthcare insurance system in the country? If yes, what are the major private insurance companies? What are the main operational principles of the system? Do the policies cover the healthcare expenditures abroad?

There are private insurance firms, they are regulated by the National Commission for Insurances and Bonds <a href="https://www.gob.mx/cnsf">https://www.gob.mx/cnsf</a>, the commission is a deconcentrated organ dependent on the Ministry of Treasure (*Secretaría de Hacienda y Crédito Publico*) and is in charge of supervising the insurance and bonds sectors, ensuring they stick to the law and the firms that operate in these areas have sufficient solvency to cover their insurances and bonds.

### Major private insurance companies:

BBVA https://www.bbvasegurossalud.com.mx

AIG http://www.aig.com.mx/

GNP <a href="http://www.gnp.com.mx/">http://www.gnp.com.mx/</a>

MAPFRE <a href="https://www.mapfre.com.mx/">https://www.mapfre.com.mx/</a>

MetLife <a href="http://www.metlifemas.com.mx/">http://www.metlifemas.com.mx/</a>

## Direct Premiums 2014

Direct premium	Am	ount (Millions of pesos)	Share (%)	Annual Growth rate (%)
Life	\$	148,657.00	41.6	2.8
Pensions	\$	20,521.00	5.7	-1.9
Accidents and sickness	\$	56,483.00	15.8	6.1
Damages	\$	131,803.00	36.9	-3.5
Damages without cars	\$	63,215.00	17.7	-6.2
Cars	\$	68,588.00	19.2	-0.8
Total	\$	357,465.00	100	<b>0.6</b> 3

Whether or not the private insurance covers expenses abroad, it depends on the type of insurance and company that is providing it.

Do public funds cover treatment abroad? If yes, please provide information concerning the relevant bureaucratic steps. Please explain and indicate the steps of abroad treatment decision, selection criteria and process of the country/hospital for abroad treatment, patient transfer process and financing/payment method of the treatment

No, public funds do not cover treatment abroad.

#### **3 MAIN INDICATORS AND INFORMATION ABOUT HEALTH TOURISM**

What are the most commonly seen diseases in the country? Please specify in order. What is the average time limit for access to treatment of those most commonly?

As vaccinations and preventative drugs have been made widely available, malaria rates have been steadily dropping over the past decade, and tuberculosis mortality is also on a downward trend. Conditions have been improving, but both afflictions still present greater risks in Mexico than in most of the Western world.

Mexico's epidemiological profile has changed dramatically over the past 20 years. In the 1990s the main causes of premature death were communicable diseases such as diarrhea and respiratory infections or birth complications. However, in 2016, obesity and diabetes were declared epidemics, the first noncontagious diseases to be considered as such. Deaths associated to these diseases caused 17.4 % of deaths in 2014, according to the Mexican National Institute of Statistics and Geography, INEGI. However, a quarter of deaths stem from a range of cardio-pulmonary diseases

<sup>&</sup>lt;sup>3</sup> https://www.gob.mx/cms/uploads/attachment/file/87876/Anuario Estad stico 2014.pdf Statistical Anual Review 2014, National Comission for Insurances and bonds.

including ischemic and hypertensive heart disease, stroke, and chronic obstructive pulmonary disease. Obesity is the major risk factor for all the above, affecting seven in ten Mexicans. Interpersonal violence is also a relatively high killer, accounting for 5.4 percent of deaths, or 32.7 deaths per thousand. Cirrhosis of the liver, kidney disease, and road injury round out the top ten lists of killers, at 4.1 percent, 2.5 percent, and 2.3 percent of deaths, respectively.

According to the Ministry of Health, the 10 main causes of disease on a National Level in 2015 are:

- 1. Acute respiratory infections
- 2. Intestinal infections
- 3. Urinary infections
- 4. Gastritis, Ulcers, Duodenitis
- 5. Gingivitis and periodontal diseases
- 6. Conjunctivitis
- 7. Medium acute otitis
- 8. Acute vulvovaginitis
- 9. Obesity
- 10. Hypertension

On 12 February 2019, the Pan American Health Organization/World Health Organization (PAHO/WHO) received a report regarding surgical site infections caused by antibiotic-resistant Pseudomonas aeruginosa after invasive procedures performed in Tijuana, Mexico. As of 11 February, a total of 20 cases, 16 confirmed and 4 suspected, have been identified in nine states in the United States. <a href="https://www.who.int/countries/mex/en/">https://www.who.int/countries/mex/en/</a>

On 26 November 2015, national health authorities in Mexico notified PAHO/WHO of 3 cases of Zika virus infection, including two autochthonous cases (residents of Nuevo León and Chiapas) and one imported case (with history of travel to Colombia). The diagnoses were made by the national reference laboratory using reverse transcription polymerase chain reaction (RT-PCR). Mexican health authorities are implementing the corresponding prevention and control measures. Investigations are ongoing.

On 25 November 2013 The Ministry of Health in Mexico has reported an additional four cases of infection with Vibrio cholerae O1 Ogawa. Of these, three are from the state of Veracruz and one from the state of Hidalgo. Since the beginning of this outbreak in September 2013 to date, a total of 184 confirmed cases, including one death, of cholera due to Vibrio cholerae O1 Ogawa has been reported in the country. Of these, 160 cases from the state of Hidalgo, 11 from the state of Veracruz, nine from the state of Mexico, two are from the Federal District, and two from the state of San Luis Potosi.

On a national level, according to the Ministry of Health (<a href="http://www.oic.salud.gob.mx/">http://www.oic.salud.gob.mx/</a>), the Median time to receive medical care is 30 minutes, however the national average is 71 minutes, which means half of all people seeking medical treatment will wait much more than 30 minutes.

Are there any abroad treatment/patient transfer to another country for the treatments of those most commonly seen diseases? If yes, to which county and for which disease/ treatment do they send patients abroad? How does this patient transfer proceeds?

According to the Medical Tourism Association, about 14 million people in the world travel to other countries in search of medical care annually. It is an activity worth between 50 and 70 thousand million dollars. Currently, Thailand is the top destination for Medical Tourism, receiving one million 200 thousand visitors, according to statistics of Patients Beyond Borders.

It is followed by Mexico, which annually receives a million tourists who seek health services. Most of them are Canadians and Americans (mostly from Texas, Nevada, Arizona and Southern California). However, patients from the UK are also drawn to the region largely due to the waiting times from overburdened public healthcare systems and the lure of the warm Caribbean waters.

Mexico offers from 25% to 65% saving in medical services while the quality of the medical care is usually similar to or better than care in America and Canada. Common medical procedures that medical tourists seek in Mexico include dental work, weight loss surgery, cosmetic surgery, orthopedic treatments and heart surgery. <a href="https://www.newsweek.com/thousands-americans-cross-border-mexico-affordable-medical-treatment-each-1426943">https://www.newsweek.com/thousands-americans-cross-border-mexico-affordable-medical-treatment-each-1426943</a>

For which reasons and for which treatments do patients go abroad? (Waiting lists, insufficiency of health staff, inadequacy of healthcare providers, high cost, relaxation purposes etc.) Which counties do they prefer frequently?

Mexico is generally preferred by other countries for medical treatment. See below.

Are there any legal and actual obstacles when the government sends (its citizen) patients to abroad (other country/healthcare institution)? If yes, what do they consist of? Is there any other country that does lobbying in healthcare sector or conducts a definite market penetration strategy? How do the other countrys' dominance in healthcare sector?

None that we are aware of.

What are the main dominant international accreditation certifications in healthcare sector in the country?

With new facilities and services has come increased international recognition. In 2006 Mexico had no Joint Commission International accredited facilities; in 2018 it has eight such facilities referring to the JCI's "gold standard" approval system for global healthcare.

What are the main foreign and local investments in healthcare sector in the country? (Please specify hospitals, pharmaceutical and medical equipment manufacturers seperately) Are there any Turkish origined healthcare investments, donations or any kid of contribution in the country? If yes, at which level?

The best hospitals and clinics in Mexico are located in Mexico City, Monterrey, and Guadalajara. There are private clinics that cater to Americans in Tijuana, Laredo, and Mexicali. These cities in relatively close proximity to the US border, has become the center of medical tourism. Some hospitals in Mexico have hired English speaking doctors and medical staff to help English speakers feel more at ease.

Major health provider groups include Grupo Empresarial Angeles, Star Medica, Hospital San Jose, Centro Medico ABC, Hospital Español, Amerimed Hospitales, Hospitales San Angel Inn, Grupo Christus Muguerza, and Medica Sur.

There are 59 hospitals that declare to have foreign capital investment, according to the Foreign Investments Registry, these investments are classified as "Mexican societies with foreign capital". The Foreign Investments Registry also records 82 foreign companies that perform "commerce acts" in Mexico, but none of them are hospitals. Refer to the Excel file for more information.

While the Mexican government keeps track of FDI with sectors and subsectors, in the report, the manufacturing sector, does not include a subsector related to manufacturing of pharmaceutics or medical devices.

According to a study by ProMexico, pharmaceutical businesses in Mexico are located in Mexico City (29%), Jalisco (21%), Estado de Mexico (10%), Puebla (5%), Morelos (4%), and Nuevo Leon (3%).

Turkish Cooperation and Coordination Agency (TİKA) set up a neonatal intensive care unit at the Tijuana General Hospital, which operates under the National System for Integral Family Development (DIF) in Baja California, Mexico.

Located on the US border as a transit point for a number of illegal activities such as illegal immigration and drug trafficking, the city of Tijuana faces certain problems while providing fundamental public services such as education and health due to high organized crime rates. Approximately 8,500 childbirths occur in the hospital, which provides services for the low-income, fragile and disadvantaged groups of the city. 450 of these childbirths require intensive care and ventilatory support.

Taking action in line with the request of the Tijuana General Hospital, TİKA set up an intensive care unit in order to fight against the complications that newborns with perinatal asphyxia (medical condition resulting from deprivation of oxygen to a newborn infant due to the inadequate oxygenation of maternal blood) face. As part of the installment of the said unit, a nasal CPAP system (nasal continuous positive airway pressure device that provides respiratory support for premature babies with respiratory problems) and other relevant medical equipment (oxygen blender, respiratory humidification device etc.) were provided. The neonatal intensive care unit will play a vital role in decreasing the infant mortality rate due to perinatal asphyxia and preventing a number of mental and physical disorders by avoiding possible postnatal complications. https://www.tika.gov.tr/en/news/tika supports mexico in maternal and infant health-49046

TİKA has inaugurated a new free health care center in Mexico in 20.04.2019, the only center serving some 15,000 residents in an area hit hard by a 2017 earthquake. TIKA opened the 1,750-square-meter (18,837 square foot) wellness center in El Espinal in Oaxaca, central Mexico.

The center provides first-class health service to 300 people per day, free of charge. The center boasts two medical clinics, a dental clinic, gynecology facilities, a delivery room, a preventive health services room, a staff training room, and a pharmaceutical depot. Housing for doctors working at the center is also provided. <a href="https://www.aa.com.tr/en/health/turkish-aid-agency-opens-healthcare-center-in-mexico/1452020">https://www.aa.com.tr/en/health/turkish-aid-agency-opens-healthcare-center-in-mexico/1452020</a>

## Are there any drug shortages at medications in the country? In which treatments are there inadequate medication?

Shortages of doctors, nurses and medicine are among the problems faced by hospitals in 24 states as a result of federal budget cuts to the health sector. A report published in 22.05.2019 in the newspaper Milenio said the reduction in health funding — part of the government's wider austerity plan — is affecting hospitals in the north of the country, the Bajío region, central and southern Mexico and the Yucatán peninsula. <a href="https://mexiconewsdaily.com/news/hospitals-under-pressure/">https://mexiconewsdaily.com/news/hospitals-under-pressure/</a> Public hospitals and healthcare clinics face medicine shortages. <a href="https://mexiconewsdaily.com/news/government-stopped-buying-medicine/">https://mexiconewsdaily.com/news/government-stopped-buying-medicine/</a>

### What are the main procurement methods for medical devices (import, donation, aid, etc)?

Due to the public institutions in Mexico, the main procurement method for medical devices is public tender. After Brazil, the Mexican medical device market is the second largest in Latin America.

In order to sell product into the medical device market, it should be known that manufacturers are required to register their product, or products, with Mexico's Comisión Federal para la Protección contra Riesgos Sanitarios, or COFEPRIS. COFEPRIS a regulatory body that operates under the umbrella of the Mexican Secretariat of Health. In addition to approving items for sale and use in the Mexican medical device market, the entity also has authority over issues related to pharmaceuticals, food safety some environmental matters, as well as regulatory discretion in matters having to do with organ transplants.

In great part, the steps required to the approval of a product into the Mexican medical device market are akin to the rules that are in place in the European Union.

### Are the diagnostic laboratories and imaging centers qualitatively and quantitatively sufficient?

In general, large public and private hospitals in Mexico regularly seek out the most modern and highly-specialized medical devices. Approximately 400 laboratories manufacture pharmaceuticals in Mexico and they are concentrated in the Mexico City metropolitan area, and the states of Jalisco, México, Puebla and Morelos.

According to a news dated June 11, 2019 problems at the hospitals include shortages of medicine, equipment and staff. For patients in Mexico's health system, quality of care can vary greatly depending on which insurance system a patient is enrolled in. A doctor who works both in ISSSTE hospital and Seguro Popular says that chronic problems at Seguro Popular hospitals include shortages of medicine, equipment and personnel, which leads to lower standards of care for patients. In contrast, at the ISSSTE hospital, if something is needed it is done the next day. ISSSTE provides health care to government workers while the Seguro Popular provides insurance to people who are not covered by other programs. <a href="https://mexiconewsdaily.com/news/seguro-popular-most-affected-by-austerity/">https://mexiconewsdaily.com/news/seguro-popular-most-affected-by-austerity/</a>.

The State Workers' Social Security Institute (ISSSTE) has declared a state of "virtual bankruptcy" due to the high levels of debt and low liquidity left by the previous government. The federal health service has debt of 18.91 billion pesos (US \$990.7 million) and just 37 centavos available to cover each peso of liabilities, according to its 2019 financial report. ISSSTE ran a deficit of just over 14

billion pesos last year but that was partially offset by an 8.89-billion-peso cash injection from the government.

<a href="https://mexiconewsdaily.com/news/government-employees-health-service-near-bankruptcy/">https://mexiconewsdaily.com/news/government-employees-health-service-near-bankruptcy/</a>

In 09.04.2019, the federal government has announced the creation of a new health care program for people not covered by the IMSS and ISSTE social security schemes. A new government department to be called the National Institute of Health for Well-Being will provide medical services to more than 60 million Mexicans without insurance.

According to new program announced, the Seguro Popular health care program – which currently offers free health care services to people with no other insurance – would be replaced by a new scheme. The president blamed past governments for privatizing parts of the health care system and leaving it "in ruins" as a result. <a href="https://mexiconewsdaily.com/news/amlo-announces-new-health-care-program/">https://mexiconewsdaily.com/news/amlo-announces-new-health-care-program/</a>

#### 4 MAIN INFORMATION ABOUT HEALTHCARE EDUCATION AND BILATERAL COOPERATIONS

Are there any faculties of medicine and/or institutions providing healthcare education in the country? If yes, how many public and private university do have medical faculties? Please provide information concerning the geographical distribution and international cooperations of these medical faculties with other foreign universities.

The most important medical schools are at the National University of Mexico (UNAM), Universidad La Salle, the Popular University of Puebla, the National Polytechnics Institute (IPN), the University of Guadalajara, and the schools of the Army and the Navy.

Many hospitals in Mexico enjoy affiliation with major educational institutions. Hospital San Jose Tec de Monterrey, for example, is sponsored by the internationally recognized Tecnológico de Monterrey, a premiere educational institution that boasts more than 18,000 full-time students and operates 32 campuses across Mexico. Through its Medical School, Center for Biotechnology, and Center for Innovation and Technology Transfer, Tecnológico de Monterrey educates health professionals, while developing new models for clinical care and research.

According to the Mexican Board for Accreditation of Medical Education (COMAEM), there are 158 programs in Universities and Campus across the country,<sup>4</sup> not all of them are accredited, by the council, but they are counted by them. 89 of these programs are accredited.

The council was created in 2002, because the Mexican Government issued stricter guidelines to accredit Universities that offer medical programs. This organization is part of the National System for Accreditation.

Are there any health agreement, protocol or Memorandum of Understanding (MoU) with Turkish government? If yes, please indicate them with their exact titles and date of signatures.

None about health.

<sup>&</sup>lt;sup>4</sup> http://www.comaem.org.mx/wp-content/uploads/2019/04/global.html

### **5 MAIN OPERATIONAL PRINCIPLES OF THE PHARMACEUTICAL SECTOR**

What is the general legal framework concerning the pharmaceutical sector? (Licensing, Pricing, Production, Import, Export, Investment, Medication)

The Ministry of Health, through the Federal Health Risk Protection Commission (COFEPRIS) oversees the sector, there are laws for the following:

- General Health Law for Health Research
- Regulations of the Federal Health Risk Protection Commission
- Regulations for Health Inputs
- Guidelines to comply with Good Clinical Practices in Health Research
- Guidelines for Provisions for Bioequivalence Studies

A wide span of medicines, medical devices and other health-related products, e.g. biological products or raw materials for the elaboration of medicines, must be registered with the COFEPRIS and/or require an import permit prior to their import. In some cases, their arrival must be notified to the authorities.

Medical devices already registered with the food and drug administration authorities in the USA and Canada may be subject to a facilitated registration procedure. Depending on the product, a certificate proving that the goods in question are freely sold in the country of export and a proof of good manufacturing practice (GMP) may have to be presented. For more information, please consult the following documents:

- Certificate of Good Manufacturing Practice
- Free Sale Certificate
- Registration of Medicines and Other Health-Related Products
- Sanitary Import Permit for Medicines and Other Health-Related Products.

Whereas general labelling requirements for national and imported products (i.e. indication of prices in the national currency, use of internationally valid symbols/units, declaration of all required information in Spanish, etc.) are stipulated by the Mexican Federal Consumer Protection Law, the labelling requirements for particular goods are further specified in the corresponding Mexican Official Standards (NOMs).

Labels of medicines and medical devices must be in accordance with the valid regulations and Mexican standards. They are to be prepared in Spanish and must, amongst others, state the following information as minimum information:

- generic and specific name of the product
- name and address of the manufacturer or distributor
- instructions for conservation of the product
- date of expiration
- batch number
- dose and means of administration
- warning, precautions (including precautions with regard to pregnancy)
- legend or symbol which marks the product as interchangeable generic drug (if applicable)

- details of the living organism used for preparing the drug and the name(s) of the disease(s)
  which it is intended for, according to the internationally acceptable nomenclature (in the
  case of drugs of biological immunological origin and action)
- further details and information as specified in the according Mexican Official Standard (NOM).

# Is there any pharma manufacturing industry in the country (local-international)? What are the names of the international pharmaceutical manufacturers that currently have production plants in the country?

The pharmaceutical industry in Mexico is one of the most developed in Latin America, with significant local production of active ingredients and finished products.

Mexico is the second largest pharmaceutical market in Latin America and 11th in the world and also an important producer of high-tech drugs. Main investor countries in the sector are United States, Ireland and Spain. MSD, Boehringer Ingelheim, Schering Plough, Bayer, AstraZeneca, Pfizer and GlaxoSmithKline, among others are the biggest companies. 20 out of the 25 most important companies worldwide have a presence in the country. There are also local brands, especially for generic drugs, but they are not as big as international brands.

### Is there any medication that can not be provided within the medical treatment?

In a drive to reduce costs and improve healthcare outcomes, there has been a trend towards outsourcing specialized procedures and care. For instance, most dialysis services in Mexico are provided by private sector companies under contract to public healthcare agencies.

Many public and private hospitals are outsourcing surgical procedures to companies that offer integral surgery services or surgery centers. These services are delivered as "pay-per-event" and include all the necessary equipment and personnel required to perform a surgery. Thus, hospitals can avoid big capital investments in plant and equipment, materials, pharmaceuticals, and instruments, while gaining access to some of the most modern specialized surgical products.

# What is the total size of the pharmaceutical market and its composition in terms of therapeutic groups?

According to BMI Research, the value of Mexico's pharmaceutical market reached MXN 189.68 billion (USD 10.03 billion) in 2017 and will grow to MXN 345.00 billion (USD 18.22 billion) by 2027. Pharmaceutical spending made up 0.88 percent of GDP and per capita spending was USD 78 in 2017. Through 2027, analysts expect pharmaceutical sales to grow at a compound annual growth rate of 6.2 percent, mostly driven by Mexico's aging population and the increasing incidence of chronic diseases.

There is no information regarding share of the market according to therapeutic groups, just the total size of the pharmaceutic market. For detailed statistics please refer to: <a href="https://stats.oecd.org/">https://stats.oecd.org/</a>

### What are the top 5 pharmaceutical companies, distributors and molecules?

Pharmaceutical: Bayer, Pfizer, Astra Zeneca, Roche

Distribution: Walgreens-Boots-Alliance, Nadro, FESA and Marzam.

# Is there any tendering, if yes, what are the percentages of tender & free market as market shares (%)?

The pharmaceutical industry established in Mexico is fully capable of supplying, as it has for years, the demand for health supplies required by public institutions. Public tenders represent the 51.7% of acquisitions in the pharmaceutic sector, the remaining 48.3% is private acquisitions, and 91.5% of these private expenses are out of pocket.<sup>5</sup> These tenders of Mexican government could be followed via https://www.comprasdegobierno.gob.mx/.

For most opportunities, it is not required to have a local representative or an office in Mexico to bid on a tender and sell to the Mexican Government. However, a local office can simplify obtaining bid documents and supporting after-sales service and parts, in addition to tracking competitors and reassuring the procuring agency of your long-term commitment to the market. Frequently, the tender requires some type of local presence and Spanish-language skills.

### How many pharmaceutical companies are there in the market?

Mexico has the presence of multinational pharmaceutical companies such as: 8 Roche, Pfizer, Johnson & Johnson, Sanofi, Merck, Novartis, Gilead, GlaxoSmithKline and Amgen. There are 252 companies with foreign capital in this industry.

The United States is the largest foreign supplier of pharmaceutical products to the Mexican market.

Are there any high level policy papers (strategic plan, sectoral strategy papers, related sections in development plans) determining the strategy of pharmaceutical sector? If yes, please give brief points of its content.

Within the context of National Development Plan (2019-24), investment in infrastructure and health services as well as "National Institute of Health for Well-being" are mentioned. On pages 44-45 of the referred Plan (https://lopezobrador.org.mx/wp-content/uploads/2019/05/PLAN-NACIONAL-DE-DESARROLLO-2019-2024.pdf) the health system of Mexico is stated as: "The administration that started on December 1, 2018 found a system of insufficient, inefficient, depauperated and corroded public health by the corruption. Millions of people do not have access to any of the institutions or modalities of that system or face suffering for which there is no coverage. As in other areas, the disaster of public health system is the result of privatization efforts and guidelines issued by international organizations co-opted by the Neoliberal ideology The result: in a period in which the clinics, clinics and private hospitals of all categories, including of great luxury, the public establishments have been freed to the sacking of the corruption, bureaucratic indolence and budget narrowing. Is almost normative that patients in state hospitals have to bring your own healing materials and be forced to wait months before undergoing surgery, both for the saturation of the operating rooms as for decompositions or lack of equipment. Others do not even get access to therapies and treatments because they are not affiliated with any social security institution or because the coverage of Seguro Popular is insufficient. In sum, the right to health is denied partially or totally to the most unprotected sector of the Mexican population."

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<sup>&</sup>lt;sup>5</sup> DuTilly & Consultores: Pharmaceutical Industry in Mexico: 2016 perspectives

"The federal government will take the necessary actions to ensure that 2024 all and all the inhabitants of Mexico can receive medical attention and free hospital, including the supply of medicines and materials of healing and clinical exams. This objective will be achieved through the creation of the National Institute of Health for Wellbeing, which will serve throughout the national territory. to all the people not affiliated with IMSS or ISSSTE. The attention will be provided in attention to the principles of social participation, technical competence, medical quality, cultural relevance, non-discriminatory, dignified and human treatment.

- The fight against corruption will be permanent throughout the health sector.
- Public hospitals of the various units will be dignified federal
- Disease prevention will be prioritized through campaigns of awareness and insertion in school programs on nutrition issues, healthy habits and sexual and reproductive health.
- A national information campaign on addictions will be launched.
- Sports practices will be promoted in all its modalities."

### What are the government incentives and promotions for the pharma sector?

There is no government incentive specifically for pharma sector other than the programs designed for foreign investments. Ministry of Economy together with State Governments carry out investment incentives for foreign companies.

### What are the generic and originator product market shares?

The pharmaceutical market in Mexico is divided into patented medicines, which represent 51 percent of the market by value, generics with 35 percent, and OTC products with the remaining 14 percent. According to the Federal Commission for the Protection Against Sanitary Risks (COFEPRIS), the country's regulatory authority for the sector, generics represent more than 80 percent of the market in terms of volume.

### **WEB RESOURCES**

#### **Public Institutions**

- Secretariat of Health www.salud.gob.mx
- Federal Commission for the Protection Against Sanitary Risks www.cofepris.gob.mx
- Mexican Institute of Social Security <u>www.imss.gob.mx</u>
- Institute of Social Security and Services for Public Employees www.issste.gob.mx
- National Center for Health Technology Excellence <u>www.cenetec.salud.gob.mx</u>
- National Commission of Medical Arbitration <a href="http://www.conamed.gob.mx/">http://www.conamed.gob.mx/</a>

#### **Private Institutions**

- Mexican Association of Medical Device Innovation Industries <a href="http://amid.org.mx">http://amid.org.mx</a>
- National Chamber of the Pharmaceutical Industry www.canifarma.org.mx
- Mexican Association of Pharmaceutical Research Industries <u>www.amiif.org.mx</u>
- National Association of Drug Manufacturers www.anafam.org.mx/
- Mexican Pharmaceutical Association <a href="http://afmac.org.mx">http://afmac.org.mx</a>
- National Association of Private Hospitals http://www.anhp.org.mx/
- Mexican Association for Insurance Institutions <a href="http://www.nadaessegurotusegurosi.com.mx/">http://www.nadaessegurotusegurosi.com.mx/</a>

#### **Private hospital chains**

- Hospital San Angel Inn www.hospitalsanangelinn.mx
- Centro Medico ABC <u>www.abchospital.com</u>
- Medica Sur www.medicasur.com.mx/
- Grupo Angeles www.gass.com.mx/
- Hospitales Star Medica <u>www.starmedica.com/</u>
- Christus Muguerza www.christusmuguerza.com.mx/
- Beneficencia Española www.beneficenciaespanola.com.mx/
- Amerimed Hospitals <u>www.amerimedcancun.com/</u>