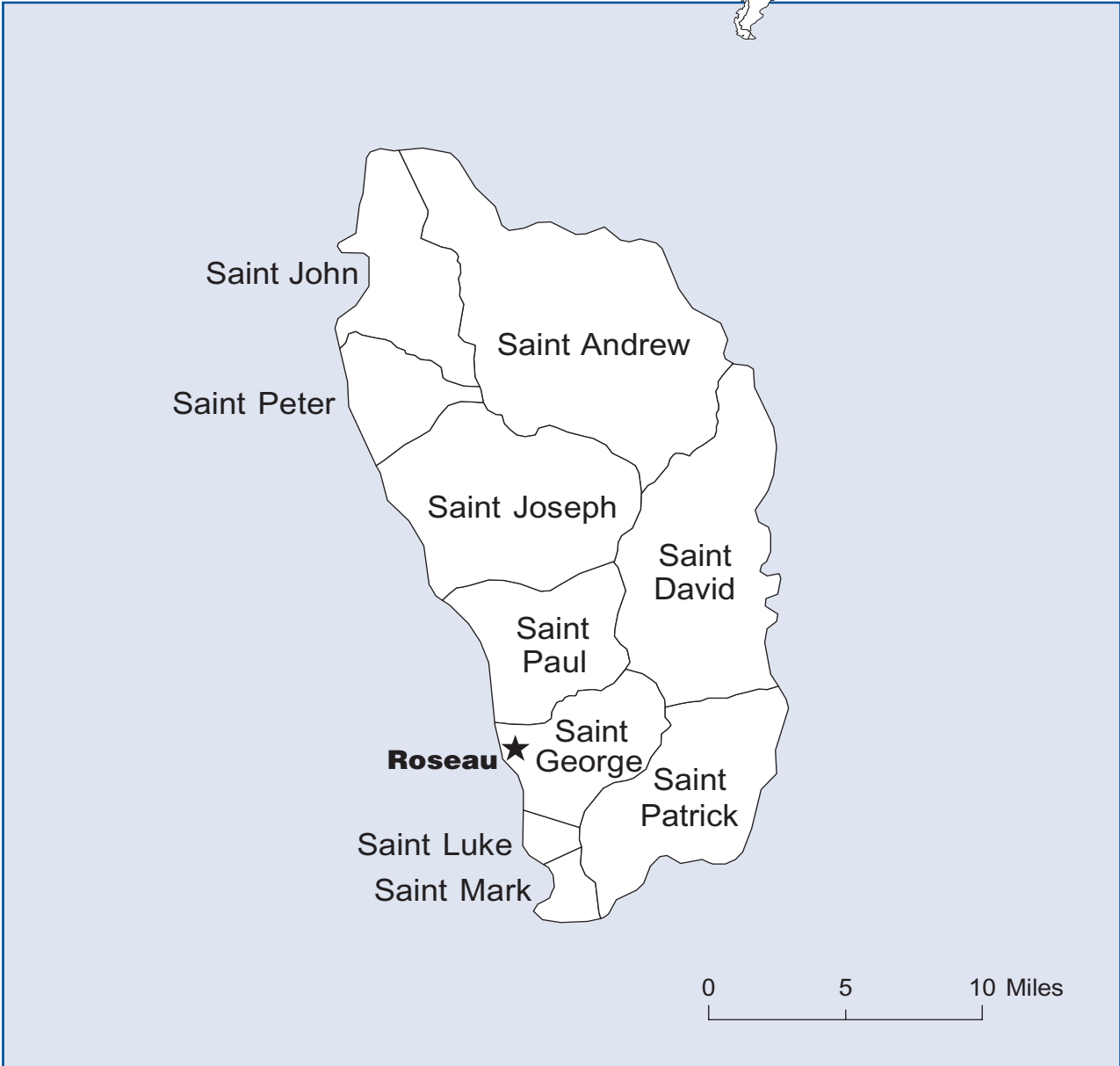


DOMINICA



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 Commonwealth of Dominica is the northernmost and largest (790 km²) of the Eastern Caribbean's Windward Islands. It lies between the French islands of Guadeloupe to the north and Martinique to the south. Dominica's climate is humid, tropical, and marine, characterized by little seasonal variation between wet and dry seasons.

GENERAL CONTEXT AND HEALTH DETERMINANTS

The country's pronounced high rainfall during the wet season contributes to its lush vegetation. The island's topography is rugged: it has steep, luxuriant rain-forest mountains; deep, river-incised valleys; and tree-covered hills that produce and sustain pristine rivers, perennial streams, and tumbling mountain waterfalls. The country has great diversity of flora and fauna. Dominica's relatively undisturbed and rugged landscape, extensive forest, and pristine fresh- and seawater ecology have made the country a much-sought tourist destination for nature lovers and environmental adventure seekers. Visitors mainly come from elsewhere in the Caribbean, the United States of America, and Europe. Arrivals increased by 54.2% between 1993 and 2004, reaching 80,087 in 2004. Cruise liners brought 383,614 passengers in 2004.

Dominica attained political independence from England in 1978, retaining a political organization based on the British Parliament, multi-party democracy. The official language is English, but most of the population speaks a patois "kweyol," a blend of African and French linguistic structures.

Dominica is subdivided into ten parishes—Saint Andrew, Saint David, Saint George, Saint John, Saint Joseph, Saint Luke, Saint Mark, Saint Patrick, Saint Paul, and Saint Peter. The capital, Roseau, is located in Saint George.

Social, Political, and Economic Determinants

Dominica's economy has traditionally been based on agriculture. Agriculture—especially banana cultivation—represented 20.0% of the Gross Domestic Product in 1997 and 17.7% in 2003. Recent global and regional events have contributed to a decline in agriculture, particularly in banana cultivation. Dominica pursues a free-market and liberal economy.

During 2004, the economy grew an estimated 3.57%, compared to 0.1% growth in 2003. As a way to address ongoing economic difficulties, the Government strengthened its fiscal policy and generated additional external financial support. Once fiscal efforts took effect, the Government embarked on a more comprehensive reform program to foster growth and move towards debt sustainability, keeping debts from growing further as an essential condition for economic stability.

The Government cut salaries by 5% as a short-term measure designed to reduce employment, which it subsequently intends to follow with a more comprehensive public service reform.

These measures notwithstanding, inflation (as measured by the Annual Consumer Price Index) rose by 2.5% in 2004, compared to 1.4% in 2003. Cost increases were recorded in fuel and electricity (7.5%), housing and utilities (4.7%), educational expenses (3.5%), and food (2.8%).

In 2001–2005, the dominant sector in the country's economy was government services, followed by tourism, construction, manufacturing, and agriculture. Tourism contributed 10%–12% of the Gross Domestic Product (GDP) and more than 30% of foreign exchange earnings—three times the earnings from banana cultivation. Nominal per capita GDP (at factor cost) in 2001 was around US\$ 3,100 (US\$ 2.72 = EC\$ 1). The Government's finances deteriorated sharply in the period, giving rise to a precarious fiscal situation (1).

In 2003, GDP was about US\$ 257.6 million, the same as it was in 1998. Government services; agriculture, fishing, and forestry; wholesale and retail trade; bank and insurance; and transport contributed about 22%, 18%, 13%, 11%, and 8% of GDP in 2003, respectively.

Household poverty in Dominica was 29% in 2002, which means that about 7,000 households were assessed as poor in the country. Approximately 11% of households—about 2,500—were considered indigent. Persons living in these households had average annual per capita expenditures under US\$ 740 and could not meet their basic food needs. Households which adequately met their basic food needs but were unable to meet all their non-food needs (average per capita expenditure at least US\$ 740 but less than US\$ 1,251) were classified as poor and represented 18% of all households, or 4,400 households.

Dominica's poverty is largely income poverty, mainly triggered by the rapid decline in revenue from banana cultivation that affected all sectors of the economy. However, the fact that the poverty head count (39%) is higher than the level of extreme poverty (15%) suggests that the majority of Dominicans can meet their basic needs. The poverty gap, which measures the extent to which the income of poor households falls below the poverty line, is 10.2%. Therefore, 4,300 households, on average, have expenditures below the poverty line (2). The Carib population is one of the

poorest in Dominica, with prevalence rates of poverty and indigence well above the average for the country as a whole.

Dominica's Country Poverty Assessment revealed that one factor that contributed to the level of poverty and loss of well-being, especially among the indigent, is the abandonment of the elderly to fend for themselves, a situation often exacerbated by sickness and disability. While conditions for the indigent are substandard, attitudes among the relatively poor are very optimistic. Many strongly decry the idea that they are poor, which shows a clear lack of correlation between income poverty and well-being for this group.

According to the country's 2002 Social Protection Review—designed to establish the characteristics, scope, and causes of poverty and identify ways to reduce it—the gender gap in the workforce was particularly high among the poor—49% of poor women were unemployed, compared to 33% of poor men. The unemployment rate decreased for both sexes between the 1997 and 1999 Labor Force Survey periods and the 2001 Population and Housing Census. Men's participation in the labor force was higher for all age groups throughout this same period. The participation rate for both sexes decreased over the years, with women's rates decreasing more sharply. The construction and agriculture sectors were largely dominated by males.

In the reporting period, there was serious overcrowding in the prison, and inadequate diets for persons with hypertension and diabetes, potential communicable disease transmission (such as HIV/AIDS and tuberculosis), inadequate human waste disposal, and inadequate bedding also were problems of concern there.

Dominica achieved universal primary and secondary education in 2005, and the country has already attained the Millennium Development Goal target of having equal access to all levels of education for boys and girls.

In 1998–2004, the net primary-school enrollment for boys was higher than for girls (83% and 79%, respectively). In 2002, three tertiary institutions merged into Dominica State College. More women than men took advantage of tertiary-education opportunities, which, over time, has led to a significant growth in the number of women in senior management positions in both the private and public sectors. More men sought vocational training, and more male students were granted Government scholarships.

In 2001, 4.5% of households did not have access to safe drinking water, down from 7.5% in 1991.

In 2004, the Dominica Water and Sewerage Company, Ltd. (DOWASCO), which manages the country's public water supply systems, operated 43 individual water supply systems that provided drinking water to 100% of urban areas and approximately 95% of rural areas; the remaining 5% of the rural population is served either by private systems or by other means such as springs, rivers, or rainwater catchments.

Per capita water consumption in 2004 was estimated at 40 to 60 gallons per person per day. DOWASCO managed approximately 13,285 service connections and 549 standpipes; 78.30% of

the total service connections were metered. Approximately 60% of the population has access to all Solid Waste Management Corporation solid waste storage, collection, and disposal services; the remaining 40% use composting, reuse, burning, and burying. A small percentage of households still practice open dumping. Littering is a major problem island-wide, affecting the lower reaches of rivers and coastal zones.

Before 1980, some 60% of households had access to a solid waste collection system. Coverage increased to about 70% in 1991 and to approximately 84% by 2001. The increased coverage of water and excreta disposal facilities resulted in a decrease in helminthiasis and typhoid among the population.

In 2005, 213 restaurants and 229 food establishments seating fewer than five patrons (snackettes) were registered with the Environmental Health Department—70.9% and 66.4%, respectively, achieved satisfactory (70% and above) test scores on the restaurant inspection form.

Dominica is under constant threat of floods, and hurricanes are common in the late summer months. In 2003, there was a major landslide in the south of the country that claimed the lives of two utility workers working in the area. In late 2004, Dominica was hit by an earthquake measuring 6.0 on the Richter scale that caused US\$ 33 million in damages, particularly in the country's north. Portsmouth Hospital sustained significant damage. Three months later, aftershocks measuring 4.7 and 5.4 on the Richter scale continued to cause stress among residents.

Demographics, Mortality, and Morbidity

According to the 2001 Population Census, the country's population was 69,625. End-of-year population estimates for 2003, however, put the figure at 70,340, comprising mainly African descendents, with a small population (4.0%) of indigenous Kalinago (or Carib) people, the last surviving tribe of the first Caribbean people, and one of the poorest population groups in the country. The 2001 Population and Housing Census recorded a noninstitutional population of 14,539 for the city of Roseau.

In estimates provided by the U.S. Bureau of the Census, the population 0–20 years old made up a smaller percentage of the total population in 2005 (36%) than in 1991 (45%). The biggest difference in the distribution of the total population between 1991 and 2005 was in the age group 20–60 years of age, which accounted for 46% in 1991 and 54% in 2005. In the age group 60 years old and older little difference is seen: 1991, 11%; 2005, 10%. Differences by sex across age groups were small, with the largest being in the group 60 years of age and older in 2005—males, 9% and females, 12%; in 1991 the proportions in this age group were males 10% and females 13%. Over the last decade, the population has shifted toward the middle of the age-sex pyramid, where an increased impact from chronic diseases is expected. (See Figure 1.) Population density decreased slightly by 2.1% from 95 per km² to 93 per km².

Life expectancy at birth in 2005 was 74.7 years (71.7 for males and 77.7 for females). A decade ago, in 1990–1995, life expectancy was estimated at 67.8 years (males, 63.5, and females, 69.8). The total fertility rate remained the same between 1991 and 2001 at 3.0 children per woman. The average childbearing age was 27.2 years in 1991 and 27.8 years in 2001. There were 2 maternal deaths between 2000 and 2003, both due to complications of pregnancy. On average, there were 1,137 live births per year in the same period. The crude birth rate averaged 16.1 per 1,000 persons in the same period. The crude death rate averaged 7.7 per 1,000 population; 2,172 deaths were reported.

In 1991–2001, 8,866 persons emigrated from Dominica, continuing the ongoing decline in the population. The most popular destinations for Dominicans were other Caribbean countries and the United States. Outmigration surges in Dominica following hurricanes, as skilled workers lose their jobs and seek better employment conditions elsewhere. On the other hand, outmigration in 2003–2005 slowed, with only 23 persons moving to other countries in 2003. Reduced population outflow and an increase in the birth rate continued to stimulate population growth (3).

In 2003, the ten leading causes of death (and the number of deaths) were malignant neoplasms (123), hypertensive diseases (86), heart diseases (71), diabetes mellitus (31), cerebrovascular diseases (26), diseases of the respiratory system other than acute respiratory disease (20), acute respiratory infection (16), conditions originating in the perinatal period (14), other diseases of the digestive system (13), and diseases of the nervous system except meningitis (12).

In 2002, there were 39,728 visits to district medical officers or to family nurse practitioners. In general, females made twice as many visits (67.7%) as males (32.3%). The largest discrepancy is found in the age group 30–64 years of age, in which the number of visits by females is threefold that by males.

Most children 0–5 years old (88.8%) had normal nutritional status in 2001; 9.4% of children in this age group were obese. In 1990–2000, 30% of the adult population was overweight (body mass index [BMI] between 25 and 30); 17.9% was obese (BMI over 30). The main causes of morbidity and mortality were influenced by such lifestyle practices as inadequate physical activity, poor diet, and poor management of life events, including driving practices. The toll from motor vehicle accidents and violence and injuries increased in Dominica.

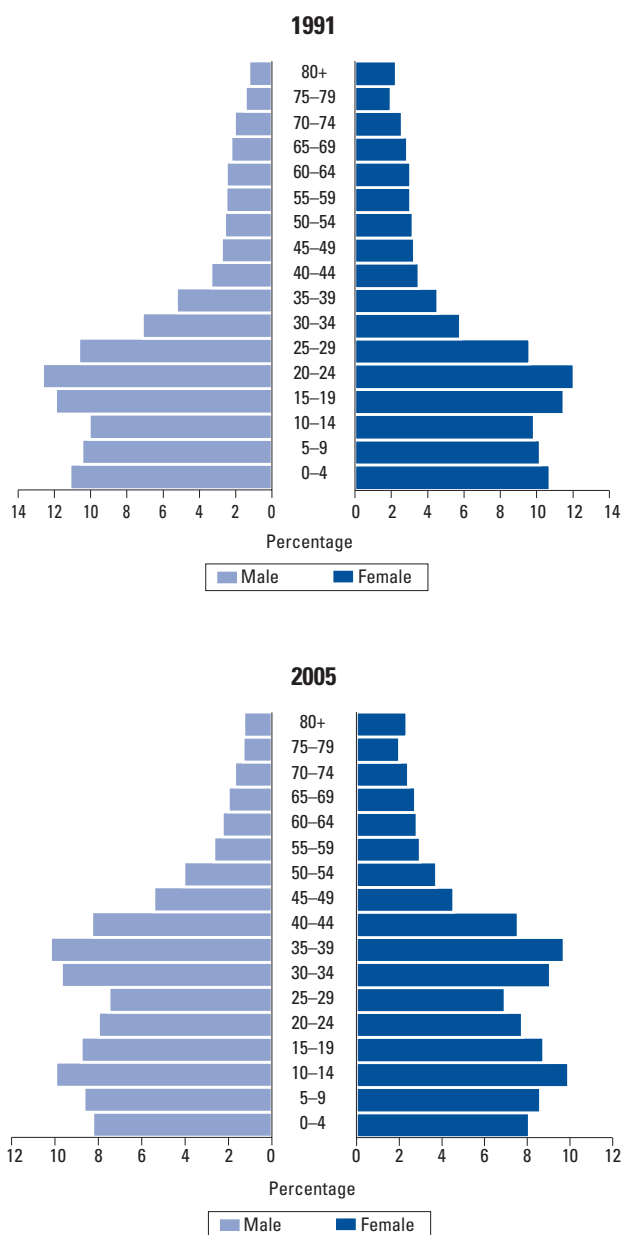
HEALTH OF POPULATION GROUPS

Children under 5 Years Old

According to the 2001 census, children 0–4 years old represented 8.9% of the population—4.5% male and 4.4% female.

During 2001–2005, 7,010 births were recorded. The crude birth rate in 2001 was 17.2 per 1,000 population; in 2004 it was 15.1 per 1,000. The infant mortality rate in 2001 was 19.8 per

FIGURE 1. Population structure, by age and sex, Dominica, 1991 and 2005.



1,000 live births; in 2003, 18.9; and in 2004, 13.1. The neonatal mortality rate was 14 per 1,000 live births in 2001 and 10.3 per 1,000 in 2004. The perinatal mortality rate ranged from 26.8 per 1,000 births in 2001 to 28.8 per 1,000 in 2004; 70 perinatal deaths were recorded during the period. The major causes of death in this age group were respiratory distress syndrome of the newborn (19) and fetal malnutrition (33). Deaths in children under

1 year old ranged from 21 in 2000 (11 males, 10 females) to 14 in 2004. The death rate among children under 5 years old was 4.3 per 1,000 in 2001 and 2.8 per 1,000 in 2004.

The prevalence of low birthweight was 8.2% in 2002, compared to 9.8% in 2004. Immunization coverage for the EPI diseases is over 99%. A few parents refused vaccination on religious grounds.

The breast-feeding initiation rate is 98.7%, and 33.9% of women breast-feed exclusively up to six months; 74% of babies are being introduced to the family cooking pot at six months.

In 2004, 10% of the population was identified as being obese.

According to the National AIDS Program, there were no infants born to HIV-positive mothers between 2003 and 2004. In 2005, there was a 20% increase in the acceptance of HIV testing by pregnant women, which led to the identification of three HIV-positive infants; they are awaiting final testing to determine their status.

Children 5–9 Years Old

Two deaths were recorded in this age group in 2003. Two children in this age group were orphaned by AIDS during the period.

Adolescents 10–14 and 15–19 Years Old

According to the 2001 census, the age group 10–14 years old represents 10% of the population, 4.9% male and 5% female; the 15–19-year-old age group represented 9.6% of the population, with equal distribution of the sexes.

The birth rate for mothers under 20 years of age remained constant, ranging from 43 per 1,000 in 2001 to 44 per 1,000 in 2005. There are no special adolescent health services within the government health system. Condoms were the only contraceptive method available at government health facilities. The fertility rate for adolescents 15–19 years old was 140 births per 1,000 adolescent girls in 2001.

There were 37 deaths in this age group during 2000–2004, with the highest number (11) occurring in 2002. The main causes of death were motor vehicle accidents (6), malignant neoplasms (unspecified) (6), diseases of the circulatory system (6), assault homicides (3), suicide (1), and maternal deaths (1). Data collected from the Global Youth Tobacco Survey (GYTS) in 2004 revealed that 34.4% of secondary- and primary-school students smoked (39.4% of boys and 26.4% of girls).

In 2000, the percentage of students who had ever smoked was 33%–41%; in 2004 it was 25%–38%. According to the data, about 27% of the students surveyed in 2000 and 2004 had started smoking before age 10 years. Current tobacco use and age at initiation remained constant for both survey years. Data for 2004 revealed that there was a 20% susceptibility to smoke among female respondents.

Almost 60% of the students were exposed to tobacco smoke in public places, and there was an increase in the number of students who indicated that one or more of their parents smoked.

Adults 20–59 Years Old

In 2003, there were 32,518 persons 20–59 years old, representing 47.6% of the total population—the highest percentage of any age group: 16,018 females and 16,500 males. That same year, females in this age group comprised 22.8% of the total population, while males accounted for 24.9%.

The total fertility rate in 2001 was 2.5 children per woman and the mean age at childbearing was 27.8 years.

According to the 2004 report of the Dominica Planned Parenthood, the most commonly dispensed contraceptives were condoms, oral contraceptives, and injectible contraceptives. Pap smear screening at this facility declined from 605 clients in 2000 to 363 in 2004.

The sharp decline in the use of spermicides, which do not protect against acquiring HIV/AIDS, might be related to an increased awareness about how to prevent HIV/AIDS.

New acceptors of contraceptives increased 7%, rising from 244 in 2003 to 261 in 2004, and the number of visits for contraceptives increased from 4,248 in 2003 to 4,566 in 2004, an increase of 7.5%.

Prenatal care is available to all prenatal clients. Most births were attended by trained health professionals at health institutions. All prenatal care clients also are offered HIV testing: between 2003 and 2005, there was a 20% increase of persons accepting testing.

The leading causes of death in this group include malignant neoplasms (22%), hypertensive disease (15.4%), and heart disease (12.7%), followed by diabetes mellitus and cerebrovascular disease. According to the 2003 Chief Medical Officer's report, there were 12 AIDS-related deaths (10 males and 2 females), representing 2.1% of all deaths.

During 2000–2003, there were 397 deaths in this age group, 250 males and 147 females.

Older Adults 60 Years Old and Older

At the end of 2003 there were 9,610 persons (4,183 males, 5,427 females) in this age group; 1.2% of the total population was over 85 years of age.

There were 1,574 deaths in this age group in 2000–2003, 746 males and 828 females. Research conducted in 2002 by the Dominica Council on Aging revealed that the main social problems facing older people are financial instability, lack of social support, loneliness among those who do not have extended families, and lack of community activities involving older persons. The main health problems experienced were hypertension, arthritis, eye problems, and diabetes. Women were more aware of their problems and seemed to have greater interaction with the health sector. Both males and females used prescription medications as well as home-prepared traditional medicines.

Family Health

Between 1991 and 2001 (the last two census years) the number of households increased by 10.9%. The Social Protection Review recorded that 34.0% of poor households were headed by single females; 45% of poor people lived in households headed by females.

According to the 2001 Population and Housing Census, female-headed households accounted for 36.9% of households. The average number of persons per household was 3.1, with 3.3% of households comprising more than eight persons. This includes 311, or 42.5%, households headed by women and 421 households headed by men. A higher number of women than men had lost spouses (3:1). This group of women continued to provide for themselves or depended on family, public support, or remittances, particularly those who had no pension earnings. More than three-quarters of heads of households only had primary-level education, although education levels in the country have improved for the population as a whole.

Teenage pregnancy levels were of great concern throughout the reporting period; rates were high despite the availability of free contraceptives at clinics. Drug use and alcohol consumption, especially among young males, also is a cause of concern.

The Disabled

Data for 2002–2005 show that a higher proportion of poor households had someone with a serious disability. Without social or family support, old age was clearly linked to ill health, disability, and poverty. The 2001 Population and Housing Census analyzed the percentage of the population with various disabilities: sight disabilities, 773 persons (1.1% of the total population); hearing disabilities, 320 persons (0.5%); speech disabilities, 475 persons (0.7%); mobility impairments, 1,131 persons (1.6%); mental retardation, 556 persons (0.8%); and all other disabilities, 1,046 persons (1.5%).

Indigenous Peoples

The Carib population is young, with 70% being under 30 years old and 40% being younger than 19 years old. Carib economic activity centers around mixed subsistence farming, craft production, and boat building. Caribs live in a demarcated area called the Carib Territory on the country's northeast. The prevalence of poverty among the Carib population was 70% in 2002 with almost half being indigent. The Caribs represent about 2,800 (4%) of the total population and 7% of the poor population (4).

In 2001, only 2.3% of the Carib population had water supplied by in-house connections, 4.6% had flushing toilets, 56.3% had electricity, and 63.0% used wood for cooking. These data reflect important disparities in living conditions between the Carib population and the rest of the population.

The Government is working to improve the efficiency, effectiveness, and quality of services delivered to the Carib popula-

tion. Plans include making an ambulance service available throughout the Carib Territory; improving the physical infrastructure of health facilities; implementing health promotion activities to foster healthy behaviors; and improving mental health through programs to prevent substance abuse including abuse of alcohol. The Carib Territory is served by two health districts, Castle Bruce and Marigot.

The 2002–2006 National Health Plan acknowledges the specific health needs of the Carib people. In 2001, specific initiatives were launched for the prevention of helminthiasis and tuberculosis in that community.

HEALTH CONDITIONS AND PROBLEMS

COMMUNICABLE DISEASES

Vector-borne Diseases

The vector-borne diseases of significance in the country are **dengue** and **leptospirosis**. The 2004 report of the Chief Medical Officer underscores vector control activities in light of troubling house indices¹ that ranged between 18% and 25%. There were five reported cases of dengue between 2001 and 2004. There have been no indigenous cases of **malaria** since the 1960s; the *Anopheles albimanus* mosquito, however, is endemic in three health districts. There was an increase in the number of persons who migrated to Dominica from countries where malaria is endemic.

Vaccine-preventable Diseases

In 2001–2005, the vaccination coverage of antigens included in Dominica's national immunization schedule (BCG, OPV, DPT, and MMR) varied between 95% and 100%. **Hepatitis B** vaccine is administered to health workers and others considered to be at high-risk for the disease. *Haemophilus influenzae type b* and hepatitis B vaccines are administered to infants only through the private sector. As part of the program to eliminate **rubella**, in 2000, 21,172 (94.1%) persons between 12 and 35 years old received the MMR vaccine, and 99.2% of children 1–5 years old received their second dose of MMR vaccine. Vaccination coverage of administered antigens in 2005 is as follows: BCG, 98%; MMR, 100%; third dose of OPV, 98%; and DPT, 98%.

The last case of **poliomyelitis** was in 1980 and the last case of measles in 1991. In 2000–2001, there were no reported cases of rubella, **congenital rubella syndrome**, **diphtheria**, **pertussis**, **tetanus**, or **neonatal tetanus**.

Dominica's immunization program was comprehensively evaluated and a five-year plan was developed in 2004.

¹Percentage of houses infested with *Aedes aegypti* larvae or pupae.

Intestinal Infectious Diseases

Gastroenteritis was the leading intestinal infectious disease in the country in 2001–2005, with 740 reported cases in children under 5 years old and 712 cases among persons 5 years old and older. There were no deaths from gastroenteritis in the period. Five cases of **typhoid fever** were diagnosed in the period.

Chronic Communicable Diseases

The incidence of **tuberculosis** did not increase in the period, and protocols were developed to facilitate case finding, contact tracing, and treatment regimens.

The influenza incidence rate in 2003 was 605 per 100,000 population, an increase from 2002.

HIV/AIDS and Other Sexually Transmitted Infections

Between 1987 and 2005, there were 305 persons who tested positive for HIV infection. Eight persons tested positive for HIV in 2003, although this figure should be interpreted carefully because voluntary HIV testing was not widespread in the country. Men 25–44 years old were the most affected by HIV/AIDS. Since 1987, 120 persons have died from AIDS-related diseases. In 2005, 34 patients attended the infectious disease clinic: 23 males and 11 females. Among 37 patients who undertook CD4 tests, 24 started antiretroviral treatment. Men having sex with men were the leading mode of transmission of the disease.

The number and percentage of positive VDRL blood samples increased each year from 1998 to 2001.

Zoonoses

There was one confirmed case of **leptospirosis** in 2005.

NONCOMMUNICABLE DISEASES

Metabolic and Nutritional Diseases

Diabetes was a major public health problem, taking a heavy toll on morbidity and mortality. In 2002 diabetes accounted for 5,253 clinic visits at district health centers, 13.2% of total clinic visits. In 2004, there were 12,623 clinic visits for diabetes. In 2002–2003, anti-diabetic drugs accounted for 14.4% of the total drug budget. Among males, 50% of visits for diabetes were in the age group 65 years old and older; for females, 50% of visits occur in the age group 60 years old and older.

Cardiovascular Diseases

Cardiovascular diseases accounted for 474 deaths in 2000–2004. The male-female breakdown was 234 cases (49%) in males and 240 cases (51%) in females. Gender differences were greater in cerebrovascular diseases, where females accounted for 61% of total deaths. In 2004, 27,676 clinic visits were made for **hypertension**.

Malignant Neoplasms

Between 2000 and 2004, there were 583 deaths due to malignant neoplasms, for an annual average of 117 deaths. Males represented 60.9% of all deaths from malignant neoplasms. The sites most frequently reported were stomach, 75 (13%, 36 males and 39 females); prostate, 163 (28%); breast, 39 (7%); digestive system, 46 males and 45 females (16%); and cervix, 70 (12%). Persons 70 years old and older accounted for 46% of all deaths due to malignant neoplasms; 267 persons (172 males and 95 females) in that age group died from this cause. The number of deaths due to prostate cancer increased from 29 in 2000 to 41 in 2004.

OTHER HEALTH PROBLEMS OR ISSUES

Mental Health

The stigma and discrimination associated with mental illness remained a major concern. There were 318 admissions for mental illness in 2003. Inpatient psychiatric treatment is available in the capital, at the Princess Margaret Hospital.

Dominica's 2002 Action Plan for Health Care contemplates the establishment of a national health program designed to reduce the incidence of mental health disorders.

Oral Health

Oral health services are offered through a network of public and private health care facilities. The Government operates seven public health dental clinics that offer preventive, curative, and restorative dentistry.

RESPONSE OF THE HEALTH SECTOR

Health Policies and Plans

The Government's mission is to promote the well-being of all citizens of Dominica by providing preventive, curative, health promotion, and rehabilitation services that adhere to acceptable standards and that are affordable and sustainable.

The 2002 Strategic Plan continued to provide the framework for health. The Plan seeks to engage multisectoral collaboration and participation, strengthen partnerships between the public and private sector, and involve individuals and civil society. The Plan is flexible to accommodate adjustments in accordance with emerging challenges.

In 2002, the Hospital and Health Care Facility Act Number 21 was revised. A draft medical act was finalized and presented to the Minister of Health in 2003, but still awaited enactment by the end of 2005. A food safety act was drafted and national consultation held in 2005. Other draft regulations submitted for enactment covered construction; disposal of offensive matter; air, soil, and water pollution; and health standards for hairdressers.

In 2004, the Cabinet approved Dominica's participation in the WHO Framework Convention on Tobacco Control, and in June of that year, the country became a signatory and party to the Convention.

Health Strategies and Programs

The Government provides a social safety net through public assistance and social security programs, as well as through broader efforts to ensure that the poor have access to basic education and health care. The Government also is committed to introducing a national health insurance program.

The 2002 Action Plan for Health Care in Dominica targeted several objectives: for women's health, to reduce morbidity, disability, and mortality among women 25–59 years old; for reproductive health, to promote responsible sexual behavior and parenting skills among adults; for men, to reduce morbidity and mortality among young adult and elderly males; for the elderly, to implement programs enhancing their well-being; for persons with disabilities, to provide better access to health and public services; for marginalized persons, to harness resources for healthy living by fostering community involvement; for the Caribbean population, to improve efficiency and quality of services; and for oral health, to ensure improved oral health status in specific target groups. In terms of mental health, the objective is to establish a national health program to reduce the incidence of mental health disorders in relation to the demand and supply of drugs. In food and nutrition, the objective is to improve the nutritional status of pregnant and lactating mothers and infants. In the control of communicable diseases, the goal is to reduce morbidity and mortality.

Organization of the Health System

Health care delivery in Dominica is channeled into primary health care and social health care.

For delivering primary health care, Dominica is divided into seven districts, which, in turn, are grouped into two administrative regions, as follows: Region I includes Roseau, St. Joseph, and Grand Bay health districts, and Region II includes Portsmouth, Marigot, Castle Bruce, and La Plaine health districts. Each district has four to seven Type I health clinics and one Type III health center. Type I health clinics serve between 600 and 1,000 persons living within 5 mi of the clinic (there are 44 Type I clinics in the country as a whole). Type III health centers serve as the district's administrative headquarters. The clinics are the first point of contact with the health services and serve to minimize demand pressures on the health center and the secondary care hospital. Two district hospitals also are part of the primary health care system—Marigot and Portsmouth hospitals—which offer limited inpatient services. Primary care services are fully decentral-

ized and are provided free of charge. The direct managerial responsibility for the delivery of primary health care services lies with the Director of Primary Health Care and the Senior Community Health Nurses. The management of the district is supported by a multidisciplinary health team of professionals.

Secondary care services are provided at the 225-bed Princess Margaret Hospital. Secondary care is not decentralized; a payment schedule has been established for medical care at the hospital, indicating fees for specialist medical officers' visits, technical procedures, and hospitalization. There is a well-organized referral system in place: cases that cannot be managed at the primary level are referred to Princess Margaret Hospital.

Private health care services are limited to outpatient care provided by individual practitioners, who usually work on a part-time basis. The great majority of private practitioners work in the capital.

As of this writing, Dominica has no national health insurance scheme, although there are several procedures to assist patients who cannot afford medical care costs. The Social Welfare Division has a yearly budget of about EC\$ 1 million to operate a program that provides a living allowance to those registered and to cover the cost of CT scans for those who qualify. A special allowance is given to severely handicapped children. Some mechanisms are in place at the Ministry of Health and Social Security and at Princess Margaret Hospital to, within some limits, assist financially or reduce/waive bills in order to facilitate access to medical services by the less fortunate. Dominica Social Security ensures short-term and long-term benefits for those who are employed in terms of pensions, sick leave benefits, and maternity grants.

Public Health Services

The Health Information Unit, led by the National Epidemiologist, is responsible for the surveillance of the country's health issues, especially communicable diseases. In 2001–2005 the Unit strengthened the surveillance of diseases of public health interest. Significant in this regard is the establishment of the National Public Health Surveillance and Response Team, which is a multi-sectoral, multidisciplinary committee that meets and reviews surveillance data on a weekly basis and initiates coordinated responses to perceived health threats. With technical assistance from the Caribbean Epidemiology Center (CAREC), the Canadian Society for International Health (CSIH), the United States Peace Corps, and the Japanese Overseas Cooperation Volunteers, the Unit upgraded surveillance systems for communicable diseases, including making improvements in computerized systems that have greatly improved analysis and reporting capability.

The Dominica Water and Sewerage Company, Ltd. (DOWASCO), is charged with controlling and managing the country's public water supply systems.

The Ministry of Health's Environmental Health Department ensures the delivery of safe, potable water. In 1990–2000, 924 water samples were submitted for analysis. On average, 85% of the samples analyzed were within standards established by WHO's Guidelines for Drinking Water. The Environmental Health Department also encourages the use of sanitary methods to slaughter animals sold for human consumption. In 2003–2004, 3,624 animal carcasses were inspected, 362 cattle, 554 pigs, 30 goats, and 2,696 poultry. The Department also held food hygiene education programs in all districts to inform registered food handlers on aspects of food sanitation, including personal hygiene, proper food handling techniques, methods of food storage, and the Hazard Analysis Critical Control Point Program (HACCP).

The Solid Waste Management Corporation, created and regulated by the 2000 Solid Waste Management Act, is responsible for storing, collecting, and disposing solid waste in the country. The Corporation's overall objective is to monitor and facilitate the effective implementation of a solid waste program by supervising and coordinating environmental health programs associated with solid waste management at the district and national levels.

In the second semester of 2003, the Solid Waste Management Corporation undertook joint educational activities with the Environmental Health Department and local village councils in Castle Bruce, LaPlaine, Tete Morne, Ma Bouche, Cochrane, Vieille Case, Wesley, and Woodfordhill. Residents were shown improved solid waste management practices and were informed on plans to serve these areas with curbside collection of solid waste. Several communities, especially along Dominica's northeast and east, remain without any established collection system. In areas where curbside collection had been implemented, residents complained of infrequent waste collection by the Solid Waste Management Corporation, which led to litter in the roadsides and, in some cases, the creation of indiscriminate dump sites.

Government laboratories performed both clinical and public health functions. They provided services in microbiology, serology, clinical chemistry, histopathology and cytology, hematology, and blood banking. Basic laboratory services are free of charge for residents who have been referred from the district clinics or from the accident and emergency department. HIV testing requested by a physician within the public sector is free of charge for pregnant women. In 2003, 32,581 persons were referred by both the public and private sector. There were 847 blood donors.

The Office of Disaster Preparedness coordinates disaster management.

Individual Care Services

Type I clinics are staffed by resident staff/midwives or primary health care nurses. Clinics offer a range of services, such as maternal and child health services, including deliveries and immunizations; medical care; cancer screening; diabetic and hypertensive clinics; health education; dental services; home visits; and environmental monitoring.

Type III health centers are staffed by a resident doctor, a family nurse practitioner, an environmental health officer, a pharmacist, community health nurses, registered nurse midwives, a dental therapist, and support staff. Type III health centers offer more complex and comprehensive services than Type I clinics; specialists in psychiatry and ophthalmology also provide services at the centers.

Princess Margaret Hospital, the only referral hospital providing secondary care in the country, provides inpatient, ambulatory, specialist, and diagnostic services, including internal medicine, dialysis, gastroenterology, surgery, ophthalmology, otolaryngology, obstetrics and gynecology, dermatology, psychiatry, pathology, oncology, radiology, anesthesiology, and pediatrics. Tertiary services are provided by visiting consultants or are acquired in neighboring islands; the cost is borne by the patient.

Health Promotion

The Government has adopted a health promotion strategy that is being carried out through various intervention programs.

The Healthy Community Initiative, for one, harnesses resources to foster healthy living by involving the community in a partnership with officers of governmental and nongovernmental departments and agencies, and with citizen volunteer groups. As part of this effort, the health promotion resource center provided training to district officers and community leaders; conducted community assessments and profiles for villages in all districts in preparation for healthy community initiatives; formulated terms of reference for the district coordinating committee to oversee the implementation and evaluation of the Healthy Community Initiative; established a partnership with the Ministry of Tourism to work on healthy tourism initiatives; and received a financial commitment from the Ministry of Tourism to grant Healthy Community Awards in 2005.

Human Resources

The Ministry of Health and Social Security undertook to substantially increase retaining health personnel by 2006. As part of this endeavor, the salary scales for specific occupations or professions, such as nurses, teachers, and computer technicians, were reviewed in 2004. Following the results of the salary survey, a decision was taken to increase by at least 15% the gross earnings of wage-earners and salaried employees that fell below US\$ 110.00 per month. In 1999–2001, 20 mental health nurses were trained; they are the main channel for change within the health system.

Health Supplies

The Government strives to improve public- and private-sector pharmaceutical services. Dominica continued to participate in the Organization of Eastern Caribbean States Pharmaceuticals Procurement Service. Essential medicines are free of charge at district pharmacies but some medicines may not be available, depending on the current stock at the Central Medical Store.

Better Health Care Access for the Kalinago People

Dominica's 3,000 Kalinago (also known as Caribs) live in eight villages scattered in a 3,700-acre area along the country's east coast. The community's economic activity has centered on subsistence farming and boat building. Although Caribs represent only 4% of the total population, they account for 7% of the population living in poverty. Their access to health services has been less than that of the general population. The Government's 2002–2006 National Health Plan acknowledges the health needs of the Carib people, and the Government is working to improve the efficiency and quality of services for this population. In addition, nongovernmental agencies also provide health services to the Kalinago. One of these is The Salybia Mission Project, which is supported by the work of medical students from the School of Medicine of Ross University and is led by a physician who is himself a Carib.

Health Sector Expenditures and Financing

The Government of Dominica's total recurrent expenditure budget for 2005/2006 is EC\$ 226.8 million. The Ministry of Health and Social Security's recurrent expenditure budget is EC\$ 29.8 million, 14% of the total annual budget.

The lion's share of the budget for health goes to salaries and other benefits to nurses, doctors, and administrators. Personal emoluments and allowances accounted for 80% of the total health budget; the remaining 20% is for goods and services. Purchases of medical supplies represent the largest expenditure item under goods and services.

In terms of budgetary allocation by service, Princess Margaret Hospital accounted for more than half of the health recurrent budget (50.49%). Primary health care, which includes the Type I clinics and Type III health centers in the seven health districts, plus two hospitals in the northern part of the country, took up 26.21% of the total health budget.

Princess Margaret Hospital was broken down into seven programs, each with its own allocated budget. Administration accounted for 4%, general maintenance for 3%, medical services for 70%, support services for 8%, safety and security for 1%, the psychiatric unit for 8%, and laboratory services for 7%.

The Ministry's budget also consists of capital budget. The Government of Dominica's total capital expenditure budget for 2005/2006 was US\$ 30 million. The Ministry of Health receives US\$ 3.3 million, or 11% of the total capital budget. From the US\$ 3.3 million allocated to health, US\$ 2.3 million represents grant

funds, US\$ 0.8 million represents a loan, and US\$ 0.1 million is government financing.

Technical Cooperation and External Financing

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