

## CHAPTER 4

# POPULATION AGEING IN MEXICO

### 4.1. IN THE INTERNATIONAL CONTEXT

According to the last population data, there were 91 million people living in Mexico in 1995,<sup>148</sup> and nearly 7% of them were 60 or over (6 million total). It is estimated that in 2025 some 12% or 17.5 million<sup>149</sup> will be 60 years old or over. The proportional growth of the Mexican population will be low (0.2 and 1.4% respectively) while the growth rate for the elderly will be 1% and 5.7% respectively. The ageing process in Mexico will be faster than the reference population averages.

In 1985 life expectancy for the Mexican population was 68.1 years leaping to 69.7 in 1990 and 70.3 years in 1995. According to the Census of the USA Office in 1998 it will be 71.6 and 75.5 in 2010. In contrast to European countries, where life expectancy decreased from 73.1 in 1991 to 72.3 in 1995 according to the last WHO report,<sup>150</sup> Mexico continues to increase even though at a lower pace than before, in spite of worsening the economic conditions. The life expectancy in Mexico is 8.4 years lower than Japan (the country with the highest life expectancy) but 7 years higher than in Brazil. Table 4.1<sup>151,152</sup> presents the proportion of people 60+ in 1996 and 2010; and the life expectancy in 1998 and 2010 by selected countries. Mexico is one of the countries with the lowest proportion of elderly people.<sup>f</sup> The difference between the growing proportions in Mexico and other developed countries is a result of the faster pace of ageing in Mexico. However, the difference against other developing countries in the region has increased, except in Argentina

<sup>f</sup> Most of the countries in Africa have a lowest proportion than Mexico, as well as Guatemala, Haití, Honduras, Nicaragua, Paraguay, and Venezuela in Latin America

and Uruguay. The difference (ratio Italy/Mexico) with the oldest country in the world was 3.5 in 1996 and is expected to be 2.5 in 2025.

Mexico is in the highest stage of the demographic transition. The pace of Mexican population ageing is expected to be highly accelerated. In 2050 the ageing ratio will be 8 times higher than the 1990's (15%) and will reach 119.4 elderly per 100 people aged 0-14 years old. The growth observed in this figure is higher than the world average and surely is equal to that observed in other developing countries.

Table 4.1  
Proportion of elderly subjects and life expectancy at birth

<i>Country</i>	<i>% of elderly people</i>		<i>Life expectancy at birth</i>	
	<i>1996</i>	<i>2010</i>	<i>1998</i>	<i>2010</i>
Italy	22.3	33.0	78.4	79.8
Greece	22.3	30.8	78.3	79.7
Sweden	21.9	28.9	79.2	80.3
Belgium	21.5	30.9	77.4	79.1
Spain	21.2	30.1	77.6	79.3
Japan	20.9	32.9	80.0	81.1
UK	20.5	28.7	77.2	79.0
Canada	16.5	28.1	79.2	80.7
Uruguay	17.3	20.6	75.5	78.5
United States	16.5	24.6	76.1	77.4
Argentina	13.6	16.8	74.5	76.8
Brazil	7.2	15.5	64.4	67.7
Chile	9.8	20.4	75.2	77.9
Colombia	6.8	16.7	70.1	74.2
Costa Rica	7.1	14.5	75.9	77.1
Ecuador	6.5	12.9	71.8	75.5
Mexico	6.5	12.9	71.6	75.5

Source: Census Bureau of the United States of America, 1998.

In Table 4.2, the most important demographic indicators used in the study of ageing are presented. In short, the proportion of elderly people is expected to increase, as well as dependency, ageing, and care ratios. Although

the proportion will increase almost six times, the other indicators (except ageing ratio) will be modified more gradually.

Even though the problem is becoming worse in Mexico, the country is behind other developing countries in Latin America. According to the Census Bureau in the USA, the 10% of the population in Chile was 60+ in 1997 and is expected to be 20% in 2025; in Uruguay it was 17% and is expected to be 21%; in Brazil it was 7% and expected to be 16; and in Argentina was 14 and will be 17%.<sup>149</sup> A recent PAHO report,<sup>153</sup> established that the ageing ratio in Brazil was 24 in 1994 and will be 74 in 2025; and for Chile it was 32 and will be 110 respectively.

Table 4.2  
Demographic indicators of the ageing population in Mexico

<i>Indicator</i>	<i>1990</i>	<i>2000</i>	<i>2025</i>	<i>2050</i>
Proportion of elderly	5.62	6.40	12.60	31.5
Masculinity ratio	83.25	77.60	76.21	79.61
Dependency ratio	9.97	10.70	19.65	40.29
Ageing ratio	14.79	18.97	54.12	119.42
Care ratio	121.09	116.85	135.23	241.82
Demographic transition ratio	0.81	0.93	1.00	1.05

Source: World Bank's Population Projections.<sup>§</sup>

#### 4.2. IN THE MEXICAN CONTEXT

The Mexican population aged 60 years and over has increased from 5% of the total population in 1940 to nearly 7% in 1995 (about 6 million).<sup>148</sup> The annual average rate of elderly population growth 1970-95 was 3.1% while the national rate was 2.6. Proportions of elderly population among total population are different in each state in Mexico. Yucatán, Zacatecas, Federal District (DF), Nayarit and Oaxaca had the highest proportions in 1995.<sup>148</sup> The

<sup>§</sup> The researcher calculated all of the indicators that will be used in this section with information from World Bank Projections.

lowest proportions were observed in Quintana Roo, Mexico, Chiapas, Tabasco and Querétaro.<sup>148</sup>

Nearly 11% of the elderly live in DF, 10% in the state of Mexico, 8% in Veracruz, 7% in Jalisco, and 5% in Puebla. The highest rates of growth were observed in Quintana Roo (8%), Mexico (5%), Baja California (5%), and Baja California Sur (4%); and the lowest rates in Zacatecas (2%), DF (2%), Durango (2), and Puebla (3%).

The national masculinity ratio has decreased in the past 50 years. In 1940 there was 94.4 men per 100 women and there was 89 in 1990. The masculinity ratio is different according to age groups 60-64, 65-69, and 70-74 years have had small variation. In the group aged 75 years and over there is a tendency for the ratio to fall. The lowest ratio is observed in the age group 85 and over (74.5 men per 100 women). There are differences by zones. In rural areas these were 112 in 1980 and 107 in 1990. The lowest masculinity ratios were observed in DF (69%) in 1970 and 70% in 1990. There were more men than women in Baja California Sur, Campeche, Chiapas, Nayarit, Quintana Roo, and Tabasco in 1970 and 1990.<sup>154</sup> The ratio was increased in Baja California, DF, Nayarit and Sonora. In DF the ratio is 2 per cent higher than before.

The ageing ratio (people aged 60 years or over per 100 people aged 0-14 years old) has increased in almost every state, except in Coahuila, Querétaro, Chiapas, and Quintana Roo. The highest ratio was observed in DF, where the rate of growth was the highest too (13 in 1970 to 24 in 1990). Yucatán (20), Tamaulipas (18), Nuevo León (17), and Jalisco (17) were states with the highest ratios after DF.

According to the demographic transition rate, proposed by the Division of Population in the UN, Oaxaca, Puebla, Chiapas, Guerrero, Michoacán, Querétaro, Tlaxcala, Zacatecas, Hidalgo, and Guanajuato are in the lowest level. San Luis Potosí, Durango, Tabasco, Jalisco, Yucatán, Quintana Roo, and Campeche have a middle level. Aguascalientes, Mexico, Nayarit, Veracruz, Chihuahua, Colima, Baja California, and Morelos are in the middle-high. Coahuila, Sinaloa, Sonora, Baja California Sur, Tamaulipas, Nuevo León, and DF are in the highest level of the demographic transition.<sup>154</sup>

The elderly population's educational level is lower than in the rest of the population. 35% are illiterate, with a higher proportion in women (41%). Only 13% finished elementary school and 11% completed secondary school. DF, Baja California, Chihuahua, Nuevo León, Baja California Sur, and

Coahuila (85, 82, 81, 81, 81 and 80% respectively), presented the highest proportion of literate people. Oaxaca, Guerrero, Chiapas, and Hidalgo have not reached 50%.<sup>155</sup>

The economically active population was lower in 1990 (29%) than in 1970 (41%). There are differences by gender with 53% men being active while only 7% of women were, while 39% of the active population received a salary and 52% worked for their own account. Quintana Roo, Chiapas, Tabasco, Campeche, and Oaxaca were shown to have the highest proportions of economic participation. Nuevo León, DF, Coahuila, Aguascalientes, and Jalisco showed the lowest proportion.

The highest proportion of employees and workers was observed in DF, Baja California, and Nuevo León, and the lowest in Oaxaca and Chiapas. 45% of the active population worked more than 40 hours a week and 19% worked at least 16 hours a week.<sup>156</sup> Income in this population was as follows: 57% got two minimum wages or less, 15% did not received an income and 6% got more than five minimum wages.<sup>155</sup> Pensioners were more common among men (39%) than women (5%). The highest proportion of pensioners was observed in DF, Yucatán, Nuevo León, Coahuila, and Sonora.

During 1993, 50% of the elderly had looked for a physician in a public institution at least once in the previous 6 months. The percentage was higher for women but both gender groups decreased with age. 80% of the health services users had looked for general practitioners, 18% for a specialist, and 1% for geriatrician services.

The national general rate of health services utilisation in the previous 15 days was 6%, but it was 11% in population aged 65 years or over, with differences by region in the country, varying from 15% in the North, 10% in the centre, 7% in Southeast and 13% in Metropolitan Zone of Mexico City (MZMC).<sup>157</sup>

Elderly people represented 8% of the total hospital discharges for the Health Sector's institutions; 5% for population not-covered by IMSS and 10% for population covered by IMSS. The national hospitalisation rate during the previous year was 35 per 1,000. The hospitalisation rate increased from 60 to 80 years but then decreased at higher ages.<sup>157</sup>

### 4.3. POPULATION INSURED IN THE IMSS

About 45%, or 36.6 million people of the Mexican population were covered by IMSS in 1995,<sup>158</sup> 32% being “asegurados” (persons paying directly or indirectly into some of the insurance schemes), 61% were the relatives of “asegurados” and 7% were pensioners and their relatives. There was an average of 3.2 beneficiaries (people who are not contributing but receive benefits as spouse, children or parents of “asegurados”) receiving health services at IMSS per “asegurado”.

In IMSS the dependency ratio was 21, double the national average, the ageing ratio was 32%, twelve points above the national average, the care ratio was 1.7 persons per each woman aged 45-60 years old. There were no data about distribution by age for the total group of IMSS beneficiaries.

In 1994, there was 28.6 million people registered in family medicine units (FMUs), which means 78% of the total covered population. In the same year, there were nearly 3 million people aged 60 or over, an 10.5% of the registered population. There were differences in this proportion by “delegation”. The highest proportion was observed in Yucatán, Nayarit, and Veracruz Sur. In Baja California, Baja California Sur, Mexico, Querétaro, Quintana Roo, and Tabasco, proportions are almost the same that at national level (See Table 4.3).

The age distribution for the total elderly population covered by IMSS is shown in Table 4.4.<sup>156</sup> There are differences by source of information, but IMSS’s source is more reliable because it is derived from beneficiaries records.<sup>158</sup> This source showed the proportion of population aged 85 or over was higher. These are a very important figures for planning present and future policies.

Table 4.3  
Population aged 60 years or over at IMSS by “Delegation”, 1994

<i>“Delegation”</i>	<i>Population 60 years or over</i>	<i>% of the elderly</i>	<i>Total Population per “delegation”</i>	<i>% from total population in that “delegation”</i>
Aguascalientes	35,183	1.2	354,673	9.9
Baja California	66,868	2.2	858,388	7.8
Baja California Sur	10,128	0.3	138,366	7.3
Campeche	17,233	0.6	158,104	10.9
Coahuila	150,592	5.0	1,258,080	12.0
Colima	18,942	0.6	181,964	10.4
Chiapas	29,860	1.0	305,633	9.8
Chihuahua	118,019	3.9	1,199,388	9.8
Durango	52,326	1.7	443,445	11.8
Guanajuato	99,906	3.3	1,203,695	8.3
Guerrero	42,784	1.4	420,692	10.2
Hidalgo	39,813	1.3	405,016	9.8
Jalisco	230,036	7.7	2,321,252	9.9
Mexico Naucalpan	222,224	7.4	3,052,540	7.3
Mexico Toluca	35,391	1.2	491,554	7.2
Michoacán	69,816	2.3	674,553	10.4
Morelos	56,251	1.9	430,387	13.1
Nayarit	34,009	1.1	243,274	14.0
Nuevo León	216,504	7.2	1,933,075	11.2
Oaxaca	30,927	1.0	304,700	10.2
Puebla	101,721	3.4	906,606	11.2
Querétaro	35,372	3.4	483,237	7.3
Quintana Roo	11,411	0.4	223,320	5.1
San Luis Potosí	56,361	1.9	553,105	10.2
Sinaloa	101,674	3.4	850,123	12.0
Sonora	105,159	3.5	874,146	12.0
Tabasco	20,059	0.7	255,867	7.8
Tamaulipas	100,285	3.3	971,761	10.3
Tlaxcala	19,293	0.6	196,876	9.8
Veracruz Norte	100,074	3.3	762,182	13.1
Veracruz Sur	85,895	2.9	623,334	13.8
Yucatán	81,749	2.7	555,361	14.7
Zacatecas	22,489	0.8	235,984	9.5
1 Northwest (DF)	118,895	4.0	1,011,874	11.8
2 Northeast (DF)	133,644	4.5	1,058,991	12.6
3 Southwest (DF)	175,552	5.9	1,357,718	12.9
4 Southeast (DF)	152,917	5.1	1,329,714	11.5
IMSS	2,999,362	100.00	28,628,978	10.5

Source: Information, Integration and Analysis Department. Special output for this research. IMSS, 1994.<sup>158</sup>

Table 4.4  
Population 60 years or over by age group

<i>Group of age</i>	<i>IMSS, 1994 data<sup>1</sup></i>	<i>NSSA, 1994 data<sup>2</sup></i>
60 – 64	28.40	35.17
65 – 69	23.80	23.75
70 – 74	18.44	18.52
75 – 79	11.81	8.24
80 – 84	9.12	7.64
85 or over	8.43	3.63

Sources: 1. Information Integration and Analysis Department IMSS, 1994.

2. National survey on ageing (NSSA), 1994.

Health services utilisation rates in the IMSS in 1994 was 14% for men and 16% for women. Both of them about double the general population rate of 6% and 9% respectively. In every region, except in the MZMC, women had higher rates than men. Nearly 9% of the elderly had been in hospital at least once during the previous 6 months, 41% of these have been in hospital for one week or less, 53% more than one week but less than one month, and only 6% more than one month or more.

Over a quarter (28%) of the IMSS elderly population had not used health services during 1994 with one third because they did not need them and about other third because they preferred private services. Medical services with the highest demand were general practice (68%), cardiology (4%), ophthalmology (3%), and urology (1%). 8% of the elderly covered by IMSS had used health services twice a month, 34% once a month, 14% once in two months, 18% once in 6 months, 8% once a year, and 12% with a lesser frequency.

For IMSS subjects aged 65 years or over, nearly 8% (there are not data available for the group of age 60-64) had received 10% of the total consultations. This means that each person received almost three consultations a year on average at the national level. However, Table 4.5 shows that the proportion of consultations delivered for the elderly is increasing yearly. This has two possible explanations, an increasing percentage of IMSS in the total population or/and increasing demands by elderly people.

Elderly population are increasing and the average consultations per year are also increasing, (2.3 in 1992 to 2.9 in 1994). In addition, the proportion of

subsequent consultations is increasing, partly as a consequence of the chronic health problems in this age group.

In IMSS, the increasing number of patients in a group and the per capita health services utilisation are good indicators, specially if consultation is generated in order to provide health promotion and preventive services.

Table 4.5  
Consultations in family medicine units, population 65 or over

<i>Year</i>	<i>First Time</i>	<i>Subsequent</i>	<i>Total</i>	<i>%</i>	<i>Annual average per person</i>
1990	29.05	70.94	3'587,602	6.7	n.a
1991	29.04	70.95	3'472,787	6.7	n.a
1992	25.90	74.09	4'609,461	8.7	2.3
1993	25.25	74.75	5'374,225	9.5	2.7
1994	24.46	75.53	6'219,826	10.4	2.9

Source: Special output provided by Information Integration and Analysis Department. IMSS, 1994.<sup>158</sup>

Table 4.6 shows the main diagnoses reported in family medicine units. High blood pressure and diabetes mellitus are the main causes of demand for health services in this level of care. Chronic diseases generated 35% and 43% of the demand in 1990 and 1994 respectively. Other health problems have a relative low frequency.

#### 4.4. SUMMARY

1. Although population ageing in Mexico is slower than in other Latin-American countries, this does not mean that this process is not a priority for the Mexican government, which has the opportunity to plan and learn from the experience of these countries.
2. Population ageing in the IMSS is higher than in Mexico as a whole. The possible explanations are that the covered population is in a healthier condition and are surviving longer than the general population; and that IMSS is the most viable health care alternative for those who are chroni-

cally ill, specially the elderly, who are looking for affordable types of health insurance.

3. Elderly people are higher users of health services and their demand on health services is increasing in each type of service.
4. There is insufficient information to make sound decisions and to evaluate effects of each one over health needs and health services utilisation by the elderly in IMSS.

Table 4.6  
Main cause for first, subsequent and total health services visits  
in family medicine units in 1994

<i>Causes</i>	<i>1990</i>	<i>1991</i>	<i>1992</i>	<i>1993</i>	<i>1994</i>
High Blood Pressure	4.72*	4.26	4.92	4.1	4.67
	25.14**	23.83	27.71	28.73	29.72
	19.20***	18.14	21.81	22.51	23.6
Diabetes mellitus	2.93	2.91	3.19	2.8	3.19
	21.80	21.29	24.28	25.56	25.12
	16.31	15.95	18.82	19.11	19.75
Acute Upper Respiratory Infections	15.05	12.86	14.92	16.56	16.24
	4.88	2.87	1.81	1.67	1.45
	5.95	5.07	5.29	5.43	5.06
Arthritis and others similar	4.0	3.37	4.27	5.10	4.39
	5.5	4.83	5.36	4.84	5.13
	5.05	4.40	5.08	4.06	4.95
Intestinal Infection and parasitic	7.56	6.10	6.76	2.8	6.7
	1.51	1.91	0.13	1.1	0.96
	3.25	2.84	2.69	7.6	2.43
Gastritis and duodenitis	2.74	2.45	3.1	3.22	3.2
	1.46	1.31	1.30	1.43	1.4
	1.83	1.64	1.82	1.88	1.83
Other problems	2.92	1.94	2.55	2.55	2.53
	1.02	0.69	0.76	0.70	0.70
	1.21	1.05	1.22	1.17	1.15

Source: Special output provided by Information Integration and Analysis Department. IMSS, 1994.<sup>158</sup>

\* First time. \*\* Subsequent. \*\*\* Total.