


Population Age Structure: 1980 and 2025

(In millions)



Central America and the Caribbean


## The Changing Regional Age Structure

The term "demographic transition" refers to a gradual process whereby a society moves from a situation of high rates of fertility and mortality to one of low rates. This transition is characterized first by declines in infant and childhood mortality as infectious and parasitic diseases are eradicated. Whole populations begin to age when fertility rates decline and mortality rates at all ages improve. Successive birth cohorts may eventually become smaller and smaller, as seen for North America in 1980. If projected declines in fertility and mortality throughout the hemisphere proceed as expected, regional population age structures will lose their triangular shape, and the older portion of the population will increase.

## Aging Most Frequently a Women's Issue

The older population is at least as heterogeneous in most demographic and socioeconomic respects as is the younger population. One notable difference between these two broad population components is their gender composition. Because sex ratios at birth favor boys, males outnumber females in youth and young-adult age groups. However, since male mortality is higher than female mortality at practically all ages, the percent female rises with age and the numerical male advantage eventually disappears. By ages 60-64, there are only 89 men per 100 women in the Americas. This ratio declines steadily to a level of 53 at ages 80 and above.

The gender difference in absolute numbers at older ages translates into a major difference in marital

Sex Ratio at Older Ages
in the Americas: 1997
(Men per 100 women)
 status. Most older men are married. But because women live longer than men, marry men older than themselves, and remarry less frequently after the loss of a spouse, a majority of older women in many countries are widowed. In countries that lack a formal social safety net, elderly widows-often illiterate and without significant financial savingsrepresent an especially vulnerable population that must rely on younger family members for economic support.


Proportion of All Deaths
Occurring Above Age
64 in 20 Countries:
Circa 1990


## The Epidemiologic Transition

The prevailing disease pattern within a population changes as that population ages. As survival rates of infants and children improve during the early highrisk years of life and the average age of a population increases, individuals increasingly are exposed to risk factors linked with chronic disease and accidents. The "epidemiologic transition" refers to a long-term change in leading causes of death from infectious and acute to chronic and degenerative. There is mounting evidence that an epidemiologic transition has occurred or is occurring in many developing as well as developed countries. The Pan American Health Organization has amply documented the role of circulatory diseases as the principal cause of death in a large majority of the nations of the Americas. Most deaths from chronic and degenerative ailments occur at relatively old ages. Comparative data from the early 1990s show that more than half of all deaths in many nations now occur at ages 65 and over.


## Older Population to Grow Much Faster Than Total Population

The growth rate of the older population in the Americas has been higher than that of the total population for many decades. There was a decline in the 60-and-over growth rate during the 1970s and especially during the 1980s, reflecting the low numbers of births in some countries during and after World War I. This decline is being mirrored by the 75-and-over growth rate as we move into the 21st century. As a whole, however, the older (60+) population will grow rapidly in the coming years. By the year 2010, the growth rate of the older population will be three and-a-half times as high as that of the total population, and the growth of the $75-$ and-over segment will be accelerating. Although the 60-and-over growth rate will decline somewhat after 2010, it is expected to remain well above that of the total population into the forseeable future.

## Average Annual Percent Growth of Total

 and Older Population in the Americas


Aging Index in Major Countries of the Americas: 1997 and 2025


An easily understood indicator of the changes in age structure is the aging index, defined here as the ratio of the number of persons aged 60 and over to the number of youths under age 15. Among major countries in the Americas in 1997, this ratio ranged from a high of 82 in Canada to a low of 9 in Nicaragua. Over the next 3 decades, the aging index is expected to double or triple in most nations. By 2025, several nations will have a smaller youth population than they have persons in the 60-and-over category. In both relative and absolute terms, notably high ratios will be observed in Cuba, Puerto Rico, Chile, and Trinidad and Tobago.

## The Oldest Old

Within a nation's older population, different age groups may have different growth rates because of the effect of past fertility fluctuations, wars and natural disasters, epidemics, and migration. The fastestgrowing portion of many older populations is the oldest old, defined here as persons aged 75 years and over. While this group typically constitutes only 1 to 2 percent of the total population in Latin American countries, many Caribbean nations have proportions of 3 to 4 percent, and the aggregate level in North America exceeds 5.5 percent.

The region's oldest old are projected to grow significantly during the coming decades, more than doubling between 1990 and 2020. Brazil will likely see more than a tripling of its oldest old during this period, from 1.9 million to 7.1 million. After 2020, the growth of the oldest old will further accelerate as the large baby-boom cohorts born after World War II begin to reach age 75. Because the oldest old consume proportionally greater amounts of health care than do younger population groups, the rapid growth of this population segment will force nations to grapple with issues of long-term care, institutionalization, and pension reform.

## Regional Growth of Oldest OId (75+)




# Life Expectancy at Age 60 

(Years of life remaining for those who reach age 60)


## Life Expectancy at Age 60 Continues to Rise

Regional life expectancy at birth, especially in Latin America and the Caribbean, rose dramatically in the two decades following World War II. The rate of increase slowed after the mid-1960s, although the vast majority of nations continue to experience improvement in overall mortality. The data matrix on the other side of this wallchart demonstrates that life expectancy for women has reached or exceeded 78 years in at least 17 nations in the Americas, similar to the levels in various European countries. Levels for men are invariably lower, although the gender difference in life expectancy varies considerably (e.g., 3 years in Paraguay versus 9 years in Brazil and Puerto Rico).


When infant and childhood mortality reach relatively low levels, improvements in average life expectancy are achieved primarily by declines in mortality among older segments of the population. In Costa Rica, for example, the proportional increase in life expectancy at age 55 has surpassed the proportional increase in life expectancy at birth. Consequently, life expectancy at older ages increases. In Canada, for example, life expectancy at age 60 rose 3 years for men and 4 years for women during the period 1970-1995. The average Canadian woman aged 60 years in 1995 could expect at least another 25 years of life, and the average Canadian man, another 20 years.

## Sources and Quality of Data

The vast majority of statistics in this wallchart are compiled in an International Data Base (IDB) maintained and updated by the International Programs Center (IPC), U.S. Bureau of the Census and are available on the World Wide Web (http://www.census.gov/ipc/www/idbnew.html). information for 43 of the Western Hemisphere's 48 countries is shown in the data matrix; these 43 countries are home to approximately 99.8 percent of the total regional population aged 60 and over. Because the IPC has not generated component population projections for 5 countries with relatively small populations (Bermuda, British Virgin Islands Cayman Islands, Montserrat, and Turks \& Caicos) comparable demographic information is unavailable

Population numbers, proportions, median ages, and life expectancies at birth are as estimated and projected by the IPC based on empirical countryspecific patterns of fertility, mortality, and migration. These data have been evaluated by IPC analysts and judged to be as representative as possible of the actual demographic situation in a given country Most of the statistics on socioeconomic characteristics are as reported by the countries themselves and
represent the latest available information from the period 1985-1997. Because countries may not have collected or published certain data during the past decade, some figures from 1980-84 are included. Data on the percent of GDP spent on health are as reported by the Pan American Health Organization.

Missing columnar values (designated NA) indicate either that data are unavailable or that the latest available information is for a point prior to 1980. Wherever possible, percents widowed, economically active, and literate have been calculated for the age group 60 and over. Because nations differ in their statistical tabulation and publication procedures some data refer to a slightly wider or narrower age grouping and are footnoted accordingly. The user should bear in mind that nations have varying definitions of concepts such as "economically active" and "literacy," and that strict comparisons are not always warranted.

The problems of comparability that affect all cross national data compilations are to some extent compounded when contrasting elderly populations. Until recently, many national statistical agencies
grouped all persons over a certain age (often age 60 ) into an open-ended category for purposes of abulation, thereby obscuring important differences between cohorts within and across older populations. The meaning and measurement of concepts (e.g., health, disability, instrumental activities of daily living, economic activity and assets, and sometimes age itself) especially relevant to older individuals are often difficult to quantify and vary widely across cultures. Other important policy-related measures such as income, living arrangements, and retirement decisions, have received relatively little attention in most countries, and the underlying dynamics remain poorly understood. The IPC, the Pan American Health Organization, and the National Institute on Aging strongly encourage expanded national data collection and additional comparative research that will shed light on similarities in the process of aging worldwide.


## PAHO/WHO

National Institute on Aging
BUREAU OF THE CENSUS


This wallchart was produced by the Aging Studies Branch of the International Programs Center, Population Division, U.S. Bureau of the Census, with the support of the Aging and Health Unit of the Family Health and Population Program, Pan American Health Organization (PAHO), and the Office of the Demography of Aging, Behavioral and Social Research Program, U.S. National Institute on Aging (NIA). The Aging and Health Unit of PAHO provides technical collaboration to countries in the region in the areas of research, aging and health information dissemination, design of programs promoting healthy aging, training of primary health care workers, and advocacy. The NIA, one of 18 institutes of the U.S. National Institutes of Health, is responsible for the conduct and support of biomedical, social, and behavioral research, training, health information dissemination, and other programs related to the aging process and the special needs of the aged. Because unique research opportunities are afforded by investigations of the health of different populations, both the PAHO and NIA support and engage in crossnational comparative studies.

The Hemisphere's Oldest Countries: 1997 (Percent of population 60+)


As we approach the 21st century, continued worldwide trends toward lower fertility and extended life expectancy have elevated the phenomenon of population aging to a level of prominence never before seen. Population aging usually has been associated with the more industrialized countries of Europe and North America, where a fifth or more of the entire population typically is aged 60 or over. What is not as widely appreciated is the fact that population aging has occurred and is occurring in less industrialized countries as well. Uruguay, for example, currently has a higher percentage of older (60+) population than does Canada and the United States. Outside of Europe and North America, the Caribbean is the "oldest" region of the world, with 10 percent of its aggregate population aged 60 years and over.

In spite of such figures, population aging has not been a prominent issue in much of the Western Hemisphere. Concern in most nations has focused on reducing levels of fertility and infant mortality and creating educational and employment opportunities for growing numbers of young adults. As a result of successes in these areas, however, the region now faces new challenges stemming from a rapidly changing population age structure. Some nations already have experienced intense public debates over issues-the nature and provision of social security; health care costs; appropriate levels of educational investment-that are directly linked to their changing demographic and health profiles.

The statistics in this wallchart are intended to highlight the present and future dimensions of population aging in the Americas and to portray similarities and diversities among nations. Comments and cautions on specific indicators are presented on the reverse.

| Country | Population age 60 and over |  | Percent age 60 and over |  | Percent age 75 and over |  | Percent female in population age 75 and over |  | Median age (years) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1997 | 2025 | 1997 | 2025 | 1997 | 2025 | 1997 | 2025 | 1997 | 2025 |
| Anguilla | 1,052 | 3,229 | 9.8 | 19.9 | 3.7 | 4.9 | 61 | 57 | 27 | 38 |
| Antigua and Barbuda | 4,693 | 13,938 | 7.4 | 21.3 | 2.1 | 2.3 | 54 | 64 | 28 | 40 |
| Argentina | 4,946,759 | 8,303,040 | 13.8 | 17.2 | 4.0 | 5.7 | 62 | 62 | 28 | 33 |
| Aruba | 8,916 | 21,079 | 13.1 | 28.6 | 3.4 | 8.5 | 64 | 65 | 34 | 43 |
| Bahamas | 21,999 | 65,265 | 8.0 | 17.7 | 2.2 | 4.6 | 62 | 60 | 26 | 35 |
| Barbados | 34,047 | 67,718 | 13.2 | 24.3 | 4.9 | 6.3 | 64 | 63 | 31 | 41 |
| Belize | 11,909 | 32,109 | 5.3 | 8.4 | 1.2 | 1.5 | 55 | 55 | 18 | 28 |
| Bolivia | 488,412 | 1,202,703 | 6.4 | 10.0 | 1.7 | 2.6 | 56 | 59 | 20 | 28 |
| Brazil | 12,471,740 | 32,738,784 | 7.4 | 15.6 | 1.6 | 4.2 | 64 | 63 | 25 | 34 |
| Canada | 4,947,621 | 10,521,953 | 16.3 | 27.7 | 5.3 | 9.1 | 63 | 59 | 36 | 43 |
| Chile | 1,443,223 | 3,666,275 | 9.9 | 20.4 | 2.4 | 5.8 | 63 | 61 | 28 | 38 |
| Colombia | 2,522,595 | 8,089,985 | 6.7 | 13.9 | 1.3 | 3.1 | 56 | 63 | 24 | 30 |
| Costa Rica | 252,448 | 773,972 | 7.1 | 14.5 | 1.8 | 3.4 | 56 | 58 | 24 | 32 |
| Cuba | 1,417,555 | 2,842,476 | 12.9 | 24.3 | 4.2 | 7.6 | 54 | 59 | 31 | 43 |
| Dominica | 8,096 | 12,771 | 12.2 | 19.1 | 4.3 | 5.3 | 61 | 63 | 26 | 39 |
| Dominican Republic | 508,599 | 1,456,291 | 6.5 | 12.4 | 1.3 | 2.9 | 54 | 57 | 22 | 29 |
| Ecuador | 768,147 | 2,281,085 | 6.3 | 12.8 | 1.7 | 3.2 | 56 | 58 | 21 | 3 |
| El Salvador | 413,586 | 934,288 | 7.3 | 11.1 | 1.9 | 3.1 | 55 | 59 | 21 | 29 |
| French Guiana | 11,953 | 46,439 | 7.6 | 17.4 | 1.8 | 4.7 | 56 | 52 | 27 | 31 |
| Grenada | 5,997 | 11,572 | 6.3 | 7.5 | 1.8 | 1.1 | 58 | 49 | 18 | 27 |
| Guadeloupe | 47,857 | 103,328 | 11.6 | 20.7 | 3.6 | 6.2 | 60 | 62 | 28 | 40 |
| Guatemala | 621,804 | 1,672,921 | 5.3 | 7.5 | 1.0 | 1.8 | 56 | 58 | 18 | 23 |
| Guyana | 46,796 | 95,957 | 6.6 | 13.5 | 1.7 | 3.1 | 60 | 66 | 23 | 33 |
| Haiti | 418,916 | 721,246 | 6.3 | 7.1 | 1.5 | 1.6 | 54 | 60 | 18 | 25 |
| Honduras | 293,703 | 715,495 | 5.1 | 8.3 | 1.2 | 2.1 | 52 | 60 | 18 | 26 |
| Jamaica | 238,863 | 502,256 | 9.1 | 15.0 | 2.8 | 3.8 | 59 | 60 | 24 | 35 |
| Martinique | 53,670 | 106,926 | 13.3 | 22.2 | 4.3 | 6.7 | 61 | 63 | 30 | 41 |
| Mexico | 5,948,491 | 17,491,716 | 6.1 | 12.4 | 1.3 | 3.1 | 58 | 61 | 21 | 31 |
| Netherlands Antilles | 23,013 | 57,902 | 10.9 | 23.2 | 2.9 | 6.9 | 62 | 62 | 30 | 40 |
| Nicaragua | 184,598 | 607,172 | 4.1 | 7.5 | 0.7 | 1.5 | 59 | 60 | 17 | 26 |
| Panama | 216,429 | 566,295 | 8.0 | 14.9 | 2.2 | 4.2 | 53 | 57 | 24 | 33 |
| Paraguay | 341,976 | 984,356 | 6.6 | 9.9 | 1.6 | 2.3 | 57 | 55 | 20 | 24 |
| Peru | 1,710,218 | 4,792,645 | 6.7 | 12.2 | 1.4 | 3.1 | 57 | 57 | 22 | 30 |
| Puerto Rico | 526,307 | 975,438 | 13.8 | 23.1 | 4.5 | 8.1 | 57 | 61 | 30 | 40 |
| St. Kitts and Nevis | 3,453 | 6,525 | 8.3 | 10.9 | 3.4 | 1.6 | 60 | 64 | 22 | 32 |
| St. Lucia | 10,976 | 24,667 | 7.3 | 12.2 | 2.2 | 2.5 | 65 | 70 | 22 | 34 |
| St. Vincent \& Grenadines | 9,024 | 22,186 | 7.6 | 14.7 | 2.4 | 3.0 | 60 | 59 | 23 | 37 |
| Suriname | 32,698 | 71,219 | 7.7 | 15.5 | 1.5 | 3.3 | 55 | 60 | 24 | 34 |
| Trinidad and Tobago | 112,060 | 231,412 | 9.9 | 21.4 | 2.7 | 5.0 | 57 | 57 | 27 | 38 |
| United States | 44,158,531 | 82,501,033 | 16.5 | 24.6 | 5.8 | 7.9 | 63 | 58 | 35 | 38 |
| Uruguay | 564,878 | 805,507 | 17.3 | 20.6 | 5.0 | 7.4 | 62 | 62 | 31 | 36 |
| Venezuela | 1,456,905 | 4,606,436 | 6.5 | 14.2 | 1.6 | 3.5 | 57 | 58 | 23 | 33 |
| Virgin Islands (US) | 13,273 | 36,164 | 11.4 | 25.2 | 2.7 | 9.4 | 60 | 63 | 29 | 39 |

Note: Component population projections are unavailable for the following countries: Bermuda, British Virgin Islands, Cayman Islands, Montserrat, Turks and Caicos.

Source: U.S. Bureau of the Census, International Programs Center, International Data Base, March 1997.

| Country | Years of life expectancy at birth, 1997 |  | Percent widowed age 60 and over |  | Percent economically active age 60 and over |  | Percent literate age 60 and over |  | Percent GDP spent on health 1990 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male | Female | Male | Female | Male | Female | Male | Female |  |
| Anguilla | 77 | 82 | 14 | 32 | 33 | 9 | (NA) | (NA) | (NA) |
| Antigua and Barbuda | 71 | 77 | 13 | 28 | 51 | 23 | (NA) | (NA) | 6 |
| Argentina | 74 | 79 | 12 | 46 | 39 | 13 | 93 | 91 | 9 |
| Aruba | 77 | 80 | 13 | 37 | 23 | 6 | (NA) | (NA) | (NA) |
| Bahamas | 74 | 79 | 14 | 44 | 47 | 26 | (NA) | (NA) | 5 |
| Barbados | 75 | 79 | 14 | 31 | 19 | 9 | (NA) | (NA) | 6 |
| Belize | 69 | 74 | 13 | 33 | 60 | 13 | ${ }^{1} 45$ | ${ }^{1} 45$ | 5 |
| Bolivia | 60 | 73 | 18 | 44 | 50 | 27 | 59 | 32 | 5 |
| Brazil | 65 | 72 | 13 | 47 | 51 | 21 | 59 | 54 | 6 |
| Canada | 79 | 82 | 10 | 40 | 20 | 8 | (NA) | (NA) | 9 |
| Chile | 75 | 80 | 13 | 39 | 40 | 11 | 83 | 82 | 6 |
| Colombia | 70 | 78 | 15 | 46 | 45 | 11 | 73 | 64 | 6 |
| Costa Rica | 76 | 78 | 12 | 34 | 41 | 6 | ${ }^{1} 79$ | ${ }^{1} 78$ | 9 |
| Cuba | 75 | 79 | 11 | 36 | ${ }^{1} 21$ | ${ }^{1} 3$ | (NA) | (NA) | (NA) |
| Dominica | 78 | 82 | 15 | 31 | 41 | 14 | (NA) | (NA) | 6 |
| Dominican Republic | 69 | 77 | (NA) | (NA) | ${ }^{1} 79$ | ${ }^{1} 22$ | ${ }^{1} 42$ | ${ }^{1} 37$ | 5 |
| Ecuador | 71 | 79 | 12 | 33 | 71 | 16 | 72 | 61 | 6 |
| El Salvador | 69 | 78 | 13 | 35 | 62 | 20 | (NA) | (NA) | 5 |
| French Guiana | 76 | 81 | 7 | 25 | 26 | 13 | ${ }^{1} 69$ | ${ }^{17} 7$ | (NA) |
| Grenada | 71 | 77 | 13 | 31 | 36 | 12 | (NA) | (NA) | 6 |
| Guadeloupe | 78 | 82 | 11 | 33 | 15 | 8 | ${ }^{1} 66$ | ${ }^{1} 63$ | (NA) |
| Guatemala | 66 | 75 | 12 | 46 | ${ }^{1} 62$ | ${ }^{17}$ | ${ }^{1} 43$ | ${ }^{1} 31$ | 3 |
| Guyana | 63 | 58 | 17 | 45 | 46 | 16 | (NA) | (NA) | 6 |
| Haiti | 51 | 59 | 8 | 27 | ${ }^{1} 64$ | ${ }^{1} 35$ | ${ }^{1} 21$ | ${ }^{1} 15$ | 3 |
| Honduras | 65 | 66 | 9 | 29 | 72 | 19 | 39 | 33 | 6 |
| Jamaica | 75 | 80 | 13 | 38 | ${ }^{1} 49$ | ${ }^{1} 23$ | 62 | 73 | 4 |
| Martinique | 79 | 82 | 11 | 30 | 14 | 8 | ${ }^{1} 69$ | ${ }^{1} 72$ | (NA) |
| Mexico | 71 | 79 | 12 | 37 | 60 | 18 | 71 | 59 | 4 |
| Netherlands Antilles | 77 | 80 | 13 | 34 | 20 | 3 | (NA) | (NA) | (NA) |
| Nicaragua | 66 | 76 | ${ }^{2} 10$ | ${ }^{2} 33$ | ${ }^{1} 58$ | ${ }^{1} 11$ | 51 | 46 | 5 |
| Panama | 74 | 79 | 11 | 32 | 42 | 8 | 72 | 71 | 9 |
| Paraguay | 72 | 77 | 11 | 30 | 54 | 20 | 79 | 68 | 3 |
| Peru | 70 | 78 | 17 | 43 | 60 | 24 | ${ }^{1} 76$ | ${ }^{14} 49$ | 3 |
| Puerto Rico | 74 | 78 | 13 | 40 | 20 | 6 | ${ }^{17} 75$ | ${ }^{1} 67$ | (NA) |
| St. Kitts and Nevis | 67 | 75 | 14 | 25 | 56 | 16 | 93 | 94 | 6 |
| St. Lucia | 71 | 77 | (NA) | (NA) | 47 | 15 | (NA) | (NA) | 5 |
| St. Vincent \& Grenadines | 73 | 79 | 14 | 25 | 41 | 12 | (NA) | (NA) | 6 |
| Suriname | 70 | 77 | (NA) | (NA) | 15 | 5 | (NA) | (NA) | 4 |
| Trinidad and Tobago | 70 | 74 | 16 | 41 | 23 | 10 | 90 | 78 | 4 |
| United States | 76 | 79 | 13 | 47 | 26 | 15 | 91 | 93 | 13 |
| Uruguay | 75 | 81 | 11 | 43 | 31 | 11 | ${ }^{1} 85$ | ${ }^{1} 87$ | 6 |
| Venezuela | 72 | 79 | 10 | 35 | ${ }^{148}$ | ${ }^{1} 11$ | ${ }^{1} 75$ | ${ }^{1} 66$ | 7 |
| Virgin Islands (US) | 78 | 82 | 11 | 30 | 27 | ${ }^{1} 12$ | (NA) | (NA) | (NA) |

NA Data not available.
${ }^{1}$ Refers to age 65 and over.
${ }^{2}$ Refers to age 50 and over.
Note: Component population projections are unavailable for the following countries: Bermuda, British Virgin Islands, Cayman Islands, Montserrat, Turks and Caicos.

Source: U.S. Bureau of the Census, International Programs Center, International Data Base, March 1997.

Projected Percent Increase in the Population 60+: 1997 to 2025




