MARKET STUDY ON THE MEXICAN MARKET FOR MEDICAL EQUIPMENT AND SUPPLIES

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1. BACKGROUND

Mexican medicine dates back to the prehispanic period, when "true" doctors (tlamatimini), which we would now call scientific, coexisted with witch doctors (nahualli) and empirical experts in the use of medicinal herbs for curative purposes. With the Spanish colony, the Spanish and mestizo population recieved the services of western doctors, while the vast indian population was covered by the autoctonous medicine. The first hospital established on Mexican soil was founded by Hernán Cortés shortly after his defeat of Tenochtitlan in 1534. The first hospitals were all run by monastic orders, until in 1821 the Spanish Constiturion extinguished them. At that time, health services were put under government responsability. Hospitals, as they were understood in colonial Mexico, included not only installations for curative purposes, but also shelters for the poor and abandoned and, in some cases, true hospital-villages to care for the people. With the new, post-Independence government of Benito Juárez, all goods in hands of the church were nationalized and the last church-held hospitals became state property (1859) under federal and local administration. Several Councils and Directorates were created and later disappeared to supervise hospital operations, until with the government of Porfirio Díaz, the Directorate of Public Welfare and the Superior Health Concil were created under the Ministry of the Interior. The first regulations for hospitals were then passed (1877). Slowly new hospitals were built and old hospitals rebuilt and modernized using the French model. several foreign communities also built their own hospitals, as is the case with the French Hospital (1860), the northamerican welfare created in 1868, which later joined efforts with the British to create the British hospital (1095), which in 1964 became the American-British Cowdray Hospital, and the Spanish welfare institution (1842) which built a hospital in 1876 and further moved in 1932 to the present facilities.

During the post-Revolutionary period, many changes took place in the public health sector. The Health Department was created in 1919, which in 1934 became the Public Health Department. During the presidency of Manuel Avila Camacjo (1940-1946) a major hospital construction program was implemented, translating into the inauguration of 45 hospitals. In 1943 the Secreatariat of Health and Welfare was created (Secretaría de Salubridad y Asistencia) which recently was renamed Secretariat of Health (Secretaría de Salud). The Instituto Mexicano del Seguro Social (IMSS) was created in 1943 as a national and mandatory public service which covers all persons bound by labor or learning contracts and members of business associations, and in 1960 the Instituto se Seguridad y Servicios Sociales para los Trabajadores del Estado (ISSSTE) was established (although its roots date back to 1925) to provide overall public health coverage to public employees (see Section 4 for more information). In 1958, there were a total of 1,132 hospitals in Mexico with 47,505 beds, in 1967 there were 4,902 hospitals with 86,151 beds, 56% in public

institutions and 44% in private hospitals. By 1992, there were 13,970 public health units with 66,165 beds and 2,250 private hospitals and clinics with 22,000 beds.

The improvement in health and well-being attained by the Mexican population at large have been very significant in this century, characterized by a market downturn in mortality and a simultaneous increase in births, followed later by a stabilization and a subsequent decline in birth rates. While between 1940 and 1960 the birth rate was of an average 46 births per 1,000 inhabitants, in 1981 this rate had declined to 43 and 32 since 1986, basically in response to the decrease in the overall fertility rate from 6.6 children to 3.8 children per woman of fertile age. Whereas in 1930 life expectancy was less than 40 years, by 1950 it had increased to 47 years, and by 1992 the average life expectancy in Mexico is of 69.7 years, 66 for men and 73 for women. These factors are reflected in the country's population structure where 12 of every 100 Mexicans are under five years of age, 27 are between 5 and 14, and 21 are aged between 15 and 24. Mexico's rural population represents some 30% of the country's total population of 84.5 million and mostly lives in widely dispersed areas. Although the IMSS is active in every state of the Republic, as are many other public health units, these factors have made the generalized delivery of health sevices difficult and expensive.

In response to a variety of events, including a commitment by the Mexican government to provide health services to a wider population, to provide higher quality services, to modenize existing facilities and to decentralized health services, as spelled out in the 1989-1994 National Development Plan; the fact that much of the medical equipment used in Mexico is technologically outdated and needs to be replaced; the need to modernize rural clinics and hospitals; the growth of domestic consumption as a result of Mexico's economic recovery and the growth of the Mexican population; and Mexico's trade liberalization policies, which have made the importation easier and relatively cheaper through the reduction in import tariffs and the elimination of prior import permits, the Mexican market for medical equipment and supplies has increased very rapidly in the past few years, at an average annual rate of 27% between 1984 and 1992. The above mentioned factors will continue to be influential in shaping the Mexican market for medical equipment and supplies, and translate into future growth.

The expansion and modernization of Mexican health care installations is presently one of the principal priorities of the government. The continuous growth of this sector is reflected in the increasingly wider coverage of the Mexican population by both public and private health services. The quality of these services has also been improved upon, but much remains to be done to medically cover the country's population. The public sector health care system will expand to meet the demands of this growing population, as well as population located in rural areas.

In order to do so, it will have to continue purchasing equipment and supplies both from domestic and foreign manufacturers.

Imports have traditionally played an important role in this market and represent important sales opportunities. In 1986, they represented approximately 75% of total apparent consumption. At present, they are estimated to cover 90% of the equipment market. This has been the result of a trend towards an increasing preference for electronic or high technology equipment. This again, will represent increased sales for foreign companies based in Mexico or wishing to enter or expand their participation in the Mexican market.

2. ECONOMIC ENVIRONMENT

With the objective of reducing the inflation rate, the Mexican authorities implemented a stabilization program in 1988, called the Economic Solidarity Pact, which features traditional austerity measures, entailing tight fiscal and monetary policies and unorthodox measures, such as price, wage and exchange rate controls. This program has been the cornerstone of Mexico's economic policy over the past four years, and has been extended throughout 1993 under the name of Pact for Stability, Competitiveness and Employment. It has resulted in a drastic reduction of the inflation rate, from an annual rate of 159% in 1987 to 19.7% in 1989. Inflation rebounded to 29.9% in 1990 but was brought down to 18.8% in 1991 and 11.9% in 1992. At the same time, interest rates have increased again to the present 20%, and the peso-dollar devaluation rate has recently been increased to Mex$0.40 pesos a day or 4.6% per annum.

Along with the objective of consolidating the progress made in price stabilization with a 7% inflation goal through tight monetary and fiscal policies, Mexico's macroeconomic policy in 1993 aims to promote employment, reaffirm gradual and sustained economic recuperation with an estimated GDP growth of 2.5%-3%, basically by establishing the necessary conditions to encourage national and foreign investment and by promoting increased efficiency and competitiveness, and to promote social development and the improvement in living standards of the poorest segment of society through direct government action.

Domestic economic activity recovered for the third consecutive year in 1989, after the 1986 recession, with a gross domestic product (GDP) growth rate of 3.3%. In 1990 it grew 4.4% another 3.6% in 1991 and 2.6% in 1992 to reach $287.6 billion (1). With an 83 million population, per capita GDP was estimated at $3,465 in 1992. Additionally, manufacturing output grew by 5.8% in 1990,

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1. Note: All values in this report, unless otherwise stated (Mexican pesos, Mex$, Canadian dollars, Cdn$, etc) are quoted in United States dollar equivalents.

3.7% in 1991 and 2.3% in 1992 in real terms, private investment and consumption expanded 13.6% and 5.2% respectively in 1990 and 1991 and public investment was up 12.8%. During the 1992-1994 period, the GDP is expected to maintain an average annual growth rate of 4%-5%, although preliminary figures place GDP growth at 2.7% for 1992 pointing towards a reduction in GDP growth in response to reduced economic activity worldwide and the need for inflation control.

In an effort to revitalize and open the Mexican economy, the Mexican Government undertook a series of structural changes, including the accession to the General Agreement on Tariffs and Trade (GATT) on August 24, 1986 leading to an extensive trade liberalization process: import permits were eliminated on all but 325 of the total 11,950 tariff items based on the Harmonized System adopted in 1989. Official import prices are no longer applicable, nor the 5% export development tax, and import duties were lowered from a maximum of 100% in 1982 to 20% in January 1988. The weighted average tariff rate is now 10.4%. The automotive and computer industries have also been liberalized, through the elimination of prior import permits, to allow free entry of products in these industries. The approval of the North American Free Trade Agreement will further strengthen trade between Canada, the United States and Mexico.

According to official data from the Mexican Secretariat of Commerce and Industrial Development (SECOFI), Mexico's trade balance dropped once again in 1992 to a $19.8 billion deficit from -$11.1 billion in 1991, when it had already increased by 145.6%. Exports increased by 3.8% in 1992, from $27.1 billion to $28.1 billion, while imports grew 25.6%, from $38.2 billion to $48 billion in 1992, having already increased 22.8% in 1991. January-March data for 1993, place total exports at $7.4 billion and imports at $12.9 for the first quarter, reflecting a 10.3% and 18.3% growth rate respectively as compared to the same period the previous year.

3. MARKET ASSESSMENT

Medical equipment and supplies encompass a very wide range of products to diagnose and treat patients. The market for medical equipment and supplies as analyzed in this report includes:

Electro-diagnostic apparatus
Ultra-violet or infra-red apparatus
Dental equipment
Ophtalmic instruments and appliances
Anaesthesia apparatus
Arterial pressure meauring apparatus
Mechano-therapy appliances
Theraputic respiration apparatus
Artificial orthopedic or fracture appliances
Artificial parts of the body

Hearing aids and pacemakers
X-ray apparatus, plaques and film
Medical and dental furniture
Surgical knives, retractors, tweezers, valves, chisels, etc.
Syringes, needles, catheters, canulae, etc.
Cotton, gauzes and other materials impregnated with pharmaceuticals
Catgut and surgical thread
Surgical gloves
Dental and bone cement
Contact lenses and spectacles
Wheelchairs
Sterilizers

Excluded are all pharmaceutical preparations.

The total market for medical equipment, apparatus and supplies, as defined above, was valued at $491.0 million in 1991, showing a 35.5% increase over the $362.3 million level of 1990, itself 26.9% above 1989 levels. Based on January-October figures, in 1992, the market grew by an additional 14.4% to $561.5 million. Table 1 shows total apparent consumption of medical equipment apparatus and supplies.

Several factors have brought about this growth: Mexican economic and trade policies, as undelined in Section 2; the growth of the Mexican population; the increased number of infectious diseases; the fact that much of the medical equipment used in Mexico is outdated technologically and is in constant need for repairs or substitution; the lack of spare parts, proper maintenance service and the lack of technicians, reason for which old equipment is often stored away bringing about an overall shortage of equipment; the 1990-1994 modernization program for the public health sector and the solidarity program which have translated into equipment purchases and an overall modernization of rural clinics and hospitals; and an increased effort by the Mexican government to reach wider coverage through public vaccination campaigns, and other health-related campaigns.

Imports have traditionally been a significant source of supply, covering at present 51% of total demand, or $286.6 million in 1992. Mexico imports much more than it exports, resulting in a trade deficit of $243.4 million. Total imports can be divided into 71% equipment and 29% supplies as described in Section 3.1 below. Imports are expected to continue increasing more rapidly than domestic production in the future, at an average annual rate estimated at 15%, to reach $435.9 million by 1995, or 53% of total demand.

TABLE 1
APPARENT CONSUMPTION OF MEDICAL EQUIPMNET AND SUPPLIES
(US$million)

	1989	1990	1991	1992e	1995p
Production	174.1	208.9	261.1	318.1	446.9
+ Imports	122.8	167.8	258.4	286.6	435.9
- Exports	11.3	14.4	28.5	43.2	57.5
TOTAL	**285.6**	**362.3**	**491.0**	**561.5**	**825.3**

Source: Import-export data by SECOFI; author's estimates

Additionally, the market can further be subdivided into purchases of equipment and of supplies (the items in each category can be consulted in Section 3.1). In 1992, total apparent consumption of $561.5 million was divided as follows:

	EQUIPMENT	SUPPLIES
Production	64.2	253.9
+ Imports	203.2	83.4
- Exports	9.5	33.7
TOTAL	**257.9**	**303.5**

The North American Free Trade Agreement (NAFTA) is anticipated to bring about an increased trade flow between Mexico, Canada and the United States in high-technology and high import contents markets, such as the one here analyzed. Total apparent consumption is therefore expected to grow at an average annual rate of 14% between 1992 and 1995 to reach a total of $825.3 million in 1995.

3.1 IMPORTS

Imports have traditionally played a major role in apparent consumption of medical equipment and, to a lesser degree, of supplies. In some segments of the market, imports actually cover total demand, since there is no domestic production. This is the case particularly with state-of-the-art technology and highly sophisticated equipment, apparatus and instrument. In 1992, imports represented 51% of total supply, as compared to 43% in 1989. The following table shows total imports of medical equipment and supplies by category.

TABLE 2
IMPORTS OF MEDICAL EQUIPMENT AND SUPPLIES
(US$000)

CATEGORY	1989	1990	1991	1992 JAN-OCT
EQUIPMENT & APPARATUS				
Electro-cardiographs	1,620	2,162	2,612	2,681
Ultrasound equipment	5,132	8,344	11,245	11,523
Incubators for babies	883	1,325	2,524	1,753
Electro-surgical app.	435	757	2,506	2,039
Gamma ray radiodiagnostic eq.	189	5,712	964	1,246
Other electro-diagnostic ap.	13,351	18,456	39,046	27,442
Ultra-violet/infra-red ap.	164	162	54	63
Dental drill engines	147	329	229	178
Dental equipment & drills	3,898	5,783	6,974	7,232
Ophtalmic instruments & appl.	2,133	3,504	6,968	5,394
Anaesthesia apparatus	606	570	3,102	2,437
Other instruments & appl.	11,324	17,722	30,692	27,735
Mechano-therapy appliances	1,964	1,828	2,701	3,407
Theraputic respiration app.	3,499	6,749	8,321	7,838
Artificial joints	504	1,018	1,165	1,215
Orthopedic appliances	2,025	9,430	4,873	11,971
Artificial parts of the body	5,904	5,071	6,397	6,867
Hearing aids	1,041	1,221	1,617	1,711
Pacemakers	1,800	937	2,093	1,957
X-ray & radiotherapy app.	17,209	19,235	37,399	27,040
X-ray tubes & parts	5,759	5,417	10,464	7,053
Medical and dental furniture	2,124	3,349	7,449	7,204
Emergency pharmacy cases	14	42	148	216
Sterilizers	1,421	1,676	2,968	2,398
Wheelchairs	141	302	417	734
SUBTOTAL EQUIPMENT	**83,287**	**121,101**	**192,928**	**169,334**
GROWTH		**45.4%**	**59.3%**	**(12.2%)**
SUPPLIES				
Syringes/needles/catheters/...	5,674	4,314	4,691	5,087
Tubular metal/suture needles	9,739	6,284	11,434	8,924
Catheters	1,816	2,939	4,179	6,085
Cannulae	507	695	1,035	1,364
Sample/transfusion plastic mats.	978	4,213	8,625	7,429
Other supplies	3,073	3,324	5,98	5,469
Surgical knives/dissect. covers	457	819	1,888	2,086
Tweezers dissect/horn/other	712	1,207	1,937	1,511
Threaded surgical needles	1,001	1,834	2,974	2,333
Other instruments & appl.	1,348	1,941	2,522	1,185
Artificial teeth & dental fill.	750	1,226	1,475	1,772
Cotton/gauzes/bandages	3,657	3,776	6,691	7,780
Catgut & suture thread	1,069	2,248	1,475	1,182
Dental and bone cement	1,490	1,690	2,219	2,125
Surgical gloves	565	818	988	1,087
X-ray plaques & film	2,783	1,886	2,642	3,464

CATEGORY	1989	1990	1991	1992 JAN-OCT
Contact lenses	895	1,701	3,515	3,393
Spectacle lenses glass	1,665	3,382	3,467	3,267
Spectacles plastic & other	1,381	2,377	3,069	3,955
SUBTOTAL SUPPLIES	**39,560**	**46,674**	**65,424**	**69,498**
GROWTH		**18.0%**	**40.2%**	**6.2%**
GRAND TOTAL	**122,847**	**167,775**	**258,352**	**238,832**
GROWTH		**36.6%**	**54%**	**(7.6%)**

Source: Import data published by SECOFI

As can be seen in this table, total imports of medical equipment and supplies have increased at a very fast pace in the past few years, averaging 33.7% between 1989 and 1992 on an annual basis. While total imports were valued at $122.8 million in 1989, by 1992 they are estimated at $286.6 million. During 1991 alone, imports grew by 54% to $258.4 million, from $167.8 million the previous year. Equipment imports have grown more rapidly than imports of supplies in 1990 and 1991 but this trend was reversed in 1992.

In the years to come, imports are expected to grow at a faster pace than local production, because end users are increasingly buying high technology, sophisticated and state-of-the-art equipment and apparatus, which will enable them to modernize and improve their facilities. Domestic production has been concentrated in manual, low technology equipment, while the more sophisticated, electronic and automated equipment has been sourced abroad. The latter is now in higher demand because it is more accurate, includes leading edge technology and is of a higher quality. Many apparatus and equipments are not made in Mexico because the low volumes sold locally by product do not justify the major investments needed to manufacture them, in particular in the face of international competition.

Among the imported equipment and supplies identified as having a good sales potential in Mexico are:

Ultrasound equipment
Respiration therapy equipment
Electro-cardiography equipment
Electrosurgery equipment
Laser equipment for surgery and laser therapy
Incubators
Cardiology and resucitation equipment
Anaesthesia and surgical needles
Otorhinolaryngology units
Intravenous catheters
Blood pressure ventilators
Blood transfusion and IV equipment

Plastic devices to administer liquid solutions
Ophthalmological instruments and equipment
Hearing aids
X-ray equipment and parts
Automatic developers for X-ray plaques
X-ray fil and plates
Anaesthesia equipment
Syringes
Impregnated gauze
X-ray film
Elastic bandages
Vascular access sets
Adhesive tape & band-aids
Catheters
Surgical thread
Abdominal pads
Surgery blades
Surgical gloves

The United States has traditionally been the number one supplier of medical equipment and supplies to Mexico with a 59% market share in 1992, followed by Germany (17%), Japan (10%), Switzerland (2%), France (2%), Italy (2%), Israel (1%), Puerto Rico (1%), Brazil (1%). The United States is percieved to be a technological leader in the industry. Also, the quality of U.S. products and the close proximity to Mexico, which has allowed easy availability of parts and service, have payed an influential role in this relationship. Many Mexican doctors have made graduate studies in the United States (and to a lesser degree also in Canada), regularly attend conferences in the States and are therefore quite familiar with U.S.-made products. Last but not least has been the association of Mexican and U.S. companies through licensing and joint venture agreements. Nevertheless, the U.S. import market share has decreased from 71% only three years ago, while German and Japanese manufacturers are gaining importance due to their aggressive market penetration. Their marketing efforts include extending more liberal credit terms for the purchase of equipment. In the case of medical supplies, the price factor tends to be very determinant and accounts for large, infrequent import quantities from Far Eastern countries, Israel, Brazil, Puerto Rico, etc., with little concern for a continuing market presence.

Some of the most important foreign firms in the local market include:

GERMANY:	Draeger	incubators
	Henochron	automated sample analyzers
	Rusch	catheters and disposables
	Siemens	X-ray units, mammographic eq, mobil testing systems
	Stortz	endoscopes
	Wolf	endoscopes

JAPAN:	Olympus	endoscopes
	Sanko	disposables
	Toshiba	mobile testing systems
SWEDEN:	Bausch & Lomb	microscopes
	Daneka	anaesthesia equipment
	Gambro	dialyzer & peritoneal equipment
	Mitogen	tent systems
	Organon Teknika	dyalyzers, hemodialysis

U.S.A.	Aldrich	Helena
	Alfa	Hewlett Packard
	Alltech Assoc.	Hoeffer
	Amico	Kimble
	Applied Sciences Labs.	Kontes
	Baker	Labline
	Bausch & Lomb	Millipore
	Beckman Instruments	NEN Research Products
	Bellco	New Brunswick
	BioRad	Pelfreez Biologicals
	Biolabs	Perkin Elmer
	Buchler	Pierce
	Calbiochem	Promega
	CGA. Corp.	Rainin
	Cole Palmer	SP
	Corning	Sargent Welch
	Difco	Satrstedt
	Dynatech	Scientific Products
	Dupont	Sharplen
	Evergreen	Sigma
	Fisher	Sorvall
	Flow Laboratories	Thomas
	Fluka	Varian
	Forma Scientific	Waters

Canada has not played an influential role in the Mexican market for medical equipment and supplies, although exports have shown an increasing trend. Total Canadian exports to Mexico amounted to Cdn$392,000 in 1988 and grew to Cdn$651,000 million in 1989. In 1990 exports to Mexico surged with a one-time export of X-ray apparatus of Cdn$1.3 million to a total of Cdn$1.8 million. In 1991, exports fell to Cdn$970,000 but increased again by 69% in 1992 to Cdn$1.6 million (see Table 3). If X-ray apparatus and parts are excluded from the total, exports grew by 110% in 1991 and 32% in 1992.

TABLE 3
TOTAL CANADIAN TRADE OF MEDICAL EQUIPMENT AND SUPPLIES WITH MEXICO
(Cdn$000)

CATEGORY	1988	1989	1990	1991	1992
CANADIAN EXPORTS TO MEXICO					
Impregnated medical supplies	0	41	5	0	0
Suture materials	0	0	4	0	0
Dental & bone rec. cement	4	0	0	101	56
Electro-cardiographs	3	0	0	0	0
Electro diagnostic apparatus	59	177	14	6	7
Needels, catheters, cannulae ..	106	103	14	158	405
Dental instruments/appliances	25	37	140	51	64
Ophtalmic instruments/appl.	4	18	0	0	0
Other medical instr/appl.	36	54	79	65	285
Mechano-therapy appliances	26	47	84	233	148
Hearing aids	27	13	33	39	39
Artificial body parts	6	36	0	130	109
X-ray apparatus & parts	0	12	1307	63	438
Sterilizers	21	0	0	0	0
Contact lenses	47	109	86	3	20
Spectacles	28	4	27	121	64
TOTAL	**392**	**651**	**1793**	**970**	**1635**
CANADIAN IMPORTS FROM MEXICO					
Impregnated medical supplies	41	27	1	12	31
Suture materials	0	7	1	4	2
Dental & bone rec. cement	48	7	21	37	0
Electro diagnostic apparatus	0	0	14	0	0
Needels, catheters, cannulae	354	136	273	400	603
Other medical instr/appl.	187	829	490	53	144
Breathing appliances	3	0	0	0	0
Orthopedic appliances	34	0	0	0	81
Artificial body parts	0	0	0	91	19
X-ray apparatus & parts	40	0	3	6	2040
TOTAL	**707**	**1006**	**803**	**603**	**2920**

Source: Statistics Canada - International Trade Division

Mexican exports to Canada, on the other hand, were valued at Cdn$707,000 in 1988 and fell to Cdn$603,000 by 1991. With major exports of x-ray apparatus in 1992, total Canadian imports from Mexico grew to Cdn$2.9 million in 1992. These are concentrated in needles, catheters and similar medical supplies and similar articles of very simple manufacture and x-ray apparatus and parts.

The most important competitive factors affecting medical equipment sales in Mexico are leading edge technology and quality, as mentioned earlier. Price, financing and promotion, as

well as availability of spare parts, technical support and service, are also important and will differentiate one company from another. End-users often mentioned problems related to poor after-sales service, insufficient repair work and timely availability of spare parts, as well as lack of technical support. This factor, coupled with credit facilities may well make the difference when selling a competitive product in Mexico. Canadian companies not currently doing business in Mexico, as well as those that have, should take advantage of the present setting and consider entering this market of consolidating their market presence. Promotion of Canadian products can be made through participation in trade shows, technical seminars, usually at national or international conferences or at trade shows, advertising in specialized magazines, direct mail campaigns and personal visits to key buyers and distributors.

3.2 DOMESTIC PRODUCTION

Local manufacture of medical equipment and supplies is limited to the more manual and less sophisticated type of equipment and also to a wide variety of medical disposables. Manufacturers of medical disposables realize they have to more competitive in terms of price and quality in the face of increased competition from abroad both internally and internationally. Domestic production amounted to $174.4 in 1989 and grew to $318.1 million in 1992, at an average annual growth rate of 22.3%. Most domestic production is concentrated in the segment of supplies and disposables, which accounts for 80% of total production, or $253.9 million in 1992. Local manufacturers are presently making efforts to modernize their plants, increase production capacity and improve technology in order to be more productive and competitive in the years to come.

Domestic manufacture includes items such as:
Cardiology equipment: oxygenators;
Pulmonary equipment: nebulizers, oxygen tents, regulators for medicinal gases, oxygen helmets, central systems for oxygen, air and vacuum systems, mist aspirators, oxygen therapy equipment and oxygen administering equipment;
Pediatric equipment: incubators, tent systems, hospital tables;
Operating room equipment: catheters, surgical tables and lighting, stainless steel furniture and accessories;
General hospital equipment: central station bedside patient monitoring systems;
Orthopedic and prosthetic equipment: protheses, orthoses and accessories;
Disposables: syringes, thermometers, needles.

High technology equipment, instruments and accessories, in particular electronic instruments, are practically not produced locally because Mexican companies do not have the technologyto produce them. In the near future, within the NAFTA environment, it is possible that U.S. and Canadian manufacturers will begin

joint-venturing with local companies or establishing assembly or manufacturing facilities in Mexico to produce more technically advanced equipment and products.

Some of the local manufacturers of medical equipment and supplies in Mexico are:

America Médica y Asociados	Instrumed de México
Ascher	Instrumental Médico
Becton Dickinson de México	Johnson & Johnson
Beiersdorf de México	Kendall de México
Casa Lux	Kodak Mexicana
Casa Mario Padilla	Laboratorios Le Roy
Casa Plarre	Manufacturas Solco
Derivados de Gasa	Médica Industrial
De Todo para Hospitales	Medizer
Drenovac	Productos Adex
Everest & Jennings de México	Quirort
GADPA	Samy
Grupo Adex	Smith's de México
Hemost	3M de México
Howmédica Mexicana	Termex
Industrias Leygar	Travenol

4. END USERS

The Mexican health services sector accounts for 3.4% of the contry's total GDP and for 18.7% of total services GDP. The Mexican health care system is composed of close to 3,000 medical units that provide hospitalization services. Of these hospitals, 736 correspond to the public sector, presently the largest end-user segment. Private sector hospitals are 2,250. Additionally, there are many in-out or external consultation hospitals and clinics in both sectors.

PUBLIC SECTOR HOSPITALS

This sector represents the largest end-user segment for medical equipment and supplies. Public health services basically report to the Secretaría de Salud (Secretariat of Health -SS), which coordinates welfare activities including social security and assistance, family integration, training and education, child attention, assistance to elderly people, communication improvements and food programs, as well as research and technological development through a wide variety of agencies. The total budget assigned to the health sector in 1992 amounted to $12 billion, equivalent to 34% of the federal budget, in addition to an investment budget of $160.4 million.

Public sector medical units are classified into three levels: the first level provides in-out patient consulting services but no hospitalization services. The second level corresponds to general

hospitals with hospitalization services but may or may not have specialized doctors or units. Third level hospitals provide specialized medical treatment, have hospitalization capacity but no in-out patient consulting services.

Public hospitals account for some 80% of medical services provided in the country. In 1992, there are a total of 13,970 public medical units, of which 736 have hospitalization services. There are a total of 83,744 doctors in the public health sector dealing directly with patients and 144,044 nurses. There are a total of 66,165 hospital beds and 48,965 other beds, 37,171 consultation rooms, 1,287 laboratories, 1,975 X-ray rooms and 2,063 operating rooms. During 1992, the Mexican public health system provided 158.6 million medical consultations, of which 23 million were with specialists, 9.3 million with dentists, 16.3 million emergencies and 110.1 million with general doctors. The public sector institutions administered 87.5 million dosis of biologicals, gave 3.5 million health-related conferences, gave 7.8 million consultations related to family planning, and registerd 2.4 million women accepting family planning methods for the first time and 6.4 million active users of contraceptives.

Several public agencies provide health care services. The most important are: The Instituto Mexicano del Seguro Social (IMSS), the Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado (ISSSTE), which are the two social security organisms in the country. Together, they have close to 50 million members. Other public agencies that provide health services include the Health Secretariat (SS), the Naval Hospital, the National Defense Secretariat (SEDENA), Petroleos Mexicanos (PEMEX), the Federal District Department (DDF) and the National System for Integral Family Development (DIF), although to a lesser degree than the former ones. By 1994, the federal government expects to achieve a 95% national coverage in public health services.

The Instituto Mexicano del Seguro Social (IMSS) is Mexico's largest health care agency. It was founded in 1942 and its social insurance law is in effect in all important industries and agricultural areas. Its budget is sourced directly by the government coupled with corporate and employee contributions, which are by law mandatory. The IMSS provides free medical attention, including consultations, hospitalization, limited unemployment compensation in cases of illness and maternity, occupational disease and accidents, and disability and old-age pensions to all workers subscribed to it and their direct family members. The IMSS had 38.7 million members in 1992, of which 11.6 million are directly insured and 24.7 million are family members and 2.4 million are retired personnel. Each year the number of people covered by IMSS increase by one to three percent. The total cost of services provided by IMSS in 1992 amounted to $8.9 billion, 47.5% correspond to direct medical, laboratory and hospitalization services, and 27.4% to economic benefits in the form of pensions, subsidies, unemployment compensations and the

like. Its total income through employee and employer contributions amounted to $8.4 billion in 1992, government and other contributions to $718 million. In a single day, the IMSS takes 28,000 X-rays, conducts 9,000 rehabilitation sessions, performs 71,000 laboratory studies and undertakes 2,700 surgical operations. There were 5,016 medical units within the IMSS in 1992, of which 320 are of the second and third level, 49,822 doctors, of which 26% are specialized, 73,980 nurses and 50,987 beds. The IMSS provided 93.3 million medical consultations during 1992.

In 1988, President Salinas launched the National Solidarity Program in an effort to create and improve basic services and facilities for the well-being of Mexicans living in the poorest rural and Indian communities and in urban low-income neighborhoods. In a tight economic environment, Solidaridad is financed by funds obtained from non-inflationary sources, such as the divestiture of public agencies, federal, state and municipal contributions, and resources provided by the beneficiary communities themselves in the form of labor or materials. In the area of health care, this program built on the previuos experience of the IMSS-COPLAMAR system created to support rural areas. In only two years (1989-1990), the Solidaridad program built 758 rural medical units, seven regional hospitals, in addition to 282 health care centers and 46 hospitals built in conjunction with SS. Also, 1,195 health care centers and 115 hospitals were reconditioned and improved. Between 1991 and 1992, another 163 first level centers and 2 general hospitals were finished. A total of 11 million persons were incorporated into the medical coverage system though Solidaridad. In 1991, the Program for the Improvement of Hospitals was created to support the maintenance and reconditioning of 600 existing hospitals with 57,000 beds. In 1992, total expenses of the Solidaridad Program in the health sector amounted to $176 million, of which 52% were for medical assistance and 32% for hospitalization.

The Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado (ISSTE) provides similar medical services to government employees and it is an important buyer of medical equipment. Its membership was of 8.6 million members in 1992, up from 487,700 in 1980, and increases by approximately 6% each year. Of total members, 2.3 million are directly insured (workers and pensioners) and 6.3 million are family memebers. Its income totalled $2.1 billion in 1992, 29% from workers and the rest from the government and other institutions. This institution had 1,195 medical units in 1992, of which 87 were second and third level hospitals. To provide these services, ISSSTE had 14,559 doctors, 44% with a specialization, 17,515 nurses and 8,788 hospital beds.

Petroleos Mexicanos (PEMEX) is the national oil company, a decentralized agency owned directly by the State. In 1991, it provided 30% of Mexico's export earnings and 34% of all public sector income. Its activities include the exploration, production and distribution of crude oil; refining and distribution of

gasoline and oil products; production and distribution of petrochemicals, as well as providing medical services to its workers. PEMEX is ranked the number 36 corporation in the world among "Fortune 500" companies, as measured by its sales of $18.1 billion during 1991. It is the largest enterprise in Latin America and employs over 120,000 people. PEMEX has 183 medical units, of which 24 are second and third level hospitals. It has 3,511 doctors and 3,340 nurses and 2,231 beds. PEMEX's purchases of medical supplies and medicines are budgeted at $6.6 million in 1993, of which only 0.5% are planned to be sourced from the Houston office. Purchases of hospital equipment are budgeted at $1.8 million, of which $1.7 million will be sourced abroad.

Table 3 lists the number of hospitals by public sector institution in the past decade.

TABLE 4
NUMBER OF GENERAL HOSPITALIZATION UNITS BY INSTITUTION
(number of units)

YEAR	SSA	DDF	IMSS (1)	IMSS (2)	ISSSTE	PEMEX	SDN	SM	TOTAL
1980	83	30	41	156	55	13	23	20	421
1982	107	29	60	158	58	16	23	24	475
1984	89	9	61	161	67	NA	24	26	437
1986	138	9	50	217	61	NA	23	24	522
1988	141	10	51	217	65	21	26	25	556
1989	143	10	52	216	68	22	25	26	562
1990	164	13	53	220	73	22	25	26	596
1991	170	13	54	223	74	16	25	27	602
1992	174	13	54	226	76	16	25	28	612

Source: Cuarto Informe de Gobierno 1992

Note:
SSA = Secretaría de Salubridad y Asistencia (now SS)
DDF = Departamento del Distrito Federal
IMSS = Instituto Mexicano del Seguro Social
(1) open population
(2) members
ISSSTE = Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado
PEMEX = Petroleos Mexicanos
SDN = Secretaría de la Defensa Nacional
SM = Secretaría de Marina

As this table clearly shows, the total number of general hospitals has grown rapidly in the past 10 years, showing an overall increase of 45.4% between 1980 and 1992. The institution with the largest number of general hospitals is the IMSS with 226 or 37%, followed by the SSA with 174 or 28%.

The next table shows specialization hospitals by institution.

TABLE 5
NUMBER OF SPECIALIZED HOSPITALIZATION UNITS BY INSTITUTION
(number of units)

YEAR	SSA	DDF	IMSS	ISSSTE	PEMEX	SDN	SM	TOTAL
1980	22	NA	26	0	1	1	1	51
1982	24	NA	30	1	1	1	1	58
1984	26	20	30	1	1	1	1	80
1986	29	20	25	11	NA	1	1	87
1988	39	19	36	11	2	1	1	109
1989	41	19	38	11	2	2	1	114
1990	48	16	39	11	2	2	1	119
1991	48	17	39	11	8	0	0	123
1992	48	17	40	11	8	0	0	124

Source: Cuarto Informe de Gobierno 1992

The number of specialized hospitals has grown at a much faster pace than general hospitals or 143% between 1980 and 1992. Prictically all institutions have installed new specialty hospitals during this period and the SSA and IMSS here again have the wider hospital coverage with 39% and 32% of total respectively.

During 1992 a total of 275 first level hospitals were built, in addition to 19 general and specialty hospitals as follows:

SSA	
Mexico-BID Program	
First level units	24
General hospitals	5
SSA-Solidaridad	
First level units	42
General hospitals	3
Normal Program	
First level units	5
General hospitals	1
IMSS	
First level units	13
General hospitals	3
IMSS - Solidaridad	
First level units	163
General hospitals	2
ISSSTE	
First level units	28
General hospitals	1

TOTAL	
First level units	275
General hospitals	19

The total number of works in progress during 1993 was of 38 with a total cost of $296 million. These included the construction and installation of 17 hospitals with over 2,000 beds and the modernization, enlargement and refurbishing of 10 hospitals and clinics and the construction of five family medicine units, among other projects.

Additionally to hospitals, these medical institutions have external consultation units as follows:

TABLE 6
NUMBER OF EXTERNAL CONSULTATION UNITS BY INSTITUTION
(number of units)

YEAR	SSA	DDF	IMSS (1)	IMSS (2)	ISSSTE	PEMEX	SDN	SM	TOTAL
1980	2847	186	2107	1024	892	148	204	103	7511
1982	3629	167	3025	1327	943	226	204	112	9633
1984	3744	237	3091	1255	986	NA	182	113	9608
1986	5248	76	2404	1230	1019	NA	168	115	10260
1988	6086	76	2323	1285	1058	149	212	110	11299
1989	6410	78	2666	1310	1062	199	212	89	12026
1990	6400	79	3075	1345	1079	182	200	119	12479
1991	6659	101	2988	1417	1103	159	215	94	12997
1992	6859	101	3271	1425	1108	159	218	93	13234

Source: Cuarto Informe de Gobierno 1992

Similarly to the growth in the numer of hospitals, the number of external consultation units has increased by 76.2% between 1980 and 1992 to reach a total of 13,234 units in 1992 as compared to 7,511 in 1980. The SSA has 51.8% of these units and the IMSS has 35.5%.

The following table shows the total number of human resources employed by each institution, including doctors, paramedics, people employed in auxiliary diagnosis and treatment services, nurses and other non-medical personnel.

TABLE 7

HUMAN RESOURCES BY INSTITUTION

(thousands)

YEAR	SSA	DDF	IMSS (1)	IMSS (2)	ISSSTE	PEMEX	SDN	SM	TOTAL
1980	48.6	8.3	6.3	125.2	32.0	5.3	7.6	1.9	235.2
1982	60.3	7.3	9.1	142.5	38.8	6.8	10.0	2.4	277.3
1984	67.3	6.8	10.6	156.5	40.0	8.1	7.9	2.2	299.4
1986	95.8	7.5	7.6	170.7	41.7	9.9	7.8	2.2	343.3
1988	100.0	9.2	10.4	173.4	47.1	12.1	7.7	2.3	362.1
1989	102.6	8.9	10.5	171.6	47.8	12.1	7.9	2.7	364.2
1990	107.8	9.6	12.0	181.7	49.9	12.2	7.6	2.3	383.1
1991	115.3	10.1	13.3	192.4	50.4	13.6	3.1	1.8	400.0
1992	119.7	10.1	15.0	198.6	54.4	13.4	3.2	2.8	417.1

Source: Cuarto Informe de Gobierno 1992

The total growth of human resources employed by the public health sector has increased by 77.3% in the 1980-1992 period. The most rapid growth could be seen in the SSA, the open public IMSS agencies in reponse to the introduction of the IMSS Solidarity and Social Solidarity Programs, and in PEMEX, while the personnel of the Defense Secretariat fell by 58% during that period.

Total personnel can further be divided as follows in 1982, 1987 and 1992:

	1982	1987	1992
Doctors in direct contact with patients	54,270	66,590	83,744
Doctors in other areas	10,950	11,088	16,813
Paramedic nurses	83,555	118,008	144,004
Other paramedic personnel	19,728	28,284	29,650
Auxiliary services personnel	11,431	17,388	25,777
Non-medical personnel	97,399	97,894	117,129
TOTAL	**277,333**	**339,252**	**417,117**

The next table shows the number of doctors working in each institution.

TABLE 8
NUMBER OF DOCTORS BY INSTITUTION
(thousands of doctors)

YEAR	SSA	DDF	IMSS (1)	IMSS (2)	ISSSTE	PEMEX	SDN	SM	TOTAL
1980	19.9	1.9	1.1	27.5	7.7	1.6	0.9	0.5	61.1
1982	16.6	2.1	2.6	31.1	9.3	1.9	1.1	0.5	65.2
1984	19.2	1.4	2.1	29.8	10.5	2.3	1.1	0.5	67.0
1986	23.5	1.8	1.2	32.3	11.6	2.6	1.0	0.5	74.4
1988	23.9	2.1	3.0	42.3	12.6	3.6	1.1	0.5	89.1
1989	25.0	2.0	2.9	36.9	12.4	3.5	1.2	0.7	84.6
1990	25.9	2.4	3.7	39.8	13.0	3.2	1.2	0.7	89.8
1991	27.7	2.5	4.3	43.3	13.6	3.5	1.1	0.6	96.6
1992	28.7	2.5	4.5	45.3	14.6	3.5	0.9	0.6	100.6

Source: Cuarto Informe de Gobierno 1992

The number of doctors working for public sector health institutions grew by 64.6% since 1980, from 61,084 in 1980 to 100,557 in 1992. Of these doctors, 83,744 or 83.3% are in direct contact with patients, while 16,813 or 16.7% have other responsabilities.

The public health agencies had the following installations and material resources in 1992.

TABLE 9
MATERIAL RESOURCES BY INSTITUTION
(million patients)

YEAR	SSA	DDF	IMSS (1)	IMSS (2)	ISSSTE	PEMEX	SDN	SM	TOTAL
C.BEDS	23452	2162	1583	28131	6552	1586	2109	590	66165
O.BEDS	22837	865	6542	14731	2236	645	938	162	48956
D.OFF	14933	418	3786	12703	3609	1181	304	237	37171
LABS	571	32	52	440	115	30	26	21	1287
X-RAY	688	40	52	747	348	26	51	23	1975
O.R.	677	62	52	885	238	66	56	27	2063
D.R.	3690	19	54	500	116	30	24	24	4457
B.B.	102	4	NA	28	61	14	5	4	218
TOTAL	**66950**	**3602**	**12121**	**58165**	**13275**	**3578**	**3513**	**1088**	**162292**

Source: Cuarto Informe de Gobierno 1992

Notes:
C.BEDS = censable beds
O.BEDS = other beds
D.OFF = doctor's offices
LABS = laboratories
X-RAY = X-Ray units
O.R. = operating rooms
D.R. = delivery rooms
B.B. = blood banks

The IMSS has the largest number of special installations in the public health sector, or 41.3%. It is followed by the IMSS with 43.3%, ISSSTE 8.2%, the DDF 2.2%, PEMEX 2.2%, Defense 2.1% and Marine 0.6%.

The following table shows the evolution of external patient consultations by institution.

TABLE 10
EXTERNAL CONSULTATIONS BY INSTITUTION
(million patients)

YEAR	SSA	DDF	IMSS (1)	IMSS (2)	ISSSTE	PEMEX	SDN	SM	TOTAL
1982	17.1	1.2	7.1	59.8	14.0	4.6	0.8	0.4	105.0
1984	16.8	1.7	7.9	71.5	16.1	6.8	0.9	0.5	122.2
1986	23.4	2.0	5.6	71.6	16.9	5.4	1.0	0.6	126.5
1988	30.6	2.1	5.3	76.1	18.5	6.1	1.3	0.6	140.6
1989	34.0	2.1	4.7	75.6	17.7	6.0	1.4	0.6	142.1
1990	34.8	2.0	5.2	78.7	17.4	5.2	1.0	0.6	144.9
1991	35.9	2.2	6.1	79.1	17.6	5.0	1.1	0.6	147.7
1992	37.8	2.5	5.4	87.8	17.9	5.3	1.2	0.6	158.5

Source: Cuarto Informe de Gobierno 1992

As can be seen above, the total number of external consultations has increased rapidly in the past few years. Between 1982 and 1992, consultations grew by a total of 51% and the institutions experiencing a larger expansion during that period were the SS and the DDF. The vast majority, or 58.8%, of medical consultations is granted by the IMSS, mostly to its members. The three institutions giving consultations to the open public, SSA, DDF and IMSS together gave 45.7 million consultations in 1992, or 28.8% of total. The ISSSTE accounted for 11.2% of external consultations, PEMEX for 3.4% and the Defense and Marine Secretariats together for 1.1%. These four institutions only grant medical services to their members. Of total external consultations in 1992, 69.4% or 110.1 million were by general doctors, 14.5% or 23 million by specialists, 10.3% or 16.3 million were emergency services and 5.9% or 9.3 million were dental consultations.

The following table describes hospitalization services by institutions as measured by the number of patients leaving the hospital.

TABLE 11
HOSPITALIZATION SERVICES BY INSTITUTION
(thousands of patients)

YEAR	SSA	DDF	IMSS (1)	IMSS (2)	ISSSTE	PEMEX	SDN	SM	TOTAL
1982	440	74	79	1,727	264	51	43	13	2,691
1984	438	68	119	1,948	310	60	48	16	3,007
1986	566	77	101	1,765	298	68	52	16	2,943
1988	687	78	107	1,698	295	83	52	19	3,019
1989	737	82	109	1,726	294	82	55	19	3,104
1990	838	82	115	1,798	295	76	66	19	3,289
1991	859	92	123	1,830	304	80	83	17	3,388
1992	917	99	120	1,896	309	78	46	19	3,484

Source: Cuarto Informe de Gobierno 1992

Here again, the increase in hospitalization services can be appreciated. In only ten years the number of patients hospitalized increased by 29.5%, led by SSA, DDF and IMSS. The IMSS vastly dominates hospitalization services in the public sector, accounting for 57.9% of all patients hospitalized. It is followed by the SSA 26.3% and the ISSSTE (8.9%).

The total number of surgical interventions practiced in these hospitals was as follows.

TABLE 12
SURGICAL INTERVENTIONS BY INSTITUTION
(thousands of patients)

YEAR	SSA	DDF	IMSS (1)	IMSS (2)	ISSSTE	PEMEX	SDN	SM	TOTAL
1982	181	28	28	777	110	21	20	7	1,172
1984	194	28	49	918	127	27	23	8	1,374
1986	224	30	48	929	137	30	25	8	1,431
1988	284	39	49	967	145	37	35	11	1,567
1989	324	41	49	1,002	145	41	38	10	1,650
1990	355	33	49	1,081	159	37	34	11	1,759
1991	418	36	56	1,119	173	41	25	9	1,877
1992	461	45	53	1,202	178	33	16	10	1,998

Source: Cuarto Informe de Gobierno 1992

The total number of surgical interventions in public hospitals has grown at a faster pace than hospitalization services, at a total rate between 1982 and 1992 of 70.5%, as compared to 29.5% for hospitalization. The number of days patient at these hospitals, on the other hand, grew by 9.2% during the same period, from 13.9 million in 1982 to 15.2 million in 1992 pointing towards a reduction in the average number of days spent at the hospital by each patient. This has been the result of better services but also of a need for a faster turnover in order to service more patients. Here again, surgeries are concentrated in the IMSS, which accounts for 62.8% of total.

In 1982 and 1992, the different institution gave the following auxiliary diagnosis services to patients.

TABLE 13
AUXILIARY DIAGNOSTIC SERVICES
(thousands of patients)

SERVICE	SSA	DDF	IMSS (1)	IMSS (2)	ISSSTE	PEMEX	SDN	SM	TOTAL
P.C.S.	5887	285	347	17073	3140	893	2009	113	29747
C.S.	19776	1700	1332	78621	14072	4384	3796	349	124030
P.X-R	1291	230	185	7348	1292	307	395	40	11088
X-RAYS	1599	295	229	8736	1561	544	395	48	13407
P.O	384	-	-	1873	778	NA	151	22	3208
O.	346	-	-	2330	813	80	151	26	3746

Source: Cuarto Informe de Gobierno 1992

Notes:
P.C.S. = # of patients for clinical studies
C.S. = # of clinical studies
P.X-R = # of patients for X-rays
X-R = # of X-rays
P.O. = # of patients other diagnostic studies
O. = # of other diagnostic studies

In addition to the institutions described above, the National System for the Integral Development of the Family (DIF) has a total of 437 consultation offices, 4 community health centers and 83 mobile medical units, in addition to 132 community development, family, daycare centers, schools, shelters and other assistance centers. It gave services to 8.7 million people in 1992: 3.5 million children, 609,000 handicapped, 696,000 abandoned old people, 2.2 million pregnant mothers and 2.2 million other people. Its services included in 1992:

Vaccinations	(number)	88,527
Family planning	(000 people)	97,400
Medical home visits	(000 visits)	454
Drug addiction prevention talks	(people)	68,343
Community servs.	(000)	977
Environmental & home improvements	(000 participants	437
Recreation & sport	(000 participants)	1,430
Health education	(000 participants)	153
Nutrition	(000 beneficiaries)	5,449
Handicapped assistance	(000 consultations)	717
Homeless assistance	(people)	2,206
Pre-school child assist.	(children)	14,979
School assistance	(people)	58,301
Civil & legal assistance	(000 people)	256

PRIVATE SECTOR HOSPITALS

The largest and most modern private hospitals are all located in Mexico City. There are an estimated 2,250 private hospitals, including only those with hospitalization services. Most of these medical units are equivalent to the second level hospitals of the public sector. These 2,250 hospitals are classified as follows: 1,822 clinics, 225 sanatoriums, 135 general hospitals and 68 medical centers. There are 787 hospitals with more than 10 beds. In these private hospitals, there are 5,317 doctors, 18,522 nurses and paramedics and 21,895 hospital beds. There are an additionbal 5,531 doctors using the facilities of these hospitals in order to attend their own patients.

Overall private hospitals are estimated to account for 20% of the health services and cater to the upper class population capable of affording these services or a medical insurance. The population served by private hospitals is estimated at 13-17 million, or about 15%-20% of total population. Some of the most important private hospitals in Mexico include:

American British Cowdray Hospital (ABC)
Beneficiencia Española
Centro Médico Dalinde
Clínica Londres
Hospital Angeles del Pedregal
Hospital Infantil de México
Hospital Metropolitano
Hospital de México
Hospital Mocel
Médica Sur

Private sector hospitals are members of the Asociación Mexicana de Hospitales (Mexican Hospitals Association) or of the Cámara Nacional de Hospitales, Sanatorios, Maternidades y Clínicas lares (National Chamber of Private Hospitals, Clinics and Maternity Wards).

5. MARKET ACCESS

In 1986, the public sector, through the Secretariat of Health (SS), tried to centralize all purchases in an attempt to gain more purchasing levberage. This centralized system was tested for three years but was discarded because it did not bring about practical advantages. The Mexico City offices of IMSS and ISSSTE are responsible for their respective equipment purchases. All purchases of medical equipment by public agencies and hospitals are subject to the Mexican Purchasing Law.

The **Law for Procurement, Leasing and Services Related to Movable Goods** and the associated Regulations govern all actions related to planning, programming, budgeting and control relating to the purchase or lease of equipment, furniture and other supplies and services related to these, both of national and foreign origin. The purchasing entity plans and generates its buying programs in accordance with overall national policies, specific objectives, availability and in coordination with related projects, using preferably domestic materials, equipment, systems, goods, services and technology (Art. 13). There are two types of public tenders: national and international. In the case of national public tenders, only local suppliers can participate and the goods have to have at least 50% Mexican contents including labor costs. International public tenders are open to suppliers established both locally and abroad and the goods can be of national or foreign origin with no national contents requirement (Reg. Art. 15). Foreign suppliers are invited to bid on international tenders only when price, quality, quantity, delivery period, service, guarantee and similar terms are convenient to the agency (Reg. Art. 6).

All purchases, leasings and services are to be assigned by public tender, unless the contract can only be assigned to one particular person holding patents to the necessary goods and services (Art. 26). Public tenders are to be circulated in three ways. They will be published in one of the large circulation newspapers in the country and at least in one of the dailies of the entity in question (Art. 27). At present, information channels for all public tenders are publications in three newspapers, usually "El Nacional", and two of the following: Excelsior, Novedades and Universal. Invitations may be sent to registered potential suppliers. Thridly, tenders are normally posted at the information board at the government entity's procurement branches. In the case of national tenders, these are also published at the Manufacturing Industry Chamber (CANACINTRA) offices in Mexico City, Guadalajara and Monterrey, while

international public tenders are sent to Embassies of countries considered a likely source of suppliers.

The bid opening act or ceremony can be no sooner then 10 days after the public anouncement of the bid in the case of line goods and 20 days in the case of manufacturing per design (Reg. Art. 14). Bids are delivered and officially opened at this bid opening act. The competition results may be announced either at this point, at a later event, posted at the bulletin board of the agency or sent directly to the winner (Reg. Arts. 19-22) The public tender contracts are assigned based on the legal, technical and economic conditions required by the contracting agency from the contractor and, these being acceptable from various bids, based on the lowest price, no longer than 30 days after the bid opening act (Art. 34).

In certain cases, the entity can directly purchase goods without a public tender, based on economic, efficiency, fairness and honesty criteria assuring the best conditions for the State (Art.35). This is the case of purchases directly authorized by the Presidency based on national security and sovereignty considerations (Art. 36), purchases of perishable goods, basic or semi-processed foods, of used goods priced below a professional valuation, in an emergency (economic, social, safety, environmental), when there are not at least three possible suppliers, when the services cannot be duly specified (maintenance, restoration and repair), when a contract is rescinded, when purchases are not made through common commercial channels, or when the purchases or services are contracted from peasants or marginal urban groups (Art. 37). In the case of purchases of goods that will later be resold or processed, the entity has to apply critera to obtain the best conditions for the State (Art. 38).

In addition, as mentioned above, when, due to the cost of the purchase, a public tender is not practical, the entity will be able to directly purchase or contract the goods or services. The maximum value of the purchases that can be contracted directly is published annually in the Expense Budget of the Federation and of the Department of the Federal District. In case the purchases surpass the maximum amounts defined above but do not exceed the limits established through the same channel, the contract can be awarded through a notice given to at least three suppliers capable of giving an immediate response (Art. 39). These limits are defined based on the individual purchasing, leasing and service amounts and the overall investment authorized to the agencies. In the case of PEMEX, IMSS and ISSSTE which have an investment budget surpassing one billion new pesos (roughly $330 million) during 1993, the maximum amount of purchases which can be made directly is Mex N$15,000 ($4,960) and the maximum amount for operations that can be assigned with a notice to at least three suppliers is Mex N$765,000 ($25,290). Also, regional purchasing offices of major public agencies are nowgiven greater authority for minor purchases such as curative materials,

cleansers, syringes, needles and othe supplies, although they usually do not have the authority to purchase imported goods.

Formerly, in order to bid on tenders and sell to a government agency or decentralized company, foreign manufacturers required having a local resident agent and to have the foreign supplier registered and accepted by the Secretariat of Planning and Budgeting (Secretaría de Programación y Presupuesto - SPP). As of July 1991, the above requirement for prior registration with SPP has been eliminated. However, most public agencies require that their suppliers be registered with their own register of suppliers and it is necessary to be registed on that to be able to enter one of their public tenders. Documents usually needed to do business with public agencies are:

- A notarized copy in Spanish of the company's incorporation articles or other corporate documents certified before a public notary in the company's country of origin and legalized by the Mexican consul;
- The firm's latest full financial statements in original notarized by a Mexican consul.
- A copy of all contracts and agreements between foreign and local firms.

As a result of Mexico's accession to GATT, the Mexican government has gradually opened the economy to international markets. Tariffs have been lowered from a maximum 100% in 1983, to 20% since December, 1988. The official price system has been totally eliminated and import permits are required on only 198 of the total 11,812 items in the Mexican Harmonized Tariff System.

The import climate for medical equipment and supplies has improved significantly as a result of this commercial liberalization. Maximum duty rates have been reduced to 20% and prior import permits are now only required on imports of certain medical disposables. As a result of NAFTA negotiations, import tariffs will be subject to a duty reduction schedule, whereby duties on non-duty-free items will be either totally eliminated or gradually reduced starting in 1994. This process is to end in 2008 with the total elimination of duties by then. At present, imports of medical equipment and supplies are subject to an ad valorem duty of maximum 20% assessed on the invoice value. In addition, a customs processing fee of 0.8% is assessed on the invoice value. A 10% value added tax (recently reduced from 15%) is then assessed on the cumulative value of both taxes in addition to the invoice value. Some manufacturers who use imported inputs for their products under a Mexican Government approved manufacturing plan may have the duty and/or VAT waived or rebated. Medical disposable products must be registerd with the Secretariat of Health (SS) and the importer needs an import authorization issued by the foreign company and approved by SS.

The new procedures now in force require the foreign supplier to have a local agent or representative and it has to be registered

through his local representative as an accepted supplier with each government ministry and/or decentralized agency according to the international tender requirements under review.

The Mexican government has begun enforcing a law under which certain categories of prodcts must be labelled in Spanish prior to importation into Mexico. As of Novermber 1992, this list includes all textile and apparel products, leather products and refrigerators. Mexico requires that all other products have a Spanish-language label affixed prior to reaching the consumer. As of October 1992, Mexico permitted importers and distributors to affix these Spanish-language labels after importation into Mexico. However, because this practice may change, exporters may want to explore cost effective ways to label their products in Spanish. Importers and customs agents can usually provide information on current and proposed labeling requirements.

Mexico has also recently begun requiring certificates of quality before certain products can be sold in Mexico. All products enetering into Mexico must have a free sale certificate. This certificate proves that the imported goods are also sold in the country of origin. A letter from the local chamber of commerce stating that this product is sold in the local market is sufficient proof for this requirement.

International tenders financed by the World Bank or the International Development Bank are open to all member countries of these institutions. More recently, the World Bank, where its credits are involved, has required that bid documents should also include an affidavit confirming that the Canadian company is a bona fide Canadian company with an official residence in Canada and that Canada is recognized as a contributing member to the World Bank.

There are no official metric requirements applicable to imports into Mexico. However, since the metric system of units is, by law, the official standard of weights and measures in Mexico, importers will usually require metric labeling for packaged goods, although the English system is also used. Dual labeling is acceptable. Imported products should be labeled in Spanish containing the following information: name of the product, trade name and address of the manufacturer, net contents, serial number of equipment, date of manufacture, electrical specifications, precautionary information on dangerous products, instructions for use, handling and/or product conservation and mandatory standards. Mexico adheres to the International System of Units (SI). Electric power is 60 cycles with normal voltage being 110, 220 and 400. Three phase and single phase 230 volt current is also available.

Prepared by: Caroline Vérut
for the Canadian Embassy
Mexico City, March 1993

APPENDIX I:
INDUSTRIAL CHAMBERS AND ASSOCIATIONS

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Manager
Dr. Francisco Hernandez Navarro
Executive Director

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President
Mr. Martín Moreno
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Internal Commerce Manager

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Director
Unidad de Investigación en Salud Infantil
Centro de Información y Documentación DIF
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Director General deControl Sanitario de Bienes y Servicios

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FACULTAD DE MEDICINA VETERINARIA Y ZOOTECNIA
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APPENDIX III
POTENTIAL AGENTS AND REPRESENTATIVES

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