# An Overview of Mexico's Medical Tourism Industry

## The Cases of Mexico City and Monterrey

Version 1.0
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Further information can be found at the research group's website:
http://www.sfu.ca/medicaltourism/

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# LIST OF ACRONYMS

| | |
|---|---|
| **ANUIES** | National Association of Universities and Institutions of Higher Education |
| **ABC** | American British Cowdray Medical Center |
| **AICM** | International Airport of Mexico City |
| **CCTS** | Consultative Council for Medical Tourism in Mexico City |
| **CIA** | Central Intelligence Agency |
| **CIMA** | International Medical Centre |
| **CNPSS** | National Health Commission for Social Protection |
| **CONAPO** | National Population Council |
| **CSG** | General Health Council |
| **EAP** | Economically Active Population |
| **ENSANUT** | National Health and Nutrition Survey |
| **FMPT-DF** | Federal District's Board of Tourist Promotion |
| **GDP** | Gross Domestic Product |
| **IMSS** | Mexican Social Security Institute |
| **INEGI** | National Institute of Statistics and Geography |
| **INI** | National Indigenous Institute |
| **ISSSTE** | State Worker's Institute of Social Security Services |
| **JCI** | Joint International Commission |

| | |
|---|---|
| **NGOs** | Non-Governmental Organizations |
| **NIPH** | National Institute of Public Health |
| **PEMEX** | Mexican Petroleum Company |
| **PPP** | Purchasing Power Parity |
| **REPSS** | State's Social Health Protection System |
| **SECTUR** | Ministry of Tourism |
| **SEDESOL** | Ministry of Social Development |
| **SEDENA** | Ministry of National Defense |
| **SEMAR** | Ministry of Navy |
| **SEP** | Ministry of Education |
| **SiNaCEAM** | National Certification System of Medical Care Establishments |
| **SPS** | Popular Health Insurance |
| **SPSS** | Social Health Protection System |
| **SS** | Ministry of Health |
| **UNAM** | National Autonomous University of Mexico |
| **UNDP** | United Nations Development Program |
| **WHO** | World Health Organization |

# INTRODUCTION

Medical tourism occurs when patients travel internationally to obtain privately-funded medical care. Medical tourism is a global practice, with hospitals and clinics in a diverse array of destination countries vying to treat such international patients. Mexico is one of these destination countries. In this document we provide an overview of Mexico's blossoming medical tourism industry. This overview has been generated based on information gathered from media and policy sources, field notes taken during site visits to public and private health care facilities in the country, immersive observational research, and informal conversations with various stakeholders in Mexico's medical tourism industry.

Our research group is interested in developing a better understanding of the health equity impacts of medical tourism on destination countries. In other words, we are interested in understanding if and how medical tourism is helpful and/or harmful to people living in destination countries and their health. Mexico is one of four countries that our work is focused on, which is why we have produced this profile. The medical tourism industries in Barbados, India, and Guatemala are also being examined. We are studying the medical tourism industries and their impacts in these countries as part of an international grant funded by the Canadian Institutes of Health Research. You can learn more about our research by visiting: www.sfu.ca/medicaltourism/.

In the sections that follow we offer some general information on Mexico and its health system before going into detail about key developments in its medical tourism industry. Complementing the main text, nine Appendices provide additional detailed insights. Appendix 1 offers a synthesis of media coverage of medical tourism in Mexico City's main newspapers in recent years, while Appendix 2 is a synthesis of media coverage of

medical tourism in Monterrey. In Appendix 3 we share a summary of policy documents central to medical tourism in Mexico. In this Appendix we consider five health equity indicators most often discussed in the medical tourism literature: (1) impacts on health human resources; (2) government involvement in the industry; (3) foreign investment in the industry; (4) impacts on private health care; and (5) impacts on public health care. In Appendix 4 we provide a list of agencies involved in medical tourism in Mexico City and Monterrey. Appendices 5 and 6 are respectively a map of facilities in Mexico City and Monterrey interested in medical tourism. Appendix 7 summarizes the advertised medical services and Appendix 8 lists the accepted national and international insurance agencies for select hospitals in Mexico City. Finally, the trade and investment treaties in Mexico are included in Appendix 9.

# 1. AN OVERVIEW OF MEXICO

Mexico, officially the United Mexican States, covers almost two million square kilometers, 72% of which is coast, and is the fifth largest country in the Americas. Mexico shares its borders in the north with the United States, the south with Guatemala and Belize, the west with the Pacific Ocean and the east with the Gulf of Mexico and the Caribbean Sea. Politically, Mexico is a federation of 31 states and a federal district, represented by a democratic and republican government. The federal government and the states have equal status and maintain principles of autonomy and association (CONAPO, 2013). In 2010, the Mexican population was over 112 million, 51.2% female, 23.2% rural, and no less than 10.7% indigenous, according to the National Indigenous Institute (INI). The population growth rate over the period 2000-2010, was 1.4% annually (INEGI, 2011a), and is undergoing a demographic transition towards an aging population.

## 1.1 Economy

Mexico experienced fairly consistent growth in GDP over the 2000 to 2011 period, ranging from 0.8 to 6.6% annual growth rates, excluding a significant drop in 2009 following the global financial crisis (Banco de México, 2012). Mexico's largest employment sector is commercial goods and services, comprising 60.9% of the working population in 2011, up from 53.8% in 2000; while employment within industrial and agricultural sectors has been steadily decreasing. Of the total population in 2010, 73.4% were men, 67.6% were employees, and 32.7% had incomes three times higher than the minimum wage (INEGI, 2011a). The country's unemployment rate was 4.5% in 2010 (INEGI, 2011b), although a slight decline has been forecasted for 2013.

## 1.2 Understanding Mexico's Health System

In 1943, the Mexican government began to assume direct responsibility for the provision of health services by creating the Mexican Social Security Institute (IMSS) as a tripartite financing institution (in which representatives of employers, workers, and the state participate in the highest governance body). This institute was responsible for providing health services to workers from the private sector, which belonged to the formal economy, and their families. However, those outside of the private sector, and the domain of public health, were not covered by IMSS. Therefore, in 1943, the Department of Health and Welfare (now the Ministry of Health) was also founded in response to the needs of the uninsured and low-income population, and for the regulation of health care.

In the early 1960s, the second social security institution of the country, the State Worker's Institute of Social Security Services, (ISSSTE), was founded. This institution was responsible for the medical attention given to federal public workers; with a tripartite funding scheme similar to that of the IMSS. During the same period of time, other social security institutions were created, as well as exclusive medical services, for workers belonging to the Navy, the Secretary of National Defense and Mexican Petroleum Company (PEMEX).

The structure created in the 1940s remained unchanged for several decades, until in 1983 when changes to the General Health Law declared health care a fundamental right for all citizens, and decentralization of the Ministry of Health (SS) services began. In 2002, the Popular Health Insurance (SPS) was piloted in five Mexican states. In April 2003, the reform of the General Health Law was approved, thus creating the Social Health Protection System (SPSS), effectively making social health protection a right of the Mexican population. By 2006, the SPSS was operational in 32 states. Operation of the SPSS is

coordinated by the National Health Commission for Social Protection (CNPSS). In each state there is an institutional office called the State's Social Health Protection System (REPSS) that is responsible for receiving and transferring funds to the health units to provide health care to their respective population.

The main objective of the reform was to create a financial mechanism to ensure that all Mexicans, regardless of their ability to pay, receive health care according to their needs. To achieve its objectives, the SPSS offers voluntary insurance to people outside of the formal wage labor market. At the end of 2010, they had almost 16 million families affiliated, becoming the second most important health insurance system in the country (Nigenda et al., 2011). However, the Mexican health system has many challenges to meet. According to results from the National Health and Nutrition Survey (ENSANUT), there is a significant amount of the population that does not have sufficient access to health services (21.39%) (National Institute of Public Health [NIPH], 2012). The executive summary of the survey states:

> Considering the coverage of children under five years of age and relatives of those with social security, health care protection coverage reaches about 79% of Mexicans nationally, an increase in coverage from 39.8 million people in 2000 to 85.8 million people in 2012. This increase is more evident among individuals in lower income households, indicating the progressive nature of the Social Protection System in Health Care (NIPH, 2012). Presently, Mexico's National Health Care System continues to be fragmented. It consists of several public, private, and social security institutions. The provision of services is not integrated. Each insuring institution has its own network of hospital providers (e.g., IMSS, ISSSTE, etc.) that assist its covered population. A person or family

member with insurance is not able to receive services in a different institution.

Table 1 (NIPH, 2012).

(FRENK & GOMEZ-DANTES, 2008) SHOWS THE DIFFERENT SOURCES THAT FUND EACH OF THE HEALTH INSTITUTIONS. A BRIEF DESCRIPTION OF THE HEALTH INSTITUTIONS, INCLUDING THE PERCENTAGE OF POPULATION COVERED IS PROVIDED IN TABLE 1 (NIPH, 2012).

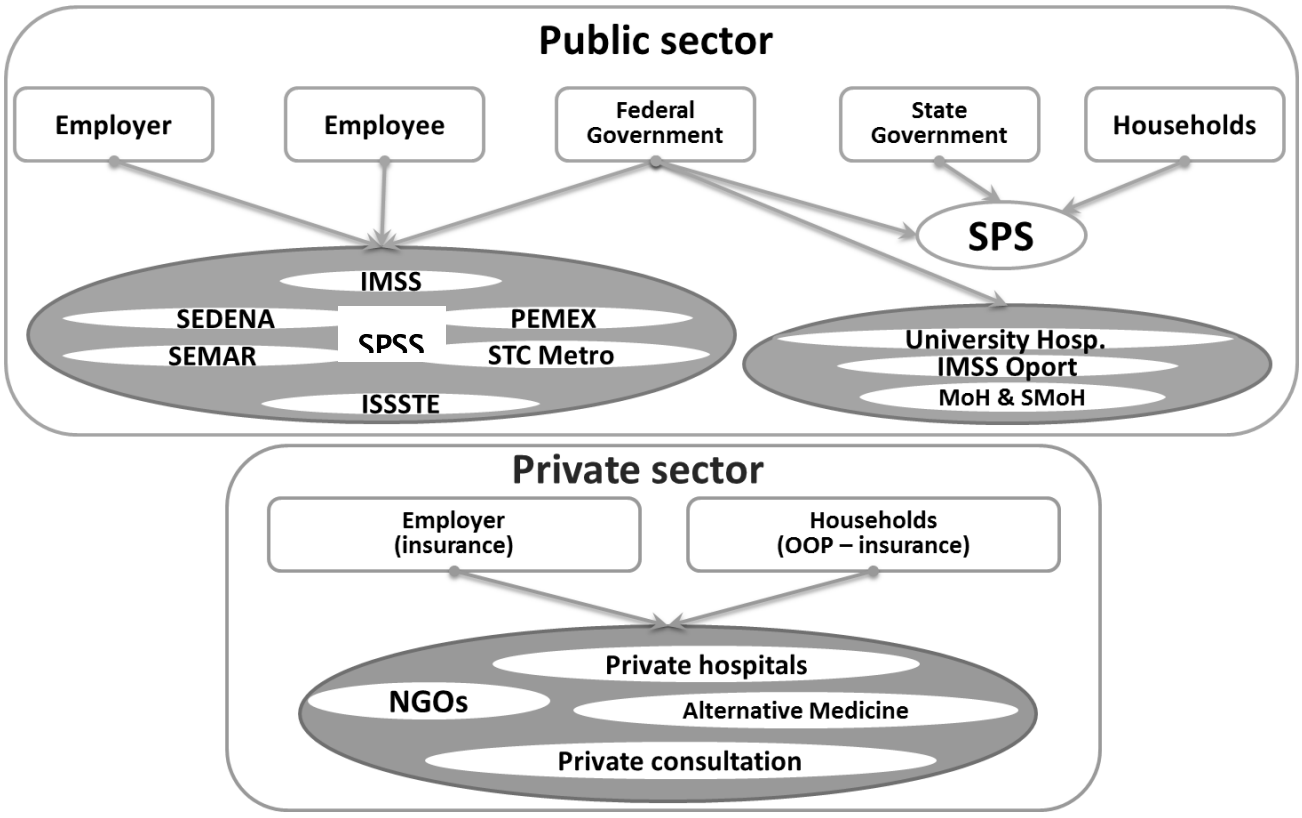



FIGURE 1: MEXICAN HEALTH CARE SYSTEM FINANCING (FRENK & GOMEZ-DANTES, 2008)

TABLE 1: HEALTH INSTITUTIONS AND POPULATION COVERAGE IN MEXICO IN 2012

| Type | Institutions | Legal Nature | Main sources of finance | % of Population Covered* |
|---|---|---|---|---|
| **SS** | Health Ministry (SS) / Social Health Care Protection System (SPSS). | Public institutions that belong to state governments | Federal / State | 38.53 |
| **Social Security** | Mexican Institute of Social Security (IMSS) | Body tripartite (government, business and workers) | Government and employers contribution | 32.19 |
| | Institute of Security and Social Services for State Workers (ISSSTE) | Public institution with legal personality and own Equity | Government and employers contribution | 6.00 |
| | Armed Forces, Navy (SEMARNAT) and PEMEX | Public institution with legal personality and own Equity | Own | 0.74 |
| **Private** | Private | Corporations | User's Pockets | 0.41 |
| **Other** | Various | Various | Charity/ User's Pockets | 0.59 |
| **None** | | | | 21.39 |

* The percentage does not equal 100% because the results were taken from ENSANUT, where 0.15% did not answer or stated not knowing to which health institution he/she was affiliated to

### 1.2.1 Health Care Expenditure

Health care spending in Mexico is comprised of various funding sources. Government spending consists of contributions from general taxes and social security contributions provided by workers and employers. Private spending is made up of the direct payments from users and a small proportion of private insurance. In 2011, of the total health care expenditure, 49% was public expenditure and 51% was private spending (SS, 2012a). Health care spending has increased significantly in recent years, rising from 5.6% of GDP

in 2000, to 6.5% in 2005 (Frenk & Gomez-Dantes, 2008), and reaching 7% in 2010. Public expenditure on health care per capita also rose during this time (SS, 2011a).

### 1.2.2 Health Human Resources

Figure 2 through Figure 5: **AVAILABILITY OF BOTH BACHELOR AND COLLEGE NURSES IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN MEXICO (RATE PER 100,000 INHABS., SS 2000; 2005; 2010)**

(SS, 2000; 2005; 2010) depict the availability of medical personnel, general practitioners, medical specialists and nurses in the three main public health institutions from 2000 to 2010. The trend has been towards substantial decreases in availability within the ISSSTE, general decrease or stagnation in personnel across the IMSS, with the exception of a noticeable increase in medical specialists, and increased availability with the SS.

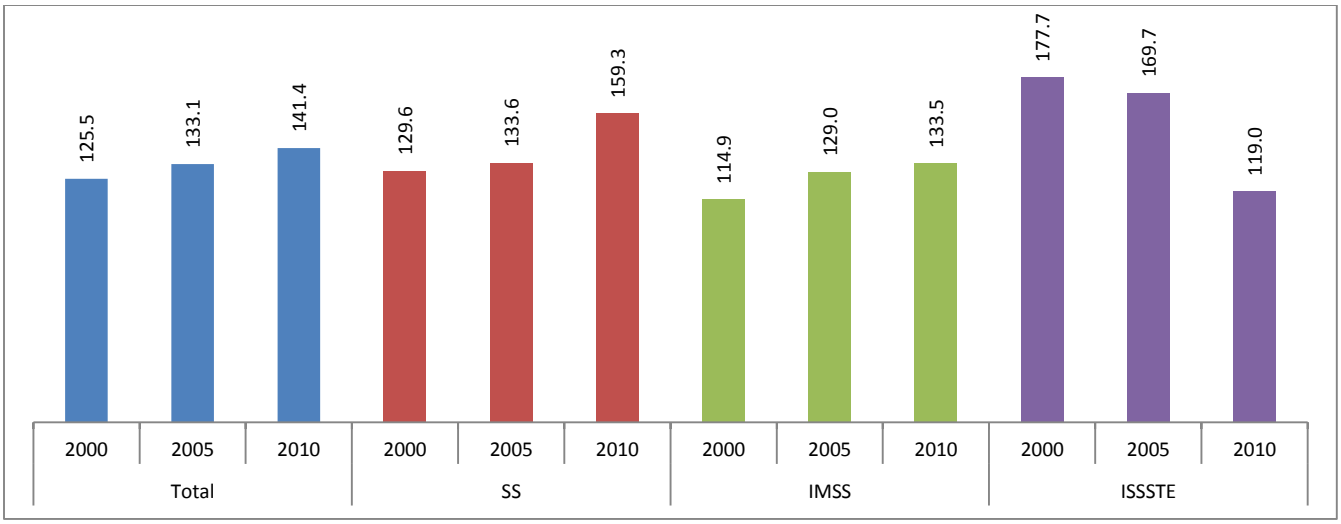



**FIGURE 2: AVAILABILITY OF MEDICAL PERSONNEL IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN MEXICO (RATE PER 100,000 INHABS., SS 2000; 2005; 2010)**

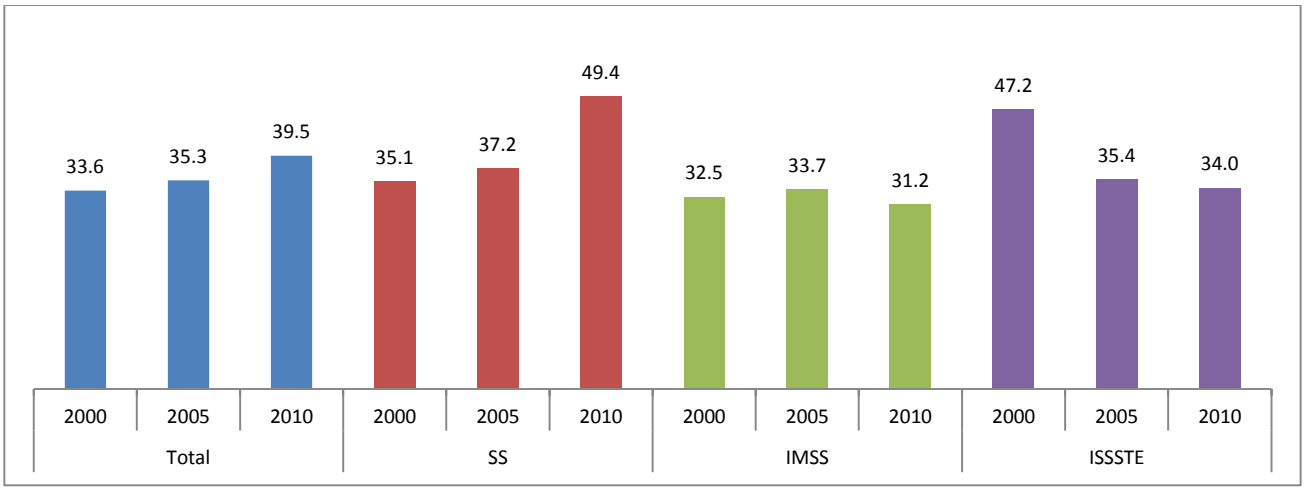



FIGURE 3: AVAILABILITY OF GENERAL PRACTITIONERS IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN MEXICO (RATE PER 100,000 INHABS., SS 2000; 2005; 2010)

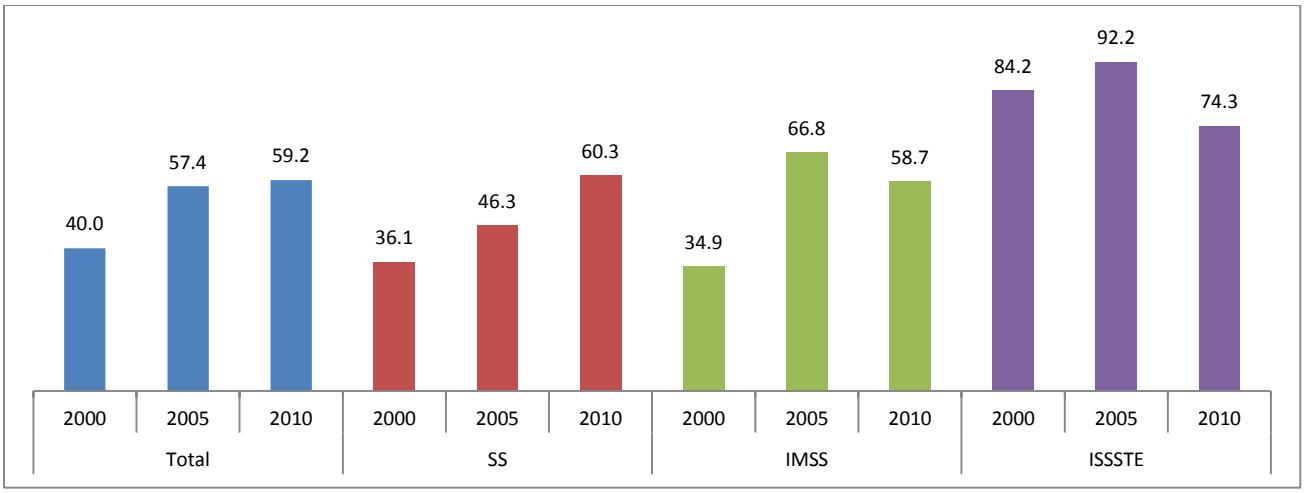



FIGURE 4: AVAILABILITY OF MEDICAL SPECIALISTS IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN MEXICO (RATE PER 100,000 INHABS., SS 2000; 2005; 2010)


FIGURE 5: AVAILABILITY OF BOTH BACHELOR AND COLLEGE NURSES IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN MEXICO (RATE PER 100,000 INHABS., SS 2000; 2005; 2010)

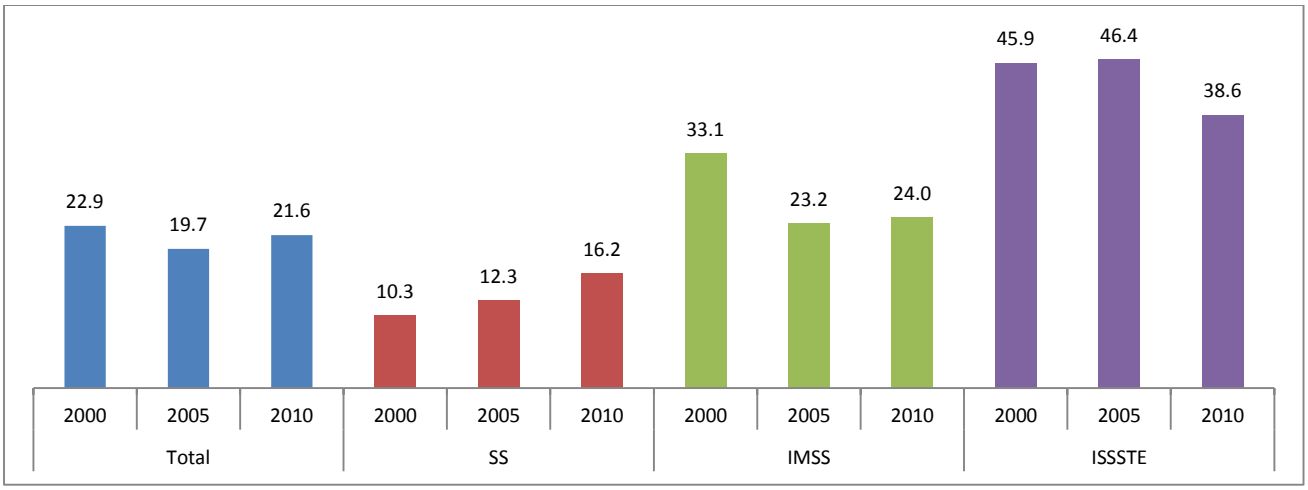



FIGURE 6: AVAILABILITY OF SPECIALIZED NURSES IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN MEXICO (RATE PER 100,000 INHABS., SS 2000; 2005; 2010)

### 1.2.3 Public Health Care Facilities

In this section Figure 7 through Figure 9 (SS, 2000; 2005; 2010) depict indicators of public health infrastructure for the main health care providers, specifically, availability of ambulatory care units, medical consultation, and hospital infrastructure. The data suggest that, relative to the IMSS and the ISSSTE, the greatest availability of ambulatory units and physicians belongs to the SS. In the case of hospital resources, the three main

public health institutions demonstrate similar levels of hospital beds, but the SS has more operating and recovery rooms.

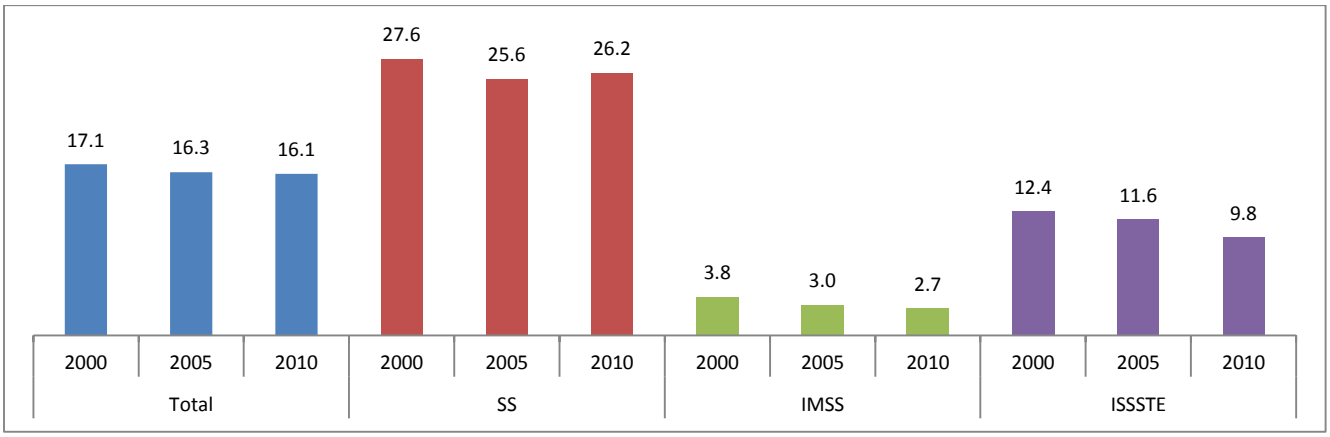



**FIGURE 7: AVAILABLE AMBULATORY CARE UNITS IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN MEXICO (RATE PER 100,000 INHABS., SS 2000; 2005; 2010)**

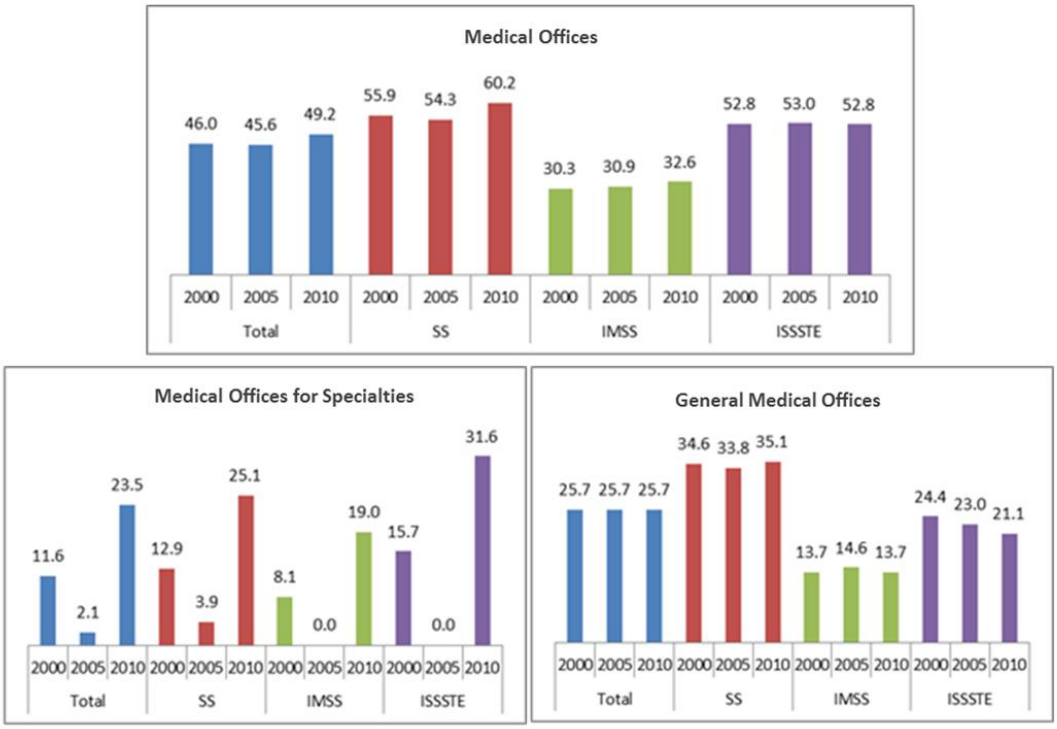



FIGURE 8: AVAILABLE DOCTOR'S OFFICES FOR OUTGOING PATIENTS IN THE THREE MAJOR PUBLIC HEALTH INSTITUTIONS IN MEXICO (RATE PER 100,000 INHABS., SS 2000; 2005; 2010)

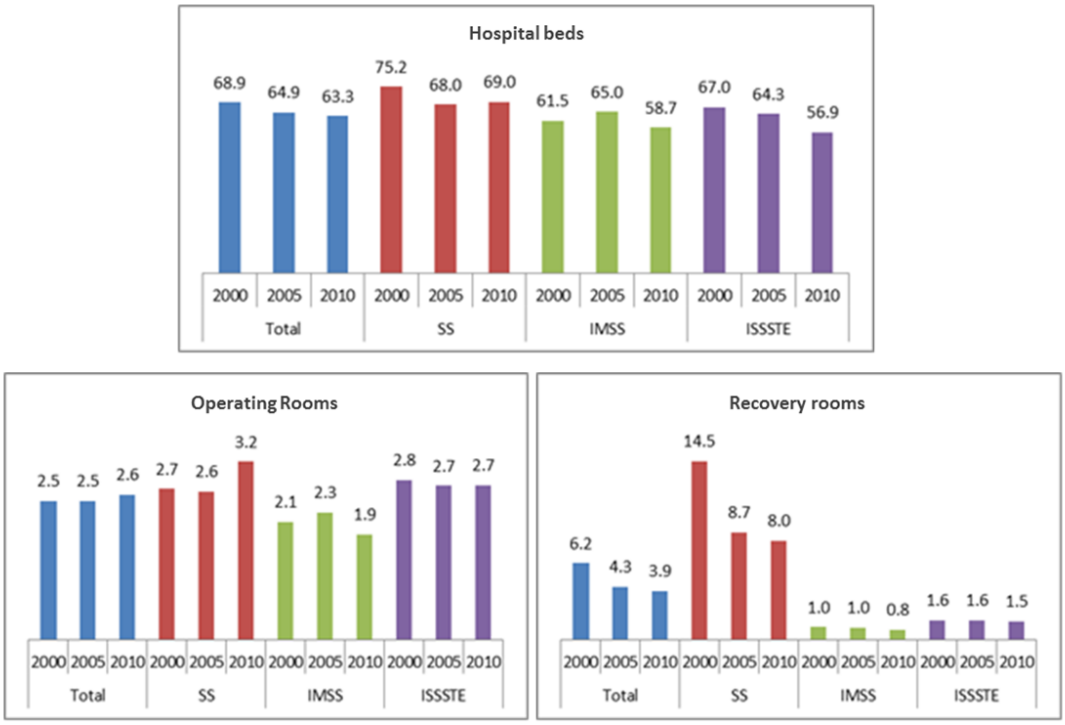


FIGURE 9: AVAILABILITY OF HOSPITAL RESOURCES IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN MEXICO (RATE PER 100,000 INHABS., SS 2000; 2005; 2010)

### 1.2.4 Key Public Health System Challenges

- Addressing access to health services (beyond coverage only)
- Increasing the percentage of GDP allotted for health services
- Offsetting the negative effects of fragmentation of the health system
- Improving training of health care personnel across disciplines and according to the assessed health care needs of Mexican society
- Increasing access to medical specialists as required by the needs arising from shifts in the country's demographic and epidemiological profile
- Improving the quality of health care being delivered
- Generating innovative public policies for preventative health care

### 1.2.5 Private Health Care Facilities

LITTLE INFORMATION IS AVAILABLE REGARDING PRIVATE HEALTH CARE FACILITIES AT EITHER THE NATIONAL OR STATE LEVEL. THE HEALTH DEPARTMENT HAS FAILED TO INCLUDE DATA IN ITS OFFICIAL PUBLICATIONS REGARDING THE PRIVATE SECTOR FOR OVER 10 YEARS. HOWEVER, THANKS TO THE WORK OF SOSA (2007) IT IS POSSIBLE TO PRESENT SOME INFORMATION REGARDING THESE FACILITIES. THE NUMBER OF PRIVATE MEDICAL UNITS AND THE DISTRIBUTION OF HUMAN RESOURCES BY THE TYPE OF MEDICAL ESTABLISHMENT ARE PRESENTED IN TABLE 2 AND

Table 3 (Sosa et al., 2007). The volume of health human resources in the private units for 2004 was estimated at 326,847 workers. However, it is important to note that a proportion of these workers are also employed in the public sector. In 2008, the National Survey of Occupation and Employment made it possible to estimate that 39.1% of doctors worked in private institutions. (Nigenda et al., 2010).

TABLE 2: PRIVATE MEDICAL UNITS ACCORDING TO TYPE OF ESTABLISHMENT IN MEXICO IN 2004

| Type of Establishment | N | % |
|---|---|---|
| **External Consultations** | 88,759 | 86.2 |
| **Hospitalization** | 2,513 | 2.5 |
| **Support and Social Assistance** | 11,668 | 11.3 |
| **Total** | **102,940** | **100** |

TABLE 3: DISTRIBUTION OF HUMAN RESOURCES FOR HEALTH CARE ACCORDING TO TYPE OF ESTABLISHMENT IN MEXICO IN 2004

| | | |
|---|---|---|
| **Type of Establishment** | **N** | **%** |
| **External Consultations** | 177,478 | 54.3% |
| **Hospitalization** | 64,716 | 19.8% |
| **Support and Social Assistance** | 84,653 | 25.9% |
| **Total** | **326,847** | **100%** |

## 1.3 Health and Equity Indicators

The following information highlights some key information regarding income inequality in Mexico, the status of education, as well as fundamental health outcomes. All data were collected from the World DataBank (http://databank.worldbank.org/) unless otherwise cited.

### 1.3.1 Income Distribution

Mexico has made improvements in its overall measures of income inequality, specifically in its Gini Index (where 0 signifies perfect equality and 100 signifies perfect inequality), Mexico scored a 48.3 in 2008, down from 53.1 in 1998. While this is slightly higher than their North American neighbours, Canada scoring a 32.1 (in 2005) and the US scoring a 45 (in 2007); it is better than their Latin American neighbours, Guatemala scoring a 55.1 (in 2007) and Honduras scoring a 57.7 (in 2007) (Central Intelligence Agency [CIA], n.d.). In 2010, the bottom 20% of the Mexican population held 4.9% of the total wealth, the second 20% held 8.8% of the wealth, the third 20% held 13.3% of the wealth, the fourth 20% held 20.2% of the wealth, and the top 20% held 52.8% of the total wealth. At the

same time, 0.7% of the population was living below the $1.25 (PPP) a day poverty line, and 4.5% were living below the $2.00 (PPP) a day poverty line.

### 1.3.2 Education

Illiteracy rates in Mexico are declining, with a 2.6% overall reduction in prevalence between 2000 and 2010 (6.9% down from 9.5%). When gender is disaggregated, the decrease in illiteracy is larger for women (3.2%; 8.1% down from 11.3%) than men (1.9%; 5.6% down from 7.4%), although the prevalence of female illiteracy remained higher than men's during this time period. Data from the National Autonomous University of Mexico (UNAM) showed that out of the total illiterate population in 2010, 40% were male and 60% were female (UNAM, 2012). The average level of schooling reached by the Mexican population in 2010 was the third year of high school (INEGI, 2011a).

### 1.3.3 Life Expectancy and Mortality

In 2012 life expectancy at birth in Mexico was 77.1 years, up from 74.3 in 2000 and 70.8 in 1990. Life expectancy at birth is slightly longer for females (79.6) compared with males (74.8). Mexico has made progress in both infant mortality rates (13.9 per 1,000 live births in 2012, down from 36.8 per 1,000 in 1990) and under five mortality rates (16.2 per 1,000 live births in 2012, down from 46.2 per 1,000 in 1990). Progress has also been made in maternal mortality rates, 50 deaths per 100,000 in 2010, a considerable reduction from 92 per 100,000 in 1990.

### 1.3.4 Nutrition Outcomes

Mexico does not suffer from high levels of child malnourishment, although 13.6% of children under five are categorized as stunted (height for age), only 2.8% are classified as underweight (weight for age), and 1.6% as wasted (weight for height). Conversely, 9% of

children under five meet the criteria for overweight. The World Health Organization (2011) estimated that in 2010, 68.3% of the adult Mexican population was overweight, and 32.1% were obese.

### 1.3.5 Noncommunicable Disease

Mexico has undergone an epidemiological transition from communicable to noncommunicable diseases. In 2010, communicable diseases along with maternal, perinatal and nutritional conditions contributed to 12% of total mortality (WHO, 2011). In contrast, noncommunicable diseases accounted for 78% of total mortality, including cardiovascular diseases (26%), cancers (13%), respiratory diseases (6%), and diabetes (13%) (WHO, 2011).

# 2. AN OVERVIEW OF MEXICO CITY

The capital city of Mexico, Mexico City, also known as the federal district, is home to the federal powers of the United Mexican States. As of 2010, Mexico City (excluding the larger metropolitan area) had the highest population density in Mexico, with 8,859,080 (or 7.9% of the population) spread over 485,000km$^2$ or 5,920 inhabitants per km$^2$ (INEGI, 2011c). Its average annual population growth rate from 2000 to 2010 was 0.30% and life expectancy at birth was 76.3 years for men and 78.8 years for women.

The population of Mexico City is 99.5% urban, relative to 78% of the total Mexican population. Similar to national statistics, 52.16% of the city's population is female, while 22.5% of the population is under 15, and 11.6% is 60 or over ( 7% less and 2.5% higher than national levels, respectively) (INEGI, 2011b). Mexico City is also a part of the broader Mexican Metropolitan Area, comprised of 76 municipalities, and a total population of 20,116,000 (Ministry of Social Development [SEDESOL] et al., 2012). A portion of the population residing outside of the federal district but within the metropolitan area utilizes health services within the federal district (Table 4, Ministry of Health of the Federal District, 2013). While this activity has been steadily declining since 2001, it continues to constitute a notable percentage.

**TABLE 4: PERCENTAGE OF PATIENTS IN THE STATE OF MEXICO DISCHARGED FROM HOSPITALS IN THE FEDERAL DISTRICT FROM 2001-2011**

| Year | Medical Discharges | |
|---|---|---|
| | N | % of Total Medical Discharges |
| 2001 | 20,536 | 22.3 |
| 2003 | 24,507 | 21.9 |
| 2005 | 25,404 | 20.4 |
| 2007 | 19,779 | 15.0 |
| 2009 | 16,428 | 12.4 |

| Year | Medical Discharges | |
|---|---|---|
| | N | % of Total Medical Discharges |
| 2011 | 16,444 | 11.9 |

## 2.1 Economy

Mexico City is the leading contributor to Gross Domestic Product (GDP) in the country, contributing on average 17.8% of the annual total from 2000 to 2011. Throughout this period of time, it has had an average annual percentage increase of 7.05%. The main economic activity is commerce and trade. The economically active population (EAP) in the federal district was 4,173, 981 individuals (59% male and 41% female) (INEGI, 2011c). The overall unemployment rate is 4.8% (5.5% among males and 3.8% in women). In 2010, 80.7% of the employed population was carrying out tertiary activities or services, 16.5% in the industrial sector and 0.7% in the primary sector (INEGI, 2011c). When these indicators were differentiated by gender, higher male participation was observed in the industrial sector (70%). Furthermore, 16.35% of the employed population mentioned informal trade as their main business activity.

## 2.2 Health Care Expenditure

Mexico City has been continually increasing their public health expenditure as a percentage of its GDP, rising by 34% between 2000 and 2005 (2.85% to 3.36%); and another 26.4% between 2005 and 2010 (3.36% to 3.79%). It ranks 11$^{th}$ in the country overall in allotment of spending on public health. However, Mexico City invests relatively little into public health when considered as a percentage of total public spending. This percentage has fallen over the 2000 to 2010 period, from 13.91% to 10.45%, with a period low in 2005 of 9.81%. This places Mexico City as number 31 of the 32 states in public health spending as a percentage of total public expenditure.

## 2.3 Health Human Resources

In 2012, Mexico City employed 145,134 health workers in the public sector (see Table 5, SS, 2012b), which accounted for 18.4% of the national total. Doctors and nurses accounted for 54.6% of all health personnel.

**TABLE 5: HUMAN RESOURCE TOTAL AND CASE OF DOCTORS AND NURSES IN NATIONAL PUBLIC HEALTH ENTITIES AND MEXICO CITY**

| Human Resources | National | Mexico City | | |
|---|---|---|---|---|
| | | N | % local | National Total % |
| **Total** | 786,014 | 145,134 | 100 | 18.46 |
| **Doctors*** | 202,461 | 34,245 | 23.5 | 16.91 |
| **Nurses**** | 267,531 | 45,204 | 31.1 | 16.89 |

The total number of medical staff members in public health care institutions in Mexico City declined between 2000 and 2010, although this was due solely to decreased availability within the ISSSTE, as the IMSS and SS actually increased their rates. The total number of general practitioners overall increased slightly due to significant increases in the SS. There is a greater availability of specialized physicians in public institutions in Mexico City relative to general practitioners. Similar to the medical staff, nurses affiliated with the public institutions in Mexico City experienced an overall decline in availability between 2000 and 2010, with the SS having the greatest availability again. Upon further examination, the trends were predominately reversed by type of nurse, with a general trend towards increased numbers of general nurses over time and a general decrease over time in specialized nurses. Figure 10 throughFigure 15 provide additional detail on the information presented above (SS, 2000; 2005; 2010).

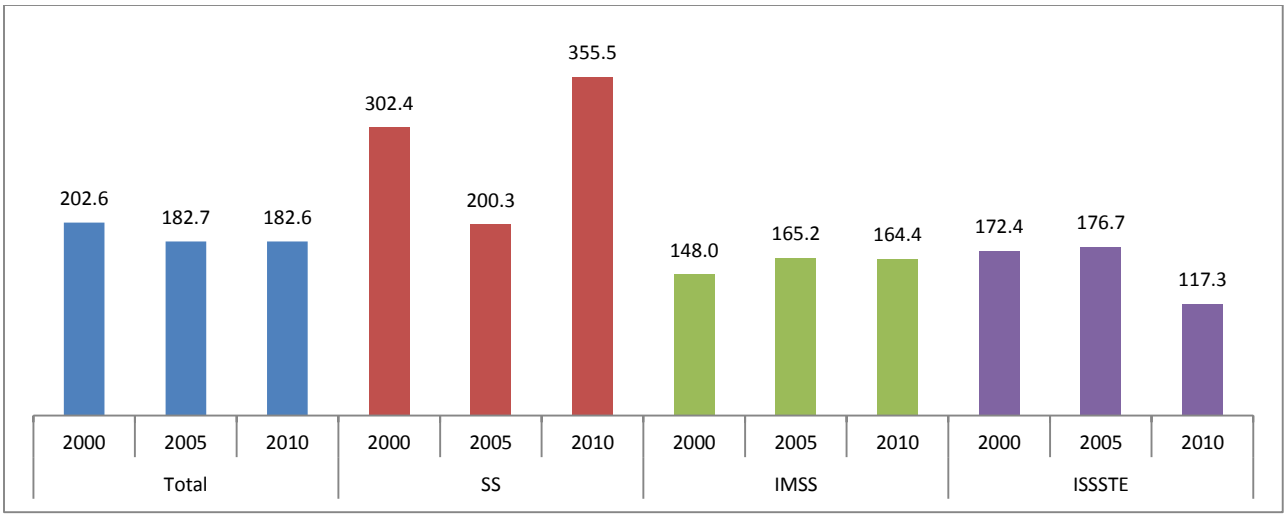



FIGURE 10: AVAILABILITY OF MEDICAL PERSONNEL IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN MEXICO CITY (RATE PER 100,000 INHABS., SS 2000; 2005; 2010)

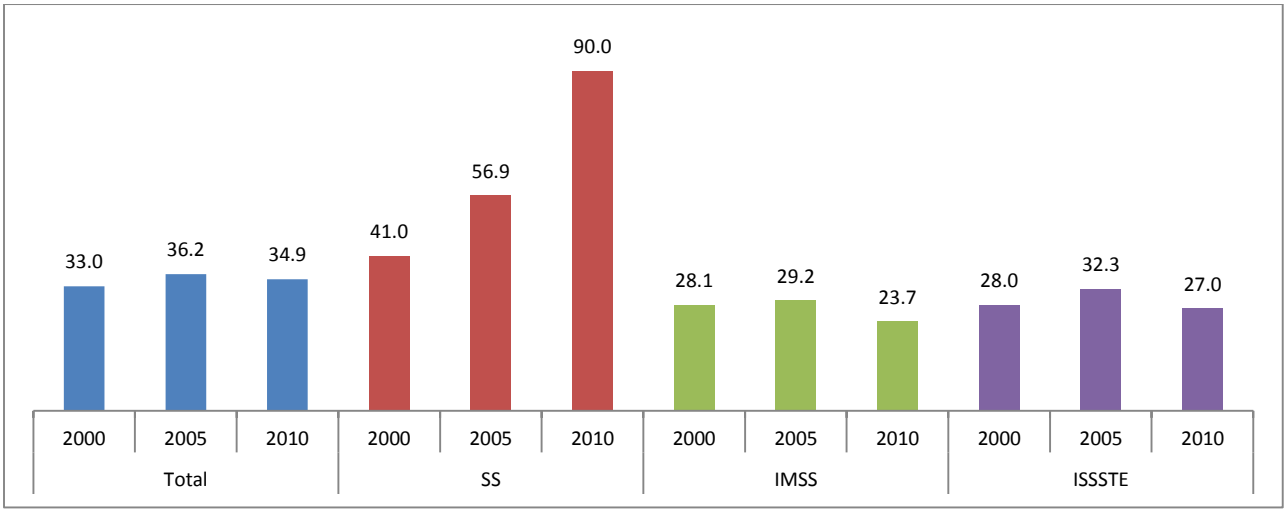



FIGURE 11: AVAILABILITY OF GENERAL PRACTITIONERS IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN MEXICO CITY (RATE PER 100,000 INHABS., SS 2000; 2005; 2010)

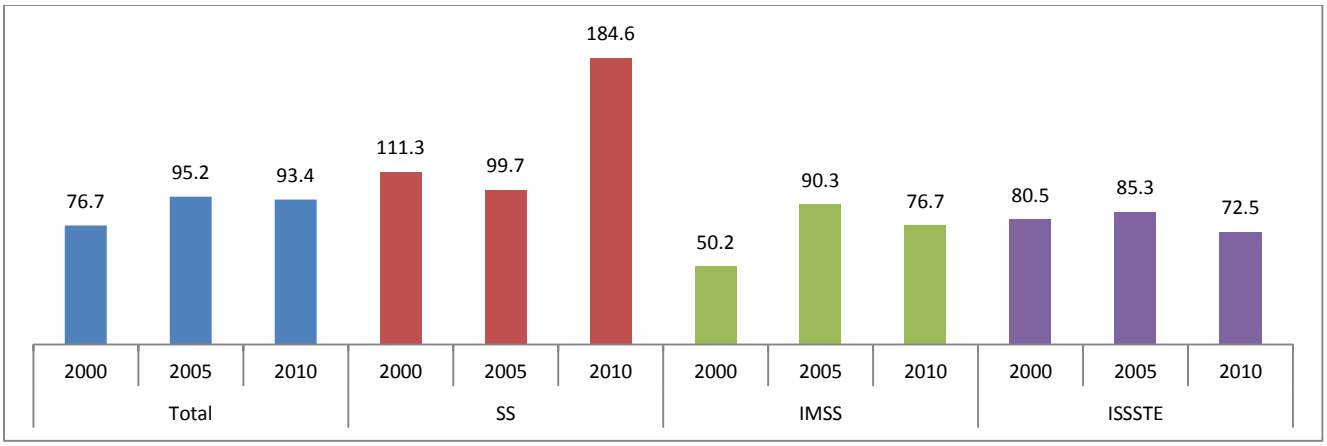


FIGURE 12: AVAILABILITY OF MEDICAL SPECIALISTS IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN MEXICO CITY (RATE PER 100,000 INHABS., SS 2000; 2005; 2010)

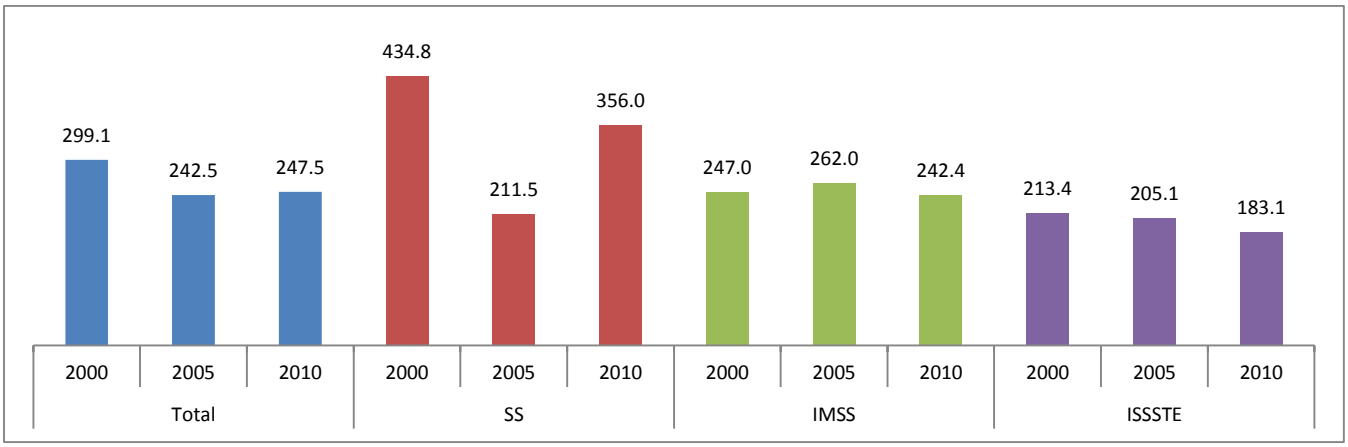



FIGURE 13: AVAILABILITY OF NURSES IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN MEXICO CITY (RATE PER 100,000 INHABS., SS 2000; 2005; 2010)

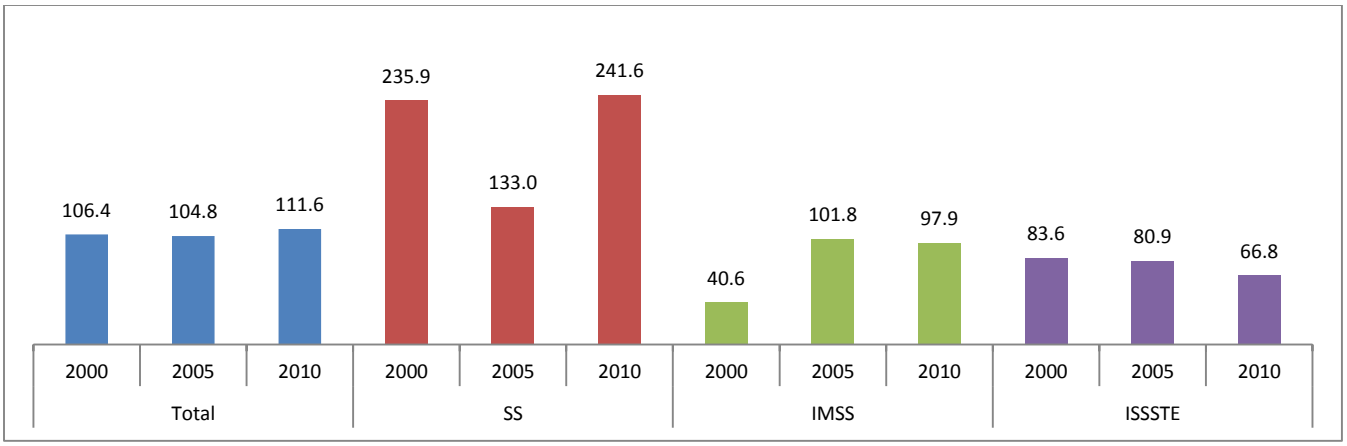



FIGURE 14: AVAILABILITY OF GENERAL NURSES IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN MEXICO CITY (RATE PER 100,000 INHABS., SS 2000; 2005; 2010)

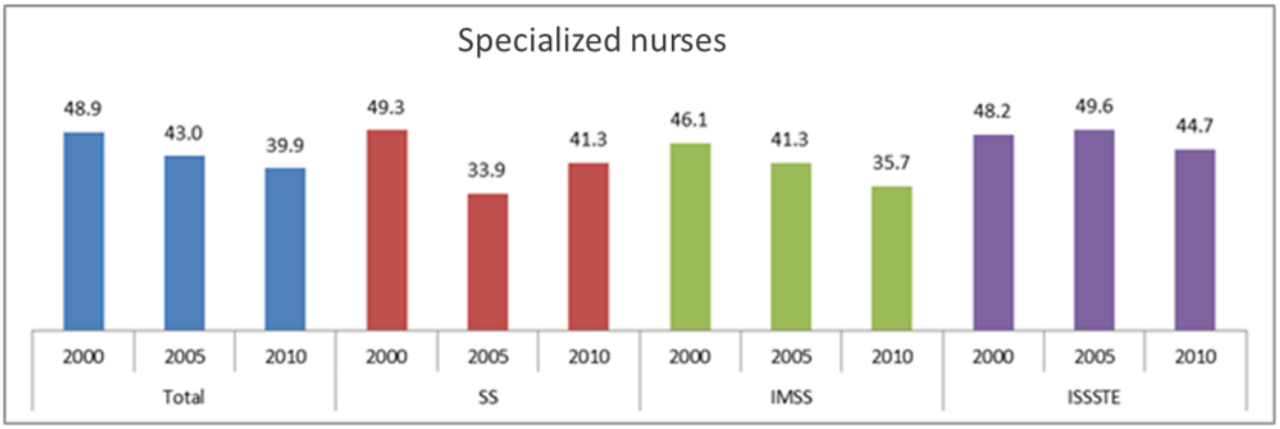


FIGURE 15: AVAILABILITY OF SPECIALIZED NURSES IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN MEXICO CITY (RATE PER 100,000 INHABS., SS 2000; 2005; 2010)

## 2.4 Public Health Care Facilities

This section (Figure 16 toFigure 18, SS, 2000; 2005; 2010) depicts indicators of public health infrastructure for the main health care providers, specifically, availability of medical consultation and hospital infrastructure. The data suggest that, relative to the IMSS and the ISSSTE, the greatest availability of medical units, physicians, and hospital resources belongs to the SS.

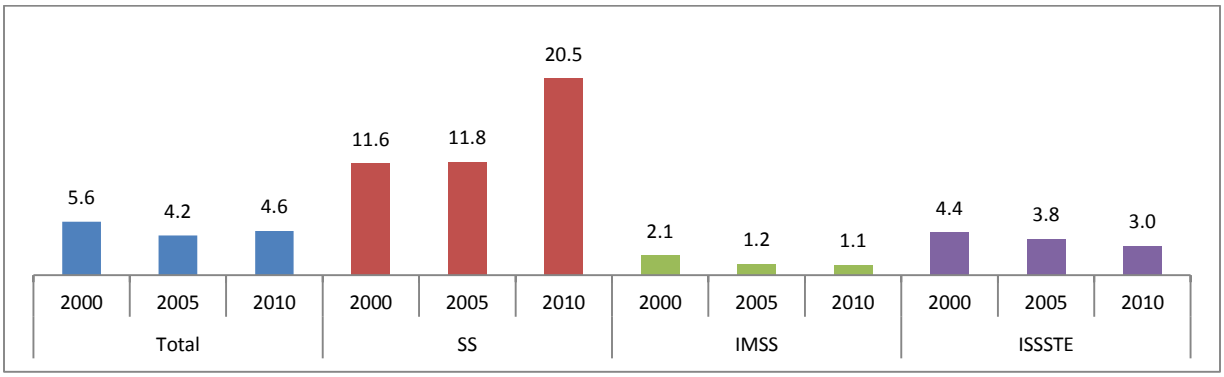



FIGURE 16: AVAILABLE MEDICAL UNITS IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN MEXICO CITY (RATE PER 100,000 INHABS., SS 2000; 2005; 2010)


FIGURE 17: AVAILABLE DOCTOR'S OFFICES FOR OUTGOING PATIENTS IN THE THREE MAJOR PUBLIC HEALTH INSTITUTIONS IN MEXICO CITY (RATE PER 100,000 INHABS., SS 2000; 2005; 2010)

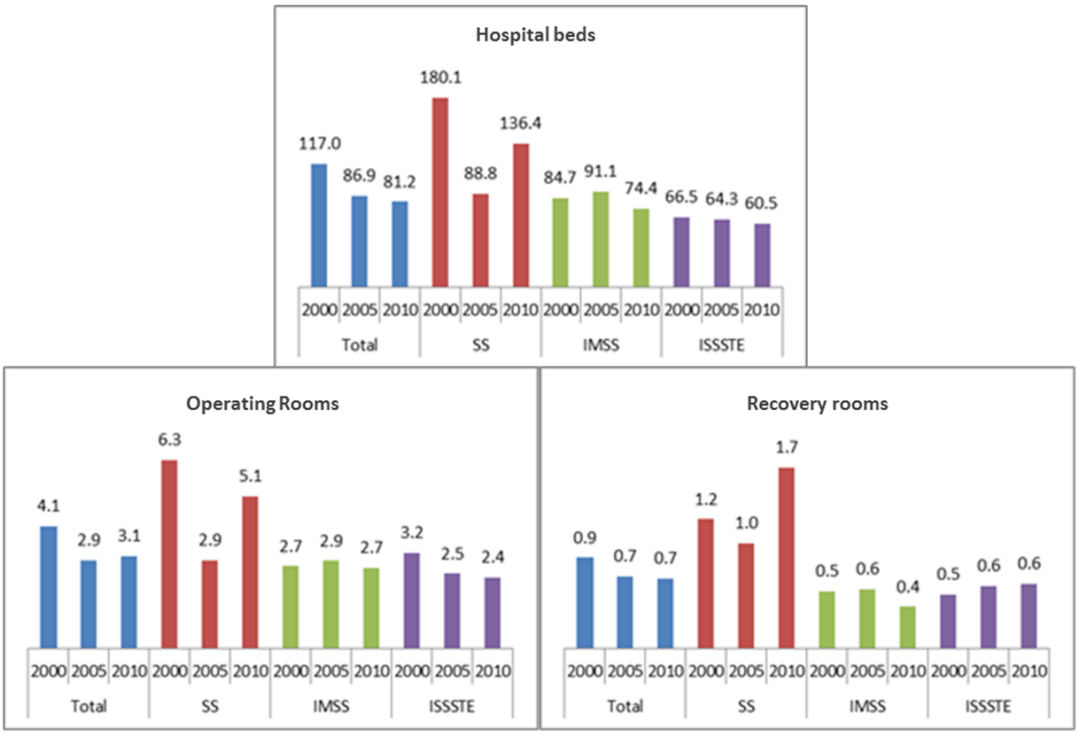



FIGURE 18: AVAILABILITY OF HOSPITAL RESOURCES IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN MEXICO CITY (RATE PER 100,000 INHABS., SS 2000; 2005; 2010)

## 2.5 Private Health Care Facilities

AS WITH THE NATIONAL LEVEL DATA, THERE IS LITTLE INFORMATION AVAILABLE REGARDING PRIVATE HEALTH CARE FACILITIES AT THE STATE LEVEL. THE NUMBER OF PRIVATE MEDICAL UNITS AND THE DISTRIBUTION OF HUMAN RESOURCES BY THE TYPE OF MEDICAL ESTABLISHMENT ARE PRESENTED IN TABLE 6 AND

Table 7 (Sosa et al., 2007). The volume of health human resources in the private units for 2004 was estimated at 102,940 workers.

TABLE 6: PRIVATE MEDICAL UNITS ACCORDING TO TYPE OF ESTABLISHMENT OM MEXICO CITY IN 2004

| Type of Establishment | Mexico | | Mexico City | |
|---|---|---|---|---|
| | N | % | N | % |
| External Consultations | 88,759 | 86.2 | 11,240 | 86.06 |
| Hospitalization | 2,513 | 2.5 | 241 | 1.84 |

| Type of Establishment | Mexico | | Mexico City | |
|---|---|---|---|---|
| | N | % | N | % |
| Support and Social Assistance | 11,668 | 11.3 | 1,579 | 12.09 |
| **Total** | **102,940** | **100** | **13,060** | **100** |

TABLE 7: HUMAN RESOURCES FOR HEALTH ACCORDING TO TYPE OF ESTABLISHMENT IN MEXICO CITY IN 2004

| Type of Establishment | Mexico | | Mexico City | |
|---|---|---|---|---|
| | N | % | N | % |
| External Consultations | 177,478 | 54.3 | 29,068 | 55.1 |
| Hospitalization | 64,716 | 19.8 | 20,072 | 38.1 |
| Support and Social Assistance | 84,653 | 25.9 | 3,578 | 6.8 |
| **Total** | **326,847** | **100** | **52,718** | **100** |

# 3. AN OVERVIEW OF MONTERREY

The city of Monterrey is the capital of the state of Nuevo León, one of the 32 states that make up the Mexican Republic. Geographically located in the northeast of the country, it is bordered to the north by the state of Texas in the United States of America, and in Mexico it borders the states of Tamaulipas, Coahuila, San Luis Potosi and Zacatecas.

Monterrey is one of the most important urban and industrial centers of the country. Along with 13 other municipalities in the state, it makes up Monterrey's metropolitan area, and has a total of 4,106,054 inhabitants (SEDESOL, et. al., 2012). However, the scope of this study only contemplates the municipality of Monterrey.

In 2010, 1,135,550 people lived in Monterrey, of which 50.5% were women and 49.5% men. The population between 15 and 29 years of age accounted for 25.5% of the city total while the segment of people 60 years and older reached 12.1% (INEGI, 2011b). By 2005, the annual population growth rate was 1.38% and the density was 3,497 inhabitants per $km^2$ (NIPH, 2010).

## 3.1 Economy

The state of Nuevo León has one of the best economic situations in the country. It's percentage of contribution to the national GDP puts it in third place, with an annual average of 7.0% between 2000-2011 (Figure 19, SS, 2013a). During this same period, the state registered an annual average percentage increase of 10.57%, with peaks of 27.4% in 2003, while in 2009 it registered the most significant decrease when it dropped -4.22%.

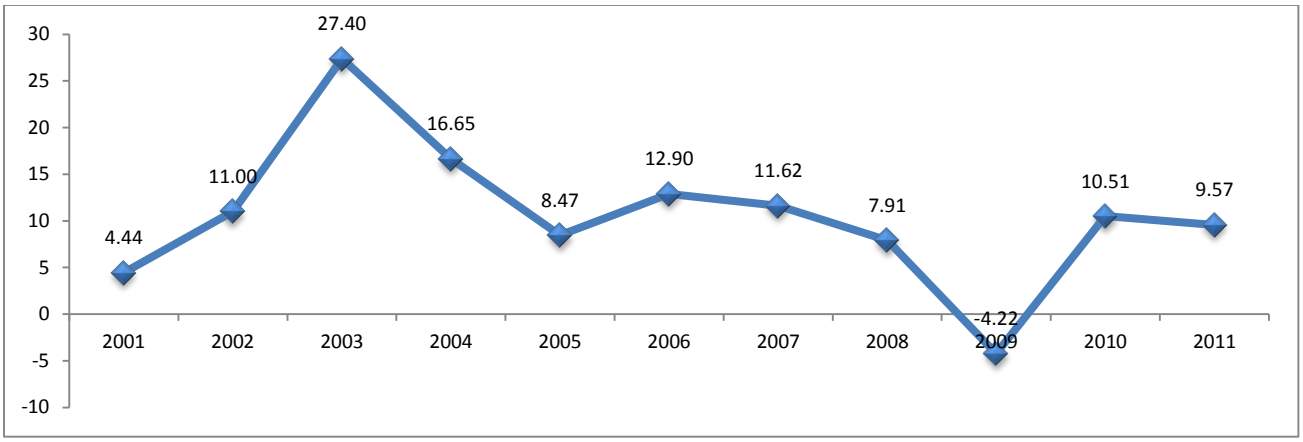



FIGURE 19: GROSS DOMESTIC PRODUCT GROWTH IN NUEVO LEÓN FROM 2000-2011 (ANNUAL %)

By 2010, the economically active population (EAP) in Monterrey was 488,181 (65% male and 35% female) (INEGI, 2011c). The largest sector of the economy was non-financial services (43%), followed by trade/commerce (23%) and manufacturing (15%) (INEGI, 2011c). In 2009, the municipality of Monterrey grossed a net total of 3,688 pesos, of which, 33.8% was raised by federal and state contributions, 31.3% by state and federal participation, and 21.6% by tax collection (INEGI, 2011c). The annual income per capita in Monterrey for 2005 was U.S. $16,854.88 (UNDP, 2008).

## 3.2 Health Care Expenditure

According to the information gathered from the 2010 Census of Population and Housing, 73.8% of the total population of Monterrey have Social Security, 73.1% of these are affiliated to IMSS, 10.8% to SPS and 5% to ISSSTE. Approximately ten percent reported having private health insurance (INEGI, 2011c). Public spending regarding health care is among the data reported by the health care information systems; however this is only published on a statewide level, so the following graphics show the corresponding information regarding the state of Nuevo León.

## 3.3 Health Human Resources

According to the 2010 Population and Housing Census, in Monterrey there are a total of 4,275 doctors in the public health services, which would represent an availability of 3.7 doctors per one thousand inhabitants. Table 8 (INEGI, 2011d) shows the institution that this staff is assigned to.

**TABLE 8: DISTRIBUTION OF MEDICAL PERSONNEL IN THE INSTITUTIONS BELONGING TO THE PUBLIC HEALTH SECTOR, 2010.**

| | Total | IMSS | ISSSTE | ISSSTELEÓN | PEMEX | SS | HU | DIF |
|---|---|---|---|---|---|---|---|---|
| **Medical Personnel** | 4 275 | 2 987 | 476 | 188 | 20 | 386 | 199 | 19 |

Figure 20 throughFigure 25 (SS, 2000; 2005; 2010) show the distribution of medical and nursing staff in the three main public health institutions in the state of Nuevo León.


**FIGURE 20: AVAILABILITY OF MEDICAL PERSONNEL IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN NUEVO LEÓN (RATE PER 100,000 INHABS., SS, 2000; 2005; 2010)**

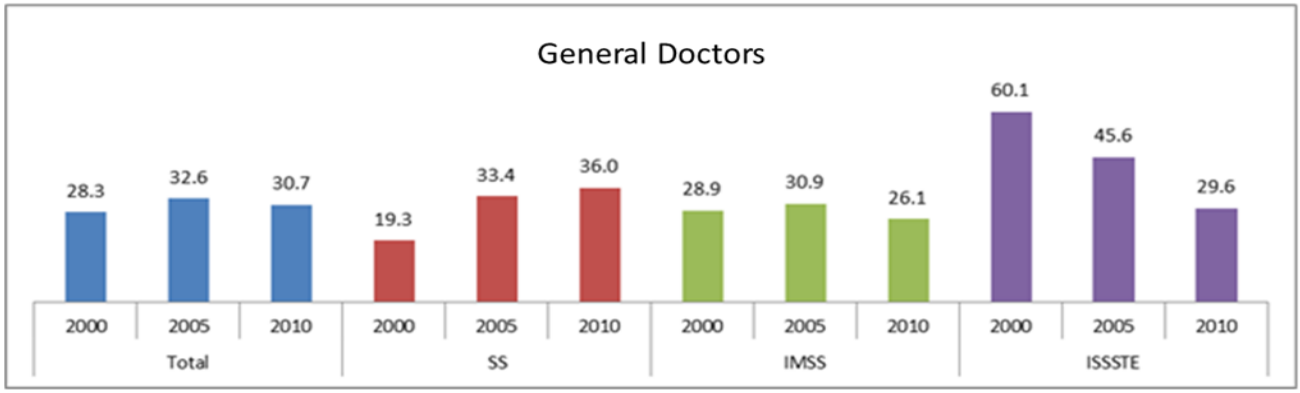



FIGURE 21: AVAILABILITY OF GENERAL PRACTITIONERS IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN NUEVO LEÓN (RATE PER 100,000 INHABS., SS, 2000; 2005; 2010)

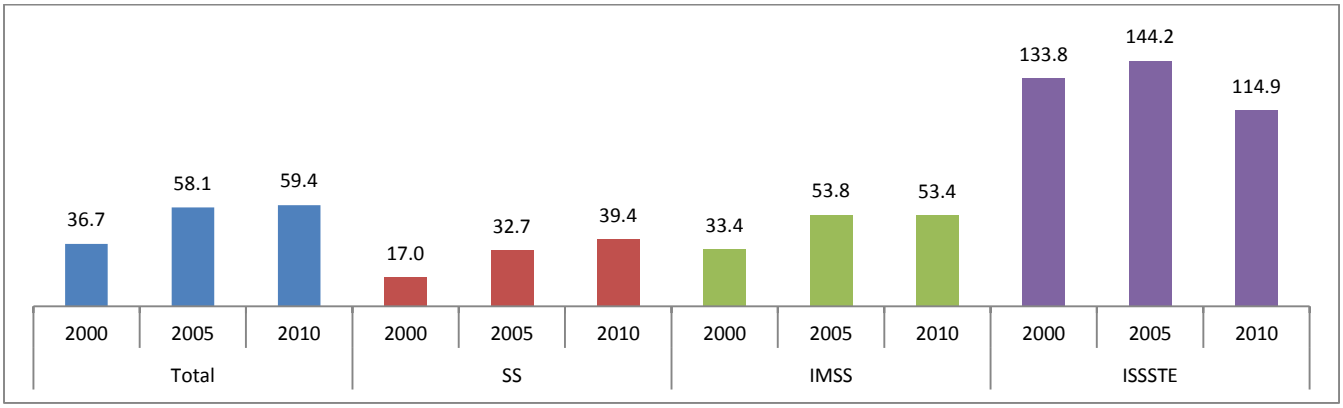



FIGURE 22: AVAILABILITY OF MEDICAL SPECIALISTS IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN NUEVO LEÓN (RATE PER 100,000 INHABS., SS, 2000; 2005; 2010)

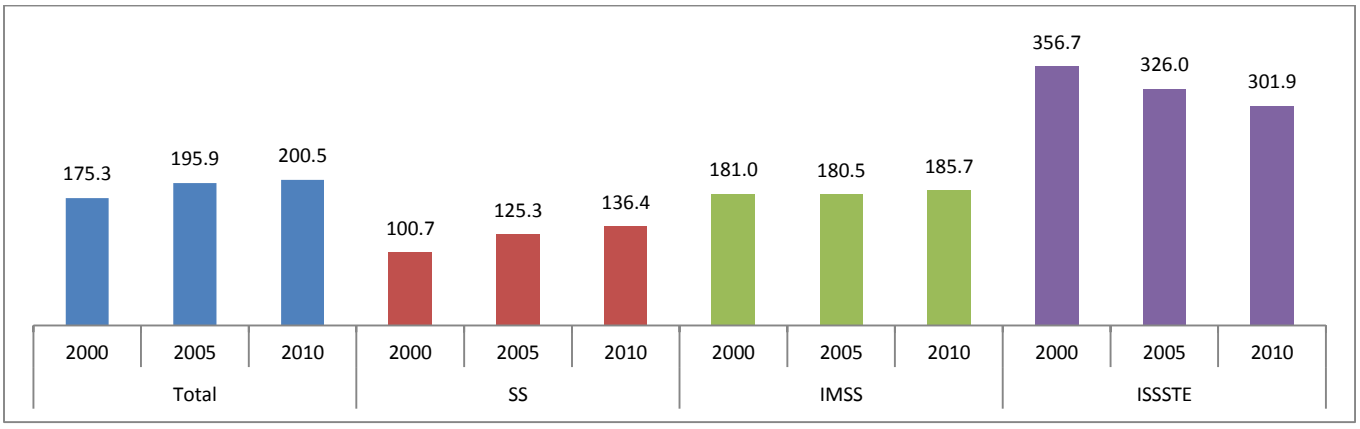



FIGURE 23: AVAILABILITY OF NURSES IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN NUEVO LEÓN (RATE PER 100,000 INHABS., SS, 2000; 2005; 2010)

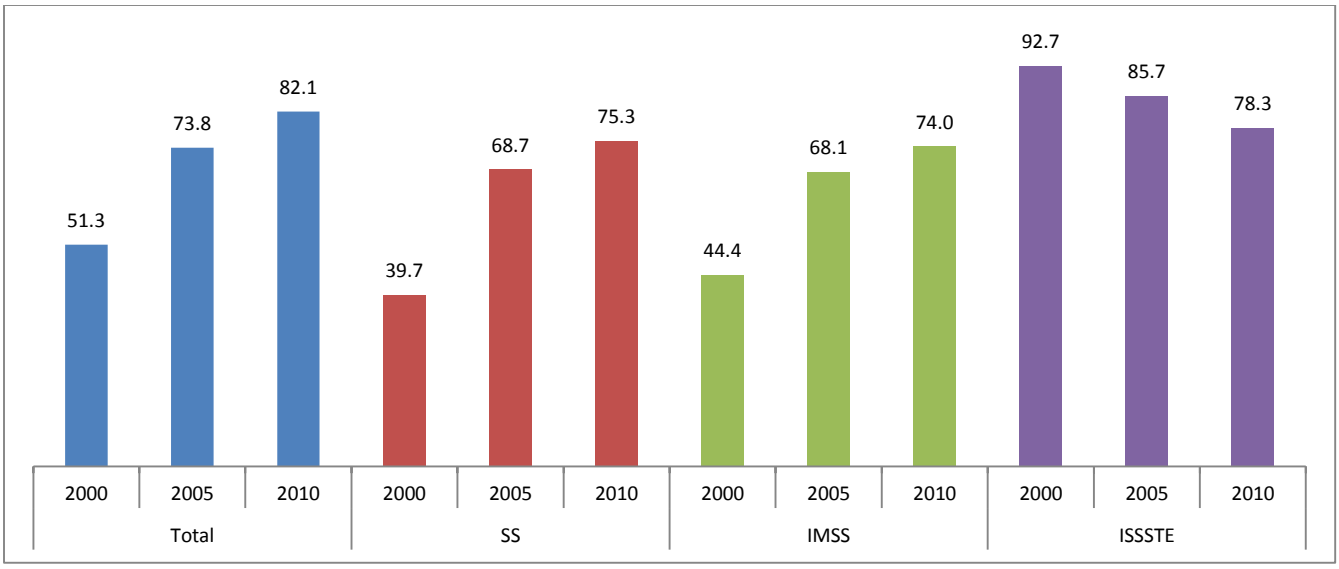



**FIGURE 24: AVAILABILITY OF GENERAL NURSES IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN NUEVO LEÓN (RATE PER 100,000 INHABS., SS, 2000; 2005; 2010)**

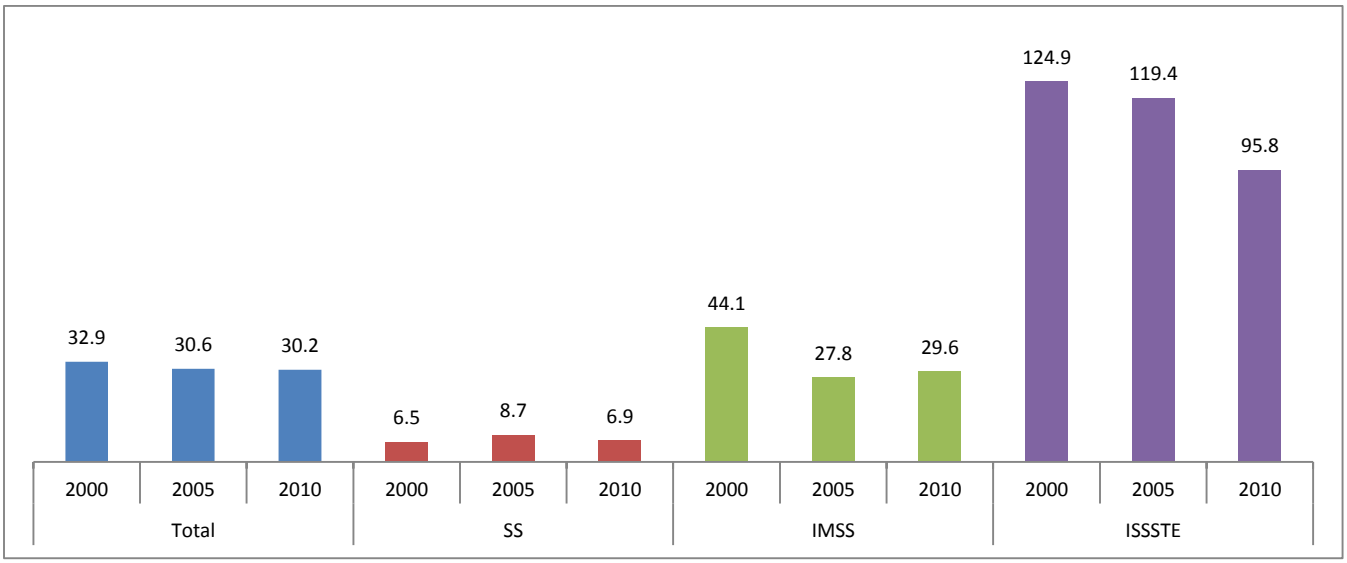



**FIGURE 25: AVAILABILITY OF SPECIALIZED NURSES IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN NUEVO LEÓN (RATE PER 100,000 INHABS., SS, 2000; 2005; 2010)**

## 3.4 Public Health Care Facilities

Based on information published by INEGI in the Statistical Yearbook of Nuevo León in the township of Monterrey, there were 95 public health care units until 2010. Eight-six percent of them were destined for external consultations, 4% were general hospitals and 10% offered highly specialized health care. It is noteworthy that of the latter, seven

belong to social security (six to the IMSS and one to the ISSSTE) while the other two provide service to the Ministry of Health's population, even though one of them is a teaching hospital that is a part of Nuevo León's Autonomous University which provides health care to the general population (see Table 9, INEGI, 2011d).

**TABLE 9: MEDICAL UNITS OF INSTITUTION THAT BELONG TO THE PUBLIC HEALTH SECTOR IN MONTERREY**

| Medical Units | Total | IMSS | ISSSTE | ISSSTELEÓN | PEMEX | SS | HU | DIF |
|---|---|---|---|---|---|---|---|---|
| **External Consultations** | 82 | 10 | 5 | 1 | 1 | 57 | 0 | 8 |
| **General Hospitalization** | 4 | 3 | 1 | 0 | 0 | 0 | 0 | 0 |
| **Specialized Hospitalization** | 9 | 6 | 1 | 0 | 0 | 1 | 1 | 0 |

At the state level, the distribution of medical units and other physical resources of the three main public health institutions can be seen in Figure 26 to Figure 28 (SS, 2000; 2005; 2010).

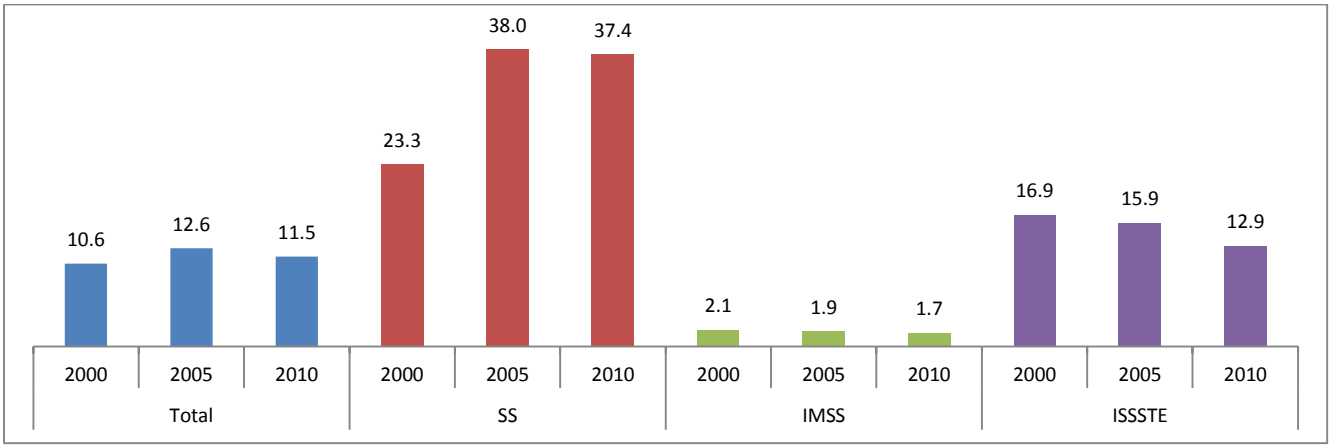



**FIGURE 26: AVAILABLE MEDICAL UNITS IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN NUEVO LEÓN (RATE PER 100,000 INHABS., SS, 2000; 2005; 2010)**

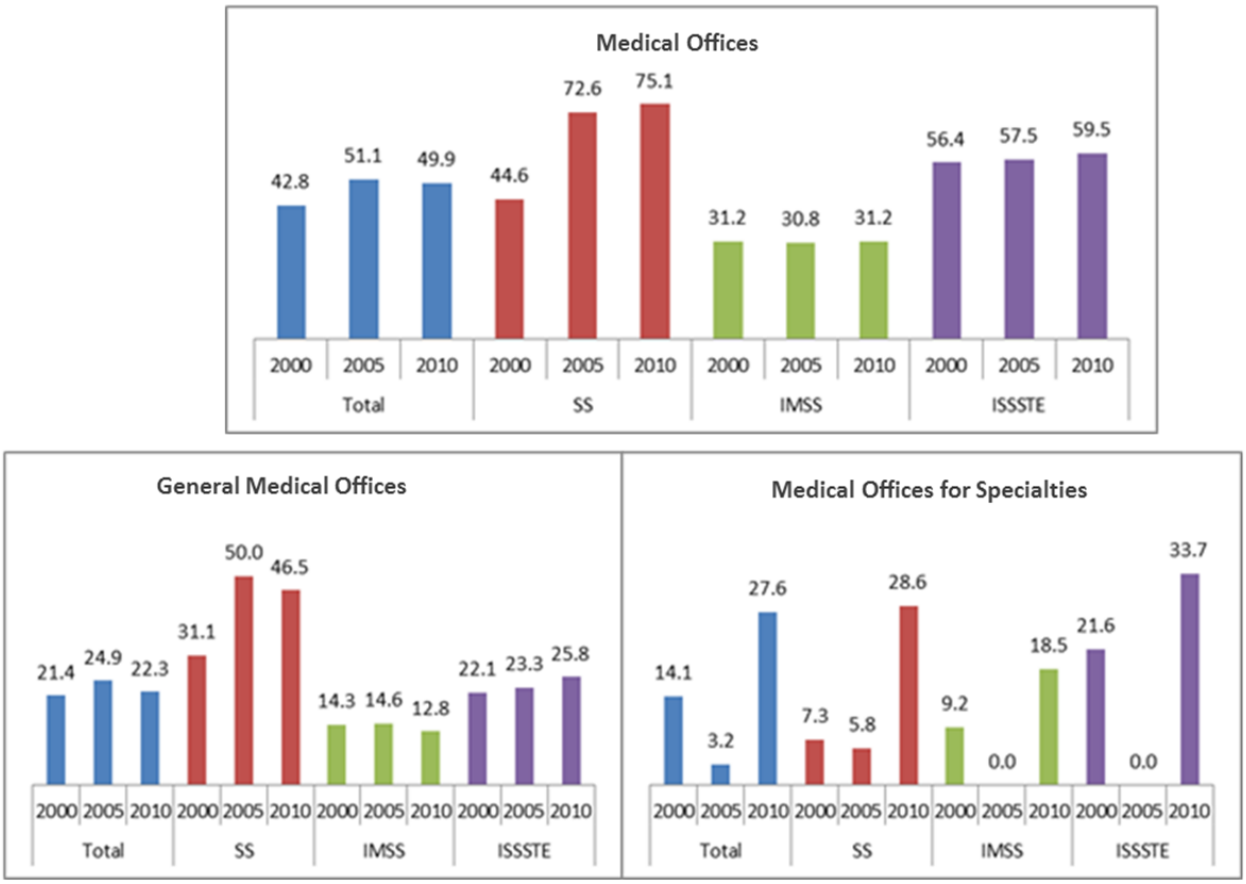



FIGURE 27: AVAILABLE DOCTOR'S OFFICES FOR OUTGOING PATIENTS IN THE THREE MAJOR PUBLIC HEALTH INSTITUTIONS IN NUEVO LEÓN (RATE PER 100,000 INHABS., SS, 2000; 2005; 2010)

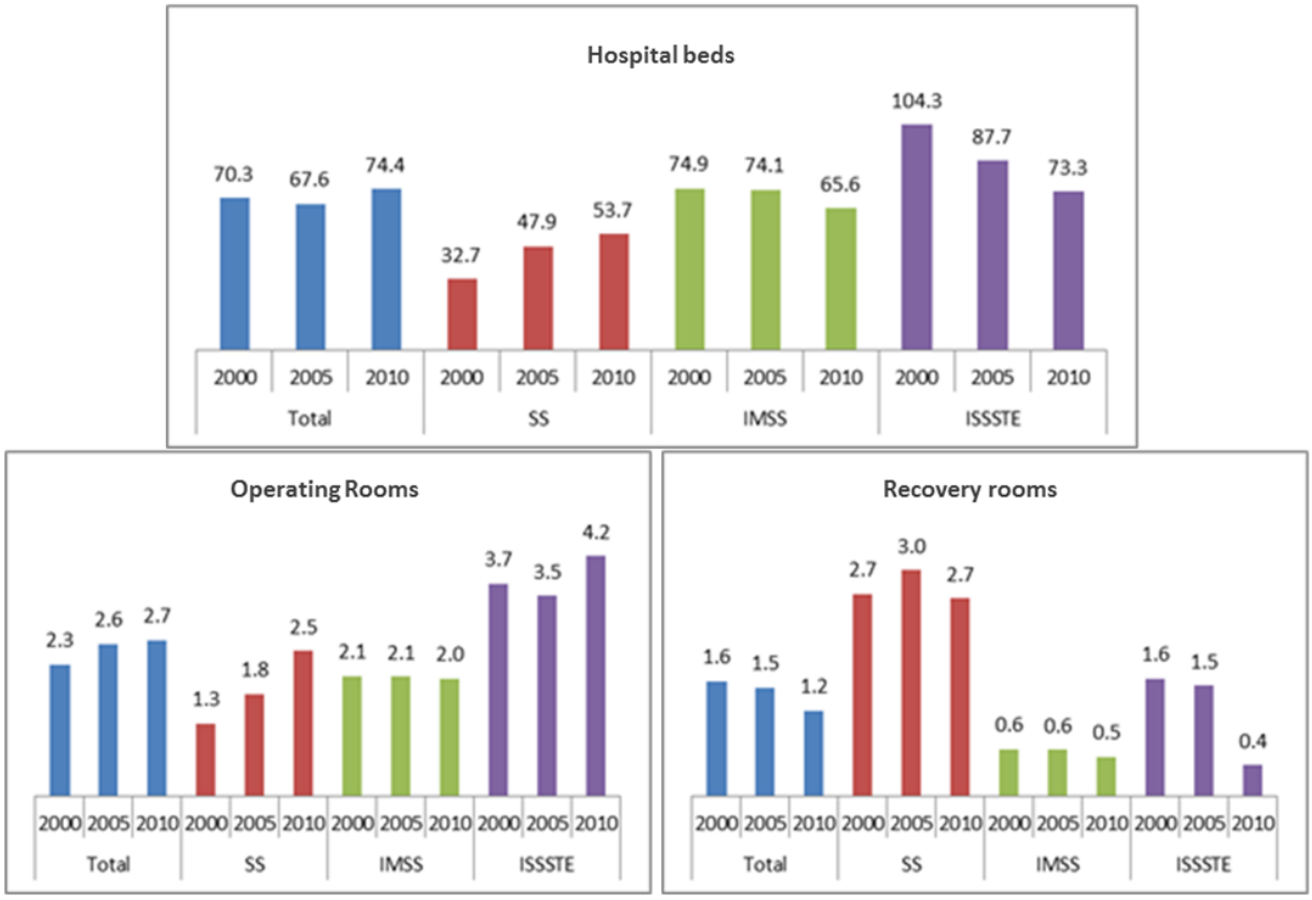



**FIGURE 28: AVAILABILITY OF HOSPITAL RESOURCES IN THE THREE MAIN PUBLIC HEALTH INSTITUTIONS IN NUEVO LEÓN (RATE PER 100,000 INHABS., SS, 2000; 2005; 2010)**

## 3.5 Private Health Care Facilities

According to information published by the Ministry of Health regarding Single Health Care Facilities, 15 outpatient clinics and 36 inpatient units appeared registered among the private medical services in Monterrey as of January 2013 (SS, 2013b).

# 4. THE EMERGENCE OF MEDICAL TOURISM IN MEXICO

Medical tourism began in Mexico in the 1960's with Hispanic workers seeking dental care in border cities, and grew throughout the 1990's with an increasing number of American citizens who had retired in Mexico seeking more affordable health care. This increase favored the private health industry, as hospitals nearer the northern border began to expand their infrastructure.

It was in the state of Nuevo León where the medical tourism industry become formalized, beginning with the association between the Christus Health Foundation from Texas and the Muguerza Group from Mexico to offer more services to the American population. Growing interest in the business of medical tourism led to the creation of the International Medical Center (CIMA), established by the International Hospital Corporation Group in the state of Nuevo León, in the town of San Pedro Garza García. These two groups began to grow through their strategies to care for patients coming from the US, the local population in Nuevo León, as well as patients from the states of Tamaulipas, Chihuahua and Sonora. The private sector expanded throughout the country, covering one third of the Mexican population by 1994 (Zurita & Ramírez, 2003), and increasing the number of private medical units from 1,790 in 1991 to 2,950 in 1999. Growth was concentrated within the four leading institutions in the federal district; Grupo Ángeles, The American British Cowdray Medical Center (ABC), Spanish Hospital and Médica Sur. The growing medical tourism industry resulted in new alliances between the hospitals and the hotel industry, as well as new quality certification standards. Between 2005 and 2007, Grupo Ángeles as well as ABC, obtained certification from Joint Commission International (JCI) and the General Health Council. The hospitals Christus Muguerza and CIMA also obtained certifications during the same time period.

The position of the private sector within the federal district and Nuevo León has allowed them to link with the public sector, creating alliances in the training of health human resources, and provision of services. New associations between public and private care and a growing medical tourist population prompted local governments in Monterrey, Hermosillo, Chihuahua, Tampico and Mexico City along with private hospitals in the mid-2000s to begin to promote their medical tourism services at different U.S. conventions. This participation generated isolated initiatives from each of the local governments and medical tourism stakeholders. In an effort to integrate the variety of initiatives the National Tourism Agreement was launched by Ministry of Tourism in 2011. This Agreement is made up of 101 activities, of which 41 are focused on the development and promotion of medical tourism, which consists of the full participation of the Ministries of Education, Health, Foreign Affairs, Finance, and the private health sector. While at present an integrated program of medical tourism in Mexico has not been developed; the issue is on the country's public agenda. Table 10 (INEGI 2011c, Ministry of Health 2011b, INEE 2012) shows the main characteristics of the Mexican states where there have been local efforts to encourage and develop medical tourism, while Table 11 summarizes the characteristics of these local initiatives. Mexico City and Monterrey are not included in this chart because these cases will be described in the following section of this report.

TABLE 10: GENERAL CHARACTERISTICS OF MEXICAN STATES WITH LOCAL INITIATIVES OF MEDICAL TOURISM. MEXICO, 2010

| State | Total Population * | % by sex | | % Population by type of insurance | | GNP Growth *** | % Illeterate Population of 15 year old and over * | Mortality Rate by 100,000 inhabitants * |
|---|---|---|---|---|---|---|---|---|
| | | Women * | Men * | Noninsured ** | Insured ** | | | |
| **Baja California** | 3,155,070 | 49.5 | 50.4 | 38.09 | 61.91 | 2.0 | 2.6 | 5.00 |
| **Chihuahua** | 3,406,465 | 50.3 | 49.6 | 36.31 | 63.69 | 4.1 | 3.7 | 7.03 |
| **Guanajuato** | 5,486,372 | 51.8 | 48.1 | 59.05 | 40.95 | 2.8 | 8.2 | 5.03 |
| **Jalisco** | 7,350,682 | 51.0 | 48.9 | 48.14 | 51.86 | 2.9 | 4.4 | 5.05 |

| State | Total Population * | % by sex | | % Population by type of insurance | | GNP Growth *** | % Illeterate Population of 15 year old and over * | Mortality Rate by 100,000 inhabitants * |
|---|---|---|---|---|---|---|---|---|
| | | Women * | Men * | Noninsured ** | Insured ** | | | |
| **Sonora** | 2,662,480 | 50.3 | 49.6 | 37.17 | 62.83 | 4.4 | 3.0 | 5.02 |
| **Tamaulipas** | 3,268,554 | 50.5 | 49.5 | 41.55 | 58.45 | 3.9 | 3.6 | 5.03 |

TABLE 11: LOCAL INITIATIVES OF MEDICAL TOURISM IN MEXICO (SOURCE: AUTHORS)

| State | Program / Policy | Year | Hospitals | Participants | | Services offered | | Characteristic |
|---|---|---|---|---|---|---|---|---|
| | | | | Public | Private | Non Medical | Medical | |
| **Baja California** | Baja Medical Tourism | 2010 | Alamater Hospital<br><br>Ángeles Tijuana | | Private Hospitals and Medical Associations | Special prices for transportation services. Accommodation services. Care for Elders. | Dentistry<br>Radiology<br>Laboratory<br>Anesthesiology<br>Audiology and Otoneurology<br>Cardiology<br>General Surgery<br>Pediatric Surgery<br>Surgeons<br>Ophthalmologists<br>Dermatologists<br>Phlebotomists<br>Gastroenterologists<br>General Geriatrics<br>Gynecology y Obstetrics<br>Aesthetic Medicine, Cosmetic Surgery<br>Surgeons<br>Pulmonologist<br>Pediatricians<br>Nutriologists<br>Oncologists<br>Orthopedists<br>Otolaryngologists<br>Radiologists<br>Orthopedists<br>Surgery and Clinical Emergencies | Coordination of procedures, from patient's country of origin to its destination<br><br>Access to certified medical personnel |

| State | Program / Policy | Year | Hospitals | Participants | | Services offered | | Characteristic |
|---|---|---|---|---|---|---|---|---|
| | | | | Public | Private | Non Medical | Medical | |
| **Chihuahua** | Chihuahua Medical City | 2010 | CIMA<br>International<br>Center for<br>Clinical<br>Medicine<br>Centro<br>Cumbres<br>COC Oncological Center of Chihuahua | | Private Hospitals and Medical Associations | | Angiology<br>Bariatric<br>Cardiology<br>General Surgery<br>Plastic Surgery<br>Endoscopy<br>Gynecology<br>Ophthalmology<br>Oncology<br>Orthopedics<br>Otolaryngology<br>Urology | Provide high-quality healthcare and travel services to both the domestic and international market, integrating the value chain sectors |
| **Guanajuato** | Ciudad de Salud | 2010 | Ángeles León<br>Aranda de la<br>Parra Hospital | State Government Ministry of Health<br>Leon Municipality Ministry of Tourism Development<br>Public Universities | Private Universities<br>Hotels<br>Restaurants | Advice and support to complete paperwork<br>Accommodation | Advanced Therapy Peritoneal Hemodialysis<br>Pathological Anatomy Laboratory<br>Ophthalmolaser<br>Neonatology Unit<br>Emergencies<br>Respiratory Support<br>Hemodynamics<br>Neurophysiology<br>Magnetic Resonance<br>Intensive Therapy Unit Integral Diagnostic Unit<br>Oncology<br>Physical Therapy | Link-up with Health and Education Institutions for the Training of health personnel<br>Participation and integration of State government with the private sector to promote medical tourism in the |

| State | Program / Policy | Year | Hospitals | Participants | | Services offered | | Characteristic |
|---|---|---|---|---|---|---|---|---|
| | | | | Public | Private | Non Medical | Medical | |
| | | | | | | | | United States and Canada |
| **Jalisco** | Medical Tourism Jalisco | 2009 | Ángeles del Carmen<br><br>Bernardette Hospital<br><br>Puerta de Hierro Medical Center<br><br>Puerta de Hierro Sur Medical Center<br><br>Maternity Hospital<br><br>Lomas Providencia<br><br>Mexican American Hospital<br><br>Real San José Hospital | State Government Ministry of Health of the State. Educational institutions Institute for the Promotion of Jalisco's External Commerce | Tourism Governmental Agencies and Private hospitals | Accommodation Transportation | Cardiology Check Up Dysplasia Obesity Surgery General Surgery Plastic Surgery Gastroenterology Surgery Gynecological Surgery Human Reproduction Neurosurgery Dentist Surgery Ophthalmology Orthopedic Surgery and Traumatology Cataract Package Glaucoma Package Ophthalmologic package for diabetic Urology | Agreements with interested parties on Medical tourism in USA and Canada. |

| State | Program / Policy | Year | Hospitals | Participants | | Services offered | | Characteristic |
|---|---|---|---|---|---|---|---|---|
| | | | | Public | Private | Non Medical | Medical | |
| | | | San Francisco de Asis Hospital<br><br>San Javier Hospital<br><br>Siloé Hospital | | | | | |
| **Sonora** | Hospitality | 2012 | CIMA Hermosillo Hospital<br><br>Northwest Hospital<br><br>San José Hospital<br><br>San José Private Hospital of Ciudad Obregón | State government Sonora State Ministry of Tourist Development | Private Hospitals | Transportation includes round services from Arizona to Sonora | Back and Neck Surgery<br>Bariatric Surgery<br>Cancer Treatments<br>Dermatology<br>Gynecology<br>In Vitro Fertilization<br>Hemodialysis<br>Nephrology<br>Neurosurgery<br>Ophthalmology and Eye Surgery<br>Orthopedic Surgery<br>Plastic and Cosmetic Surgery<br>Restoration and dental surgery<br>Stem Cell Storage | Link to the US consulate for the completion of administrative procedures |
| **Tamaulipas** | Matamoros Medical/District | 2012 | San Charbel Hospital<br><br>Christus Muguerza | | Private Hospitals | Transportation services to hospitals and health care units, airport, | Cardiology. Obesity Surgery, Laparoscopy, Plastic surgery, Gastroenterology | |

| State | Program / Policy | Year | Hospitals | Participants | | Services offered | | Characteristic |
|---|---|---|---|---|---|---|---|---|
| | | | | Public | Private | Non Medical | Medical | |
| | | | Hospital (Reynosa)<br><br>Medical and Surgical Specialty Center<br><br>International Medical Center<br><br>León y Garza Clinic<br><br>A.M.E. Hospital Clinic<br><br>San Francisco Hospital Clinic<br><br>Guadalupe Hospital | | | border crossing and accommodation in the city. | Geriatrics<br>Gynecology<br>Family Medicine<br>Internal Medicine<br>Pediatrics<br>Nephrology<br>Nutriology<br>Ophthalmology<br>Otorhinolaryngology<br>Pathology<br>Pediatrics<br>Psychology<br>Traumatology<br>Emergencies<br>Urology<br>Root Canal<br>Surgery | |
| | Medical Rute | 2012 | | Local and State Governments | Medical Associations | Free transportation from Texas Valley to Matamoros | | To assist patients from the Texan Valley to attend medical facilities in Tamaulipas. |

## 4.1 The experience in Mexico City

The federal district government took the initiative in developing medical tourism in Mexico City. In 2009, the Secretariats of Tourism and Health, on instructions from the mayor of Mexico City, began discussions around affairs related to medical tourism in order to develop an action plan aimed at turning Mexico City into the primary site for medical tourism in the country. In November of the same year, the Consultant Council for Health Tourism (Consejo Consultivo de Turismo en Salud, CCTS) was set up, as a unit for consultation, opinion, and support for decision-making in the medical tourism industry. CCTS members included the mayor of Mexico City, the heads of the Secretariats of Tourism and Health, the federal district's Board of Tourist Promotion (FMPT-DF),[1] representatives of private hospitals, and other providers of technological services (private labs) and tourism (travel agencies, airlines, hotels, etc.).

In the period between 2010 and 2011 the CCTS was unable to establish a regular meeting schedule, this, *inter alia*, helps explain its ultimate dissolution. One contributing factor was the lack of participation of small-scale hospitals and service providers, and tourist providers, due to an identified bias towards larger hospitals, as well as the lack of clarity in the role of the tourism sector. A second contributing factor was the outbreak of the H1N1 virus during this time, a particularly challenging public health issue in Mexico. Primarily, the outbreak interrupted the momentum of the burgeoning medical tourism

[1] FMPT-DF is a parastate entity with autonomous management, created in 1998 as a public trust for advising and financing plans, programs and actions aimed at promoting tourism in the Federal District. It has a Governing Body called Technical Committee and its budget is approved by the Federal District Legislative Assembly (ALDF).

industry, as governments and other stakeholders prioritized their time, resources, and efforts towards controlling the H1N1 pandemic.

Medical tourism maintained a presence in the Federal District government agenda through the efforts of the tourism and health Secretariats, the FMPT-DF, and the four large hospitals in Mexico City: Grupo Ángeles, Médica Sur, Spanish Hospital and ABC Medical Center. In 2011, with the financial resources of the FMPT-DF and the data from the hospitals, they carried out an investigative study of the medical tourism industry. The results of the study were released in November 2012, and concluded that Mexico City would be a premier destination for medical tourism, given its considerable advantages over other cities in the country. These features include:

1. **Infrastructure and availability of health services units.** Mexico City, Guadalajara, and Monterrey maintain 85% of all private hospitals with 50 beds or more. Four of the most dominant are located in Mexico City.
2. **International mobility.** The Mexico City International Airport (AICM) is the largest in the country, and it is considered one of the 55 busiest airports in the world given the number of flights that arrive and depart every day from the airport. In 2012, it was one of the busiest Latin American airports and the 26$^{th}$ busiest globally (AICM, 2013).

The following are the main recommendations from the study:

1. To agree on the type of medical intervention that each hospital could provide, including the quality and price competitiveness.
2. To create an electronic platform for the promotion of Mexico City as a destination for medical tourism, including information about interventions and costs.

3. To hire a company to operate the platform and to carry out the following activities: marketing; call center; patient recruitment; referral of patients to hospitals; and monitoring of patient conditions in their place of origin

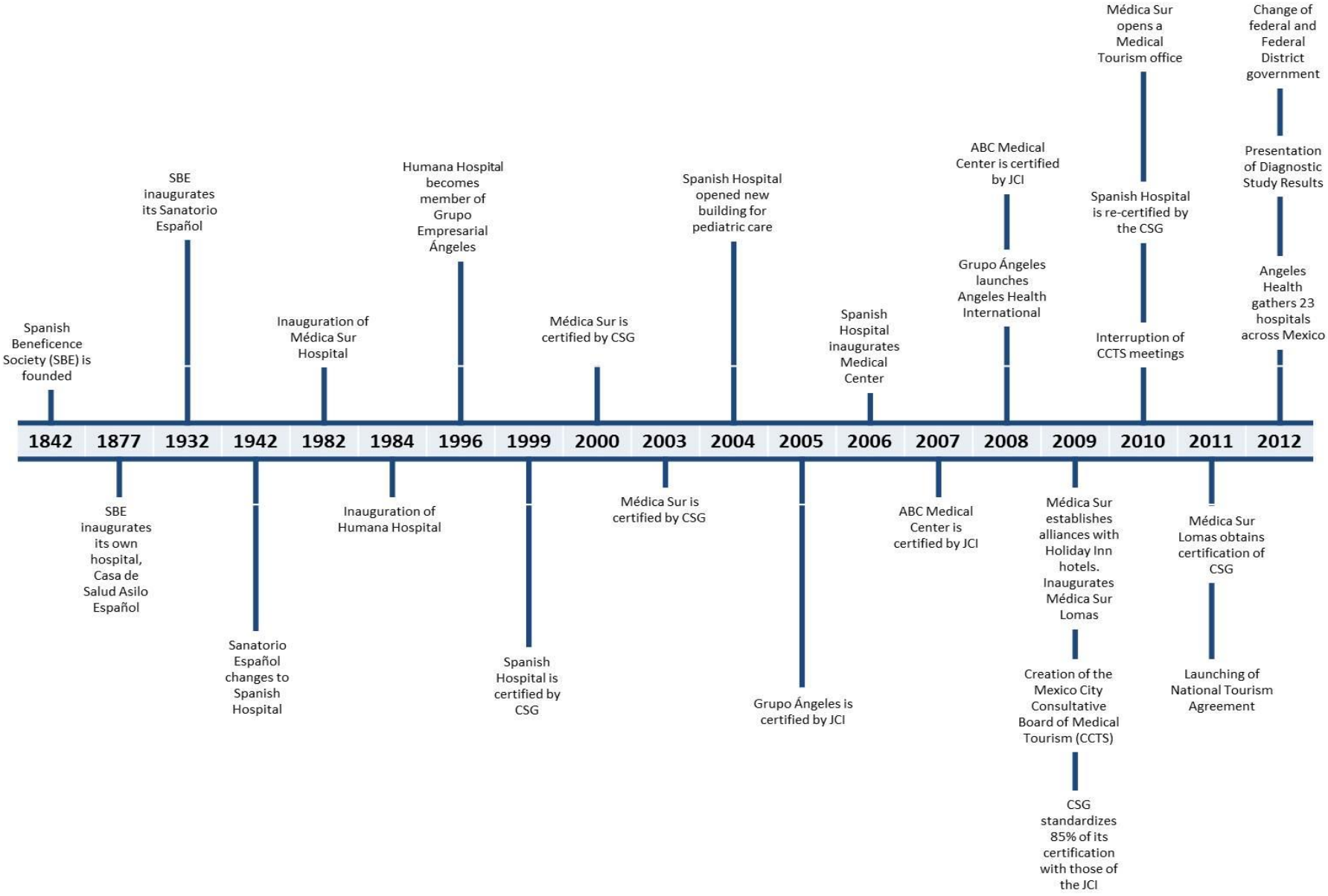
There have been attempts to implement the three recommendations, but as of March 2013 the pertinent stakeholders have failed to reach any specific agreements. In regards to the first, the equivalent level of clinical sophistication reached by all four hospitals has made it difficult to determine which procedures should be offered by which hospitals. Additionally, while the existence of the Diagnosis Related Group[2] has made it possible to identify consistent pricing, all of them agree that price may not be the most important factor for medical tourism patients.

In relation to the second and third recommendations, FMPT-DF estimated the cost of the technological platform to be $192,300 USD, as long as each hospital committed to covering the cost for at least two years. The hospitals accepted the government's proposal, however, they have not been able to agree on additional issues such as developing an equitable strategy for the funding of the platform, for example, considering the number of health units (also beds, labs, etc.) that each enterprise has. Therefore, at this point in time no final agreement has been reached on this issue.

[2] Diagnostic Related Groups (DRGs) were developed with the purpose of creating an adequate platform to analyze the quality of medical care and the use of services in a hospital environment. Its utilization allows establishing a system of prospective payments that defines specific costs for each DRG and every treated patient.

The following is a timeline with the sequence of the most significant events for medical tourism in Mexico and the four medical institutions involved.

## FIGURE 29: KEY DEVELOPMENTS IN MEDICAL TOURISM – MEXICO CITY



# 5. EXISTING MEDICAL TOURISM SITES IN MEXICO CITY AND MONTERREY

Based on data published by the Federal District's Board of Tourist Promotion, under the Federal Ministry of Tourism (Ministry of Tourism, 2012) 20 private health care institutions were identified in Mexico City that offer their services to foreign patients, while only three hospitals were identified in Monterrey. To date public health institutions have not been directly involved in the care of medical tourism patients.

Although only four of the twenty institutions located in Mexico City are involved in actions specifically intended for medical tourism development, all of them have the existing infrastructure as well as material and human resources necessary for this service. In fact, all of them have been certified by the National Certification System of Medical Care Establishments (SiNaCEAM) from the General Health Council (CSG) (CSG, 2012); however, the only facilities that have been certified by the JCI are the American British Cowdray Medical Center (ABC) and the ophthalmology site of Médica Sur.

Table 12 (Ministry of Tourism, 2012) lists the twenty institutions in Mexico City, the blue highlighting identifies the four hospitals that will be detailed in the following section.

TABLE 12: MEDICAL UNITS THAT TAKE CARE OF FOREIGN PATIENTS IN MEXICO CITY

| Medical Institution | Certifying Institution | |
|---|---|---|
| | CSG | JCI |
| 1. Hospital Cami Medical Center | ✓ | |
| 2. Tiber Medical Center | ✓ | |
| 3. Eye Care | ✓ | |
| 4. Hospital Foundation "Nuestra Señora de la Luz, I.A.P. "Hospital de la Luz" | ✓ | |

| Medical Institution | Certifying Institution | |
|---|---|---|
| | CSG | JCI |
| **5. Grupo Ángeles** | ✓ | |
| 6. Specialty Hospital MIG | ✓ | |
| 7. DIOMED Hospital | ✓ | |
| **8. Spanish Hospital, Spanish Beneficence Society** | ✓ | |
| 9. HMG Hospital | ✓ | |
| 10. Los Cedros Hospital | ✓ | |
| 11. Merlos Hospital | ✓ | |
| 12. San Ángel Inn Chapultepec Hospital | ✓ | |
| San Ángel Inn Sur Hospital | ✓ | |
| 13. Star Medical Centro Hospital | ✓ | |
| 14. De la Vision Medical Institution | ✓ | |
| 15. Ocular Lomas Laser | ✓ | |
| **16. Médica Sur** | ✓ | |
| 17. New Sanatorium Durango | ✓ | |
| 18. South Ophthalmology | ✓ | ✓ |
| **19. The American British Cowdray Medical Center Campus Observatorio** | ✓ | ✓ |
| The American British Cowdray Medical Center Campus Santa Fe | ✓ | |
| 20. WTC Sports Clinic | ✓ | |

In the case of medical institutions located in the city of Monterrey (Table 13, Ministry of Tourism, 2012), two received JCI recertification in 2011, San Jose Tec Health Hospital and Clinic OCA Hospital, while the Christus Muguerza High Specialty Hospital has been certified by JCI since 2010. All three hospitals have been certified by CSG as well.

TABLE 13: MEDICAL UNITS THAT CARE FOR FOREIGN PATIENTS IN MONTERREY

| Medical Institution | Certifying Institution | |
|---|---|---|
| | CSG | JCI |
| 1. Christus Muguerza High Specialty Hospital | ✓ | ✓ |

| Medical Institution | Certifying Institution | |
|---|---|---|
| | CSG | JCI |
| 2. Foundation Santos and de la Garza Evia I.B.P. "Hospital San Jose Tec de Monterrey" | ✓ | ✓ |
| 3. OCA Hospital | ✓ | ✓ |

## 5.1 Mexico City

### 5.1.1 Grupo Ángeles


SOURCE: Grupo Ángeles. Image by: Unknown.

In 1984, the North American enterprise Humana Inc., opened its first Latin American hospital in Mexico City. In December 1986, Hospital Humana was sold to Mr. Olegario Vázquez Raña, a Mexican businessman, who in November 1998 created Ángeles Enterprises Group, which includes communications, hotels, and financial services. A health branch was also opened known as Ángeles Health Care Services Group (Grupo Ángeles).

Grupo Ángeles currently has 23 hospitals across the country (10 located in Mexico City), with 208 surgery rooms and 2,378 hospital rooms, and employs 12,500 doctors in 55 specialty and sub-specialty areas. There are currently seven Grupo Ángeles hospitals in Mexico that provide care to international patients, including Ángeles Lomas


SOURCE: Grupo Ángeles. Image by: Unknown.

in Mexico City. For an overview of available services see Appendix 7.

Grupo Ángeles also participates in physician and nurse training, providing access to funding opportunities, symposiums, conferences, workshops, and roundtables, which allow national and international interprofessional collaboration and knowledge exchange. Grupo Ángeles began focusing on medical tourism in 2008, creating Angeles Health International, based in San Diego, California, to promote their health care services to the Mexican, Canadian, and American populations. They currently provide services to approximately 1,200 medical tourism patients annually, primarily from the USA and Canada.

### 5.1.2 Spanish Hospital, Spanish Beneficence Society, I.A.P.

The Spanish Hospital is one of the oldest institutions in Mexico City, inaugurated in August 1932. Over time they have diversified the services offered to the largely, but not exclusively, Spanish community living in Mexico. The hospital has doctors in 33 clinical specialties, in 11 medical units (For an overview of available services see Appendix 7). The hospital also contains a teaching and research center, eight nursing homes, a travel agency, an insurance agency, a pharmacy, a bank, ATM's, a chapel, a civil registration office, green areas, three restaurants, and heliport. See Appendix 8 for list of accepted national and international insurance agencies.

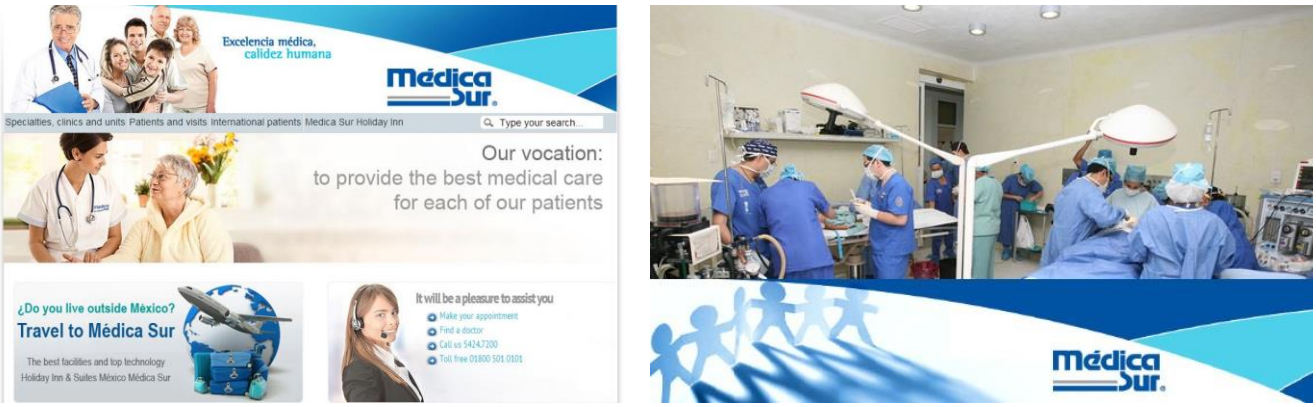
Source: The Spanish Hospital. Image by Unknown.

### 5.1.3 Médica Sur

Médica Sur was developed in 1982 by a group of Mexican physicians and health care professionals with a vision for a private sector High Specialty Center. It is located south of the federal district in Mexico City's greater metropolitan area, in the same area as the group of National Health Institutes and High Specialty Hospitals, which provide medical care to the uninsured Mexican population, train specialists, and carry out activities related

Source: Médica Sur Hospital. Image by Unknown.

to clinical, public health, and social science investigations.




Source: Médica Sur Hospital. Image by Unknown.

Médica Sur Group evolved from a hospital, to a High Specialty Center, and finally a group of companies that covers the three levels of medical care: (1) primary care at its three medical care centers; (2) secondary care at the Santa Teresa Hospital in the middle of the Mexico City's metropolitan area; and (3) high specialty medical care at its Medical-University Complex on the south side of Mexico City. For an overview of available services see Appendix 7**.** Médica Sur has 204 hospital beds, 21 operating rooms, and 557 medical offices serving all specialties.

Although this hospital is not exclusively for international patients, they do offer special services for medical tourism. Patients are assisted by a healthcare team throughout the duration of their experience, from arrival to departure; transportation is arranged to Médica Sur facilities and the staff will handle admission and air travel if requested. Additionally, Médica Sur offers a Holiday Inn & Suites hotel, a gym, three restaurants,

three coffee shops, two drugstores, two banks and several ATMs, and parking. Médica Sur is also a member of the Medical Tourism Association.

### 5.1.4 The American British Cowdray Medical Center, *ABC Medical Center* (Observatorio and Santa Fe campus)

Located in the west of Mexico City, the ABC Medical Center is a private, nonprofit medical assistance institution, organized under Mexican law ("Private Assistance Institution" or "IAP"). In 1952, the Medical Association of ABC's Medical Center was created in response to the need for Specialized Medical Consultants.

In 1964, new facilities were inaugurated on Observatorio Avenue. In 2004, a center was opened in Santa Fe to complement services offered at the Observatorio site. In 2006 they signed an affiliation agreement with Methodist International in Houston, Texas, confirming that its current services meet international standards. In 2008, ABC Medical Center received full accreditation for its Observatorio and Santa Fe sites from the JCI, CSG, College of American Pathologists, and Bariatric Surgery Center of Excellence.


Source: ABC Medical Center. Image by Unknown.

In regards to medical tourism, ABC Medical Center has installed an Office for Foreign Patients in order to provide foreign patients single contact sites where they can obtain information related to doctors, treatments and services, as well as meet the specific needs of those patients who travel to Mexico from abroad. For an overview of available services see Appendix 7.

Source: ABC Medical Center. Image by Unknown.

To provide services to medical tourists, ABC Medical Center has medical and administrative staff who speak English as well as Spanish. Furthermore, it also has the cooperation of the Lady Volunteers, who speak 17 languages. This medical center also rents ambulances to perform land and air transportation anywhere in Mexico or abroad. Their Observatorio campus has 200 beds, 10 operating rooms, and 7 outpatient surgery units, while their Sante Fe campus is slightly smaller at 60 beds, 8 operating rooms, and 13 outpatient surgery units. See Appendix 6 for list of accepted national and international insurance agencies.

## 5.2 Monterrey

### 5.2.1 Christus Muguerza High Specialty Hospital


Source: Christus Muguerza High Specialty Hospital. Image by Unknown.

Hospital Muguerza, founded in 1934 by Don José A. Muguerza and his wife Doña Adelaida Lafón, merged with Christus Health in 2001 to form the Christus Muguerza High Specialty Hospital. In 2007 it became the first, and only, hospital in Mexico to obtain the "Gold Seal of Approval" from Joint International Commission. To strengthen the training of their specialized doctors, the hospital established alliances with the University of Monterrey, UDEM, Nuevo León's Ministry of Health Metropolitan Hospital, Specialized Hospital 25 IMMS and Orthopedics and Traumatology IMMS 21Hospital.

The hospital is certified as a training venue for cardiologists and includes a nursing school, offering high school degrees, nursing degrees, and a specialized nursing degree. For an overview of available services see Appendix 7.

### 5.2.2 San José Tec de Monterrey Hospital


Source: San José Tec de Monterrey Hospital. Image by Unknown.

San José Tec de Monterrey Hospital, founded in 1973, has since updated its infrastructure, improved its health human resources, and modernized its diagnostic, treatment and reception centers. In 2007 it earned its Joint International Commission certification. The hospital is part of the Medical School of the Tecnológico de Monterrey, where most of their staff is trained. The hospital is equipped with waiting rooms, a cafeteria, parking, a shop, a pharmacy and, a special office for their foreign population. For an overview of available services see Appendix 7.

### 5.2.3 OCA Hospital

Source: OCA Hospital. Image by Unknown.

Founded in 1988, the OCA Hospital obtained its Tertiary Care License in 1996 from the Health Ministry, allowing it to perform transplants, open heart surgery, microsurgery, and neurosurgery. It currently has 290 beds, 25 operating rooms, 24 emergency cubicles and over 1,300 employees. In 2008 it obtained the Quality Accreditation from the Joint International Commission. For an overview of available services see Appendix 7.

The OCA Hospital houses a hotel with 8 rooms, a cafeteria, a bank, waiting rooms, shops, a pharmacy, and parking. It also has the women's clinic, the OCA Cancer Center, the Sleep Clinic, and the Bariatric Center.

# 6. FUTURE MEDICAL TOURISM PLANS

According to the National Tourism Agreement future plans for the medical tourism industry in Mexico include, in the medium term:

- Integrate state actions into a single national initiative for the development of medical tourism.
- Strengthen the integration of public and private sectors to build strategies that favor the creation and market of health personnel abroad.
- Development and advertising of a national campaign regarding the different entities that offer medical tourism in Mexico.

And in the long term:

- The construction of an integral health policy for the development of medical tourism with greater state involvement.

# 7. CONCLUSION

Mexico has a vast structure of health services concentrated in the public, social security, and private sectors. In recent years, the increase in public sector financing has allowed for the expansion of units delivering secondary and tertiary level care. However, the country continues to experience significant inequities in the allocation of resources such as funding, staff, and access to health services, particularly within hospital care. This inequity has two sources, the first is due to the revenue structure of the Mexican population where the gap between rich and poor is one of the largest worldwide, and second because of the way the Mexican health system is structured which grants a higher number of services and resources to people within the formal labor market, which excludes more than half of the economically active population in the country.

The Mexican health system has undergone recent reforms, including a large influx of funds directed at improving public services. While it is too early to say whether these reforms will improve equity in the population's access to quality health care services, the likelihood is low that one health policy reform will be sufficient to tackle the historical pervasiveness of structural inequalities within the Mexican population.

The growth in Mexico's private health sector over the past 20 years has been noticeable. The primary focus of private health care on small-scale delivery, approximately 10 to 20 beds on average, has shifted to expanded, highly specialized hospitals, in large cities such as Mexico City, Guadalajara, and Monterrey. However, the private health insurance industry has not experienced parallel growth, limiting the progress of the private hospital sector. It is estimated that in Mexico only 4% of the population is covered by private insurance, compared with 20% in Brazil, implying that the majority proportion of private hospital clientele is paying out of pocket.

Based on the information that has been gathered there appears to be interest from large private hospitals in Mexico to expand their markets. One identified target market has been the foreign population, or medical tourists, who can be enticed through attractive packages designed to meet their timelines and financial capacity. However, few hospitals have developed formal strategies to target these markets. One of the key components in targeting a medical tourism market is achieving accreditation from the Joint International Commission. This status has only been acquired by a handful of the aforementioned hospitals, although more are in the process of doing so.

The next few years will be critical in determining how successful Mexico's medical tourism efforts will be. A sustainable joint venture between tourism industries, federal and state government, and the private hospital sector, which have all expressed interest in developing this sector, will be crucial in establishing an integrated platform. Medical tourism remains an emerging industry in Mexico; the implications of which are being shaped by today's policy and regulatory environment decisions.

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# APPENDIX 1 MEXICO CITY- CONTENT ANALYSIS OF MEDIA COVERAGE OF MEDICAL TOURISM

In this section we will report on the results of a media content analysis examining the coverage of medical tourism in Mexico's most influential newspapers, including: El Economista, El Financiero, El Occidental, El Universal, Milenio, and Reforma (national newspapers); Excélsior and La Jornada (Mexico City newspapers); El Norte (Monterrey newspaper); and El Diario de Yucatán. These newspapers were also selected to provide a balanced point of view regarding medical tourism, given the conservative ideologies of Milenio, Reforma, Excélsior, and El Norte; the neutral position of El Economista, El Occidental, El Universal, and El Diario de Yucatán, and the critical position of El Financiero and La Jornada.

The ten newspapers were examined for relevant search terms, including *Medical Tourism/Turismo Médico* and *Health Tourism/Turismo en Salud*. The articles were judged for relevance based on three factors: (1) if medical tourism was the primary focus of the article; (2) if medical tourism had been mentioned explicitly by a key actor or institution, such as, Health Ministers or care providers; and (3) if there was detailed information regarding medical tourism providers or relevant policy. The following table details the classifications of articles based on these three factors. A total of 50 articles were deemed relevant to medical tourism, 13 in regards to the national level, ten for Mexico City and 27 for Monterrey.

The selected articles were used to review the representation of the five focal issues of the study in the media: (1) impacts on health human resources; (2) government involvement in the industry; (3) foreign investment in the industry; (4) impacts on private health care; and (5) impacts on public health care.

One common factor among all of the newspapers was their growing coverage over time of medical tourism. The primary focus of articles was on the medical facilities, the integration of key players to compete with the international market, and the advertisement of packages that the different health institutions offer in Mexico City and Monterrey. Within the ten Mexico City articles, only one was an opinion piece, while all remaining articles were informative, and all articles framed medical tourism as a positive development. Government involvement and impacts in the private health sector were the subjects of greatest incidence, followed by health human resources issues, foreign investment, and economic impact. Within the 13 articles addressing medical tourism at the national level, two presented the negative aspects of the issues, and were primarily in reference to the government's involvement in the development of medical tourism, and the impact on private health services.

### A1.1 Impacts on Health Human Resources

The most significant impact expected from the growing medical tourism industry is the development of a high quality pool of health human resources across the country. This is due in large part from the need to comply with quality standards in order to achieve the international accreditations and certifications required to attract the medical tourism market. Moreover, there is an emerging need for technical and non-technical English communication skills for staff members caring for patients, so much so that at the beginning of 2010, the Ministry of Health announced the launching of a pilot program to train bilingual nurses (English and Spanish), and ultimately all health personnel (Vega, 2010).

The second most important impact identified is related to the retention of health care workers in Mexico. New standards for care and the growth and sustainability of more

specialized areas of care provide new training opportunities, room for professional growth and development, and increased financial compensation. All of which have been shown to be factors in health care professionals' decisions to emigrate for employment. Furthermore, medical tourism is also seen as generating jobs in the health care sector, according to the Diario de Yucatán, "Mexico can grow at a rate of over 10% to generate jobs from 4 to 5% annually and at a 2% annual growth [in positions for HHRR] if medical tourism is boosted" (Diario de Yucatán, 2008). Although this growth will be limited to the private health care sector, possibly creating 'brain drain' from the public health care sector.

Some of the articles that were reviewed also made reference to the key role health care workers play in the successful growth of medical tourism in Mexico (e.g. one columnist, Andres Oppenheimer, suggested that Mexico was able to provide superior care to that which they would be able to receive at home, "the health personnel involved in medical tourism in Mexico offer quality medical care and warmth with standards of excellence, which undoubtedly exceed that provided by the staff in the United States ... Good medical care with personal warmth will be a great attraction for millions of Americans health tourists" (Oppenheimer, 2008). This theme is further exemplified in the Mexico City media, where the technical capacity of doctors is seen not only as a critical factor in successfully promoting medical tourism, but that the highly qualified team of physicians would draw medical tourists to their country.

### A1.2 Government Involvement in Medical Tourism

Until 2008, the federal government's involvement in the development of medical tourism in the country consisted primarily of support strategies for promotion of the sector (e.g. El Financiero, 2008). References were made to the importance of government and private

strategies to capitalize on medical tourism. They also address the need to support the organization and implementation of hospital networks, and medical tourism support services such as, translators, escorts, travel agents, and means of contacting health professionals (El Occidental, 2008).

One of the major avenues of federal government support for medical tourism is through their contributions to the hospital accreditation process, to help develop international reputability (Milenio Diario, 2009). In 2009, standards from the Joint Commission International (JCI) were adopted by the Certification System of Health Care Facilities, which is responsible for certifying medical units in Mexico.

Despite these efforts, in 2010 the perception still existed that the government had not yet played a decisive role regarding medical tourism. The press published reports making reference to the need for greater support of the medical tourism industry through a nationwide public-private strategy agency, which would allow for more cohesive and consistent efforts across the country (e.g. Vega, 2010; Coronel, 2010).

The government began to show increased involvement in 2011 with the creation of the National Program for Medical Tourism. According to estimates this strategy would have generated approximately 4 billion USD by the year 2020, as well as more than 400,000 medical tourism visits. During that time the publication of the National Tourism Regulation was announced, which included the registration of hospitals and medical certificates. Another government strategy released during 2011 was the dissemination of medical tourism through the Tourism Board of Mexico to the northern states of the country, by launching promotional campaigns of the services in the United States and Canada (El Economista, 2011; Excelsior, 2011; Reyna, 2011).

Locally, it was not until 2009 that the Federal District Government began to look towards the development of medical tourism in the state, as observed in the articles issued by the local and national press (e.g. Durán, 2009; Milenio Diario, 2009). The first major event was marked by the installation of the Advisory Board of Health Tourism in Mexico City, comprised of hospitals, clinics and private laboratories, the National Association of Private Hospitals, the Hotel Association of the City of Mexico, tourist agencies, the National Chamber of Commerce of Mexico, and the Mexican Airlines, Aeromexico and Interjet. The Federal District Government relied upon the participation of the Ministry of Health, the Ministry of Tourism and the Tourism Promotion Fund. This council was created as a technical entity to consult, review, and assist in decision-making to ensure excellent medical services.

In 2010, the newspaper El Universal made reference to a dissemination strategy led by the Directorate of Strategic Programs of the Ministry of Tourism of Mexico City, to promote the hospital infrastructure in Mexico City, as well as the technical capacity of the medical staff, the scientific and technological level of the hospital network, and the competitive prices relative to the U.S. market (40% below U.S. costs) (El Universal, 2010).

Recently, in June 2012, the implementation of a network of comprehensive services for the promotion and delivery of activities related to medical tourism under the supervision of the Ministries of Health and local tourism was announced (Excelsior, 2012). This strategy will be carried out through a website that gathers all of the available services in the city, allowing patients interested in treatment in Mexico City to navigate all services in one convenient place, and in order to begin commercially advertising service packages.

### A1.3 Foreign Investment

As for foreign investment, the review of the media produced very few results in both the national and local scope. The first result related to the national scope took place in March 2009, when the newspaper El Economista reported that the British chain, Intercontinental Hotels Group (IHG), would invest 600 million USD that year in the construction of 62 hotels, some of which would be focused on the business of medical tourism (El Economista, 2009).

Related to the earlier announcement in June 2009, in Mexico City news broke out that Medica Sur had built a hotel operated by IHG, for the purpose of taking care of patients and families both within the country and abroad. This work was an investment of 71 million Mexican pesos. In February of the following year, an announcement was made through El Financiero that the Ministry of Economy would seek to attract investment from national and international hospital groups in order to meet the estimated demand of 25 new hospitals to service the U.S. market, an investment of 2.1 million USD (Análisis IPADE, 2009).

### A1.4 Impacts on Private Health Care

Undoubtedly, the private health sector has had the largest impact on, and has the most chance of benefitting from medical tourism in Mexico, as this market has been the sole provider of medical tourism services With the support of local and federal governments, most of the actions related to this industry have been orchestrated by the private health care sector. One of the most positive outcomes of medical tourism for private providers has been the improvement in infrastructure, which is associated with the certification process of the Joint Commission International (JCI), and association with private insurers

in the United States. As of 2010, nine hospitals had been certified by the JCI (two in Mexico City and seven in Monterrey).

For its part, the Ministry of Health has supported and encouraged both the international and national certification of hospitals. The government's interest in these actions stems from a desire to ensure a reputation for the highest quality of care in Mexico, in such an important activity with large potential for growth. However, even during 2010, the newspaper Reforma made reference to the significant lag in the certification of private hospitals, considering that at that time only 74 of 3,700 hospitals had been certified by the Ministry of Health. According to the publication, the cause of this was the lack of proper implementation within private hospitals of management and care models designed to provide quality services, and their use of international protocols that were not designed to address deficiencies in the quality of care provided, or a lack of infrastructure or equipment (Vega, 2010).

Medical tourism has also altered the population seeking treatment in private medical units. In principle, medical tourism is directed at the treatment of older Americans living in Mexico, whose population is estimated at around one million people. However, the intention is to have the Hispanic market be the primary users of health services in Mexico, which suggests a need for low cost medical interventions in Mexico. The primary medical tourism services offered through the private health care sector include; dental, orthopedic, ophthalmic, cosmetic, oncology, and cardiology services.

Meanwhile, Mexico City has the capacity to provide services to 24,000 patients annually from abroad (El Universal, 2010). Medical tourism has generated economic impacts within the private sector during the previous five years, which has allowed them to enhance their

infrastructure, technology, and health personnel training (Análisis IPADE, 2009). Receiving accreditation by international bodies, such as the JCI, also had an impact on medical tourism activity, such that in 2009 Hospital Medica Sur required a special office focused solely on medical tourism to handle the influx of activity (Milenio, 2009).

The reciprocal growth in medical tourism and the private health care sector is due in part to the wide range of hospitals that this city offers, the flexibility of air travel costs, and recent promotions made by the Distrito Federal government. As published in the Excelsior's digital version of December 2011, the city's Secretary of Health attended events in the United States to promote Mexico City's private health care industry as offering high quality health services at low costs to Americans and Canadians without health insurance (Excelsior, 2011).

### A1.5 Impacts on Public Health Care

There were no impacts of medical tourism on the public health care sector discussed, mainly because it has not yet been involved in the provision of medical tourism services.

### A1.6 Other Issues

The El Universal article published in 2010 reported that the average medical tourist stay is 7 days, while the regular tourist stay is that of two days; the economic flow to Mexico City in 2010 for stays of 7 days was 13,000 USD versus the 400 USD for two day stays (El Universal, 2010). These amounts have favored the creation of jobs, training of medical professionals, and technological innovations. This impact has not only benefited hospitals offering these services, but also the hotel industry and airline industry, considering that the average cost of medical tourism travel exceeds 10,000 USD per person, (Excelsior, 2012).

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# APPENDIX 2 MONTERREY – CONTENT ANALYSIS OF MEDIA COVERAGE OF MEDICAL TOURISM

In the case of Monterrey, the newspapers El Norte, Milenio Diario de Monterrey, Reforma and El Economista were reviewed. Out of these 4 newspapers, only El Economista does not have a conservative position towards the issues of the political agenda.

## A2.1 Impacts on Health Human Resources

Concerning the case of Monterrey, six articles made reference to the issue of health human resources, stating that medical tourism has made a positive impact, including the improved quality of nurses' training in the United States, and the ability of physicians to approve quality indicators and assure their certifications by Joint International Committee (Monterrey Milenio Diario 2008, Monterrey Milenio Diario 2010, Monterrey Milenio Diario 2012). The reviewed articles were consistent in presenting a positive influence of medical tourism on health human resources in Monterrey. For example, Palmira Gonzalez from el Norte made a statement regarding the implementation of an agreement between the Mexican Consortium of Hospitals (CMH) and San Antonio's Methodist Health Care System (MHS) (located in the United States), in order to establish exchange programs for the training of personnel (González, 2008d).

## A2.2 Government Involvement in Medical Tourism

The growth of medical tourism in the state of Monterrey is due to its geographical position (close to the US border) and its hospital infrastructure; key reasons why the state authorities support the development of the private health care industry in Monterrey. However, government involvement is generally limited to encouraging states, such as Monterrey, to continue growing the medical tourism industry. The newspapers articles related to this issue mainly focused on the fact that authorities such as Tourism and

Economic State Secretaries promoted the creation of plans and programs focused on certification or the regulation of services (González, 2008a; González, 2008c).

In 2007, the newspaper El Financiero reported that the head of Monterrey's Ministry of Economic Development had estimated that the medical tourism industry was worth about $567 million USD, which represents 9.5% of the state's GDP (El Financiero, 2007). Consequently, declaring that the state government would support health institutions to promote these services among those in the American community without health insurance.

The same year, Palmira González reported that the Ministry of Economic Development was looking to support hospitals so that they could achieve international quality standards, and have the possibility of serving a greater number of foreign patients (González, 2007).

In 2011, the Ministry of Tourism and the Ministry of Health had planned to formalize and launch a joint certification program for tourism and health service providers, as well as the specific promotion of medical tourism services in Mexico, in states such as Jalisco and Monterrey. This arose out of the finding that in 2009 the medical tourism industry in Mexico generated revenue of $122 million USD, of which $90 million was for the use of medical services (Buendía, 2011).

### A2.3 Foreign Investment

Foreign investment in Monterrey's private health sector has been the focus of the media's attention, particularly in 2007 and 2012, when newspapers reported on the foreign investment in a hospital in the municipality of Escobedo (Monterrey Milenio Diario, 2012).

According to García, $400 million USD was invested in Monterrey to build new hospitals such as, el Zambrano and el Ginequito, the latter located in the municipality of Escobedo (García, 2008). The International Financial Corporation (IFC), a member of the World Bank Group, made a 35 million USD investment in the construction of the first sustainable hospital.

### A2.4 Impacts on Private Health Care

Monterrey is a city with a large hospital infrastructure; the magnitude of which has enabled the medical tourism industry to have a positive impact on the economic and professional development of the state, including the improved quality of training for doctors and nurses, and increased investment in infrastructure and technology. The articles regarding private health care focused on the increasing demands in this sector to increase capacity, given 30% of users are now from the United States, primarily from Texas and Chicago. These users mainly require services related to cosmetic, heart, bariatric, ophthalmology and dental surgeries (García, 2008).

The medical tourism industry has been growing in Monterrey since 1996, due in large part to the increasing quality of medical care, and wide range of services that the hospitals offer. The quality of medical care is reported as the main consideration for Americans and Canadians when selecting a hospital. The Christus Muguerza hospital with its Joint International Commission certification has been able to increase its services 300% from 2007 to 2008 (González, 2008b). In this same article González referred to the fact that Monterrey competes with countries like Thailand and India in offering cheaper services, although no direct price comparisons were made.

### A2.5 Impacts on Public Health Care

Most of the articles reviewed did not mention the public health system in relation to medical tourism, or the need to integrate the public and private sectors to strengthen the delivery of services. However, one article stated that the opening of the first green hospital, funded by the IFC, will cover 90% of the population in the municipalities of San Nicolás and Escobedo (El Economista, 2012). This hospital will have 20 thousand square meters of construction, 50 beds, five operating rooms, intensive care, pediatric and neonatal units, a 24hr emergency certified service, and imaging and laboratory department. The hospital will cover patients in the communities surrounding these municipalities, as well as patients in the medical tourism industry.

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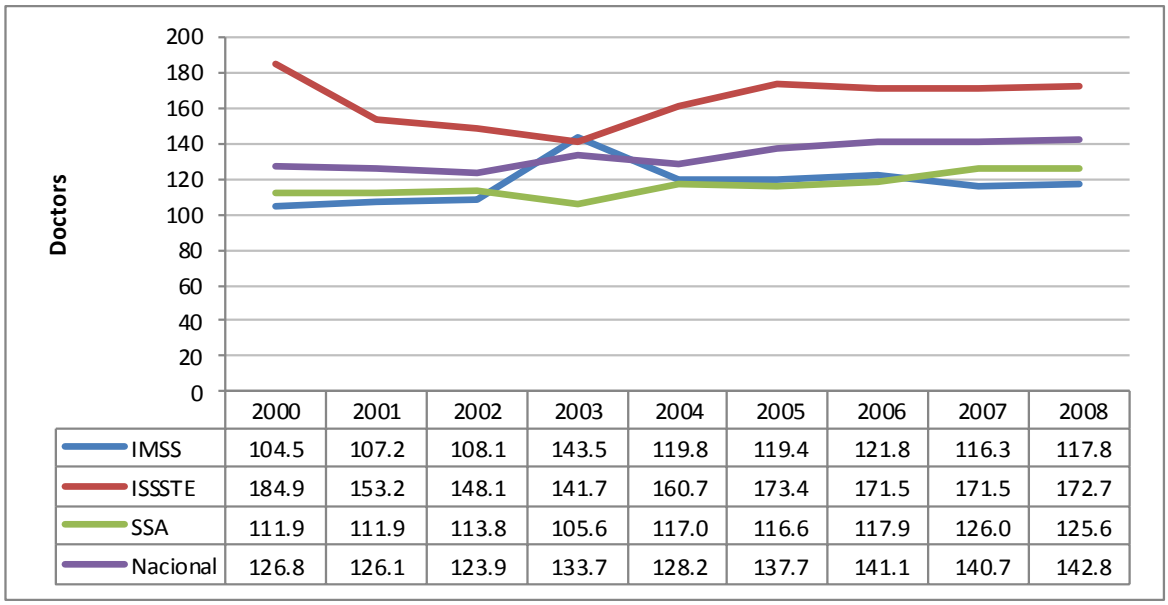
# APPENDIX 3 MEXICO CITY AND MONTERREY- NARRATIVE SYNTHESIS OF POLICY DOCUMENTS REGARDING MEDICAL TOURISM IN MEXICO

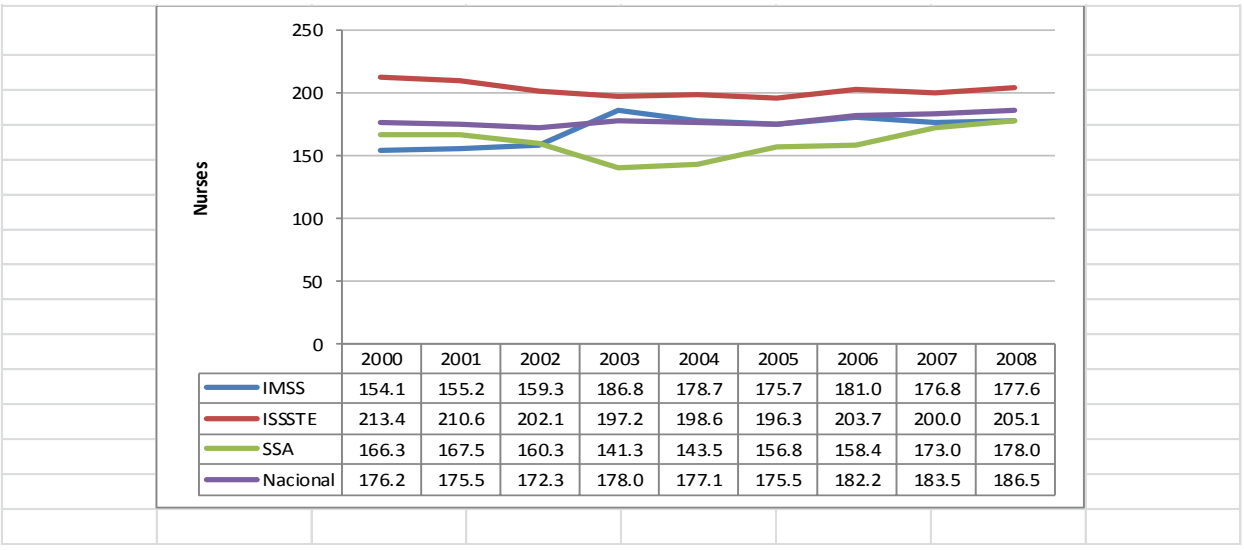
## Impacts on Health Human Resources

While the intensity of health human resources has increased over the last eight years, the Mexican health care system is still facing a shortage of doctors and nurses. In 2000 there were 1.2 doctors per 1,000 inhabitants nationally, by 2008, this rate increased to 1.4 doctors (see Figure 30, SS, 2012b). This phenomenon has been the same for nurses (see Figure 31, SS, 2012b), who increased from 1.7 to 1.8 nurses per 100,000 inhabitants over the same time (Nigenda and Ruiz, 2012). This includes nurses at all levels, as well as professional and technicians.




| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|---|---|---|---|
| IMSS | 104.5 | 107.2 | 108.1 | 143.5 | 119.8 | 119.4 | 121.8 | 116.3 | 117.8 |
| ISSSTE | 184.9 | 153.2 | 148.1 | 141.7 | 160.7 | 173.4 | 171.5 | 171.5 | 172.7 |
| SSA | 111.9 | 111.9 | 113.8 | 105.6 | 117.0 | 116.6 | 117.9 | 126.0 | 125.6 |
| Nacional | 126.8 | 126.1 | 123.9 | 133.7 | 128.2 | 137.7 | 141.1 | 140.7 | 142.8 |

**FIGURE 30: TOTAL NUMBER OF DOCTORS ACCORDING TO TYPE OF INSTITUTION FROM 2000 TO 2008 (SS, 2012B)**




| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|---|---|---|---|
| IMSS | 154.1 | 155.2 | 159.3 | 186.8 | 178.7 | 175.7 | 181.0 | 176.8 | 177.6 |
| ISSSTE | 213.4 | 210.6 | 202.1 | 197.2 | 198.6 | 196.3 | 203.7 | 200.0 | 205.1 |
| SSA | 166.3 | 167.5 | 160.3 | 141.3 | 143.5 | 156.8 | 158.4 | 173.0 | 178.0 |
| Nacional | 176.2 | 175.5 | 172.3 | 178.0 | 177.1 | 175.5 | 182.2 | 183.5 | 186.5 |

**FIGURE 31: TOTAL NUMBER OF NURSES ACCORDING TO TYPE OF INSTITUTION FROM 2000 TO 2008 (SS, 2012B)**

The increased supply of doctors and nurses in the job market may be attributable to the number of training opportunities. From 1990 to 2004, both public and private nursing school have experienced considerable growth (Figure 35)

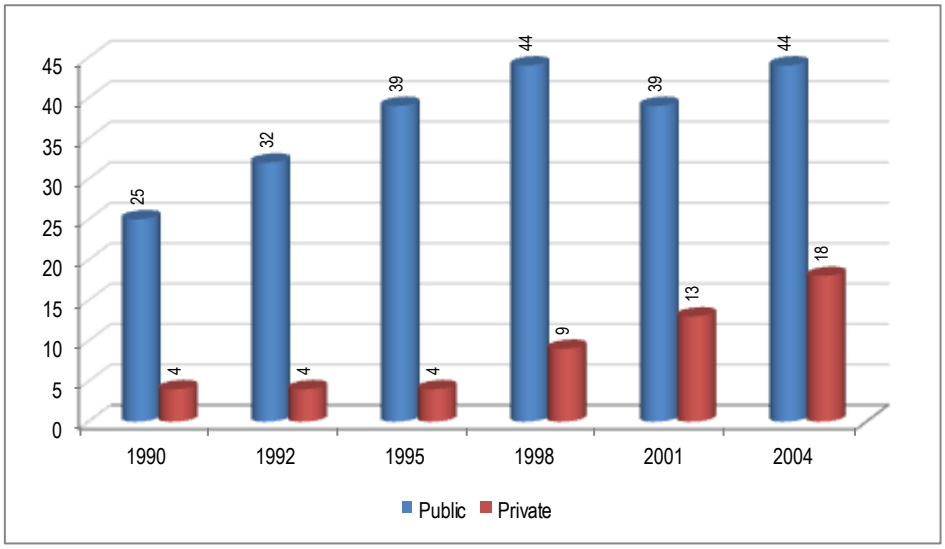



**FIGURE 32: NUMBER OF SCHOOLS PROVIDING NURSING DEGREES ACCORDING TO REGIME FROM 1990 TO 2004**

Source: Compiled from statistical yearbooks ANUIES (1990-2004)*

There were also increases in physician education institutions, but only in the private sector. Public institutions remained at between 45 and 49 during 1990 and 2004, (see Figure 4), while private institutions grew from 13 to 30 during the same time period (Nigenda and Ruiz, 2012).

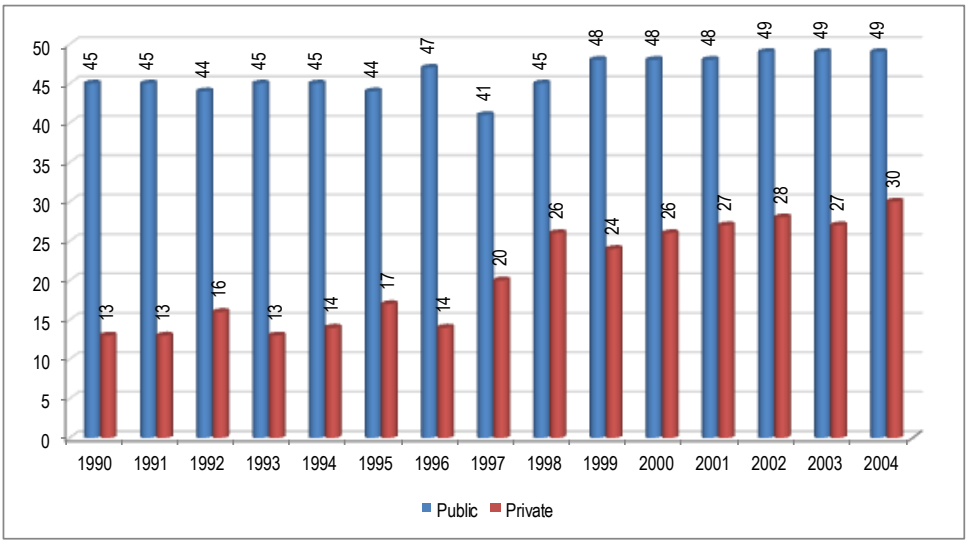



**FIGURE 33: NUMBER OF SCHOOL OFFERING A DEGREE IN MEDICINE BY REGIME 1990 TO 2004**

Source: Compiled from statistical yearbooks ANUIES (1990-2004)

Improving the quality and quantity of health human resources is a priority for both training institutions and employers, such that greater connections between education and practice have been created to continue the training of health professionals to help them acquire more skills and compete in the international market. Private medical institutions such as Grupo Ángeles, ABC, Médica Sur, Christus Muguerza and the Medical Specialty Center San Jose, have designed training models with American institutions and public institutions in Mexico, wherein health professionals are trained and employed in Mexico, they acquire greater competencies abroad, and then return to Mexico where they develop their abilities. In spite of the fact that the training module is the same for each institution, each one of them has different programs.

**Grupo Ángeles:** Its objective is to provide continuous training to its employees in different specialization areas. It has an international relationship with Mexico's National Autonomous University, La Salle University and the Ministry of Health (Grupo Ángeles, 2013). This group has created its own company based in San Diego, California to promote medical tourism and attract U.S. patients to its hospitals (ECLAC, 2011).

**ABC Medical Center**: This institution's objective is to train doctors at the highest level of health care in Mexico and abroad, thus for over 20 years it has maintained cooperation with Mexico's National Autonomous University, La Salle University, the University of Valley of Mexico, American College of Surgeons, as well as the public health sector, SS, IMSS and ISSSTE, (ABC, 2013). In 2006 the ABC Medical Center established an agreement with the International Methodist Hospital in Houston, Texas, to share knowledge and train professionals in high technology.

**Medica Sur Hospital:** Medica Sur aims to provide specialization and continuous training to achieve high academic standards and quality of care, the reasons for which they have established agreements with the Hospital Clinic de Barcelona, Mayo Clinic, UNAM's School of Medicine, and La Salle University in General Surgery and Arthroscopy (Medica Sur, 2013)

**Christus Muguerza Hospital:** The Christus Muguerza Hospital aims to have its physicians provide patients with the highest quality of ethical care, based on sound scientific knowledge, and principles of responsibility, honesty and respect. To achieve this objective, the hospital has established agreements with institutions such as the University of Monterrey, Metropolitan Hospital of the Ministry of Health in Nuevo León, Specialties IMSS Hospital and Orthopedics Hospital 21 IMSS (Christus Muguerza, 2013). The hospital

also has agreements with private institutions in the United States to assist nurses with their English as a second language training.

**Tec Salud San José Hospital**: Prepares highly qualified doctors and nurses who are committed to meet the needs of health care (Trevino, 2009). The activities carried out to achieve this objective are focused on the institutional participation with Monterrey Tech.

Regarding the specific case of Monterrey, the "Technological Park" a unique place in the country in terms of human resource training, research and technology transfer, was built. One of the areas that will be a part of this "Technological Park" will be medical tourism.

## Government Involvement in Medical Tourism

In 2010, the Ministry of Tourism began a two-stage initiative promoting medical tourism in Mexico. The first stage, the results of which should be seen in 2015, focuses on attracting American residents of Hispanic origin, mainly from Texas and California, without health insurance. It also focuses on identifying American residents with private insurance who require basic and intermediate procedures such as, hip and knee, cardiovascular, dental, ophthalmologic, and aesthetic surgeries (SECTUR, 2011). Finally, this stage focuses on a public and private relationship, in which the public sector will be the tool for the development of more clusters in Mexico and as well as strengthening training programs so that more agreements can exist with institutions in the U.S. and Canada.

The second stage will begin in 2015, and aims to promote the demand for more complex and highly specialized surgeries. The Ministry of Tourism, through the National Agreement on Tourism, proposed collaborative action among four ministries; Ministry of

Education, Health, Foreign Affairs, and Tourism, as well as the private health sector in five action areas: (1) investment in medical infrastructure and human capital; (2) attraction and advertising of medical tourism; (3) development of partnerships; (4) lobbying in the United States with employer firms and associations of Hispanic Americans; and (5) strengthening of public infrastructure (SECTUR, 2011).

These initiatives are intended to integrate actions already underway in varying states, such as in Sonora and Tamaulipas, where local governments have begun collaborating with the education, tourism and private sectors to boost medical tourism from different areas.

## Foreign Investment

Foreign investment in Mexico's medical tourism sector has been generated through two avenues. The first is through the investment of American health care facilities in Mexico, such as Christus Health; the second is from out of pocket expenditures made by medical tourists, primarily in hospitals along the northern border. In 2001 the Texas Christus Health Group partnered with Monterey Muguerza Hospital to build 30 hospitals around the north of Mexico. This alliance is governed by an approach that combines current technology with ethical values to provide health care (ECLAC, 2011). The Christus Muguerza Hospital Network has six highly specialized hospitals: two in Monterrey, the remaining four in Chihuahua, Reynosa, Puebla and Coahuila; and a network of health care facilities in these same locations. According to the Bank of Mexico, out of pocket payments increased from $88 million USD in 2000 to $311 million USD in 2007, stating that during 2007, 750,000 Americans traveled abroad to receive medical care (SECTUR, 2011). In 2009, medical tourism in Mexico generated $122 million USD in revenue

annually, of which $90 million USD accounted for the medical expenditures and $35 million USD in travel costs.

## Impacts on Private Health Care

In 1992, the International Hospital Corporation (IHC) was established in Mexico with the purpose of offering high quality medical services in Mexico and Latin America (CCTS, 2010). The IHC invests and operates private hospitals under the name of International Medical Centre (CIMA). Currently, CIMA has hospitals in Hermosillo, Chihuahua, and Monterrey, and is building another one in Puebla. This generated interest from other private institutions to offer medical and spa services to the foreign population. Thus, institutions like the ABC Medical Center, Christus Muguerza Hospital, Grupo Ángeles, Medica Sur, Spanish Sanatorium, Star Medica, and Summits Chihuahua strengthened their hospital infrastructure to attract American patients to Mexico.

Improving the infrastructure was one of the first steps taken by private institutions, as most Mexican hospital chains invested in housing facilities close to health care establishments in order to provide services before, during, and after medical treatments. Such is the case of Grupo Ángeles hotels associated with Medical Camino Real, and Medica Sur with Holiday Inn and Suites. Another recent trend in Mexico has been developing consortiums or clusters of regional and state health facilities, both in border states, as well as those in which U.S. citizens already live, such as Jalisco and Guanajuato. State and local governments, private hospitals, universities, health authorities, and tourism companies and facilitators participate in these conglomerations. The main consortiums are: the City Health in Monterrey (2005), the Medical Tourism Association of Tijuana, A. C. (2008), Medical City in Chihuahua (2009), the Advisory Council on Health

Tourism Mexico City (2009), and the Health Tourism Cluster of Sonora (2009) (SECTUR, 2011; ECLAC, 2011).

## Impacts on Public Health Care

The increased quality of training in the private sector to meet the JCI and the General Council of Health standards has trickle down effects in the public health care sector, given the overlap in personnel between public and private. Additionally, education and public health sectors have formed partnerships with private health institutions to train doctors and nurses in programs such as the Bakery Heart Center, Baylor School of Medicine and John Hopkins Medical School.

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# APPENDIX 4 – MEXICO CITY AND MONTERREY – LIST OF KEY AGENCIES AND ACTORS INVOLVED IN MEDICAL TOURISM IN MEXICO CITY AND MONTERREY

## A4.1 Federal Key Informants (in alphabetical order)

- Angeles Health International
- Confederation of National Chambers of Commerce, Services and Tourism (Concanaco Servytur Mexico)
- Federal Commission for Protection against Health Risks
- General Health Council
- Grupo Ángeles
- Interinstitutional Training Commission for Health Human Resources
- Mexican Academy of Surgery
- Mexican Association of Colleges and Schools of Medicine (AMFEM)
- Mexican Association of Insurance Institutions (AMIS)
- Mexican Board of Nursing Certification, A.C. (COMCE)
- Mexican College of Nursing Graduates
- Mexican Council on Accreditation and Certification of Nursing, A.C. (COMACE)
- Mexican Federation of Associations of Medical and Nursing Schools (FEMAFEE)
- Mexican Health Foundation
- Ministry of Education
- Ministry of Finance
- Ministry of Health
- National Academy of Medicine
- National Association of Hotel Chains
- National Association of Private Hospitals (ANPH)

- National Association of Universities and Institutions of Higher Education (ANUIES)
- National Chamber of Air Transportation (CANAERO)
- National Commission for Medical Arbitration (CONAMED)
- Permanent Commission on Nursing
- School of Nursing, Ministry of Health
- The Mexican Senate

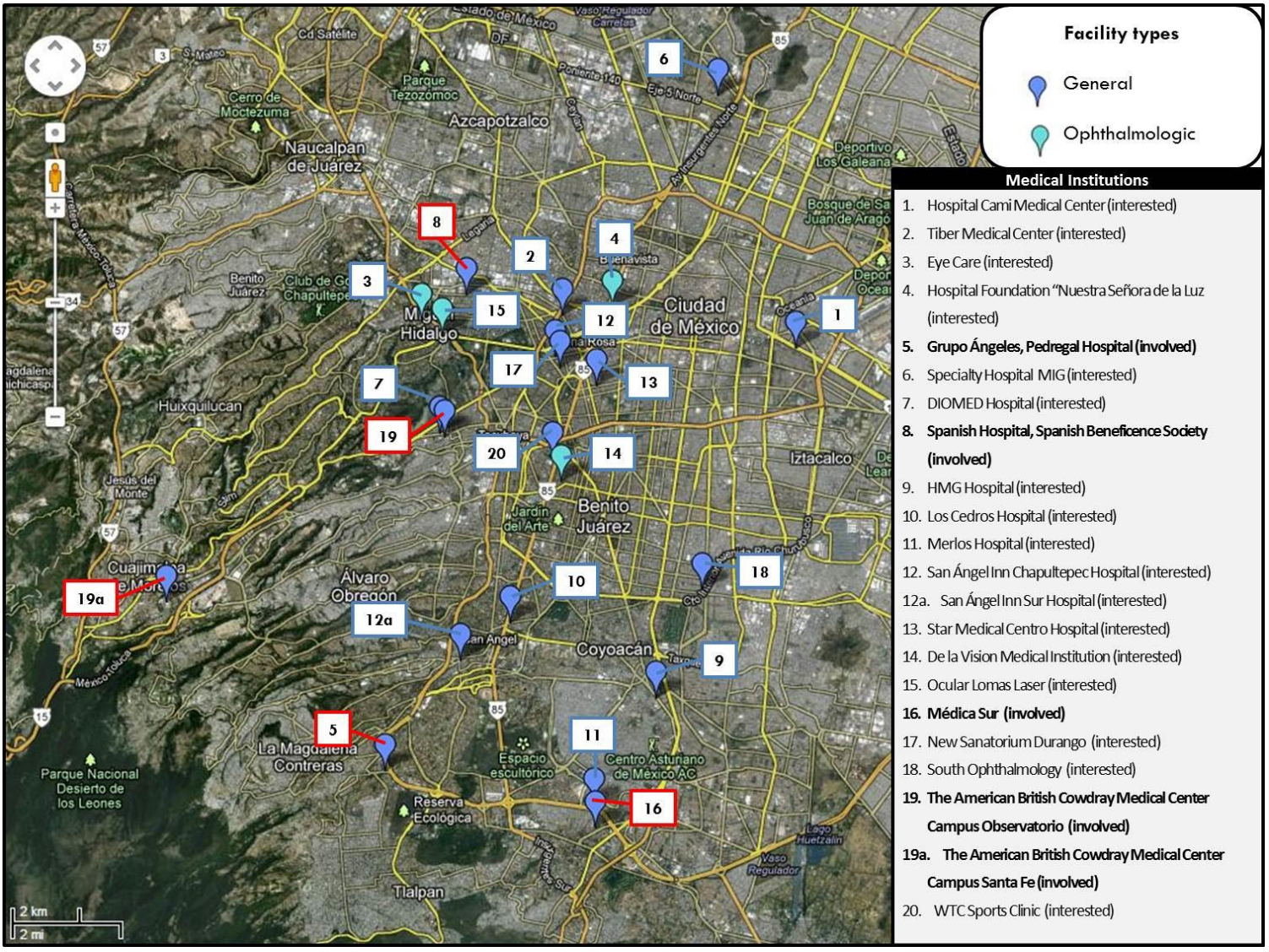
## A4.2 Mexico City Key Informants (in alphabetical order)

- ABC Medical Center
- Chamber of Commerce, Services and Tourism of Mexico City
- Federal District's Board of Tourist Promotion (FMPT-DF)
- Médica Sur
- Ministry of Economic Development of Federal District
- Ministry of Health of Federal District
- Ministry of Tourism of Federal District
- Spanish Hospital

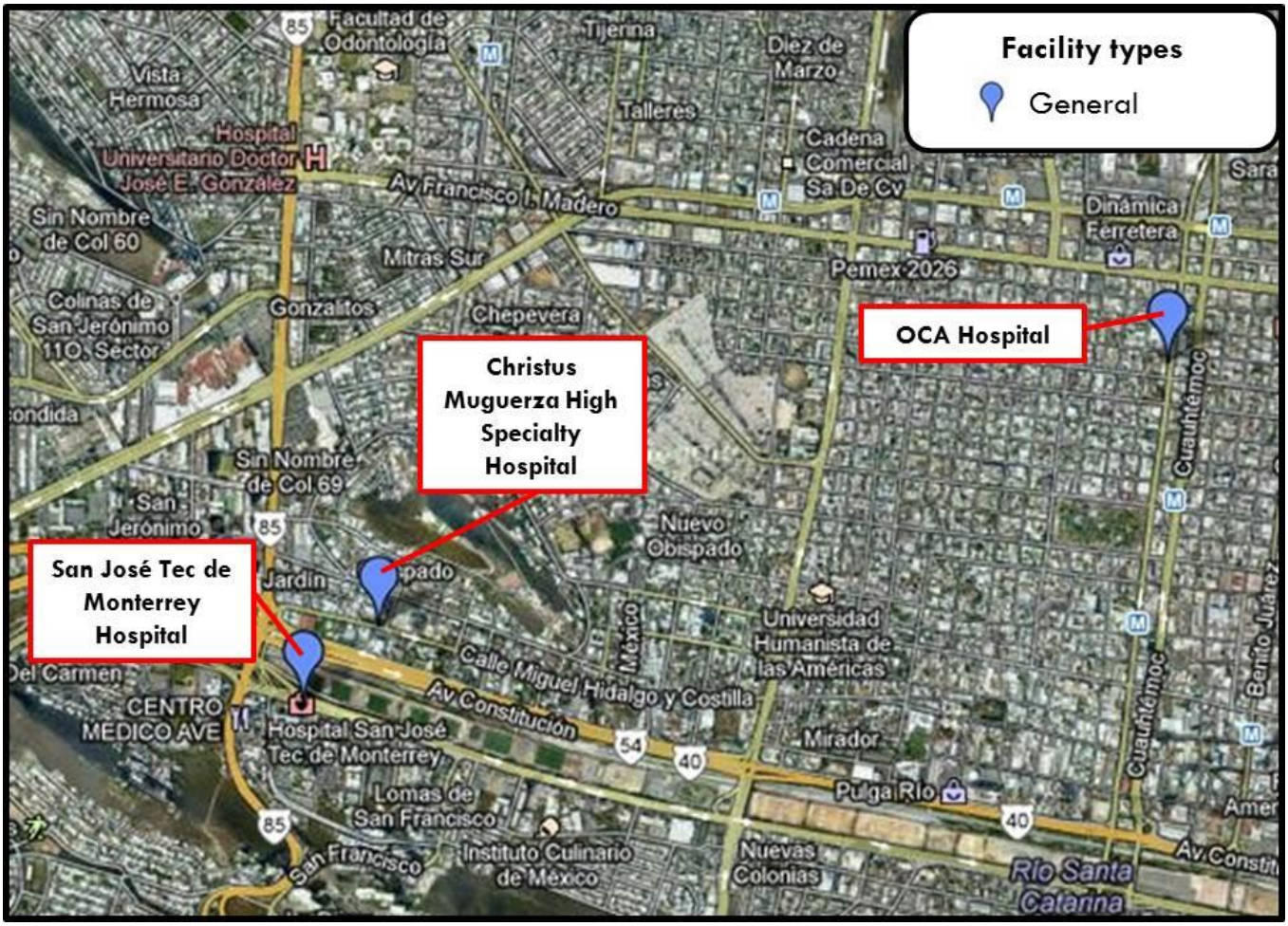
## A4.3 Monterrey Key Informants (in alphabetical order)

- Christus Health
- Christus Muguerza Group
- Ministry of Economic Development of Nuevo León
- Ministry of Education of Nuevo León
- Ministry of Finance of Nuevo León
- Ministry of Health of Nuevo León
- *Monterrey Ciudad de la Salud* Cluster
- San Jose TEC Salud Hospital
- Tourism Development Corporation of Nuevo León

# APPENDIX 5 MEXICO CITY – MAP OF INVOLVED AND INTERESTED IN MEDICAL TOURISM FACILITIES



# APPENDIX 6 MONTERREY – MAP OF INVOLVED AND INTERESTED IN MEDICAL TOURISM FACILITIES



# APPENDIX 7 – ADVERTISED MEDICAL SERVICES

1. Grupo Ángeles (Mexico City)
2. Spanish Hospital (Mexico City)
3. Médica Sur (Mexico City)
4. American British Cowdry (Observatorio and Santa Fe Campus) (Mexico City)
5. Christus Muguerza High Specialty Hospital (Monterrey)
6. San José Tec de Monterrey Hospital (Monterrey)
7. Organizacion Clinica America (OCA) (Monterrey)

| MEDICAL SERVICE | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| Allergy Services | | ✓ | | | | | |
| Audiology Services | | ✓ | | | | ✓ | |
| Bariatric Services | ✓ | | ✓ | | | | ✓ |
| Blood Bank Services | | ✓ | | | ✓ | ✓ | |
| Cardiology Services | ✓ | ✓ | | | ✓ | ✓ | ✓ |
| Dentistry Services | ✓ | ✓ | | | | | |
| Dermatology Services | | ✓ | | | | | |
| Fertility Treatment | ✓ | | | | | | |
| General Surgery | ✓ | ✓ | | | | | ✓ |
| Gynecology/Obstetrics | | ✓ | * | | | | ✓ |
| Hemodialysis | | ✓ | | ✓ | | ✓ | ✓ |
| Hyperbaric Chambers | | ✓ | | | | | |
| Imaging Services | | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Laboratories | | ✓ | | ✓ | ✓ | ✓ | |
| Neonatal and Pediatrics | | ✓ | | | ✓ | | |
| Neurology Services | ✓ | ✓ | | | ✓ | ✓ | |
| Nuclear Medicine | | | ✓ | ✓ | | | ✓ |
| Oncology Services | ✓ | ✓ | ✓ | | ✓ | | |
| Ophthalmology Services | ✓ | ✓ | | | | | |
| Organ Transplant | ✓ | | | | ✓ | | |
| Orthopedic Surgery | ✓ | ✓ | ✓ | | | | |
| Pain Clinic | | ✓ | | | | | |
| Physiotherapy | | ✓ | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Plastic and Reconstructive Surgery | ✓ | ✓ | * | | | | |
| Psychiatric Services | | ✓ | | | | | |
| Stem Cell Therapy | ✓ | | | | | | |
| Other Services | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

* – Coming Soon

# APPENDIX 8 – ACCEPTED NATIONAL AND INTERNATIONAL INSURANCE AGENCIES FOR SELECT HOSPITALS IN MEXICO CITY

1. American British Cowdry (Observatorio and Santa Fe Campus) (Mexico City)
2. Spanish Hospital (Mexico City)

| INSURANCE PROVIDER | 1 | 2 | INTERNATIONAL AGENCY |
|---|---|---|---|
| Ace Seguros, S.A. de C.V. | ✓ | ✓ | ✓ |
| AIG Mexico, Compañia de Seguros de Vida, S.A. de C.V. | ✓ | | |
| AIG Mexico Seguros Interamericana, S.A. de C.V. | ✓ | | |
| Allianz Mexico, SA de CV, Insurance Company | ✓ | ✓ | |
| Allianz Worldwide Care | | ✓ | ✓ |
| Aon Risk Services Agentes De Seguros Y Fianzas, S.A. de C.V. | ✓ | ✓ | |
| Axa Assistance Mexico | | ✓ | |
| Axa Seguros, S.A. de C.V. | ✓ | ✓ | |
| Banco Nacional de Mexico, S.A. de C.V. | ✓ | | |
| Best Doctors Inc | | ✓ | ✓ |
| BMI Services Inc. | ✓ | | ✓ |
| Bupa Mexico Compañia De Seguros, S.A. de C.V., Insurance Company | ✓ | ✓ | |
| Dimension Salud, S.A. de C.V. | ✓ | | |
| Grupo Nacional Provincial, S.A.B. de C.V. | ✓ | ✓ | |

| | | | |
|---|---|---|---|
| Infineum Mexico S., De R.L. De C.V. | | ✓ | |
| Interacciones, S.A. Gpo. Financiero Interacciones Insurance Company | ✓ | ✓ | |
| Intermutuelles Assistance | ✓ | ✓ | ✓ |
| Inter Partner Assistance, S.A. de C.V. | | ✓ | ✓ |
| Internal. Health Insurance Danmark | ✓ | ✓ | |
| International SOS Inc. | ✓ | | ✓ |
| La Latinoamericana, Seguros. S.A. de C.V. | | ✓ | |
| Mapfre Tepeyac, S.A. de C.V. | ✓ | ✓ | |
| Medica Integral, Gnp, S.A. de C.V. | | ✓ | |
| Metlife Mexico, S.A. de C.V. | ✓ | ✓ | |
| Metropolitana Cia.De Seguros, S.A. de C.V. | ✓ | ✓ | |
| Mexico Alico Life Insurance Company, S.A. de C.V. | | ✓ | |
| Mexico Asistencia, S.A. de C.V. | | ✓ | |
| Morgan White Administrators International | ✓ | ✓ | ✓ |
| Plan Seguro, S.A. de C.V. | ✓ | ✓ | |
| Prevem Seguros, S.A. de C.V. | | ✓ | |
| Preventis, S.A. de C.V.Grupo Financiero Bbva Bancomer | | ✓ | |
| Qualitas Compañía De Seguros, S.A.B. de C.V. | | ✓ | |
| Royal & Sunalliance Seguros(Mex), S.A. de C.V. | ✓ | ✓ | |
| Seguros Atlas, S.A. de C.V. | ✓ | ✓ | |
| Seguros Banorte Generali, S.A. de C.V. | ✓ | ✓ | |

| | | | |
|---|---|---|---|
| Seguros Inbursa,Sa Gpo. Financiero Inbursa | ✓ | ✓ | |
| Seguros Monterrey New York Life, S.A. de C.V. | ✓ | ✓ | |
| Seguros Multiva, S.A. Gpo Financiero Multiva | | ✓ | |
| Servicios Especializados para el Desarrollo Médico S.A. de C.V. | ✓ | | |
| Tokio Marine And Fire Insurance Co.Ltd | | ✓ | ✓ |
| USA Medical Services | ✓ | ✓ | ✓ |
| Vanbreda International | ✓ | ✓ | ✓ |
| Vitamédica, S.A. de C.V. | ✓ | ✓ | |
| William M. Mercer | ✓ | | ✓ |
| Zurich Compañía De Seguros, S.A. | ✓ | ✓ | |

# APPENDIX 9: TRADE AND INVESTMENT TREATIES – MEXICO

## GATS Commitments

Although trade and investment treaties at the bilateral, regional and multilateral level are not the most crucial drivers of trade and investment pertinent to medical tourism, these agreements do have the capacity to influence growth in international patient flows, and equitable access to quality health care. One such treaty is the World Trade Organization's (WTO) General Agreement on Trade in Services (GATS), which requires member states to progressively remove barriers to health services. This can include trade in health services in four specific areas (known as 'modes') (WTO, n.d.):

1. The supply of cross-border health services (such as telemedicine, or laboratory testing)
2. The supply of health services for international consumers (such as medical tourism)
3. The presence of foreign direct investment in health services (such as foreign direct investment in a health facility)
4. The movement of health workers (such as allowing foreign health professionals to practice within the country)

Reducing trade barriers (also known as 'liberalization') can be achieved through two streams: (1) improved market access, i.e., the removal or reduction of tariff and non-tariff barriers to foreign goods, investors or service providers entering the domestic market; and

(2) national treatment, i.e., equal regulation of foreign and domestic goods, investors and service providers. GATS operates from a 'positive list approach' wherein nations voluntarily include a designated number of sectors, and indicate any exclusions or limitations to market access and national treatment for each mode of each sector. GATS commitments are binding and must be upheld, violation of any commitment opens a nation up to potentially costly trade disputes with other WTO member states.

Under GATS, Mexico has liberalized trade in medical and dental services; higher education services; life, accident and health insurances services; private hospital services; and other human health services, including laboratories and medical diagnosis services, private services auxiliary to medical treatment and dental prosthesis laboratory services. Mexico has fully liberalized without restrictions on medical, dental and hospital services under GATS Mode 2 (the supply of health services for international consumers), which will ease growth in Mexico's medical tourism sector. Mexico also removed restrictions on health professionals under GATS Mode 4, although it 'reserved' an existing measure that only allows Mexican nationals who are licensed as doctors to provide in-house (hospital) services. Mexico permits foreign direct investment (GATS Mode 3) in the health sector but limits this to 49% of the registered capital, indicating that Mexican investors should retain majority control over private health care.

Finally, Mexico has elected to liberalize life, accident and health insurance services under GATS. While this commitment remains unbound (i.e., Mexico is still able to impose new limitations on it), Mexico has progressively increased the amount of foreign control in private insurance markets from 0% in 1994, to 30% in 1995, and 40% in 1998 (WTO, 1994;

1995; 1998). While this could facilitate medical tourism (to the extent that private health insurers in the patient's country also operate in Mexico), there is concern that growth in private health insurance markets can crowd out tax-funded public health insurance, reducing equitable access to care for poorer population groups.

## Regional and Bilateral Trade Agreements

Mexico has concluded several regional and bilateral trade agreements.

REGIONAL TREATIES INCLUDE:

EU-Mexico Free Trade Agreement & Economic Integration Agreement

Mexico-Northern Triangle (El Salvador, Guatemala, Honduras)

North American Free Trade Agreement (NAFTA) (Canada, the USA and Mexico)

The implication of these regional treaties for health services remains largely conjectural at this time. For instance, the Mexico-Northern Triangle FTA shifted to a 'negative list approach', wherein all service sectors and modes of supply are open to competition from members of the agreement (excluding government services or functions). This provision effectively eliminated restrictions on foreign direct investment in private healthcare services, which could affect the private/public balance in health care and health human resources with implications for equitable access to quality health care by those reliant on public health services.

NAFTA introduced an investor-state chapter in its agreement, which permits foreign investors the right to initiate dispute settlement proceedings against a foreign government

for regulatory or legislative actions 'tantamount to expropriation.' All three countries under NAFTA have reserved the right to 'adopt or maintain any measure' with respect to a broad range of services, including public health. However, this exception applies only to the extent that such services are 'established and maintained for a public purpose.' Existing or increased private markets for health care in all three countries could leave this exception open to a NAFTA challenge. One such challenge, terminated because the claimant failed to file a requisite deposit, saw a US health care firm attempt to sue the Canadian government for $160 million in damages due to the firm's inability to establish a private surgical service in Canada. Although it is not known how a tribunal may have ruled in such a case, the investment chapter in NAFTA opens 'public health care…to investment treaty claims (Van Harten, 2011).' Non-health specific investment dispute settlements can have indirect effects on health care through the large fines paid by governments (reducing public revenues) and by 'regulatory chill,' wherein governments become cautious about new public health measures for fear of triggering a potentially costly trade or investment dispute.

Mexico is currently one of twelve countries negotiating a new regional FTA, the Trans-Pacific Partnership (TPP) agreement, which would go far beyond conventional trade and investment liberalization and deal primarily with 'behind-the-border' measures that seek to bring policy domains traditionally under domestic control under international trade and investment law. Inclusive of the investment chapter seen in NAFTA, and the 'negative listing' of services in recent bilateral and regional treaties, the TPP represents a further reduction in policy space and capacity, particularly for the low- and middle-income countries involved. The implications of the TPP on medical tourism or equitable health care

access within Mexico, however, will not be known until a final agreement is reached and made public.

Mexico has also engaged in numerous bilateral trade agreements (BTAs) with countries including China, Colombia, Costa Rica, the European Union, Israel, Japan, Nicaragua, Peru, and Uruguay, many of which include expansions on trade in cross-border services and contain provisions on investment and investor state dispute settlement. The Colombia-Mexico agreement is instructive, as both countries have made deeper liberalization commitments with each other in social and health services, hospital and human health services, and tourism and travel related services. These commitments can ease the flow of patients between these two countries, and is indicative that much of the flow of international patients in medical tourism is regional, between neighbouring countries.

## Bilateral Investment Promotion and Protection Agreements (BIPAs)

BIPAs, also known as bilateral investment treaties (BITs) or foreign investment protection and promotion agreements (FIPAs), focus solely on guaranteeing the rights of foreign investors in the host country (Dhar, Joseph, & James, 2012). Such investment protections have been worked into some of the regional and bilateral agreements discussed above, as well as in Mode 3 of GATS. Of particular concern with BIPAs is that they allow foreign private investors to initiate arbitration against a government when they believe their investment has been expropriated due to regulatory or legislative change. This is worrisome as it may

shift authority over dispute resolution away from local jurisdictions and shift power to relatively wealthy investors.

GATS contains a list of general exceptions to its commitments that a country can use to justify new measures necessary to protect human, animal or plant life or health. Moreover, individual investors or companies cannot initiate a dispute under WTO rules, only another member country can. With BIPAs, however, private foreign investors can initiate a dispute, and even when an expropriation is considered to be for a public purpose, and does not discriminate against foreign in favour of domestic investors, there is a requirement for "fair and equitable compensation."

According to UNCTAD (2012), while expropriation includes traditional concepts such as nationalization, it has also been extended to include regulatory measures enacted by the state in the protection of public interest that may diminish the economic value of the investment. As a result, attempts by Mexico to increase regulatory protections for its citizens could be undermined or made financially prohibitive by the requirement that compensation be paid to private foreign investors.

As of 2012, Mexico has signed a total of 29 BIPAs, inclusive of Argentina, Australia, Austria, Bahrain, Belarus, Belgium/Luxemburg, China, Cuba, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, India, Italy, Korea, Netherlands, Panama, Portugal, Republic of Korea, Slovakia, Spain, Sweden, Switzerland, Trinidad and Tobago, United Kingdom and Uruguay (Foreign Trade Information System, 2014). Additional measures in many BIPAs include bans on performance requirements (set percentages of local inputs which promotes employment and technology transfer), and bans on capital control, (restricting flows of capital in and out of the economy to promote economic stability), which

can contribute indirectly to the ability of the population, particularly vulnerable sections, to afford access to medical care.

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