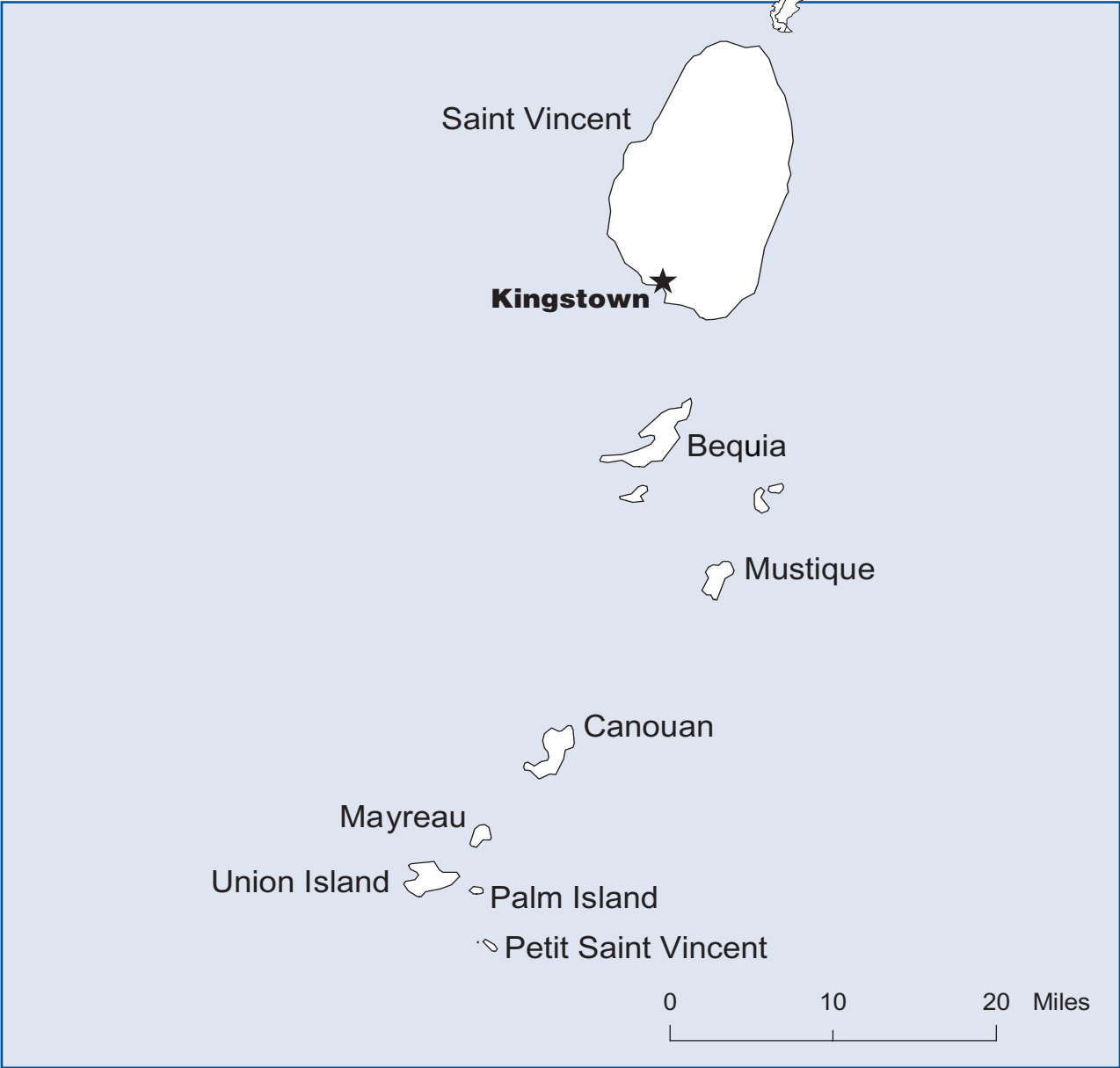


SAINT VINCENT AND THE GRENADINES



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.

Saint Vincent and the Grenadines is a multi-island state in the Lesser Antilles; the country's 32 islands, inlets, and cays cover a 345-km² land area. The volcanic island of Saint Vincent, which accounts for most of the land area, is where 91% of the country's population lives. La Soufriere Volcano last erupted in 1979. The Grenadines includes seven inhabited islands—Bequia, Canouan, Mayreau, Union Island, Mustique, Palm Island, and Petit Saint Vincent. Sea transport links all the islands; airport facilities are available on Saint Vincent and in Bequia, Canouan, Mustique, and Union Island.

GENERAL CONTEXT AND HEALTH DETERMINANTS

The country has a tropical climate, with temperatures averaging between 72° and 80° F and rainfall averaging 80 inches along the coast and 160 in the central range; the rainy season falls between May and November. Saint Vincent and the Grenadines is susceptible to hurricanes, tropical storms, volcanic eruptions, and earthquakes.

Social, Political, and Economic Determinants

Saint Vincent and the Grenadines gained political independence from Great Britain in 1979 and is governed as a Westminster-style parliamentary democracy. The country is politically stable and free and fair elections are held every five years. The official language is English. The leading religious denominations are Anglican (17.8%), Pentecostal (17.6%), and Methodist (10.9%).

Between 2000 and 2004, Saint Vincent and the Grenadines' GDP grew from US\$ 285 million to US \$349 million. GDP growth averaged 5.1% per year in 2000–2004, resulting mainly from resilience in the construction, transportation, banking and insurance, electricity and water, communications, and wholesale and retail sectors. The removal of preferential tariffs and quotas on bananas, the country's main export crop, has led to losses in the agricultural sector. The Government has acknowledged the need to develop the services and tourism sectors to offset those losses. There were 77,631 tourist arrivals in 2002, nearly 7,000 more than in 2001.

In 2000–2004, the government annual budget ranged from US\$ 150 million to US\$ 180 million.

The 1996 Poverty Assessment Report concluded that 37.5% of the population (43,875 persons) was poor¹ and 25.7% (30,069 persons) was classified as indigent poor.²

¹Poverty is defined as insufficient diet and a lack of other goods and services necessary for effective functioning in a society.

²The indigent poor are persons who are not able to meet their basic food needs.

The report also concluded that the country showed high levels of inequality. In 2001, the Government committed itself to address the doubly debilitating conditions of mass poverty and inequality, and established the National Economic and Social Development Council to oversee and guide the poverty reduction strategy. In 2002, the draft Interim Poverty Reduction Strategy Paper, a blueprint for developing policies and programs to address the central elements of poverty reduction in the short, medium, and long terms, was completed.

The overall employment rate³ declined from 80.2% to 78.9% between 1991 and 2001. Unemployment among males increased from 18.4% in 1991 to 22.1% in 2001; among females, it decreased from 32.1% to 18.6% in the same period. The percentage of the population working in agriculture, construction, and wholesale industries declined from 49.1% of the labor force in 1991 to 41.6% in 2001. This drop was mainly due to a 37% decline in employment in agriculture. Fishing and manufacturing industries declined between 1991 and 2001. In 2001, 52% of the labor force was in the age group 15–43 years old as compared with 60% in 1991.

The unemployment rate in 2001 was 21%. The country's size, limited economic diversification, and extreme vulnerability to hurricanes triggered income insecurity and economic volatility at national and household levels. According to a World Bank document, the impact was particularly felt by the poor and the indigent poor, who were unable to tap savings or were not reached by the government's social protection programs in times of hardship.

The literacy rate in 2001–2005 was estimated at 96% overall, with equal levels for males and females. Saint Vincent and the Grenadines' educational system offers primary, secondary, and tertiary education levels. Since 2003, the Government has granted universal access to secondary education for all children. There

³The overall employment rate is the employed population as a percentage of the economically active population.

are 28 primary and 21 secondary public schools in the country, plus 3 private primary schools and 4 private secondary schools. School enrollment was 96% for the age group 5–9 years old and 94% for 10–14-year-olds. Preschool enrollment was only 33% in 2001. Although there were no full-time tertiary institutions on the island, 5.4% of the population has attained tertiary degrees. There were no observable differences in the number of males and females pursuing university education.

The Central Water and Sewerage Authority distributes potable water to about 90% of the country's population. According to the 2001 census, the water supply for 52.2% of households was publicly supplied into the home; for 17%, publicly supplied water was piped into the yard; for 20.8%, water was privately piped into the dwelling; and for 10%, mainly households on the Grenadines, water came from private catchments.

Food safety continued to be an issue of great concern in the country. Between 2001 and 2005, the number of food establishments increased, but there was no system for registering and licensing them. Food handlers' clinics conducted twice per year at district health centers provided education and information on food safety; attendance is voluntary.

In 2001, 52% of the households used a combination "water closet linked to cesspit" and "water closet linked to sewer," an increase compared with the 32% reported in 1991. Concomitant with this increase, the number of households using pit latrines fell from 62% in 1991 to 44% in 2001. Saint Vincent and the Grenadines has two sanitary landfills, one located at Belle Isle on the island's leeward side and the other at Diamond, on the windward side.

All households in Saint Vincent have their garbage collected once a week; households in the Grenadines have collection twice a week.

Squatting continues to be widespread. Persons who settle in squatting areas usually have no access to potable water or sanitary facilities. The areas where they live also are noted for vermin and rodent infestations, as well as the presence of other disease carrying organisms. Overcrowding, which allows for the easy spread of communicable diseases, is a common feature in these settlements.

Demographics, Mortality, and Morbidity

According to the 2001 Population and Housing Census, Saint Vincent and the Grenadines' total population was 106,253. Of the total population, 30.7% was under 15 years old, compared to 37.2% in 1991. This decline has reduced the dependency ratio, which dropped from 0.8 in 1991 to 0.6 in 2001. There were 29,523 persons 15–29 years old, which accounted for 27.8% of the population in 2001, compared to 29.5% in 1991. The broad age group of 30–44 years old, on the other hand, increased from 16.1% to 21.1% in those same years, while the age group 45–64 years old rose from 10.7% to 13.2%. Persons 65 years old and older represented 7.3% of the total population in 2001, compared to 6.5% in

1991. The census also showed that the female-to-male ratio was 1:1.02. (See Figure 1.)

According to the 2001 census, African descendents accounted for 72.8% of the population, mixed ethnicities for 20%, Caribs for 3.6%, and East Indians for 1.4%. Caribs and other indigenous peoples live predominantly along the country's northeast.

In 2001–2004, there were 3,097 deaths, for an average of 774 deaths per year. In 2001, there were 765 deaths. The five leading causes based on defined causes of death were malignant neoplasms (133), diabetes mellitus (103), cerebrovascular accidents (60), ischemic heart diseases (45), and HIV/AIDS (34). Diabetes, ischemic heart disease, cerebrovascular accidents, hypertensive diseases, and malignant neoplasms were the five non-communicable diseases that accounted for around 50% of total deaths annually. In 2003 there were 774 deaths. The five leading causes of death were diabetes mellitus (120), malignant neoplasms (119), heart disease (102), hypertension (101), and cerebrovascular accidents (51); together, these causes accounted for 62.4% of total deaths.

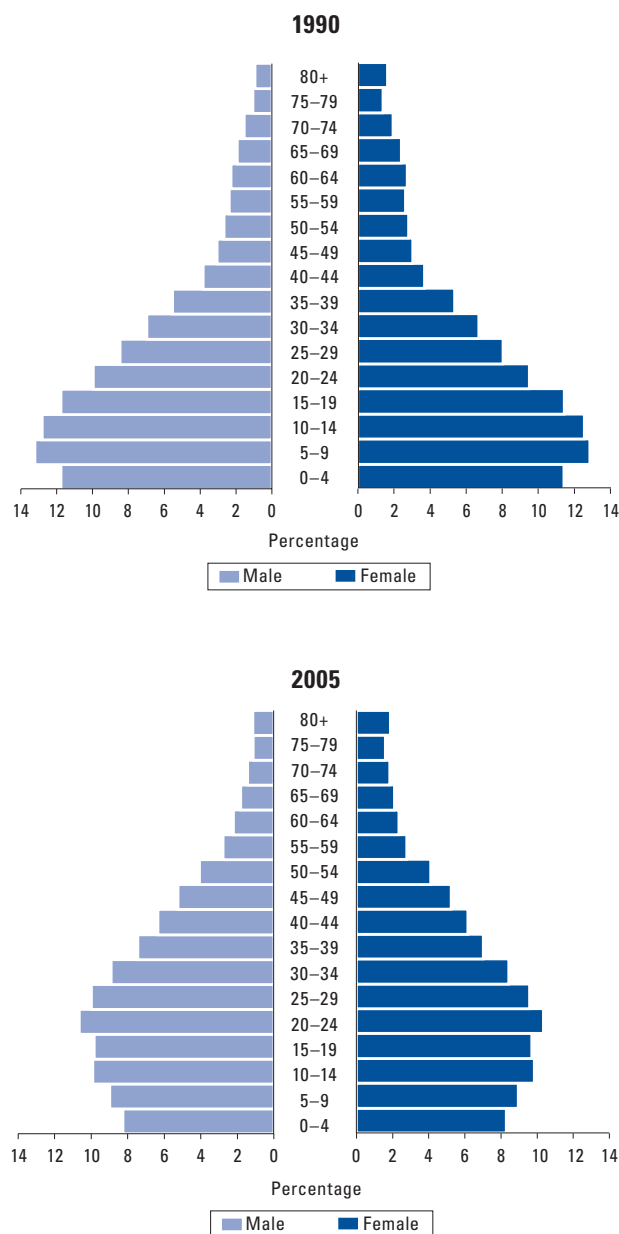
Diabetes accounted for 71 female deaths and 49 male deaths; 55 females and 46 males died of hypertension. Nearly equal numbers of males and females died from ischemic heart disease and cerebrovascular disease; economically and socially deprived women were particularly vulnerable to these two diseases.

The leading cause of death in males was malignant neoplasms; in 2001–2003 malignant neoplasms of the prostate was the fifth leading cause of death among males, with 91 deaths. An analysis of mortality data for 2003 showed that there were 69 deaths from malignant neoplasms among males, compared to 49 deaths among females. The most common site for malignant neoplasm in males was the prostate. Cardiac-related conditions have steadily increased in Saint Vincent and the Grenadines over the years; in 2004, 1,205 cases were reported. Chronic obstructive pulmonary diseases were responsible for 23 deaths in males and 5 deaths in females. In 2003, 40 males died from cirrhosis of the liver, alcoholic cardiomyopathy, alcoholic hepatitis, acute pancreatitis, and gastrointestinal hemorrhage; only 16 females died from these diseases that year.

Data from public health care facilities revealed that injuries from poisoning and other consequences of external causes accounted for 827 visits. Males accounted for 468 (57%) visits and females, for 359 (43%). According to an analysis of clinic visits for noncommunicable diseases in 2003, the age group 15–24 recorded the most visits for soft tissue injuries, with 156 (19%), followed by the 25–34 age group with 149 (18%), and the age group 5–14, with 145 (17%).

Injuries and accidents accounted for 124 deaths in 2001–2003, with homicides accounting for 38.7%, drowning for 24.2%, motor vehicle accidents for 21.8%, and suicides for 16.1%. Between 2001 and 2004, motor vehicle accidents increased from 950 to 1,086. In those same years, 134 males were seriously injured, compared to 56 females. In 2003, external causes ranked among the ten leading causes of death in the country for the first time.

FIGURE 1. Population structure, by age and sex, Saint Vincent and the Grenadines, 1990 and 2005.



According to clinic data, external causes represented 0.6% of the reason for clinic visits in 1998, increasing to 2.2% in 2003. Police reports indicate that 63 homicides and 4,470 criminal assaults were reported in 2001–2004.

The surveillance system reported 2,500 annual visits for asthma to the emergency room at Kingstown General Hospital in 1998 and 1999, with 45% of these visits from children under 10 years of age. In 2001–2005, asthma continued to be a major reason for clinic visits.

Total life expectancy at birth was 71.6 years in 2005. Life expectancy for males decreased from 69.5 years in 1991 to 68.8 years in 2005; life expectancy for females remained constant at 74.4 years in that same period.

The total fertility rate in 1996–2000 was 2.3 children per woman and 2.2 children per woman by 2005. The fertility rate in 2001 was 2.4; it was 2.1 in 2005. The crude birth rate averaged 19.0 per 1,000 population in 2000–2001, while the crude death rate averaged 6.8.

Infant mortality ranged from 18.5 per 1,000 live births to 17.3 between 2001 and 2004. Three maternal deaths were recorded between 2001 and 2004.

HEALTH OF POPULATION GROUPS

Children under 5 Years Old

There were 4,094 live births between 2001 and 2002; 241 infants were low-birthweight babies (<2,500 g). Perinatal mortality in 1998–2002 registered an annual average of 20 deaths per 1,000 live births. The leading causes of death in this age group were extreme prematurity, birth asphyxia, and respiratory distress syndrome of the newborn. According to data from the maternity unit of Milton Cato Memorial Hospital, in 2002, 34.4% of admissions to the special care nursery were as a result of prematurity. Other leading morbidities seen at the nursery included sepsis, jaundice, and respiratory distress syndrome. According to the communicable disease data for 2001 and 2002, acute respiratory infections in the age group under 1 year old accounted for approximately 11% of total reported cases of acute respiratory infections.

Among the 1–4-year-old age group, poisonings were responsible for 47% (37) of reported accidents in 2002; falls were responsible for 32% (25).

A total of 20,324 child health visits were made at the various health centers. Most visits were for growth monitoring (19,606) followed by immunization (10,073); the remainder were for referrals and other health problems. There were 212 (18% of the total) clinic visits for asthma in the age group 1–4 years old. Visits for child health complications accounted for 214 visits, or 1% of total health visits made—problems included malnutrition, respiratory infections, diarrheal diseases, and injuries. In 2003, immunization coverage for BCG, polio, DPT, hepatitis B, and *Haemophilus influenzae* type b was 100%; coverage for MMR was 90.7%. In 2003, there were two reported cases of *Haemophilus influenzae* meningitis in the age group 1–4 years old; both were females.

Children 5–9 Years Old

The age group 5–9 years old accounted for 10.8% of the total population in 2001. Mortality in this age group is generally low. In 2001, there were 8 deaths: 5 males and 3 females. According to data for 2002, there were 6 deaths, 3 males and 3 females. Causes of death for males were unspecified drowning (1) and exposure to

electric current (2). The causes of death in females were malignant neoplasm of the kidney (1) and victims of an avalanche (2).

Health center data showed that in 2002–2004, visual problems, impacted cerumen, dental caries, viral illnesses, and tinea were the most common health problems encountered. Each child is examined upon entering and leaving primary school as a public health requirement.

In 2002, asthma workshops were conducted for 37 primary and secondary schools as well as for preschool teachers.

Adolescents 10–14 and 15–19 Years Old

This age group represented 21.1% of the population in 2001, almost equally distributed among the sexes. In 2001, the Pan American Health Organization conducted a national sample survey on healthy lifestyles among adolescents 10–14 years old and found that 11% of respondents admitted to using inhalants, 85% to using marijuana, 7% to smoking cigarettes, and 3% to using alcohol weekly or daily. Nutritional data from 2002 indicated that 87.8% of youth in this age group met criteria for normal nutrition, 8.6% were obese, and 3.6% were moderately undernourished. The Ministry of Health's National Family Planning Unit reported that of the 8,166 live births in 2000–2003, 1,704 (20%) were to teenage mothers. Disaggregated by age group, the 10–14-year-old cohort accounted for 48 live births, while the 15–19-year-old age group accounted for 1,606 live births. Of the 782 diagnosed cases of HIV in 1984–2004, 48 (61%) were among persons aged 10–19 years old. Ten new cases were diagnosed in 2002, six in 2003, and five in 2004.

In 2000–2002, there were 10 deaths in the age group 10–14 years old. Causes of death included tuberculosis of the lungs, infantile cerebral palsy, secondary malignant neoplasm of the brain, and septicemia.

Adults 20–59 Years Old

This age group accounted for almost 50% of the population in 2001. Of total births (7,166) in 2000–2003, 91% (6,525) were to women 20–44 years old. Twenty-five percent of these women made their first visit to prenatal clinics prior to the 16th week of gestation. Trained personnel at Milton Cato Memorial Hospital delivered 99% of births. According to 2002 maternal and child health data, of the estimated 4,130 pregnancies in 1996–2002, 4.5% (92) had gestational diabetes and 4.2% (85) had hypertension in pregnancy.

In 2002, 9.2% (184) of women had anemia during pregnancy, 5.1% (102) had pre-eclampsia, 16.5% (341) had pregnancy with abortive outcome, 4.1% (85) were Rh-negative, 10.5% (216) gave birth to premature infants, 7.1% (143) had hypertensive disease during pregnancy, and 24.1% (709) gave birth by cesarean section. That same year, there were 141 low-birthweight babies, representing 11.8% of total births. There were 9,023 visits to prena-

tal clinics in 2002, excluding those made to private health care providers. That same year, there were 1,264 new family planning acceptors, 55% of them opting for oral contraceptives and 38% for injectables; six persons chose sterilization and two were fitted with intrauterine devices. In 2004, the number of family planning acceptors increased to 10,888. There is little data on the extent of condom use, but it is estimated that in 2004, the Government spent roughly US\$ 3,875 on free condom distribution. In 2002, 2,926 Pap smears were done; 7.4% showed abnormal results.

Clinic records show that there were 220 obese persons in 2002, with women accounting for 85% (188 cases). Persons 35–45 years old had the most records of obesity (58%), followed by those aged 25–34 years (26%) and those 45–54 (22%). Persons aged 55–64 years old accounted for 3,432 visits for hypertension, and persons 45–54, for 1,927.

Older Adults 60 Years Old and Older

This age group represented approximately 7.2% of the population in 2001. Persons 60 years old and older always have accounted for the greatest number of attendances for hypertension, which in 2003 reached 5,774 (48.7% of all attendances). Arthritis ranked as the fourth leading reason for clinic visits for this group in 2003, accounting for 3,632 visits, or 8.9% of total visits. Arthritis has always predominantly affected persons 65 years old and older: in 2003, this group accounted for 2,199 visits (60.5% of all visits for arthritis), with women accounting for 75% of the group's visits. Cardiac problems were the primary reason for clinic visits among those 65 years and older. The age group 70 years old and older recorded the most skin cancers, accounting for 41% of the total number reported in 2003.

The leading problems facing this population group include chronic diseases, loneliness, and abuse. Saint Vincent and the Grenadines has a need for psychosocial support services for the elderly. Care for the elderly is provided through the public and private health care systems through a Government-operated home and a publicly operated program that provides care and support to the elderly in their homes. There are also four privately operated homes for the elderly. Two recently commissioned centers cater to the elderly's daytime needs and allow for older persons to interact socially with one another. There are 161 available beds for the elderly; 106 of them are in the public system.

The Family

Ninety percent of households were located on mainland Saint Vincent. In 2003, the mean household size was 3.5 persons, compared with 3.9 persons in 1991. In 2001, 85.2% of the households lived in undivided private houses (single dwelling units that comprise the entire building). The number of persons living in "combined business and dwelling" structures increased by 26.3% between 1991 and 2001. There were 30,518 households (one or

more persons living together) in 2001, compared with 27,002 in 1991, an increase of 13.0%; 12,136 households were headed by females, and 39% of them (4,723) were headed by women not in union. During 2001–2004, 35 children lost one or both parents to HIV/AIDS.

Morbidity data for 2003 made special note of spousal abuse—83 males and 49 females were affected. According to an analysis of clinic visits for noncommunicable diseases in Saint Vincent and the Grenadines in 2003, there were 83 clinic visits due to domestic violence recorded in 2003, with males accounting for 49 (59%) and females accounting for 34 (41%).

Workers

Work-related injuries contribute substantially to the country's morbidity profile; some workplaces are unsafe or provide unhealthy working environments. Occupational conditions fall outside the ambit of the Ministry of Health and the Environment, however.

HEALTH CONDITIONS AND PROBLEMS

COMMUNICABLE DISEASES

Vector-borne Diseases

Dengue fever and leptospirosis continued to be endemic in the country. National household and Breteau indices of *Aedes aegypti* breeding were 19.84% and 43.57%, respectively, in 2000; both figures were above internationally accepted levels. The introduction of West Nile virus and the rare Chikungunya virus are of real concern to the country's vector control unit.

Vaccine-preventable Diseases

Saint Vincent and the Grenadines vaccinates against measles, mumps, rubella, diphtheria, pertussis, tetanus, poliomyelitis, tuberculosis, and hepatitis b. In 2003, the pentavalent vaccine was introduced into the immunization program. Although vaccination against *Haemophilus influenzae type B* is not routinely offered in the country, private sector physicians administer it on request. Of the approximately 2,000 to 3,000 annual blood donors, 2% tested positive to hepatitis b in 2001–2003.

Saint Vincent and the Grenadines continued to enjoy a steady supply of vaccines, syringes, and needles, and the country's vaccination coverage has remained between 85% and 100% over the years.

Intestinal Infectious Diseases

There were 1,744 cases of gastroenteritis reported in 2002 and 4,122 in 2003, more than a twofold increase. The disease was listed as the second most common communicable disease in 2004 and 2003, accounting for 11.3% and 12.3% of cases, respectively.

Helminthiasis diagnoses in the primary care setting are usually based on clinical suspicion, rather than laboratory confirma-

tion. Of the 4,281 stool samples screened for 2003 and 2004, there were 144 positive samples: 47 cases of *E. coli*, 30 cases of hookworm, 2 cases of trichuris, 34 cases of strongyloides, 2 cases of ascaris, and 29 cases of giardia. In 2003, there were 60 cases of foodborne illness reported from the accident and emergency department. Fifteen cases of foodborne illness were reported in 2004; 13 were confirmed.

Pathology laboratory surveillance reports for 2004 identified three cases of salmonellosis, two cases of shigellosis, and one case of campylobacteriosis. In 2003, there were four cases of salmonella, two of shigella, and two of campylobacter.

Chronic Communicable Diseases

There were 65 new cases of tuberculosis between 2000 and 2004. Each year in that period, the majority of cases were in males; in 2003, 13 of the 14 cases were in males. Diagnosed cases ranged between 15 and 80 years old. In the same period, there were 14 deaths from tuberculosis. Saint Vincent and the Grenadines has adopted the Directly Observed Treatment, Short-course (DOTS) strategy to reduce the number of tuberculosis cases since the Milton Cato Memorial Hospital began to offer the treatment.

The last case of leprosy (Hansen's disease) was reported in 2000.

Acute Respiratory Infections

There were 16,374 cases of acute respiratory infections reported in 2003 and 11,030 in 2004. In this two-year period, acute respiratory infections represented roughly half of all reported communicable diseases, which is a matter of grave concern for the country. In 2004, there were 4,654 cases of acute respiratory infections in children under 5 years old, 40% of the total number of acute respiratory infections in the population; the male-to-female ratio was 1.2:1.

HIV/AIDS

There were 60 cases of HIV infection in 2002 and 81 in 2003. In 2004, there were 108 confirmed new cases of HIV infection—the highest incidence since the first case was reported; males accounted for 64 of the cases (59%). There were 40 cases of AIDS, 26 in males (65%) and 14 in females (35%). There were 57 cases of AIDS in 2003.

Vertical transmission accounted for two cases in 2004; there were no new cases in 2003. A formalized system of care and treatment to persons with HIV/AIDS offering antiretrovirals was put in place in August 2003; the program was bolstered in 2005. In 2004, 14 new clients began antiretroviral treatment, adding to the 22 persons (12 males and 10 females) who had been participating since 2003; as of this writing, there were 25 males and 11 females enrolled in the program. The availability of the care-and-treatment program, as well as voluntary HIV counseling and testing programs, may be responsible for more people volunteer-

ing to be tested and for more persons accessing treatment centers for managing their infection.

The 17 fewer AIDS cases between 2003 and 2004 may be attributed to the introduction of antiretrovirals treatment and the bolstering of the national HIV/AIDS program through the project jointly funded by the Global Fund to Fight AIDS, Tuberculosis, and Malaria and by the World Bank.

Zoonoses

There were 53 cases of **leptospirosis** in 2000–2004, most of them in males. The mean age of those affected was 34 years.

NONCOMMUNICABLE DISEASES

Metabolic and Nutritional Diseases

Anemia accounted for 531 clinic visits in 2004, representing 1.4% of all noncommunicable diseases clinic visits. The female-to-male ratio was 4:1: females accounted for 429 visits (80.8%) and males, for 102 (19.2%).

The age group 65 years old and older is the most affected by metabolic and nutritional diseases, accounting for 82 visits for these diseases (15.4%), followed by the 15–24 age group with 79 (14.8%), and the age group 5–14 with 78 (14.6%). In 2003–2004 there were more than 500 annual visits for metabolic nutritional diseases.

Diabetes accounted for 4,070 visits, or 11% of total clinic visits, in 2002; males accounted for 23% and females for 77%.

Obesity accounted for 271 visits in 2004. Most visits were among persons aged 25–44 years, accounting for 120 visits, or 44.2%. Results of the 2004 Food and Agriculture Organization/Caribbean Food and Nutrition Institute study of 143 adolescents and adults aged 11–65 years old showed a widespread use of foods high in fats, salt, and sugar. On the other hand, foods rich in fiber and antioxidants were not consumed widely, especially among the younger age group. The study also pointed out that persons who reported daily consumption of vegetables also were vegetable producers. Estimates of national food availability indicated that there was a trend in an oversupply of per capita energy, increasing from 2,540 kcal/day in 1999 to 2,642 in 2000, and then decreasing slightly to 2,609 in 2001. The corresponding figures for protein and fat were 68.1g and 74.9g, respectively, in 2000 to 66.7 g and 73.0g in 2001.

Cardiovascular Diseases

Hypertension accounted for 29% of all clinic visits in 2000. Visits for hypertension rose slightly in 2002, accounting for 30% of all clinic visits (11,082). Males represented 26% of these visits and females, 74%. The age group 65 years old and older accounted for half of all visits for hypertension, followed by the age group 55–64 years, which accounted for 20%.

Cardiovascular diseases accounted for 1,869 (4.6%) clinic visits and ranked as the fifth leading reason for health visits in 2004. That same year, the age group 65 years old and older—the age group with the highest number of visits for cardiovascular diseases—accounted for 1,273 visits (73.5% of all visits). Records at the Milton Cato Memorial Hospital, the main referral hospital, show that in 2000–2003 there were 1,025 admissions for cardiovascular diseases: 237 for myocardial infarction, 279 for chronic ischemic heart disease, and 509 for hypertensive heart disease.

Malignant Neoplasms

Between 2000 and 2003, there were 554 deaths from malignant neoplasms. The six most common sites were: the prostate, 118 (21%); upper respiratory organs and lungs, 56 (10%); upper gastrointestinal tract, 47 (8.0%); female breast, 39 (7.0%); bowel, 30 (5.4%); and cervix, 23 (4.1%). Cervical cancer is the most common form of malignant neoplasm in females.

OTHER HEALTH PROBLEMS OR CONDITIONS

Mental Health and Addictions

During 2002–2004, there were 1,437 admissions to the mental hospital, 282 of them (19.6%) were new cases. According to a breakdown by diagnosis, drug-induced psychoses was the leading cause of admission, followed by schizophrenia, acute psychoses, mental retardation, and manic depressive disorders. Drug users accounted for 85 admissions (40%).

Oral Health

Oral health services are offered through a network of public and private health care facilities. The government operates ten public health dental health clinics that offer primarily preventive care. In 2002, public dental health clinics cared for 15,921 patients. The frequency of procedures performed by the department were: extractions (52%); preventive care (18%), restorations (18%), and other (12%). There is no school dental health program.

RESPONSE OF THE HEALTH SECTOR

Health Policies and Plans

In developing Saint Vincent and the Grenadines' national health policies and strategies, consideration was given to the country's specific and unique local health conditions; to relatively unchanging societal and policy circumstances, such as economic and political organization; to cultural factors, such as the society's and specific groups' values and commitments; and to external factors that influence the country, such as regional and international agreements.

Caring for the Poor, Caring for the Environment

Squatting—the practice of establishing unregulated settlements on state-owned land—is widespread in Saint Vincent and the Grenadines, and it poses major public health and environmental challenges for the country. An estimated 16,000 squatters—more than one in seven of the country’s citizens—survive mostly through subsistence farming. As a rule, in these settlements housing is substandard, and the communities are overcrowded and prone to vermin and rodent infestations, which lead to high rates of communicable diseases. The squatters usually have no access to potable water or sanitary facilities. By far the most promising endeavor is embodied in the Government’s Integrated Forest Management and Development Program (IFMDP), an ambitious multisectoral effort involving various ministries. The program aims to encourage squatters to relocate to areas that provide better access to health services and to apply better farming practices.

Health Strategies and Programs

In 2004, the Ministry of Health and the Environment began to prepare the 2006–2011 national strategic health plan which is guided by local, regional, and international policies the Government has subscribed to. First, the Government relies on the principle of primary health care as the main mechanism to improve the population’s quality of life. Second, in a regional context, priority areas set in the Caribbean Cooperation in Health Initiative will be adhered to. Thirdly, the results of the analysis of the country’s Essential Public Health Functions will guide the direction the health sector will pursue during the period of the plan. In addition, the regional initiative for extending social protection in health will facilitate a greater collaboration with the National Insurance Service as a way to address universal access to programs and services. In 2001, Parliament passed the National Economic and Social Development Council Act; the Council finalized the Interim Poverty Reduction Strategy paper in 2003.

Saint Vincent and the Grenadines became a signatory of the WHO Framework Convention on Tobacco Control in 2004, an international treaty that promotes state parties to enact or amend public health laws to control the burden of disease from tobacco use and prevent the initiation of smoking.

Legislation regulating the work of nurse midwives and nursing assistants was amended to incorporate and expand the role and functions of the family nurse practitioner. In 2002, the draft legislation requiring the use of seatbelts while riding in automobiles and helmets while riding motorcycles was enacted in 2006. The 2004 pharmacy act gives greater autonomy to pharmacists.

Organization of the Health System

The Ministry of Health is the agency within the Executive Branch charged with providing equitable, good quality, sustainable, and comprehensive primary, secondary, and tertiary health

care. The Ministry also must offer health promotion, nutrition, and health education services to the population, as well as protect and preserve the environment and the country’s natural resources, through a health service delivery process, the conduct of environmental assessments and research, and the efficient management of available resources.

The Minister operates as the political director; the Permanent Secretary is the administrative leader; and the Chief Medical Officer (CMO) is the technical head. Administrative and technical leaders follow public service rules and regulations. A Health Planner sits within the Ministry of Health and the Environment, although administratively this officer functions under the Ministry of Finance and Planning.

To support this structure a senior management committee has been constituted, involving senior administrative and technical personnel at the Ministry. The committee’s primary responsibility is policy development and implementation. The Ministry of Health and the Environment provides primary, secondary, and tertiary services through its 14 programs.

Thirty-nine health centers provide services across nine health districts. Shifts in population have affected the numbers of persons to be served in various districts, resulting in a need to redefine district boundaries.

On average, each health center is equipped to provide services to a catchment population of 2,900 persons, and no person is required to travel more than three miles to access care. Primary health care services available include emergency care, medical care, prenatal and postnatal care, midwifery services, child health services (including immunizations and school health), family planning services, and communicable and noncommunicable disease control. Dental health services are delivered at selected centers and mental health services are offered at all health centers on a visiting basis. Each health center is staffed with a full-time district nurse, a nursing assistant, and a community health aide. Other district health teams—including a district medical officer,

a pharmacist, a nursing supervisor, a family nurse practitioner, an environmental health officer, a family life educator, a social worker, a nutrition officer, and other visiting staff—provide additional support.

Public Health Services

The Government of Saint Vincent and the Grenadines is firmly committed to a program to prevent and control the spread of HIV/AIDS and to alleviate the socioeconomic impact of the disease on the population. A National Strategic Plan was launched in 2001 and a program that will fall under the Ministry of Health and the Environment was budgeted in 2002 expenditure estimates. An updated Plan to be implemented in 2004–2009 includes the following overarching goals: to reduce the incidence of HIV to 0.1% from the current rate of 0.6%; to decrease the case fatality rate of persons living with HIV/AIDS; and to offer support to people living with HIV/AIDS and their families. The Plan targets the following five priority areas: to strengthen intersectoral management, organizational structures, and institutional capacity; to develop, strengthen, and implement prevention and control programs for HIV/AIDS and other sexually transmitted infections with priority given to youth and high-risk or vulnerable groups; to strengthen care, support, and treatment programs for people living with AIDS and their families; to conduct research; and to upgrade surveillance systems. The agencies implementing the Plan include civil society organizations and ministries other than the Ministry of Health.

The response to natural and manmade disasters is the responsibility of the National Disaster Management Organization (NEMO), which includes community disaster committees that are responsible for the response at the community level. Under a World Bank sponsored project, new headquarters for NEMO were constructed, equipped with necessary infrastructure to house an emergency command center. Strategic sea defenses in vulnerable areas have been constructed. All government sectors have developed national disaster plans.

In 2000–2004, the government funded contraceptive distribution at a cost of US\$ 89,630.

An assessment of the school feeding program was conducted in 2004 with assistance from the Caribbean Food and Nutrition Institute. An adolescent health and family life survey was conducted in 2002 and a study on how to communicate behavioral change for preventing HIV was carried out in 2003.

Individual Care Services

The 211-bed Milton Cato Memorial Hospital is the country's only acute-care referral hospital in the public sector that provides specialist care in most major areas. The delivery of care is organized into seven departments: accident and emergency, outpatient services, surgery, medicine, operating theatre, pediatric services,

and obstetrics/gynecology. Five rural hospitals with a combined 58-bed capacity provide a minimum level of secondary care. There also is a 10-bed acute-care private hospital, the Maryfield.

The Government also operates the 186-bed Mental Health Centre, which provides care to patients with acute and chronic psychiatric problems, and the 106-bed Lewis Punnett Home, which caters to an indigent elderly population. Five private institutions with a combined bed capacity of 55 offer resident care for the elderly.

With the installation of a Coulter Haematology Analyzer® in 2002, blood testing has been streamlined in the country, with turnaround times significantly cut down and the capability to conduct new tests expanded. In addition, the installation of a BD FACSCount™ cytometry instrumentation system in 2003 has allowed the laboratory to effectively handle an increased demand for CD4 testing, which has led to the introduction of antiretroviral treatment for HIV/AIDS, as well as to handle greater demand for routine hematology. The laboratory also has benefited from two information programs, the Rapid Automated Biological Identification System (RABIS) and Portable High-throughput Integrated Laboratory Identification System (PHILIS).

Saint Vincent and the Grenadines participated in a project sponsored by the European Union designed to strengthen medical laboratories in the Caribbean, which has led to a better understanding of the quality of laboratory services in the country and has set the course for achieving standardization and accreditation in the future. Since 2001, histology specimens have been analyzed locally by a resident pathologist.

In 2001, an additional plain-film unit was installed at Milton Cato Memorial Hospital's accident and emergency department.

Health Promotion

In 2001–2005, some public schools adopted healthy school policies, including providing only healthy food choices in the school feeding program or through vendors at the school. Teachers received additional training in physical education so they could make it more enjoyable for students. All the new schools built included facilities for physical education or had such a facility nearby. The health and family life curriculum included topics related to the prevention of noncommunicable diseases. Of 1,620 schoolchildren screened, 20 were referred to the ENT specialist.

A program to reduce drug demand began in 2004; it is designed to build human resources to address the issue of drug abuse, strengthen treatment and rehabilitation capability, raise public awareness about drug abuse and its attendant problems, and develop a strong multisectoral response to prevention.

Human Resources

According to 2005 figures from the Nursing Council's register, there were 398 nurses of varying categories registered. The coun-

try has access to two schools of nursing: the Government-run School of Nursing and the Kingstown Medical College, which is based in Grenada. In 2003, the School of Nursing strengthened its registered nurse program to accommodate increased enrollment and help offset nurse shortages due to nurses migrating out of Saint Vincent and the Grenadines. Table 1 shows the number and ratio of health professionals in the country.

Health Supplies

The Central Pharmacy and the pharmaceutical services are charged with procuring, preparing, dispensing, and distributing all drugs in the national health system, as well as procuring and distributing through medical stores the medical and other supplies that facilitate the health system's proper functioning.

The bulk of pharmaceuticals are purchased through the Organization of Eastern Caribbean States' Pharmaceutical Procurement Services (formerly the Eastern Caribbean Drug Service). According to the Procurement Services' Regional Formulary and Therapeutics Manual Saint Vincent's Ministry of Health and the Environment can purchase drugs from 76 categories. There are 39 district pharmacies that supply drugs to the public health system. There also are 13 registered private pharmacies and 31 registered pharmacists, 19 of whom are employed by the Ministry.

TABLE 1. Number and ratio of health professionals, by category, Saint Vincent and the Grenadines, 2001–2005.

Health professional category	Number	Ratio per 10,000 population
Physicians	101	9.5
Registered nurses	228	21.5
Nursing assistants	124	11.7
Nursing auxiliaries	115	10.8
Laboratory technicians	13	1.2
Pharmacists	36	3.4
Environmental officers	14	1.3
Psychiatrists	2	0.19
Psychologists	1	0.09
Dentists	13	1.2
Counselors	5	0.5
Nutrition officers	12	1.1
Health educators	7	0.66

Health Sector Expenditures and Financing

The Ministry of Health and the Environment collaborates with other ministries and departments in the pursuit of its health care goals and objectives.

Financing from the Government is based on annual budgetary proposals submitted to the Ministry of Finance and Planning and on a program of work derived from strategic and operational planning processes. According to Government estimates, the total health budget for 2000–2004 ranged from US\$ 18.6 million to US\$ 21.7 million, representing an annual average of roughly 12% of the national budget.

Information on the cost of medications for noncommunicable diseases in the public health system is provided by the report of the audit of the country's pharmaceutical supply. Medications for diabetes cost US\$ 407,154 and medications for hypertension cost US\$ 230,032 in 2004; the two combined represented 20% of the annual pharmaceutical budget in the public system. According to information from the Family Nurse Practitioner and asthma initiative coordinator, the most recent medication costs for asthma are for 2002; they totaled US\$ 21,283.90.

Technical Cooperation and External Financing

Technical and financial assistance is obtained from international organizations such as the World Health Organization, the World Bank, the Pan American Health Organization, the European Union, the Caribbean Epidemiology Center, and the Organization of Eastern Caribbean States; from individual governments such as the governments of France, Japan, and Taiwan; and from private institutions such as St. Georges University.

Bibliography

- OECS Fiscal Issues: St. Vincent and the Grenadines, December 2004.
- National Health Plan of Saint Vincent and the Grenadines, Working document, 2006–2010.
- Saint Vincent and the Grenadines Population and Housing Census, 2001.
- National Family Planning Unit, Ministry of Health and the Environment.