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# BERMUDA

## GENERAL SITUATION AND TRENDS

### Socioeconomic, Political, and Demographic Overview

**B**ermuda comprises a small group of islands that cover an area of approximately 20.5 mi<sup>2</sup>, located 586 miles east, southeast of Cape Hatteras, North Carolina. It has a population of 59,807, of which 51.6% is female, with a density of 3,160 persons per mi<sup>2</sup>.

Bermuda has virtually no natural resources, and it imports all of its consumer goods. The economy is based almost entirely on tourism and international company business. About one-third of the work force is engaged in wholesale and/or retail trade; one-third, in restaurants and hotels; and the other third, in community, social, and personal services. The country usually has a small balance of payments surplus, the Bermuda dollar (BDS) is pegged to the US dollar on an equal basis, and inflation is estimated to be at around 2.6% per annum. Hotel occupancy rates have slowly improved over the past few years, reaching 64% in 1995.

Education is free in public schools and compulsory up to age 16 years. In 1995, 10,056 students were enrolled in government and private primary and secondary schools and in Bermuda College. In 1994, the literacy rate was estimated at 97%.

Living standards are high, with good housing and well developed communications systems. Roads are good, and public transportation (buses, taxis, and ferries) is well-developed. All the population has safe drinking water at home, as well as sanitary waste disposal.

In 1991, the median household income was US\$ 48,588, an increase of 16.4% since 1988, when it was last measured, and women represented 50% of the work force.

The country's per capita health expenditure was US\$ 943 in 1995, representing approximately 5% of the GDP.

In 1991, the census reported a population of 58,460 inhabitants in Bermuda. The yearly population growth has been

approximately 0.7% in recent years, yielding a population of 59,807 in 1995. Between 1991 and 1995 the average number of births per year was 902, but births have declined steadily during the period, with numbers in the latter years falling by more than 10% to 840, compared to the 959 at the beginning of the period. Crude birth rates declined from 16.4 per 1,000 population in 1991 to 14.0 in 1995. The racial composition of the population is 58% black and 42% white and other races. According to the 1991 census, the island had 22,430 households. Over time, multiple family-member households have given way to smaller units, with the average number of persons per household dropping to 2.61.

The population is gradually aging. It was estimated that in 1995 only 6.8% was under 5 years old, 12.9% between 5 and 14 years of age, and 9.8% 65 years old and older. That same year, life expectancy was 63.4 years for males and 78 years for females.

The average infant mortality rate for the 1992 to 1995 period has been approximately 13 per 1,000 live births. The crude death rate has hovered around 8 per 1,000 in the same period (Table 1).

### Mortality Profile

A total of 2,388 deaths were recorded in Bermuda between 1991 and 1995, an annual mean of 478 events.

Overall, the average percentage of deaths according to broad groups of causes in the 1991–1995 period showed that diseases of the circulatory system were the most frequent ones, with 40.9% of the cases, followed by neoplasms, with 26.1%. Among the diseases of the circulatory system, the most frequent causes of death were ischemic heart disease (23.7%) and cerebrovascular disease (9.9%). Among neoplasms, lung, colon cancer, and female breast were the most frequent sites. External causes accounted for 4.5%; communicable diseases, for 4.3%; and conditions originating in the

perinatal period, for 2.2%. The distribution pattern of deaths by sex was similar, except for external causes, where the frequency was almost four times higher among males, and for communicable diseases, where the frequency was twice as high among females.

## SPECIFIC HEALTH PROBLEMS

### Analysis by Population Group

#### *Health of Children and Adolescents*

The infant mortality rate in Bermuda is low (an average of 11 deaths per 1,000 live births in 1991–1995), and practically all deaths in this age group are due to conditions originating in the perinatal period. There were no recorded deaths in infants due to communicable diseases during this period. Only three deaths were registered during this period among children aged 1–4 years old and none for the age group 5–14 years old. Seven percent of newborns weighed 2,500 grams or less at birth.

Respiratory infections were the leading cause of hospitalization for infants, and respiratory infections and accidents were the leading hospitalization causes for children from 1 to 14 years of age.

Obesity is a public health concern in the age group 5–9 years old. Because immunization coverage has been consistently high, the incidence of vaccine preventable diseases is low or nonexistent. In 1995, coverage was 80.5% for measles vaccination, 90.7% for OPV3, and 93.7% for DTP3 in the age group under 1 year of age.

Dental decay has decreased over the past decade and oral health in children is generally excellent. This is largely attributed to a preventive dental care program for children that provides free fluoride rinses. The voluntary, school-based program has maintained high participation rates.

In youths 15 to 19 years old, accidents were the leading cause of death and one of the major causes of hospital admissions, along with pregnancy and respiratory diseases.

#### *Health of Adults*

Approximately 57% of the total population was between 25 and 64 years old in 1995. The most important causes of mortality and morbidity in these population groups were chronic diseases, accidents and violence, and AIDS. Mortality in these age groups has increased in the past 10 years due to AIDS and HIV infection, particularly in males. AIDS was the main cause of death in the group aged 35 to 44 years. For those aged 50 to 64 years, the leading causes of death are diseases of the circulatory system, cancers, and diseases of the digestive system.

Maternal health indicators are good. In 1995, more than 95% of pregnant women received prenatal care, 99% were fully immunized against tetanus, and all births took place in a hospital.

#### *Health of the Elderly*

The population group 60 years old and older are the most rapidly growing segment of the country's population. The leading causes of death and hospitalization in this group are diseases of the circulatory system, cancer, diseases of the digestive system, and diseases of the respiratory system. Social security benefits to persons in the age group 65 and older include health insurance. Special programs are in place to enable the aged to remain independent and active as long as possible.

#### *Workers' Health and Health of the Disabled*

Regulations related to workers' health are enforced under the Public Health Act, which is designed to ensure safety in the workplace. Many women occupy professional positions, and there is no evidence of child labor.

The Government has special programs to enable the disabled to remain active, independent, and employed as much as possible.

### Analysis by Type of Disease

#### *Communicable Diseases*

Communicable diseases are not an important health problem. In 1990, three imported cases of malaria were recorded, but none has been recorded since 1992. Dengue and yellow fever have never been reported, and the last registered cases of rubella (4 cases) occurred in 1992.

AIDS is an important health problem. Since Bermuda's first case was reported in 1982, 339 cases and 269 deaths have been recorded.

In 1991 there were three reported cases of tuberculosis and seven in 1992.

#### *Noncommunicable Diseases and Other Health-Related Problems*

Chronic noncommunicable diseases are the most important health problems. Both circulatory system diseases and cancers are leading causes of hospitalization and death. Ischemic heart disease and cerebrovascular disease are the

most important causes of death among diseases of the circulatory system. The most frequent types of cancer include: female breast, lung, colon, and stomach.

Accidents are a major cause of death in the age group 15–34 years old, and motor vehicle accidents are the most important in this category; males are disproportionately affected.

## **RESPONSE OF THE HEALTH SYSTEM**

### **National Health Plans and Policies**

The Government's health policy emphasizes maternal and child health, health of schoolchildren, community nursing for the elderly, dental health, control of communicable diseases, mental health, and alcohol and drug abuse. Public health policy rests on the following principles: the Government should be the provider of last resort and should serve as the guarantor of public health; all residents should be able to participate in determining health care system priorities; and individuals, the community, and the Government share responsibility for maintaining the public health and assuring conditions whereby individuals can maintain and improve their health status.

In response to community concerns about escalating health care costs and the quality of health care on the islands, in 1993 the Government undertook an in-depth review of health care that brought together providers, consumers, the Government, and the insurance industry to examine health care costs, financing, quality, and needs assessment.

The general practitioner will likely continue to function as a "gatekeeper," controlling access to specialized care; the Government, in an effort to cope with rising health care costs, will develop more formal arrangements with preferred providers abroad (USA and Canada) for providing tertiary and some secondary care. Insurers are facing increased pressure to expand coverage and increase benefits, particularly for the treatment of addictions and for preventive services.

Both the Public Health Service and the Bermuda Hospitals Board have explored the development of additional ambulatory services and a greater integration of existing community services, particularly those geared at the elderly.

### **Organization of the Health Sector**

Bermuda's health care system comprises a public and a private sector. The Ministry of Health, Social Services, and Housing is responsible for health matters in the country. The Ministry is mandated to promote and protect the health and well-being of the island's residents and is charged with assuring the provision of health care services, setting standards, and providing coordination within the health care system.

The Minister of Health sets public policy and reports to the Cabinet. The Ministry has responsibility for health planning and evaluation. There is no central planning agency.

The Ministry comprises several departments and agencies, including Ministry Headquarters, the Department of Health, the Department of Child and Family Services, the Prisons Department, the Department of Financial Assistance, and the Housing Corporation. Ministry Headquarters coordinates and controls the Ministry's departments; each department is responsible for its own operation, under the direction of the department head or director and the authority of the Permanent Secretary.

The Ministry also is responsible for the island's hospitals. These are administered by the Bermuda Hospitals Board, a statutory body appointed by the Ministers. Public health services are provided by the Ministry through the Department of Health.

Primary health care services are delivered from private physicians' offices, government centers, and hospital outpatient clinics. The private sector delivers a significant proportion of primary health care. Additional ambulatory care services are provided through specialty clinics and the hospital's emergency room.

Responsibility for providing public health services rests with the Department of Health, which includes a mandate to provide disease prevention and control and health promotion services. The Department also serves as a regulatory agency; monitors food safety and water and air quality; and provides various public health services, including personal health, dental health, and environmental health.

The public health service administers several public health programs, including maternal and child health, school health, immunization, and communicable disease control. It also manages home care, including health visiting and district nursing, and selected specialized care, such as care for AIDS patients, rehabilitation, health education, and health promotion programs. The country is divided into three health regions, and the department operates a health center in each. These centers offer prenatal care, family planning services, immunizations, child health and other primary care services, and dental clinics for children.

Private voluntary agencies, assisted by the Government, provide some specialized services such as community based oncology nursing and personal services for HIV-infected persons.

### **Health Services and Resources**

#### *Organization and Operation of Health Care Services*

Bermuda has two hospitals: the King Edward VII Memorial Hospital, a general hospital with 234 beds, plus an additional

90 geriatric and rehabilitation beds, and Saint Brendan's Hospital, a psychiatric hospital with 166 beds. An executive director is responsible for the management of each hospital; he or she is assisted by several senior managers and by a medical staff committee that represents the physicians. There are no private hospitals in the country.

King Edward VII Memorial Hospital provides diagnostic and treatment services, including medicine, surgery, pediatrics, obstetrics and gynecology, rehabilitation, and geriatrics. The hospital also provides some specialized and intensive services, including oncology, medical and surgical intensive care, and renal dialysis. In addition to its specialty and ambulatory care clinics, the hospital operates a primary care clinic for indigent patients. A neonatal care unit is being developed. Both hospitals undergo periodic accreditation reviews by the Canadian Council on Hospital Accreditation.

The average length of stay at the general hospital was 8.7 days in 1993, and this figure has remained stable for several years. The average occupancy for that same year was 75%, and there were 63,905 patient-days.

There are no secondary or tertiary referral hospitals on Bermuda, although there are links for the provision of tertiary care with the United States, the United Kingdom, and Canada.

Mental health services are provided through psychiatrists, psychologists, a psychiatric social worker, and mental welfare officers attached to Saint Brendan's Hospital. This hospital provides treatment for both mentally ill and mentally handicapped persons. The hospital operates a day hospital and an outpatient clinic, provides community-based services, and functions as a halfway house. There is only one psychiatrist in private practice; all others are employed by the Hospital Board.

Long-term care facilities are operated by the Hospital Board and the Government. Skilled nursing care facilities include Lefroy House, with 57 beds, and the extended care unit at the general hospital, with 90 beds. A hospice facility for the terminally ill that opened in 1991 provides care for AIDS patients and other terminally ill persons. It is operated by the Hospital Board and partially subsidized by public funds. There are 11 residential care facilities for the elderly, including nursing homes that provide room and board and limited assistance with personal services. Most of these facilities are partially funded through public monies.

### *Human Resources*

There were 94 physicians in active practice in the country in 1995, which represents one physician per 637 inhabitants: 25 of those are general practitioners, 6 work in public health and preventive medicine, and the remainder are specialists.

There are 27 dentists, including specialists in periodontics, orthodontics, and others; 5 of the general dentists work in the

public health service. This represents 2,174 inhabitants per dentist.

In 1995, the number of licensed nurses was 689, including registered nurses, enrolled nurses, and psychiatric nurses. More than 75% are registered nurses, and most are based in hospitals.

There is a variety of other health personnel, including 15 physiotherapists, 40 medical laboratory technologists, 23 radiographers, 15 occupational therapists, 9 nutritionists and dietitians, and 7 speech-language pathologists.

Most physicians and dentists work as independent, private practitioners. Most other health care providers are employed on a salaried basis by the hospitals, the public health service, or private physicians. There is a small number of multi-specialty practices and a few partnerships among specialists.

There are 38 pharmacists who provide services ranging from retail pharmacy to clinical pharmacology. Most pharmacists are employed on a salaried basis.

### *Health Care Financing*

The health care system is financed through a variety of mechanisms. Health services are either paid through an insurer, by a government agency, or by consumers. Funding for the hospitals includes insurance payments and government subsidies. There is no universal, publicly funded health insurance, although hospitalization insurance is mandatory for all employed or self-employed persons. Insurance coverage is nearly universal, and some persons are insured by more than one provider. Both employers and employees contribute an equal share of insurance premiums. The administration of Hospital Insurance is provided through the Hospital Insurance Commission, which regulates insurance sold both by private companies and public agencies. All policies must provide a minimum set of benefits, known as the Standard Hospital Benefit.

Government employees are insured through the Government Employees Health Insurance Scheme, and several major employers operate "approved schemes" to cover their employees. The Hospital Insurance Commission also operates a health insurance plan, which has an annual open enrollment period designed to ensure access to health (hospitalization) insurance for all Bermuda residents.

A Mutual Reinsurance Fund covers dialysis, kidney transplants, diabetes education and counseling, drugs to prevent graft rejection, hospice care, and extended-stay (in-hospital) patients. It is funded through a compulsory levy on all health insurance premiums collected and was introduced to spread the cost of high risks claims among all insurers. The fund also is administered by the Insurance Commission. Hospitalization is provided free-of-charge to children and the aged, and

it is covered through a government subsidy to the Bermuda Hospital Board.

Public health services are generally free or provided at modest cost; they are funded through general revenues.

The prevailing method of payment for doctors and dentists is fee-for-service. There are no restrictions on direct payments to providers by consumers, and physicians may bill pa-

tients for charges in excess of standard insurance reimbursement or agreed fee schedules. For hospital-based physician services there is a fee schedule, established on an annual basis by agreement between the Bermuda Medical Society and the Health Insurance Association of Bermuda. The Government determines overall increases in hospital fees and regulates the acquisition of major equipment and services.