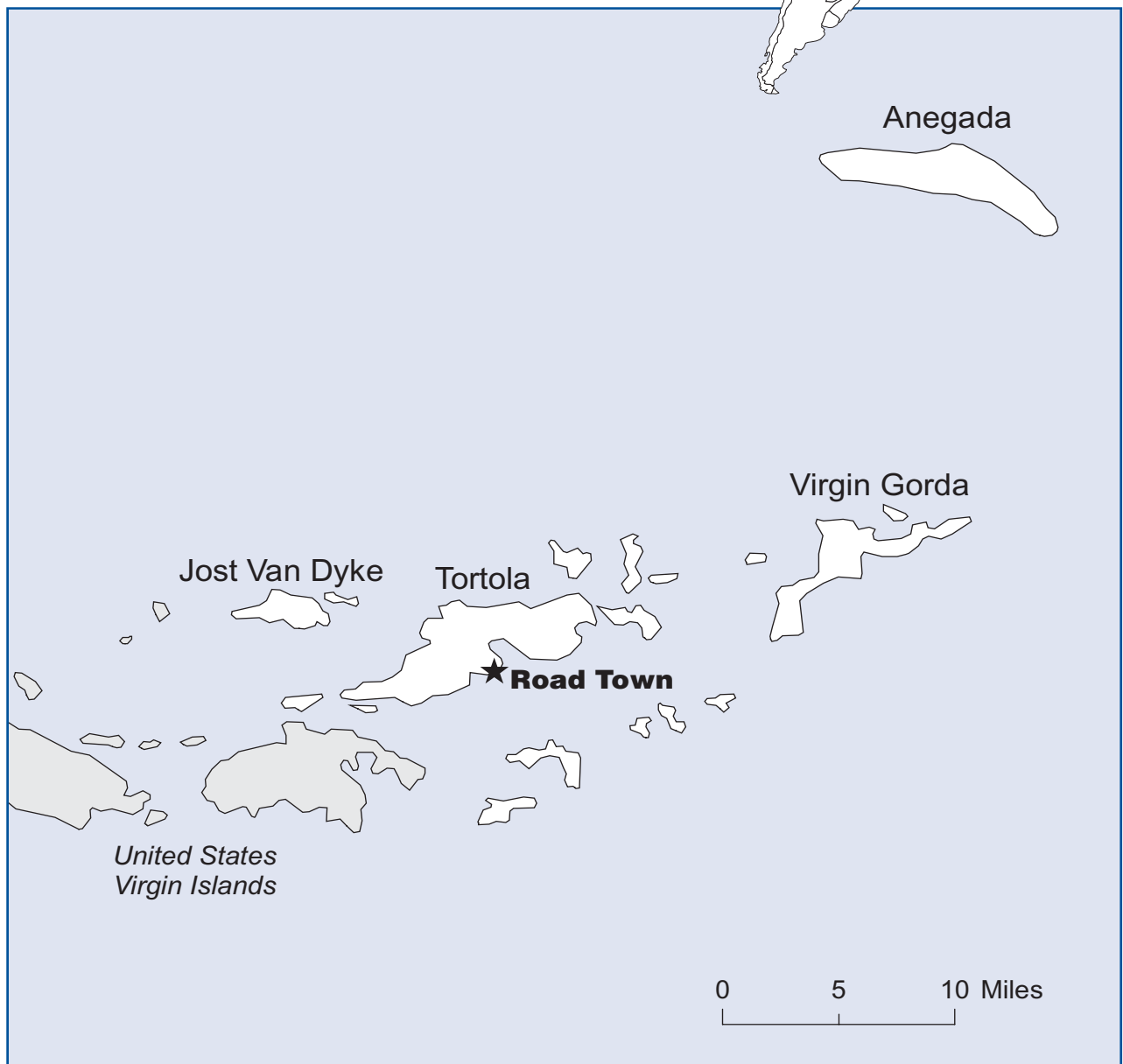
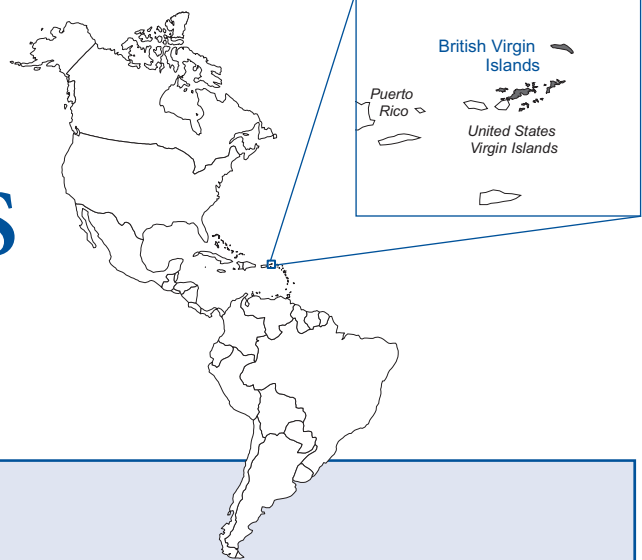


BRITISH VIRGIN ISLANDS



Sources: Second Administrative Level Boundaries Dataset (SALB), a dataset that forms part of the United Nations Geographic Database, available at: http://www.who.int/whosis/database/gis/salb/salb_home.htm, and the Digital Chart of the World (DCW) located at: <http://www.maproom.psu.edu/dcw>. The boundaries and names shown here are intended for illustration purposes only, and do not imply official endorsement or acceptance by the Pan American Health Organization.

The British Virgin Islands is a cluster of about 50 islands, cays, and rocks strewn over 3,445 mi² in the northeastern corner of the Caribbean Sea, east of Puerto Rico. The British Virgin Islands' total land area is 154 km². Of the 15 inhabited islands, the largest are Tortola (56 km²), where Road Town, the capital, is located; Anegada (39 km²); Virgin Gorda (22 km²); and Jost Van Dyke (8 km²). Topography varies from extremely flat land in Anegada to mountainous and rugged terrain on Tortola, which has the highest point, Mount Sage, rising 543 m above sea level.

GENERAL CONTEXT AND HEALTH DETERMINANTS

The British Virgin Islands is an overseas territory of the United Kingdom with internal self-government. A 13-member Legislative Council is democratically elected. The Queen appoints a Governor to represent her and exercise reserve powers on behalf of the Crown. The Governor, in turn, appoints the Executive Council ministers: a Chief Minister, who is the head of government; an Attorney General (an ex-officio member); and four other government ministers. The Executive Council is chaired by the Governor. The Governor acts on the advice of the Executive Council. Because the territory is so small, there is no need for a local government. District officers with administrative functions have been appointed for Virgin Gorda, Jost Van Dyke, and Anegada.

Social, Political, and Economic Determinants

The British Virgin Islands uses the US\$ as currency (one of only three dependent territories of the United Kingdom that do). GDP grew by an average of 9% annually between 1991 and 2001. GDP at current market prices was estimated at US\$ 765 million in 2000 and US\$ 830 million in 2003. Nominal per capita GDP in 2001 reached US\$ 35,954. GDP produced by the financial services sector grew by an average of 23% between 1991 and 2001. Tourism grew by 12% annually over the same period and now accounts for 14% of GDP.

The financial services sector is the major contributor to the economy (38% of GDP), and accounts for more than half of the government's revenue. Since the enactment of the 1984 International Business Ordinance Act and the 1990 International Business Company Act and its subsequent amendments, the financial sector has steadily grown—more than 650,000 companies had been incorporated by the end of 2005. The International Business

Company is the designated venue for initiating international business ventures and is responsible for the expansion of various sectors in the financial services industry, such as the management of insurance, mutual funds, trusteeships, and companies. The Business Companies Act of 2004 (which went into effect in 2005) removed the differential tax obligations that existed between companies conducting business locally and internationally, while providing flexibility and choice in a larger range of corporate products such as restricted, purposed, and segregated portfolio companies. The British Virgin Islands is a major jurisdiction for the incorporation of mutual funds. At the end of 2005 a total of 3,724 mutual funds were registered or recognized. The British Virgin Islands continues to be an extremely conservative banking jurisdiction. At the end of 2005, 8 banks were authorized to conduct business in or from within the territory. In the area of fiduciary services, 117 general trust licenses and 119 restricted trust licenses were issued. The territory also provides ship registration services. At the end of 2005, 2,531 ships had been registered.

Tourism is the next major contributor to the territory's economy. The figure of 2,500 visitors per day set by the cruise ship policy is often exceeded, because multiple, large-capacity cruise ships often dock simultaneously. Government infrastructure projects and commercial and residential developments continue to fuel activity in the construction industry.

The current labor force is around 11,700, 95% of whom are employed. The unemployment rate remained constant at 3.6% in 2001–2005. The unemployment rate for women in 2003 was 3.4%, compared to 3.8% for men. In 2001 there were 15,227 persons older than 15 years of age; of the 13,543 persons employed in this age group, 48% were males and 52% were females. These figures remained constant in 2002. The five leading employers in 2001 were public administration and social security (4,742), followed by hotels and restaurants (2,164), construction (1,071), education (1,382), and wholesale and retail trade (1,050).

The population living in poverty¹ in the British Virgin Islands in 2003 hovered around 22% of the population (16% of households). Indigence is nearly absent.

With few exceptions, the poor in the British Virgin Islands did not exhibit characteristics typically associated with poverty. Housing characteristics and other indicators such as access to water and electricity supply and overall health levels are little different from those of non-poor households. In addition, school enrollment for 5–16-year-olds among the poor neared 100%. Many poor households also owned assets such as vehicles, telephones, washing machines, refrigerators, and stereos, and had access to services such as cable TV at levels comparable to those in non-poor households (for example, 20% of poor families have cell phones and more than one-third have computers). Almost 30% of poor households also owned land that they considered to be developable and which represented a potential source for additional funds.

More than 80% (95% if single elderly households are excluded) of poor households have at least one person working; just under one-half have two or more working members. Unemployment, although higher than among not poor households, was only 11%, but workers from poor households tend to be less skilled. The minimum wage (US\$ 4/hour) provides sufficient income for adults working full-time to exceed the poverty line. The elderly living on their own made up virtually all of poor households with no one working. This subgroup had little income generating potential, and depended on the government, their families, or NGO assistance for support.

Single-parent households made up one-fifth of all poor households, although it should be noted that more than 70% of them are not poor. The more serious matters dealing with unstable family relationships are issues such as family and marital problems, domestic and spousal violence, single parenting, and teenage pregnancy or motherhood.

There was little evidence that children were seriously affected by lack of income. Their health was generally good, school enrollment was nearly universal, and there was no evidence of malnutrition. The main problems have to do with children's welfare, particularly when parental relationships break up.

The British Virgin Islands has 26 primary schools, 16 public and the remainder private. School attendance is compulsory up to age 15 years, and the average length of school attendance is 9.4 years; most students complete 12 years of combined primary and secondary education, however. There are four public secondary schools and one private. Adult literacy rates in 1998–2000 were 98.3% for females and 97.8% for males.

¹The poverty definition is set on the basis of indigence lines (based on minimum food requirements) and poverty lines (minimum food requirements plus an element of non-food expenditure), and is derived according to the Caribbean Development Bank's (CDB) methodology. The indigence line for an adult is US\$ 1,700 per annum; the poverty line for an adult is US\$ 6,300 per annum.

The British Virgin Islands currently generates more than 80 tons of solid waste per day during the peak tourist season and less than half that at other times of the year. In 2004, waste generated on Tortola, Jost Van Dyke, Virgin Gorda, and Anegada amounted to approximately 31,964 tons. In 2004, 26,506 tons were delivered to the incinerator plant compound; 5,458 tons were delivered to sister island dumpsites to be used as landfill.

As of this writing, there is no government-run public transportation system; vehicle ownership rates are high, however, and private transportation services are readily available. A fairly extensive network of roads provides access to all settlements. Inter-island transportation is mostly by ferry, although limited air taxi services are available to Virgin Gorda and Anegada.

The major source of potable water is cisterns (each home is required to have one before it can receive planning approval for construction) and wells. Two companies produce reverse-osmosis, desalinated water distributed by Tortola's Water and Sewerage Department in Tortola, which supplies about 75% of the population on that island. The remainder of the population relies on cisterns. Virgin Gorda has its water supplied by two systems, one at North Sound and the other at The Valley. Municipal public water supplies also are available on Anegada and Jost Van Dyke. Bottled water is imported or locally produced by at least five companies that bottle and distribute locally. Several hotels operate their own seawater desalination plants.

Tortola's food establishments continue to increase. In 2000 there were 237 food establishments, increasing to 278 in 2003 and representing a growth of 17.3%. During the first three quarters of 2003, 176 food premises were inspected: 143 were found to be satisfactory. Major problems involved improper food thawing practices, poor maintenance, improper storage of food and utensils, and inadequate screening of buildings to keep away insects and other pests.

Hurricanes and seismic activity pose the greatest threats to the British Virgin Islands, as the territory lies in the expected path of Atlantic hurricanes. No major storms or hurricanes affected the territory during 2001–2005. In November 2002, major flooding affected many low-lying and coastal areas, damaging property and causing minor damage to the road infrastructure. Although no major incidents have occurred since then, the potential for flash flooding in low-lying and coastal areas remains an area of concern, particularly during periods of very heavy and prolonged rainfall. The islands are also prone to disasters caused by humans, such as exposure to hazardous chemicals, explosions, and transportation accidents. Oil spills are considered to be the greatest manmade threat to the British Virgin Islands.

Demographics, Mortality, and Morbidity

The population of the British Virgin Islands is highly concentrated in the working age group (45–64-year-olds); fewer than half of households had children and only 14% contained an elderly

erly person. In 2002, the estimated population was 20,987, with persons under 15 years old accounting for 24.9%. Persons 15–44 and 45–64 years old comprised 47.6% and 22.4% of the general population, respectively, while those 65 years and older accounted for 5.1% of the population. The total population in 2004 was 21,689—11,152 were men and 10,537 were women.

Population growth was most marked in the age group 45–64 years old, which almost doubled between 1991 and 2004. This is the population group likely to have the highest incidence of early stage noncommunicable disease and most likely to benefit from secondary (and to some extent primary) prevention efforts. The aging of the population can be clearly seen by a comparison of population pyramids from 1991 to 2005 (see Figure 1).

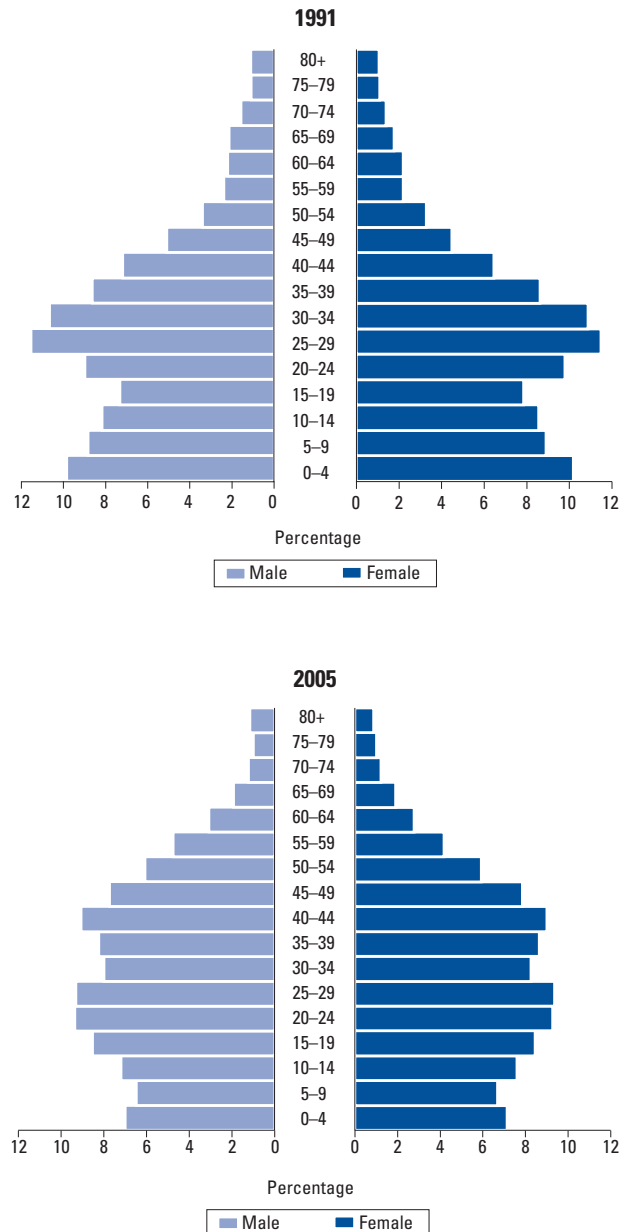
The British Virgin Islands depends heavily on migrant labor and this group influences the distribution of the population. In 2004, immigrants accounted for more than 50% of the population (11,269). Migrant labor contributes to the bulge in the 19–45-year-old group in the territory's population pyramid. Employment by nationality is as follows: nationals, 44%; immigrants from other Caribbean countries, 43%; and other non-nationals, 13%. The Government provides just under 30% of all employment; most of the remainder is provided by private employers, and only 13% of workers are self-employed. Non-nationals dominate the private sector (70% of employed) although they also fill one-third of all government jobs. While they are strongly represented in all occupations, they are more likely to be employed in the less skilled occupations. They especially fill the ranks of employees in hotels, construction, trade, and domestic services (more than 60%).

Life expectancy at birth remained constant at 75.1 years in 2001 and 2002, and at 73.8 years in both 2003 and 2004. In 2001–2004, life expectancy at birth for males was 73.2 in 2001, 76.6 in 2002, 78.9 in 2003, and 69.9 in 2004. For females it was 77.7 for 2001, 75.9 for 2002, 75.9 for 2003, and 78.5 for 2004.

In 2003, the crude birth rate was 12.6 births per 1,000 population, rising to 14.7 births per 1,000 population by 2004. The total number of births increased from 267 in 2003 to 318 in 2004, an increase of 18%. The total fertility rate averaged 1.5 children per woman in 2003, slightly dropping to 1.4 in 2004.

Chronic diseases, their complications, and consequences are the major causes of morbidity and mortality in the territory. Cancers, hypertensive diseases, diabetes, cerebrovascular accidents, and coronary artery disease consistently have been the leading causes of death and hospital admission in the territory. In 2004, 23 patients were admitted to the hospital for diabetes and 15 for hypertension. Use of dialysis increased, with the primary contributing factor to renal failure being diabetes. Diabetic leg ulcers and diabetic foot problems are also a concern. Accidental injuries, including drowning, and mental health disorders are two other major causes of morbidity and mortality in the territory. Diabetes, hypertension, arthritis, and mental disorders were among the significant reasons persons gave for seeking care at the community health clinics in 2001–2004.

FIGURE 1. Population structure, by age and sex, British Virgin Islands, 1991 and 2005.



There were 422 deaths in 2001–2004. The number of total annual deaths varied from 101 in 2001 to 120 in 2004, representing crude death rates of 4.9 to 5.3 deaths per 1,000 population for the period. There were no maternal deaths during the reporting period. The five leading causes of death in this period were hypertensive disorders, malignant neoplasms, drowning, coronary artery disease, and pulmonary embolism. In 2003–2005, malignant

neoplasms ranked first, followed by hypertensive diseases. Specific causes within the five broad causes included ischemic heart disease, diabetes mellitus, cerebrovascular diseases, and accidental drowning and submersion. In 2003 the leading causes of death in males were malignant neoplasms (17), hypertensive diseases (10), drowning and submersion (6), ischemic heart disease, (6) and alcoholic liver disease (2). The leading causes of death in females in that same year were malignant neoplasms (6), hypertensive disease (11), drowning and submersion (1), alcoholic liver disease (2), and diabetes mellitus (2).

HEALTH OF POPULATION GROUPS

Children under 5 Years Old

In 2001, children in this age group represented 8.5% of the population (20,647); in 2004 they represented 8.1% of the population (21,689). Coverage of the Expanded Program on Immunization (EPI) in 2004 for this age group was as follows: BCG, 100%; polio, 90.97%; DPT, 90.61%; and measles and MMR, 100%. In 2001–2005, the national immunization program's schedule included BCG, DPT, HepB, Hib, OPV, and MMR vaccines. Coverage of this highly successful program reached more than 90% of children with all recommended vaccinations during the first 12 months of life.

In that same period, there were 23 perinatal deaths, 2 neonatal deaths, and 4 infant deaths. The breakdown of annual perinatal deaths during the period was six deaths each in 2001 and 2002, one death in 2003, and five deaths each in 2004 and 2005. Causes of death related to labor and delivery included complications of placenta, cord, and membranes; birth asphyxia; and neonatal aspiration of meconium. Prenatal causes of death in the same period included hypertensive disease during pregnancy, placental abruption, and intrauterine infection, accounting for 7 of the 23 (30%) deaths; conditions originating in the perinatal period accounted for 8 of the 23 (35%) deaths; and genetic and other abnormalities accounted for 8 of the 23 (35%) deaths.

In 2001, of 126 hospital discharges in this age group, the major cause of discharges was elective circumcision (53), followed by asthma (20), neonatal jaundice (11), pneumonias (11), gastroenteritis (9), viral infection (7), and external causes (5).

There were 1,477 live births in 2001–2005. In 2004, there were 316 live births, 22 (7.0%) of which were low-birthweight babies. That same year, there were three stillbirths. In 2005, there were 282 live births and 6 stillbirths; of these, 18 (6.4%) were low-birthweight babies.

Children 5–9 Years Old

In 2001, this age group represented 9.0% of the population. There were no deaths in this age group that year. Of the 58 hospi-

tal discharges in this age group, the leading discharge diagnoses were asthma (18), elective circumcisions (14), fracture of the forearm (6), and gastroenteritis (5).

Adolescents 10–14 Years Old

Adolescents in this age group represented 8.6% of the population in 2001 (20,647). There were no deaths in this age group that year. Of the 43 hospital discharges in this age group, the leading discharge diagnoses were asthma (9), sickle cell disease (8), viral infections (6), elective circumcision (4), appendicitis (4), and bronchopneumonia (4). There were two deliveries to 14-year-old mothers. All children entering high school are given full medical screenings.

Young Adults 15–24 Years Old

This age group represented 14.5% of the population in 2001. There were two deaths in this age group in 2001, one due to pneumonia and the other to external causes. There were 57 hospital discharges in this age group; the leading discharge diagnoses were unspecified abortions (15), viral infections (5), mental and behavioral disorders due to alcohol use (5), appendicitis (5), acute asthma and pneumonia (3), and motor vehicle accidents (3).

Pregnant women attend prenatal clinics up to 32 weeks of pregnancy, after which they are referred to Peebles Hospital, where deliveries are usually performed. A significant number of women go to the United States to deliver their infants, although the figure varies considerably from year to year. There were 25 deliveries in the age group 15–19 years old.

There is an active family planning program that is part of the community health services. Available family planning methods include condoms, oral contraceptives, injectable contraceptives, and intrauterine devices. Diaphragms and contraceptive foams and jellies were phased out by 2006 due a decline in use and increased promotion of condoms. Pap smears are offered as part of the Community Health Services' family health program.

Adults 25–64 Years Old

This age group represented 54.4% of the population in 2001 (20,647). There were 33 deaths in the age group. The leading causes of mortality in 2001 were hypertensive diseases (6), malignant neoplasms (4), drowning and submersion (6), ischemic heart disease (3), external injuries (4), and renal failure (1). There were 325 hospital discharges in this age group in 2001; the leading discharge diagnoses were unspecified abortions (31), deep vein thrombosis (27), malignant neoplasms (24), sickle cell disease (22), and leiomyoma of the uterus (21). There were two AIDS-related deaths in this age group in 2001.

Older Adults 65 Years Old and Older

Adults 65 years and older represented 4.9% of the population in 2001. There were 53 deaths in this age group. The leading causes of mortality were malignant neoplasms, mainly in the prostate, cervix, gastrointestinal tract, and lungs (16); hypertensive disorders (15); ischemic heart disease (3); diabetes (3); cerebrovascular accidents (3); and pneumonia (2). Of the 97 hospital discharges in this age group in 2001, the leading discharge diagnoses were malignant neoplasms (17), congestive heart failure (15), cataracts (12), diabetes (10), and hypertension (22).

The Family

More than half the adult population are immigrants, mainly from other Caribbean countries; one-half of them have been residents of the British Virgin Islands for at least 10 years. One in five households are “mixed,” having at least one adult from the territory and one from another country, twice as many households as in 1991. This implies that the integration of non-national residents in households is on the rise. One-third of households are exclusively composed of British Virgin Islands nationals; the rest (46%) are exclusively composed of non-nationals. Household size has remained virtually unchanged, at 2.9 persons per household on average, since 1991. One-half of the British Virgin Islands’ households have one or two persons living in them; only 16% have five or more. Mixed households tend to be larger than exclusively British Virgin Islanders or exclusively non-British Virgin Islander households. One in eight households is headed by a single parent; one in seven has an elderly person; and under half include children, half of which have no adult male present.

Persons with Disabilities

According to the Development Planning Unit within the Chief Minister’s office, 4.4% of the population of the British Virgin Islands has some form of disability, including mental retardation (4.6%) and reported mental retardation and sight (12.6%), hearing (3.1%), and speech (2.9%) impediments. Slightly more than 59% of the disabled are females, 80% had education levels at or below primary level, and 24% were formally employed.

The Esylen Henley Richard Children Center is the main facility providing care for children with special needs. A volunteer group, the Friends of Esylen Henley Richard, provides funds for meals and helps to arrange medical care. BVI Services is a vocational rehabilitation program established in 1982 to assist disabled adults reincorporate into the society through occupational therapy and training. Social security invalidity benefits are payable to insured persons who have become permanently unable to work or who have received sickness benefits for at least 26 weeks and have been issued a medical certificate attesting that they are likely to remain incapacitated. Benefits are dependent on a minimum number of contributions to the scheme.

HEALTH CONDITIONS AND PROBLEMS

COMMUNICABLE DISEASES

Vector-borne Diseases

Dengue is the vector-borne disease of greatest concern in the territory. There were no cases of dengue or dengue hemorrhagic fever reported to the Ministry of Health in 2004; there was one case of dengue fever in 2005. The house index of *Aedes aegypti* mosquitoes ranged from 1.2 to 3.2 in 2002, compared to 1.7 to 1.8 in 2003. In 2004, the house index for *Aedes aegypti* ranged between 0.77 and 1.5. There were no cases of **malaria** or **yellow fever** in 2001–2005.

Vaccine-preventable Diseases

There were no confirmed cases of **polio**, **diphtheria**, **rubella**, **measles**, **mumps**, or **neonatal tetanus** between 2001 and 2005. There were also no confirmed cases of *Haemophilus influenzae meningitis* during the period. The territory’s Expanded Program of Immunization (EPI) is a component of the Family Health Program. Under the program, children under 1 year old receive BCG, hepatitis B, DPT, Hib, and OPV vaccines. Children 1 year old receive MMR, DPT, and polio vaccines; boosters are given according to the immunization schedule up to 11 years of age.

Acute Respiratory Infections

In 2001–2004, acute respiratory infections represented an important proportion of communicable diseases reported to the Ministry of Health. In 2001, there were 308 cases of acute respiratory illness in children under 5 years old, compared to 179 in 2004. Reported **influenza** cases ranged between 1,283 in 2001 to 120 in 2004. In 2002, one case of **tuberculosis** was confirmed in a person with a history of an extended visit to Guyana. A full course of treatment was completed. In 2004 two cases were confirmed, both of which were among residents who spend only part of the year in the territory. Both completed a full course of treatment. No cases were reported in 2003 or 2005.

HIV/AIDS and Other Sexually Transmitted Infections

The first case of AIDS was reported in the territory in 1985. By the end of 2005, there were 62 reported cases of HIV infection (33 males and 29 females). Of these, 21 males and 14 females have died. In 2005, 27 persons were living with HIV/AIDS and receiving antiretroviral therapy; 9 were cases of HIV infections without AIDS (4 males and 5 females) and 18 were AIDS patients (8 males and 10 females). Of those receiving antiretroviral therapy, ten were receiving care overseas. The predominant mode of transmission was heterosexual contact (43), followed by homosexual contact (5), blood-borne (2), mother-to-child (1), and not reported (11). The age distribution of persons with HIV/AIDS is 25 to 35 years (9), 35 to 65 years (15), and over 65 years (3).

Zoonoses

There were no reported cases of zoonotic diseases in 2001–2005.

NONCOMMUNICABLE DISEASES

Cardiovascular Diseases

In 2001, cardiovascular diseases accounted for 21 of 126 (16.7%) hospital discharges; 12 deaths that year were due to cardiovascular diseases. **Ischemic heart disease** was the leading contributor, with eight deaths, and **hypertensive heart disease** and **cardiomyopathy** accounted for two deaths each. In 2004, 15 of 84 deaths were attributable to cardiovascular disease; the main contributors were ischemic heart disease (8 deaths), cardiomyopathy (4), and hypertensive heart disease (3).

Malignant Neoplasms

In 2001, malignant neoplasms accounted for 41 of 126 (32.5%) hospital discharges. In that same year, 20 of 97 (20.6%) deaths were due to malignant neoplasms. Prostate cancer accounted for 6 of the deaths, followed by cancer of the gastrointestinal tract (3), lung cancer (2), and female genital tract cancer (2). In 2004, 28 of 84 deaths (33.3%) were due to malignant neoplasms, with prostate cancer accounting for 5, followed by gastrointestinal tract cancer (13), breast cancer (3), and cancer of the female genital tract (1).

OTHER HEALTH PROBLEMS OR ISSUES

Mental Health and Addictions

In 2004, there were 69 hospital admissions of psychiatric cases at Peebles Hospital (47 males and 22 females); 102 new psychiatric cases were registered at the Ministry of Health's Mental Health Division. The active patient case load by the end of 2004 was 500. Services provided at the Mental Health Division include psychometric assessment, psychotherapy, and management of the Crisis Intervention Team.

According to results from the 2002 National Secondary School Survey, 97% (960) of the 991 respondents attended public schools; the remainder were enrolled in private schools. There was a greater proportion of female students (55.8%) among those surveyed. The study found that one in every six students (18.3%) had tried cigarettes in their lifetime, one in every 26 (3.9%) had tried them in the 12 months prior to the survey, and only 1.3% had smoked cigarettes in the month before the survey. Alcohol rated highest of any drug category surveyed: six of every 10 students (61.6%) reported having tried alcohol in their lifetime, almost one in three (38.1%) reported having used alcohol in the past year, and about one in five (21%) reported having used alcohol in the month prior to the survey. Marijuana was by

far the most frequently used illicit substance (including inhalants). Lifetime use of cocaine and crack cocaine was very low overall (reported by only eight students), and reportedly used exclusively by males. Students also reported very little lifetime use of tranquilizers or stimulants.

Violence and Other External Causes

The number of violent crimes averaged two murders, six attempted murders, and five reported cases of rape per year throughout 2001–2005. In the same period, there were 6,179 road traffic accidents, 14 of them fatal and 975 resulting in injuries.

Oral Health

The Dental Service Unit, which is part of the Community Health Services, monitors fluoridation in primary schools and provides dental health services to the population at large. Between 2001 and 2004 the number of annual extractions ranged from 257 to 303, and the number of restorations ranged from 1,213 to 1,469. In 2004, there were 1,383 tooth fillings and 257 teeth extractions performed, for a 5:1 ratio of teeth filled to teeth extracted. There are two government dentists based on Tortola; they also provide dental services once a week on Virgin Gorda and once a month on Anegada.

RESPONSE OF THE HEALTH SYSTEM

Health Policies and Plans

The Ministry of Health and Social Development is charged with executing the government's national health policy, as established in the Public Health Act, Cap 194. In 2005, with the passage of the British Virgin Islands Health Services Act, the British Virgin Islands Health Services Authority was established. As a result, the role of the Ministry will shift from that of provider of services to that of procurer of services. Following the Ministry's general policy direction, the Health Services' Board answers to the Ministry in regard to the delivery of health services.

In accordance with the 1976 Public Health Act, which provides the statutory framework for protecting and promoting the population's health, government health services are provided free at the point of use to certain groups, including full-time schoolchildren, nursing mothers, the elderly, the mentally ill, the indigent, health workers, firefighters, the police, prisoners, and prison officers. Given the low user fees and a poor fee collection scheme, the health system does not generate revenues, and the Government is forced to heavily subsidize it. In 2006, the Government began to explore the design of a national health insurance scheme to improve the inflow of revenue into the system.

The Government's health priorities, as stated in the 2003–2007 legislative agenda, are: improving health care and social services by insuring access to health services for every citizen on

all islands; reaching out to those at risk; improving access to health care by completing the hospital annex, working towards the completion of the new hospital, installing the hospital board, upgrading clinics, and exploring options for training and attracting more local doctors and nurses; and meeting social challenges by exploring a national mobile pension plan, developing a national health insurance plan, and strengthening unemployment benefits.

The legislative framework for environmental management was revised in 2001–2005. The 2000 Derelict Vehicle Ordinance regulates and authorizes the removal of derelict vehicles from roads or public places and sets a schedule of fines for handling the vehicles; the Merchant Shipping Act (2001) was established to control oil pollution; the Slaughterhouses Act (2001) is designed to regulate the establishment and control of Government abattoirs and other slaughterhouses; the 2001 draft Labor Code is designed to allow labor inspectors to act in cases where safety and health are threatened.

The territory's regulatory framework on food safety needs strengthening to include provisions for setting standards, monitoring, and incorporating up-to-date criteria to promote food safety.

Organization of the Health System

The Ministry of Health and Social Development is responsible for providing health and social services, as well as for monitoring and regulating health providers. The Permanent Secretary is responsible for the Ministry's administration and also provides support to the Minister in his policy role. The Director of Health Services is the chief technical adviser on health matters.

The territory has a dynamic and expanding private health sector, encompassing both inpatient and ambulatory care. Private health care facilities include Bougainvillea Clinic, specializing in plastic surgery; four private dental surgeries; seven private medical clinics; and nine private physician offices. It is estimated that about 50% of local medical consultations are in the private sector. Many residents seek care off-island, mainly in the United States Virgin Islands or Puerto Rico, either by choice or because they require specialized care unavailable locally. British Virgin Islands residents also have access to specialist care in the United Kingdom, which is arranged through the International Division of the United Kingdom's Department of Health.

Public Health Services

Public sector primary care services are offered at the British Virgin Islands' 10 health clinics and 2 health posts: Road Town Health Center and seven other clinics on Tortola, two on Virgin Gorda, and one each on Jost Van Dyke and Anegada. The Road Town Health Center serves as a referral point for the district clinics. The clinic in The Valley, on Virgin Gorda, is staffed by two

physicians; the clinic at North Sound is staffed by a resident nurse supported by The Valley clinic physicians. The clinic on Jost Van Dyke is staffed by a nurse practitioner, and the clinic on Anegada, by a public health nurse; both clinics are visited regularly by a physician. The clinics on Tortola and Virgin Gorda are adequately staffed and function well; the others are understaffed.

Catchment populations fluctuate, depending on the arrival of tourists and temporary residents such as yacht dwellers, who may seek care through the public health services.

District clinics provide a full range of child health services, including growth and nutritional monitoring, development assessment, treatment of common illnesses, counseling, school health, and screening for anemia, including sickle cell anemia. District clinics also offer another range of services, including maternal and child health clinics, special chronic disease clinics, treatment of common illnesses, nutritional counseling, and school health services. A voluntary screening program for prostate cancer began in 2000 and continues to operate. A Community Health Pharmacy Program was established in 2002—a community health pharmacist is stationed at Road Town Clinic and also provides services to Virgin Gorda and to East End and West End on Tortola.

The Environmental Health Division of the Ministry of Health is responsible for food hygiene; vector control; water quality surveillance; hygiene in institutions; and investigation of complaints such as septic tank problems, rodent infestations, and abandoned vehicles.

The two main instruments that deal with sewage disposal in the territory are the Public Health Ordinance and the Public Health Regulation (Nuisances). Both need to be amended to be able to regulate the use of holding tanks in yachts and the discharge of sewage effluents from ships and yachts. The Water and Sewerage Department is responsible for providing public sewerage services in the British Virgin Islands. A sewerage system currently serves Road Town, with waste being collected and pumped through an outfall located on Tortola. Cane Garden Bay, on Tortola's western end, is also served by two sewerage systems that include a secondary treatment plant. In addition, some hotels have sewage treatment plants that produce water for garden irrigation. Most of the rest of the territory relies on individual septic tanks and soak-away systems. Poor soil percolation has led to sewage disposal problems in the East End/Long Look community on Tortola; a sewage collection and treatment system is being implemented in that area.

The Environmental Health Division administers a water quality surveillance and institutional hygiene program designed to protect residents and tourists from water-borne disease outbreaks and ensure that public institutions adhere to a basic standard of sanitation. The inspection of schools and water supply systems is a major component of the program. In 2003, 105 samples were taken and analyzed; 25 of them were contaminated and subsequently treated with chlorine.

The vector control program targets mosquito-borne diseases in the British Virgin Islands. The outputs outlined were improved quality of work and reduction of the house index from current levels. The goal to reduce the incidence of mosquito-borne diseases was achieved. Other activities included conducting training sessions for workers, providing workers with protective equipment, and fogging areas with a house index of 2% and above.

The food safety program of the Environmental Health Division conducts regular inspections of food production and distribution outlets. Clinics for food handlers were conducted at Road Town, Virgin Gorda, Jost Van Dyke, and Anegada, which included lectures on the use of “ServSafe” materials and the hazard analysis and critical control point (HAACP) approach. Some of the sessions were held at the larger food establishments.

The Community Nutrition Unit and the Hospital Dietary Unit together provide nutrition and dietetic services. At the community level, the nutrition program is run by a nutritionist based at the Road Town Public Health Clinic and who also provides scheduled services to the clinics at Anegada, Capoon’s Bay, East End, Jost Van Dyke, Long Look, and Virgin Gorda. Services include nutrition consultations for persons requiring both normal and therapeutic diet therapy, nutrition surveillance, and nutrition screening among vulnerable groups (e.g., 0–5-year-olds and senior citizens) to aid in program planning and for research. The Unit also is involved in the development and implementation of nutrition education programs to promote healthy lifestyles and nutrition projects to help to assist in the fight to reduce the incidence of noncommunicable chronic diseases.

The Community Nutrition Unit works with public health nurses; school health, health promotion, environmental health, and mental health units; and with the Social Development and Education Department. The Caribbean Food and Nutrition Institute, headquartered in Jamaica, provides invaluable technical cooperation to complement the national nutrition programs.

The Department of Disaster Management’s mission is to reduce loss of life and property due to disasters by ensuring that adequate preparedness and mitigation measures are in place and that response and recovery mechanisms are established to offset the impact of natural and technological hazards. A health disaster coordinator post was established in the Ministry of Health and Social Development in 2003 to coordinate health disaster mitigation efforts. The Department operates under the 2003 Disaster Management Act.

Individual Care Services

The British Virgin Islands has one 44-bed public hospital—Peebles Hospital—and one 8-bed private hospital—Bougainvillea Clinic, both located in Road Town. Peebles Hospital offers inpatient specialist services in obstetrics and gynecology, internal medicine, pediatrics, general surgery, ophthalmology, and psy-

chiatry. Eleven medical specialists and nine general practitioners are employed at the hospital. Bougainvillea Clinic offers mainly general medical, primary care, and surgical services.

Peebles Hospital’s physical plant is currently undergoing major development. Construction of a 120-bed hospital is scheduled to commence late in 2006. An annex building housing a refurbished accident and emergency department, imaging services, medical diagnostic laboratories, the dialysis unit, and office space was completed in 2006. This annex serves as a transitional facility to relieve cramped services in the current hospital.

In 2001–2005 there were 10,746 admissions at Peebles Hospital, and the average length of stay for all wards was 5.8 days; the bed occupancy rate averaged 52.2%. Hospital admissions in the period ranged from 2,200 in 2001 to 2,131 in 2005 at Peebles Hospital. Bed occupancy rates increased steadily from 61% in 2001 to 63% in 2004. In 2005 occupancy rates were 72%. Total inpatient days also steadily rose, increasing from 9,865 in 2001 to 11,540 in 2005.

There were 23 medical emergency evacuations from the island in 2005, compared with 26 in 2004, with conditions ranging from childbirth to road traffic accidents. Cases that could be dealt with by the nurse were triaged and appropriate care was given at the clinic.

The national blood bank service is located at the Peebles Hospital medical diagnostic laboratory. The laboratory relies on the Caribbean Regional Standards for blood banking.

There were 343 blood donations in 2004, compared to 318 in 2003. All blood for transfusion is screened for HIV, hepatitis B, and syphilis. All donations are collected on a voluntary basis and there is no remuneration for any donation.

Programs aimed at improving the management of both communicable and noncommunicable diseases are available through the Community Health Services and Peebles Hospital. Hypertension and diabetes clinics are conducted on Tortola at Road Town, Iris Smith-Penn (East End), and Capoon’s Bay clinics, and on Virgin Gorda at North Sound and Iris O’Neal clinics.

The dialysis unit was upgraded to eight stations in 2005; currently there are 19 persons receiving dialysis. Pathology services and diagnostic radiological services, including x-rays, ultrasound, and mammograms, are also available in the public sector. CAT scans are available in the private sector; patients who require MRIs travel to Puerto Rico or the United States Virgin Islands. Patients requiring tertiary care are referred to Puerto Rico, Jamaica, Barbados, the United States, and the United Kingdom.

The Mental Health Division within the Community Health Services is the lead agency providing mental health services in the British Virgin Islands. The central office is located in Road Town, and it provides outpatient mental health care through its outreach psychiatric services. It receives referrals from a broad cross section of agencies and the general public.

The incorporation of new values and beliefs led to the redefinition of the Mental Health Unit as a coordinated service covering all psychiatric clients, including those with substance abuse

The British Virgin Islands' Migrant Workers

Immigrants seeking work account for more than half of the British Virgin Islands' population; many of them stay on for years, even for decades. The British Virgin Islands relies heavily on this migrant labor force. Non-nationals dominate the ranks of private-sector employment and fill about one-third of Government jobs. They tend to work in less skilled occupations, mostly as employees in hotels, construction, trade, and domestic service. With migrant workers being disproportionately represented among 19–45-year-olds, the health system must address both the problems of the younger migrant population and those of the older British Virgin Islands national population.

problems. The Unit's mission is to provide a comprehensive range of services to assist the people of the British Virgin Islands in achieving their fullest potential and optimal level of mental wellness. The territory's mental health service approach emphasizes treating individuals in their communities, including monitoring and administering medication, providing family counseling, and promoting self-care.

Mental health services are directed by a psychiatrist who also manages the inpatient care of psychiatric patients at Peebles Hospital. The mental health team includes a clinical psychologist, a school psychologist, three mental health officers, and three orderlies.

The mental health team visits the hospital, the prisons, and geriatric homes as required. Mental health officers also travel regularly to outer clinics in Tortola, Virgin Gorda, Jost Van Dyke, and Anegada. Psychiatric patients are admitted to Peebles Hospital Medical Ward. There are only two secured rooms on the medical ward and non-disruptive patients are admitted to the general medical ward.

Health Promotion

In 2003, the Health Education Division was reorganized to become the Health Promotion Unit. It provides leadership and strategic direction for the development, coordination, and integration of health promotion programs aimed at improving the health and quality of life of the people in the British Virgin Islands. The unit delivers programs that focus on promotion of health and wellness, and also emphasizes behavior modification and lifestyle changes, targeting vulnerable groups such as primary and secondary school children and young adults, as well as community groups.

The main objective of the Dental Health Services is to provide optimum lifetime dental health for all British Virgin Islands citizens by providing and maintaining services directed towards limiting and preventing the occurrence, progression, and recurrence of dental disease. Preventive strategies include a school-based program to administer fluoride rinse to children aged 3 to 13 years on a weekly basis. Schoolteachers conduct the program,

and a Dental Division dental hygienist provides periodic monitoring. In 2004, a program was started to provide each kindergarten and primary-school child with a toothbrush each school term; the program was terminated due to lack of funding. Fluoride toothpaste is also made available in the schools. Schoolchildren are regularly checked during the dental hygienist's regular visits to the roughly 20 public and primary schools for dental caries and other dental-oral abnormalities and referred when necessary for treatment. The dental hygienist instructs the children on oral hygiene, home care, diet, nutrition, and brushing techniques, sound dental health, and the development, progression, and prevention of dental caries.

Human Resources

There were 45 physicians practicing in the British Virgin Islands as of December 2005. Of these, 29 work in the public sector and the remainder in the private sector. As of the end of 2005, there were six registered dentists in practice, two in the public sector and four in the private sector. Medical and dental practitioners are registered by the British Virgin Islands Medical and Dental Council.

There are 121 registered nurses employed in the public sector; 24 of them work in Community Health Services and 97 at Peebles Hospital. There is no nursing school in the territory, so nurses are principally trained in other Caribbean islands, the United States Virgin Islands, or the mainland U.S. Nurse recruitment is primarily from other Caribbean countries. In 2004, the Government launched the Health Scholarship Program to recruit young people into the health professions. Under this initiative, special scholarships were offered in medicine, nursing, pharmacy, radiography, and medical technology.

Health Supplies

There is no local production of drugs, vaccines, or medical equipment. The Peebles Hospital Pharmacy is the central purchasing agency for the public health services. Drugs are purchased through the Organization of Eastern Caribbean States

Pharmaceutical Procurement Service Unit. Some drugs that are not included in the Unit's formulary are purchased directly from private suppliers. The Unit's formulary is revised every two years. Narcotics are not available at district clinics. Private sector practitioners make their own arrangements to purchase drugs. A certificate from the Director of Health Services is required to import narcotics into the territory; all other drugs used in the private sector are purchased independently and are not regulated by the Government. The Peebles Hospital Pharmacy supplies pharmaceuticals to the district health centers (primary care units). There are privately owned pharmacies in Tortola and Virgin Gorda. The Medical Act (2000) requires that a registered pharmacist be present at both private and public pharmacies. Standardized treatment protocols for conditions such as asthma, eclampsia, hypertension, and gastroenteritis are available.

Vaccines are purchased through the Pan American Health Organization (PAHO) Revolving Fund. When urgently needed, some vaccines are purchased through a vendor in Barbados. Some vaccines are provided at no cost to private sector practitioners as a way to boost vaccination coverage. A limited number of vaccines are ordered directly by the private sector.

Most of the equipment, including laboratory, x-ray, ultrasound, and dialysis, is located at the public hospital. CT scan and mammography are available in the private sector; there also are three private medical diagnostic laboratories in the private sector. Maintenance employees at Peebles Hospital have received biomedical technology training from the suppliers; service contracts also are maintained with some suppliers.

Health Sector Expenditure and Financing

Public health care currently is financed mainly through the Government's annual budget allocations to the health services, by out of pocket payments, and by insurance reimbursements. The Government is actively investigating the development of a National Health Insurance scheme to increase access and share risk. Private health care is financed by out of pocket payments and private insurance. There is a growing sector of the population that accesses care overseas. This is generally funded by private insurance, out of pocket payments, and Government assistance to those requiring overseas tertiary care. User fees generally raise only 8% of the hospital and primary-care operating costs. In 1997, expenditures on public health services (hospital and primary health services only) were US\$ 7.14 million, with hospital services accounting for 65.5%. By 2004, the total figure had increased to US\$ 16.89 million, with hospital services accounting for 69%. Total private health expenditure, including out of pocket insurance payments, was estimated to be US\$ 10.5 million.

The budget for hospital and primary care services represented 7.8% of the national budget and has ranged from 6.6% to 7.5% between 1999 and 2004. The budget for solid waste management

rose from US\$ 2.38 million in 1997 to US\$ 3.42 million in 2003. Total health expenditure as a percentage of GDP stood at 2.4% in 1999 and rose to 3.1% in 2004. Total per capita spending on health is estimated at US\$ 1,050 in 2004, up from US\$ 760 in 1999.

Capital investments in health between 2004 and 2005 have included the construction of Peebles Hospital Annex, helipads for emergency medical evacuation, and a new municipal incinerator on Tortola. A compulsory social security scheme covered all paid employees, with employees and employers contributing equally to the premiums; some persons are covered 100% by the government. Self-employed workers are also required to participate in the plan. The social security benefits include maternity, occupational injury, unemployment, old-age pension, sickness, and survivor's benefits, as well as a funeral grant.

Technical Cooperation and External Financing

The Ministry of Health and Social Development currently benefits from technical assistance provided by several regional and international health institutions, including the Pan American Health Organization (PAHO), which provides access to World Health Organization technical resources and manages the revolving fund for purchasing vaccines for the Expanded Program on Immunization. The Caribbean Epidemiology Center (CAREC) provides support in epidemiology and medical laboratory. The Caribbean Health Research Council (CHRC) promotes research on diseases and health issues important to the territory by developing national capacity to conduct essential national health system and services research. The Caribbean Environmental Health Institute (CEHI) provides technical assistance in the field of environmental health. The British Virgin Islands' Medical and Dental Council participates in meetings of the Caribbean Association of Medical Councils (CAMC). CAMC was established by CARICOM to help ensure the quality of doctors practicing in the Caribbean after the University of the West Indies medical schools stopped being accredited by the United Kingdom's General Medical Council. The Caribbean Regional Drug Testing Lab (CRDTL) provides quality testing of pharmaceuticals for the territory. The Organization of Eastern Caribbean States Pharmaceutical Procurement Service (OECS PPS) provides drugs to the territory at considerable cost savings realized by the pool procurement of drugs for nine Eastern Caribbean countries.

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