INTRODUCTION

Saint Vincent and the Grenadines is a multi-island state in the Eastern Caribbean. The islands have a combined land area of 389 km\(^2\). Saint Vincent, with an area of 344 km\(^2\), is the largest island (\(^1\)). The Grenadines include 7 inhabited islands and 23 uninhabited cays and islets. All the islands are accessible by sea transport. Airport facilities are located on Saint Vincent, Bequia, Canouan, Mustique, and Union Island.

Saint Vincent and the Grenadines, like most of the English-speaking Caribbean, has a British colonial past. The country gained independence in 1979, but continues to operate under a Westminster-style parliamentary democracy. It is politically stable and elections are held every five years, the most recent in December 2010. Christianity is the
dominant religion, and the official language is English (1).

In 2001 the population of Saint Vincent and the Grenadines was 102,631. In 2006, the estimated population was 100,271 and in 2009, it was 101,016, a decrease of 1,615 (1.6%) with respect to 2001. The sex distribution of the population in 2009 was almost even, with males accounting for 50.5% (50,983) and females for 49.5% (50,033). The population aged 60 and over numbered 9,957 (9.9%) in 2009, while the under-15 population totaled 30,969 (30.6%), yielding a dependency ratio of 61.1 per 100 population (2). Figure 1 shows the population structure of Saint Vincent and the Grenadines in 1990 and 2010. A country poverty assessment survey conducted in 2007–2008 found that 39.2% of the population was urban and 60.8% rural (3). Life expectancy at birth was 71.4 years in 2000 but fell in subsequent years, and by 2009 was 71.2 years (74.1 for females and 69.8 for males) (4). Table 1 shows selected demographic information (4).

There were 9,412 births during the 2006–2010 period, with an average of 1,882 births per year. The crude birth rate increased slightly, rising from 17.9 per 1,000 population in 2006 to 19.7 in 2009, then decreasing to 17.5 in 2010 (4). This rise in 2009 is attributable to an increase in births among adolescents under the age of 19, which rose by 17% over the previous year. The total fertility rate remained fairly constant at 2.1–2.2 per woman. The crude death rate also remained constant at between 70 and 80 per 10,000 population (4). Saint Vincent and the Grenadines has experienced fluctuations in its population over the past 20 years as a result of emigration. According to the CIA World Factbook, the net migration rate in 2008 was estimated at 7.56 migrants per 1,000 population (5).

The economy of Saint Vincent and the Grenadines has suffered from the effects of the recent global economic crisis and new quota and tariff arrangements put in place following the loss in 1993 of preferential trade status for its main export crop, bananas. Preliminary estimates for 2010 indicated that economic activity had declined by a further 1.8%, after three years of contraction from 2007 to 2009. This downward trend was associated with effects of the global financial crisis, which has spawned decreases in several major economic sectors, including agriculture, construction, transport, storage and communication, banking, and insurance. Per capita income for 2010 was US$ 6,669, compared with US$ 5,988 in 2006. The overall balance on fiscal accounts rose from a deficit in 2006 to a significant surplus in 2010, mainly as a result of an increase in other capital revenue (6).

Achievements in health during the 2006–2010 period included the installation of a seawater reverse osmosis plant in 2010 to provide potable water to the
residents of Bequia, one of the Grenadine islands. An electronic health information system introduced in 2010 now links community health centers to the Health Information Unit within the Ministry of Health, Wellness, and the Environment. In 2008, the Government, with assistance from the Government of Cuba, commenced construction of a modern medical complex in the north of Saint Vincent. The facility, which was still under construction in 2010, will encompass the refurbished 30-bed Georgetown Hospital, a diagnostic unit offering radiography and laboratory services, a renal dialysis unit, surgical theaters, and an outpatient department. One of the Government’s major initiatives during the period involved the upgrading of three health centers to polyclinics.

**HEALTH DETERMINANTS AND INEQUALITIES**

Poverty eradication remained a central thrust of government policy and programming during the period. A primary aim of the poverty reduction strategy—one of the mainstays of the country’s social development policies since 2003—is to achieve the Millennium Development Goal targets (7). A poverty assessment survey conducted in 2007–2008 reported that the Gini coefficient was 0.40, compared with 0.56 in 1996, and that 30.2% of the population was poor, down from 37.5% in 1996 (3). It also found a marked decrease in the proportion of indigent poor, which fell from 25.7% in 1996 to 2.9% in 2008. An additional 18%, though not poor, were deemed to be vulnerable, putting the total proportion of vulnerable population at 48.2% in 2008. The highest levels of poverty were found in the rural farming communities of Georgetown and Sandy Bay (55.6%) and Chateaubelair (43.1%).

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1. The poverty line used in the Country Poverty Assessment Study was EC$ 5,523 per annum per adult, or EC$ 15.13 per day, to satisfy the basic food and non-food requirements.
2. The indigence line used in the Country Poverty Assessment Study was EC$ 2,448 per annum.
The “Education Revolution” strategy, launched in 2001, continued to guide the Government’s efforts in the education sector during 2006–2010. Universal early childhood education was introduced as a policy in 2009 and universal access to secondary education was strengthened. Five new secondary schools were built during the period. Net enrollment at the primary level was 99.8% for both sexes in 2007, and 92% of students completed school (males, 80.6%, and females, 103.6%). More males than females went on to secondary school (53% vs. 47%) until 2005, when female enrollment and completion began to increase; by 2010 the secondary school completion rate was 85.9% for males and 111.0% for females. The country’s four postsecondary institutions were amalgamated in 2009 into the Saint Vincent Community College. Postsecondary education enrollment increased from 1,289 in 2006 to 1,867 in 2010, with males accounting for 35.3% and females for 64.7% (8). The Country Poverty Assessment 2007–2008 indicated that 84% of the population was literate (3). The most recent sex-disaggregated literacy statistics are from 1991, when the literacy rate in the 15–24 age group was 88.2% for males and 89.5% for females (7).

The Government of Saint Vincent and the Grenadines demonstrated its commitment to strengthening gender equality and promoting the empowerment of women by signing onto the Quito Consensus, adopted in 2010 at the 10th Regional Conference on Women in Latin America and the Caribbean. The Government is also a signatory to several regional and international charters and conventions relating to gender equality, including the Convention on the Elimination of Discrimination Against Women and the Inter-American Convention on the Prevention, Punishment and Eradication of Violence Against Women (“Convention of Belém do Pará”) (9). Between 2006 and 2010 a total of 23 women died as a result of gender-based violence, 8 at the hands of a current or former intimate partner. There were 205 cases of rape reported between 2006 and 2009, 200 cases of sex with a minor under the age of 15, and 29 cases of incest (7).

THE ENVIRONMENT AND HUMAN SECURITY

ACCESS TO CLEAN WATER AND SANITATION

In 2010, 98% of the population had access to clean drinking water; 33,030 households had a potable water supply, up from 28,875 in 2007 (10). The water supply is monitored by the Public Health Department for residual chlorine and by the Central Water and Sewerage Authority for fecal and total coliforms (10). The Country Poverty Assessment 2007/2008 reported that 11.6% of houses were connected to the public sewer system, 56.6% had septic tanks, and 30.3% used pit latrines (3). In 2010, the Government commissioned the construction of a septic lagoon in Diamond Village, located on the windward side of the island, to receive effluent from septic tanks for decomposition (10). The

BOX 1. Improved access to health care through polyclinics.

The Stubbs Health Centre was reconstructed and recommissioned in 2010 as a polyclinic, the first on Saint Vincent. This polyclinic is located in a district accessible to several communities on the island’s windward side. It provides both routine prenatal, postnatal, child health, and family planning services and specialist services in general medicine, pediatrics, psychiatry, and dentistry. The polyclinic also functions as a birthing center and provides counseling services, testing for HIV, and limited diagnostic services. The facility will serve as a focal point to promote wellness, enhance health promotion, and support the fight against HIV infection and noncommunicable diseases. Two other polyclinics are to be built, one in the community of Mesopotamia in the central part of Saint Vincent and the other in the town of Clare Valley on the leeward side of the island.
Government conducts regular monitoring for mosquito larvae; during 2006–2010 the house index ranged from 16.4% to 20.2% and the Breteau index from 28% to 36.8% (11).

Between 2006 and 2008, the Solid Waste Management Unit and private garbage collection entities collected garbage once a week from 100% of households and disposed of approximately 50,301 million metric tons of solid waste annually in the four landfills operated by the Government (10).

**AIR POLLUTION**

According to the data from the World Bank’s World Development Indicators, Saint Vincent and the Grenadines emitted 1.9 metric tons of carbon dioxide per capita in 2006 and 1.8 metric tons in 2008 (12). With regard to CO₂ intensity (kilogram of CO₂ per kilogram of oil equivalent energy use), in 2006 and 2007 the figure was 2.9 (13). No data were available for 2008.

**THE WORK ENVIRONMENT AND WORKERS’ HEALTH**

Matters relating to workers’ health fall under the purview of the Labor Department; the Public Health Department of the Ministry of Health is the monitoring agency. No work-related policies or program-focused initiatives were undertaken in the reporting period.

**ROAD SAFETY**

All drivers in Saint Vincent and the Grenadines must possess a driver’s license, and all vehicles must be inspected annually in order to be licensed as roadworthy. The Motor Vehicle and Traffic Act, enacted in 2006, requires seatbelt use by all drivers and front-seat passengers and helmet use by all motorcycle riders. The law is enforced by the police, who conduct periodic checks for traffic violations. Road safety tips are aired on radio stations on a daily basis. During 2009 and 2010 there were 1,080 road traffic accidents, with 8 fatalities (7 males and 1 female). Data on road traffic accidents for the other years in the period are not available (14).

**VIOLENCE**

There were 121 murders during the period 2006–2010; 98 (81%) of the victims were male and 23 (19%) female. All but one of the killings were committed by males. Wounding cases totaled 3,826 during the period, with an annual average of 765 (14).

**DISASTERS**

Saint Vincent and the Grenadines lies in the path of the hurricanes that buffet the Caribbean islands from June to November each year. Hurricane Dean (2007) caused damages totaling US$ 814,814 and Hurricane Omar (2008), US$ 2,074,074. Hurricane Tomás in 2010 claimed one life and resulted in recovery costs of US$ 50.7 million (15).

**CLIMATE CHANGE**

In addition to phasing out chlorofluorocarbons in 2007, the Government completed several other critical activities during the period, including drafting of the second national communication to be submitted to the Secretariat of the United Nations Framework Convention on Climate Change and implementation of a special climate change adaptation program. It also compiled a greenhouse gases inventory and conducted vulnerability and adaptation assessments for the coastal zone and for the tourism, agriculture, water, and health sectors. The Government is currently pursuing a management plan aimed at phasing out hydrochlorofluorocarbons in Saint Vincent and the Grenadines as part of its obligations under the Montreal Protocol on Substances that Deplete the Ozone Layer (11).
Food and Nutritional Security

The country imported 540,036 kilograms of food at a cost of US$ 43,921 in 2005. By 2010 the import bill was US$ 68,123 and the quantity had risen to 619,570 kilograms. Approximately 16% of the food import bill was spent on meats and poultry (16). Training was provided in the hazard analysis and critical control points (HACCP) system, and food establishments and vendors were recertified in the use of the HACCP system during the reporting period. The Public Health Department monitored good manufacturing practices and carried out routine ante-mortem and post-mortem meat inspections. The Government, through the Nutrition Support Program, supplied 22,188 basic food packages to pregnant women who were underweight or suffering from anemia; through the School Feeding Program, it provided meals to 12,923 schoolchildren, including 9,613 at the primary level and 3,310 at the preschool level (11). Other feeding programs for vulnerable persons included a soup kitchen run by the Catholic church, a Salvation Army school feeding program, and a weekly meal delivery program for shut-ins, sponsored by the Anglican church. The Ministry of Social Development provided 5,300 persons with subsistence allowances totaling US$ 2.2 million annually (9).

Health Conditions and Trends

Health Problems of Specific Population Groups

Maternal and Reproductive Health

Maternal and child health remained a priority focus during the period. All of the country’s 39 health centers offered prenatal, postnatal, and child health and family planning services. There were 9,413 live births between 2006 and 2010, of which 1,892 (20.1%) were to teenaged mothers under the age of 19 years; 95% of these births took place in a hospital setting and 5% at designated birthing centers. Trained health personnel attended 98% of the births, 73%–80% of which were spontaneous vaginal deliveries and 20%–27% were cesarean sections. Since 2005, the proportion of newborns with low birthweight (under 2,500 g) has remained at 7%. Since 1996, approximately 99% of babies have been initiated on breast milk and monitored, but there are no tabulated data to show the percentage of babies breastfed to six months. In 2010, the leading causes of maternal morbidity were gestational diabetes (176 cases, 9.8% of total morbidity), hypertension (143 cases, 8%), urinary tract infections and pyelonephritis (105 cases, 5.8%), and rhesus incompatibility (51 cases, 3%). This pattern was similar to that of previous years. In 2010, 7,527 females had Pap smears. The proportion of normal smears was 98.6%. There were four maternal deaths during the period under consideration: two in 2006, both from eclampsia (one in the 15–24 age group and the other in the 25–44 age group) and two in 2010, one from eclampsia and one from obstetric trauma (both in the 45–64 age group) (4).

Children (0–9 years old)

There were 9,413 children under 5 years of age in 2006 and 9,483 in 2009. A total of 7,189 children visited health centers during this period, mainly for immunization and growth monitoring. In 2010, vaccination coverage for DPT and poliomyelitis was 100%; for MMR, 99.7%; and for BCG, 91.0%. Growth monitoring between 2008 and 2010 revealed that 86% of children had normal weight for age, 10% were obese, and 4% were moderately undernourished. Gastroenteritis and acute respiratory infections were the top two causes of child morbidity. The infant mortality rate has fluctuated since 1995, when it was 18.0 per 1,000 live births; the rate rose to 25.7 per 1,000 live births in 2006, then declined to 18.2 in 2007, 16.7 in 2008, and 13.7 in 2009, increasing again, to 16.8, in 2010. The reduction between 2006 and 2007 was due mainly to an aggressive quality control program that included monthly perinatal audits, monthly educational sessions, and care interventions in both community and hospital settings based on a management-by-objectives approach. Between 2006 and 2009 there
were 129 deaths in the under-1 age group, 64 males (49.6%) and 65 females (50.4%). The leading cause of death in this age group was perinatal infections, which accounted for 56 male deaths (43.4%) and 58 female deaths (45%). In the under-5 age group, acute respiratory infection was the leading cause of morbidity and represented 39.8% of all respiratory infections. In the group aged 1–4 years there were 12 deaths during 2006–2009: one in 2006, a male death from communicable disease; four in 2007, one male from a malignant neoplasm, one male and one female from a nervous system disorder, and one female from heart disease; four in 2008, all males, one from communicable disease, one from a malignant neoplasm, and two from injuries; and two in 2009, both male deaths from injuries. The leading cause of death in the 1–4 age group was unintentional injury, which accounted for four male deaths, one each from land transport accident, assault, exposure to unspecified factors, and exposure to unspecified smoke, and one female death from exposure to unspecified smoke (4).

Children aged 5 to 9 numbered 10,812 in 2006 and accounted for 10.8% of the total population. In 2009 their number stood at 10,892, including 5,456 males (50.1%) and 5,436 females (49.9%). There were two deaths in the 5–9 age group, both of females, one each from insulin-dependent diabetes and pulmonary edema, and one death of a male in the 5–14 age group from inhalation of an unspecified substance (4).

Adolescents (10–14 and 15–19 years old)

Adolescents 10–14 years old totaled 10,594, or 10.5% of the population, in 2009 with males totaling 5,372 (50.7%) and females 5,222 (49.3%). Between 2006 and 2009, there were 33 deaths in this age group: males 20 (61.0%) and females 13 (39.0%) (17).

Adolescents 15–19 years old totaled 10,736 (10.6% of the population) in 2009, with males accounting for 50.3% (5,396) and females for 49.7% (5,340). The main health problems affecting this group were pregnancy and HIV infection. There were 345 births to teenaged mothers in 2010, representing 19.3% of all births for that year. The proportion of births to teenagers has remained constant at over 19% of total births since 2005. There were only 5 adolescent groups in 2010, down from 15 in 2005. These groups were affiliated with health centers and, with support from the Family Planning Program, carried out health education, health promotion, and wellness programs. There were 36 deaths in this age group, of which 26 (72%) were males and 10 (28%) females (4).

During 2006–2010, there were 85 deaths in the age group 15–24 years old, of which 87 (78.3%) were males and 24 (22%) females. Between 2006 and 2009, the leading causes of death in this age group were intentional injuries, males 36 (42.4%) and females 4 (4.7%), and assaults, males 30 (35.3%) and females 3 (3.5%) (4).

Adults (20–64 years old)

Persons 20 to 59 years old made up approximately 48.3% of the population in 2006 (48,990 individuals) and 48.9% (49,353) in 2009; 25,413 of the latter number were males and 23,940 females. No data are available on contraceptive prevalence or unmet needs for family planning during the reporting period. Female condoms were introduced in 2006 and 10,327 were distributed, but in 2010 only 1,116 condoms were requested. While there was a decrease in the number of requests for oral contraceptives, which dropped from 16,477 in 2006 to 13,958 in 2010, requests for contraceptive injections increased from 9,361 to 10,706. The leading causes of morbidity in this age group were noncommunicable diseases, primarily diabetes, hypertension, or a combination of the two. During 2006–2010, there were 1,150 deaths among 20–64-year-olds, with males accounting for 755 deaths (65.7%) and females for 395 (34.3%).33 The leading causes of death in the age group 25–64 years old were malignant neoplasms, with 200 deaths; followed by trauma, with 198; intentional injuries, with 74; unintentional injuries, with 70; and assaults, with 54 (4).

3 Based on the age grouping used to tabulate mortality data, the leading causes of death were only available for the age group 25–64 years old.
The Elderly

The numbers of people in the over-60 population remained constant at 9,883 (9.8%) in 2006 and 9,958 (9.8%) in 2009, with 4,471 males (45%) and 5,487 females (55%) in the latter year. Noncommunicable diseases account for the largest share of morbidity in this population. Between 2006 and 2009 there were 1,897 deaths in the over-60 age group, 894 of males (47.1%) and 1,003 of females (52.9%). The leading causes of death were cerebrovascular disease, which accounted for 263 deaths (13.9% of total deaths), 118 of males (62%) and 147 of females (7.6%); ischemic heart disease, 382 deaths (20.1%), 180 of males (9.4%) and 202 of females (10.6%); malignant neoplasms, 215 deaths (11.3%), 143 of males (7.5%) and 72 of females (3.8%); and diabetes mellitus, 204 deaths (10.8%), 95 of males (5%) and 109 of females (5.7%). There were 177 cases of communicable disease, with males accounting for 84 (4.4%) and females for 93 (4.9%) (4).

The Family

Family health, as measured by the proxy indicator of standard of living, continued to improve during the period. Households headed by males made up 56% of all households in 1998 and 47.9% in 2008. The average age of heads of household was 47.2 in 1998 and 52 in 2008. The mean household size decreased from 4.1 in 1998 to 3.5 in 2008 and the number of children per household fell from 2.2 to 1.7, with 1.4 persons per bedroom. The majority of households had access to electricity in 2008 (88.8%, up from 76.3% in 1998) (3).

Mortality

By law, all deaths are registered in Saint Vincent and the Grenadines. Deaths in 2006–2009 totaled 3,189, with females accounting for 48% and males for 52%. The crude death rate was 76.2 per 10,000 population in 2006, 78.1 in 2007, 84.4 in 2008, and 84.2 in 2010. During the period 2006–2009 there was a marked decline in infectious diseases and an increase in chronic noncommunicable diseases. Ten causes accounted for 2,551 deaths (80% of all deaths) during the reporting period; 74% of deaths during the period were as the result of noncommunicable diseases. Malignant neoplasms remained the leading cause of death among males. Within this group, prostate cancer was the number-one cause, accounting for 38 deaths (54%), followed by skin cancer (7 deaths, 10%). Breast cancer was the leading cause among females, accounting for 29 deaths (49%). Cervical and skin cancer each accounted for 9 female deaths (15%). Ischemic heart disease caused 462 deaths (14.5%) during the period 2006–2009, 225 males and 237 females (4). Table 2 shows the five leading causes of death for males and females in the 2006–2009 period.

<table>
<thead>
<tr>
<th>Cause</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td>Malignant neoplasms</td>
<td>70 (1)</td>
<td>53 (2)</td>
<td>53 (2)</td>
<td>53 (3)</td>
</tr>
<tr>
<td>Ischemic heart disease</td>
<td>58 (3)</td>
<td>51 (1)</td>
<td>54 (1)</td>
<td>60 (1)</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>29 (5)</td>
<td>43 (2)</td>
<td>28 (4)</td>
<td>47 (4)</td>
</tr>
<tr>
<td>Hypertension</td>
<td>11</td>
<td>26 (5)</td>
<td>20 (3)</td>
<td>26 (5)</td>
</tr>
<tr>
<td>Cerebrovascular disease</td>
<td>37 (4)</td>
<td>30 (4)</td>
<td>34 (3)</td>
<td>60 (2)</td>
</tr>
<tr>
<td>Communicable diseases</td>
<td>59 (2)</td>
<td>40 (3)</td>
<td>60 (1)</td>
<td>26</td>
</tr>
</tbody>
</table>

Source: Reference (17).
* Numbers in parentheses indicate the rank order of the cause of death for the year in question.
Other noncommunicable causes of death were hypertension and injuries and violence. Injuries and violence ranked second as a cause of death among males in 2009; unintentional injuries accounted for 37 deaths and intentional injuries for 17, assaults being the leading cause (70.5%) in the latter group. Communicable diseases accounted for 395 deaths, including 169 (89 males and 80 females) from acute respiratory infections, 108 (55 males and 53 females) from septicemia, 14 (12 males and 2 females) from tuberculosis, and 104 (71 males and 33 females) from AIDS-related causes.

**Morbidity**

Assessment of data on health center utilization patterns showed that visits for noncommunicable diseases totaled 29,868 in 2010, an increase of 10.4% over the 2005 figure. Persons with hypertension recorded the highest number of visits, 9,904, and persons with both hypertension and diabetes the second highest, 8,168. Diabetes accounted for the third highest number of visits, 2,724. Among children under 5 years of age, acute respiratory infections (11,801), gastroenteritis (2,605), and asthma (1,499) were the most frequent reasons for care-seeking at health centers and doctors’ clinics.

**Communicable Diseases**

**Vector-borne Diseases**

The country saw only two laboratory-confirmed dengue cases in 2006, but subsequently recorded 10–20 annually between 2007 and 2009, with a high of 218 confirmed cases in 2010 (89 in males and 129 in females). The number published is likely to be under-reported, in that clinically confirmed cases are assumed not to be included. There were two imported cases of malaria during the period, one in 2008 and one in 2010.

**Vaccine-preventable Diseases**

The last vaccine-preventable disease was diagnosed in 1999. The country’s Expanded Program on Immunization (EPI) maintained a 95%–98% immunization coverage among children 0–5 years old during the reporting period. The Ministry of Health, Wellness, and the Environment now includes hepatitis B and *Haemophilus influenzae* vaccine in its schedule.

**Zoonoses**

The incidence of leptospirosis nearly doubled between 2001–2005 and 2006–2010, rising from 49 to 90 cases per 100,000 population. No other zoonotic diseases were reported during the period.

**HIV/AIDS and Other Sexually-transmitted Infections**

HIV prevalence remained low (approximately 1% of the population) during the period, which saw a 37% decrease in reported cases of HIV infection between 2005 and 2008 and a 40% decrease in AIDS-related deaths. Between 2006 and 2010, a total of 1,218 persons had contracted HIV and 648 had developed AIDS. As of October 2009, 319 persons living with HIV were receiving medical care, including 175 persons on antiretroviral therapy. Table 3 shows the number of persons infected with HIV between 2006 and 2010.

In 2010 the HIV incidence rate was 32.7 per 100,000 population, with a male-to-female ratio of 2:1. One of the best practices in HIV/AIDS management in Saint Vincent and the Grenadines is the Prevention of Mother-to-Child Transmission Program, which commenced in 1998. In 2006–2010, the program tested 100% of pregnant women who attended public health services and offered antiretrovirals free of cost to pregnant women testing positive. The seroprevalence rate for mothers was 0.9 per 1,000 population during the period. Voluntary testing and counseling services have been integrated into the public health system.

There has been a marked decrease in gonococcal infections, which dropped from 348 in the period 2001–2005 to 68 in 2006–2010.

**Tuberculosis**

In 2010, the incidence of tuberculosis was 14.9 per 100,000. During 2001–2005 there were 44 cases of
tuberculosis, while in 2006–2010 there were 66, with 14 deaths, of which 9 were from AIDS-related tuberculosis.

**Emerging Diseases**

Twenty cases of pandemic influenza A(H1N1) were reported in 2009.

**Intestinal Diseases**

Gastroenteritis affected 6,789 persons, 38.7% of them in the population under 5 years old (4).

**Respiratory Infections**

The most common communicable disease over the period 2006–2010 was acute respiratory infection, which accounted for a total of 29,631 cases of illness, 54.1% in females and 49.9% in males (4).

**Chronic, Noncommunicable Diseases**

Noncommunicable diseases accounted for 29,686 visits to public health care centers in 2010. Male visits totaled 8,667 (29%) and female visits 21,019 (71%). In 2008, persons under the age of 70 years accounted for 35.4% of all deaths from noncommunicable diseases. Hypertension, diabetes, and diseases of the digestive system were the main reasons for health care visits, according to health center records (4).

**Mental Disorders**

The Mental Health Rehabilitative Program continued to pursue the goal of integrating mental health services into primary health care services. The three leading causes of admission to the Mental Health Centre near Kingstown have remained the same since 2000. In 2010 they were schizophrenia (281 cases, 63% of total admissions; females, 52, and males, 229), substance abuse with schizophrenia (93 cases, 20.8% of admissions; females, 2, and males, 91), and drug-induced psychosis (36 cases, 16.2% of admissions; females, 7, and males, 29) (4). In 2007, 1,236 persons were treated for mental illnesses, 30.8% as inpatients, 29.6% as outpatients, 23.8% in their homes, and 15.8% at the main secondary care institution, the Milton Cato Memorial Hospital in Kingstown (19).

**Other Health Problems**

**Oral Health**

Government-funded oral health services were offered at 10 health centers during the period. In 2010, the public dental services saw 18,452 clients, performing

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**TABLE 3. Number of new HIV-infection cases, cumulative total, and among 15–24-year-olds, by sex, Saint Vincent and the Grenadines, 2006–2010.**

<table>
<thead>
<tr>
<th>Year</th>
<th>New cases</th>
<th>Male</th>
<th>Female</th>
<th>Unk.*</th>
<th>Total</th>
<th>Cumulative total</th>
<th>15–24 years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>Female</td>
<td></td>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td>42</td>
<td>22</td>
<td>0</td>
<td>64</td>
<td>1,218</td>
<td>02</td>
</tr>
<tr>
<td>2009</td>
<td></td>
<td>38</td>
<td>24</td>
<td>1</td>
<td>63</td>
<td>1,154</td>
<td>05</td>
</tr>
<tr>
<td>2008</td>
<td></td>
<td>41</td>
<td>25</td>
<td>0</td>
<td>66</td>
<td>1,091</td>
<td>04</td>
</tr>
<tr>
<td>2007</td>
<td></td>
<td>42</td>
<td>40</td>
<td>4</td>
<td>86</td>
<td>1,025</td>
<td>08</td>
</tr>
<tr>
<td>2006</td>
<td></td>
<td>45</td>
<td>36</td>
<td>0</td>
<td>81</td>
<td>939</td>
<td>05</td>
</tr>
</tbody>
</table>


* Sex unknown.
extractions (34% of all oral health care provided), preventive care (30%), restorations (15%), and other services (21%) (4). These public oral health services were complemented by a number of private services. No data are available on services rendered by private providers.

**Disabilities**

A study conducted in 2010 to determine the presence of disabilities in Saint Vincent and the Grenadines identified a total of 2,332 persons with disabilities, of whom 2,195 had been assessed for biological and physical disabilities. Disabilities identified were: physical/motor, 745 cases (34%); intellectual, 497 (22.6%); mental, 372 (16.9%); visual, 259 (11.8%); multiple, 208 (9.5%); and hearing, 114 (5.2%). The study revealed that 0.4% of children in the 0–4 age group, 1.8% of children and adolescents in the 5–14 age group, and 1.5% of adolescents in the 15–19 age group showed physical and motor disabilities. With respect to intellectual disability, the study found 16 persons in the 0–4 age group, 154 in the 5–14 age group, and 74 in the 15–19 age group (4). The country has five special schools and one resident home which serve 172 children with disabilities. The National Society of and for the Blind offered some programs for adults with visual disabilities.

**Risk and Protection Factors**

In 2007 the country participated in the Global Youth Tobacco Survey and in the Global School Health Survey, which focused on secondary-school students aged 13–15 at the national level. The survey revealed that 19.1% of youths used a tobacco product, 12% smoked cigarettes, and 10.3% used other forms of tobacco (4).

**HEALTH POLICIES, THE HEALTH SYSTEM, AND SOCIAL PROTECTION**

**Health Policies and the Health System’s Leadership Role**

The policy of the Government of Saint Vincent and the Grenadines is to provide universal health care that reflects the principles of equity, affordability, quality, and cultural acceptance for its citizens. The Minister of Health, Wellness, and the Environment is responsible for effecting health and environmental policies and for ensuring the delivery of government health services. The Millennium Development Goals, the Essential Public Health Functions, and the Caribbean Cooperation in Health, Phase III, provided the context and timelines for benchmarking progress and evaluating performance in the health sector.
houses for the benefit of needy persons with no income. Approximately 150 houses are still to be built under this program (6). A social investment fund of US$ 3.7 million was established in 2006 to fund programs that address the needs of underprivileged communities; funds are awarded on the basis of proposals submitted by such communities (6).

The Government has adopted and allocated funding for social policies that focus on vulnerable populations, including the poor, the elderly, the unemployed, persons living with HIV/AIDS, and women and children at risk.

**Health Legislation**

The only health-related legislation during the period was a law enacted in 2006 in the area of road safety concerning seatbelt and helmet use. By 2010, several pieces of health legislation were being prepared for amendment, including various aspects of laws dealing with complying with requirements for the International Health Regulations 2005.

**Health Expenditures and Financing**

Public-sector health care is financed through a national consolidated fund and a fee-for-service system. The percentage of Government health expenditure remained constant at 3% to 4% of gross domestic product (GDP) during the period (6). Table 4 shows the trend in health spending between 2006 and 2010. The Government provided funds for 63% of health care expenditures on an annual basis (11). In 2010, approximately 30% of the Government’s annual health care expenditure was budgeted to primary health care, 42% to secondary care, and the other 28% to administration, education, and pharmaceuticals and supplies (6) (Table 4)

**The Health Services**

The Ministry of Health, Wellness, and the Environment provides mainly primary and secondary health care services. Primary health care is offered through 39 health centers in the country’s nine health districts, seven on the island of Saint Vincent and two in the Grenadines. Each health center is equipped to cover an average population of approximately 3,000. Geographic accessibility is good, with no one having to travel more than three miles to receive care. Secondary care was mainly provided at the 211-bed Milton Cato Memorial Hospital, the country’s only government-run, secondary-care referral institution (21). In the 2006–2010 period, the number of hospital admissions ranged from 8,000 to 9,000 a year, with an occupancy rate averaging between 67% and 70%. The average length of stay was five days, and the leading reasons for hospitalization were obstetrical causes (32%), followed by medical (28.7%), surgical (23.6%), and pediatric (15.3%) causes. On average, 17,568 persons visited specialist outpatient clinics each year during the period (4). Specialist services in cardiology, oncology, and endocrinology are not available in country. Persons requiring urgent catastrophic care are usually air-lifted to another Caribbean island, most often Barbados.

Five rural hospitals, with a total bed capacity of 58 and an average annual admission of 600 persons, provided a minimum level of secondary care. The Maryfield Hospital in Kingstown, with 12 beds, is

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<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated national budget</td>
<td>213.8</td>
<td>231.8</td>
<td>278.6</td>
<td>276.4</td>
<td>336.2</td>
</tr>
<tr>
<td>Health budget</td>
<td>20.8</td>
<td>20.7</td>
<td>27.2</td>
<td>26.5</td>
<td>30.5</td>
</tr>
<tr>
<td>Percentage of national budget</td>
<td>16.6</td>
<td>16.6</td>
<td>18.6</td>
<td>17.4</td>
<td>17.1</td>
</tr>
<tr>
<td>Percentage of GDP</td>
<td>3.4</td>
<td>3.4</td>
<td>4.0</td>
<td>3.7</td>
<td>nd*</td>
</tr>
</tbody>
</table>

*a* nd, no data available.

privately owned and operated. The Government operates a 106-bed geriatric facility for the indigent and a 186-bed rehabilitative health center, mainly for mentally challenged adults. Five private institutions with a combined bed capacity of 55 offer resident care for the elderly (22). The Country Poverty Assessment 2007–2008 reported that 66.6% of Vincentians used public health facilities. Approximately 61.4% visited doctors as their first contact with the health system, while 36.2% consulted nurses or other health care workers (3).

The Health Promotion Unit of the Ministry of Health continued to educate the general public and specific target groups about health-related matters. Additionally, 14 community and institutional fitness groups were established in various communities in 2010, including the women’s prisons and four senior citizen groups.


In 2005, the capacity of the public laboratory was enhanced through the procurement of a machine to perform CD4 cell counts for persons infected with HIV. In 2010, the Government also invested in a CT scan machine, the first ever in the public-sector health services.

**KNOWLEDGE, TECHNOLOGY, INFORMATION, AND HUMAN RESOURCE MANAGEMENT**

**Scientific Production in Health**

The Health Information Unit led by the National Epidemiologist continued to provide relevant and timely data during the period. The Unit added a surveillance officer and a statistical officer to its staff in 2006. In 2010, Saint Vincent began the installation of a networking system to link hospitals and health centers to the Health Information Unit. By 2010 four hospitals and 32 health centers were on the network and the following information modules were fully functional: HIV/AIDS; electronic health records; admission, transfer, and discharge; prescribing and dispensing; human resources; supply chain management; and maternal and child health. The system was still in a transition phase at the end of the period, but when fully implemented will generate timely and relevant information to enhance the capacity of planners and decision-makers.

**Public Health Workforce**

Table 5 compares the number and ratio of staff per population in 2005 and 2010. Notably, the most extreme shortages are among medical specialists.

**Health Personnel Training**

Most physicians in Saint Vincent and the Grenadines are graduates of the University of the West Indies Medical School or of medical schools in Canada, Cuba, Grenada, or the United States of America. The Caribbean Association of Medical Councils is the regional mechanism for registration of physicians and monitoring of the practice of medicine. A total of 250 nurses registered with the General Nursing Council during the period 2006–2010, a 58.8% increase over the previous 5-year period (23). Under bilateral arrangements Saint Vincent and the Grenadines has supplied a total of 89 nurses to Barbados, the Cayman Islands, and Trinidad and Tobago. Continuing education for all categories of health personnel was provided during the period.

**Health and International Cooperation**

Saint Vincent and the Grenadines is a member of the Caribbean Community (CARICOM) and the Organization of the Eastern Caribbean States. The Government has forged ties within the international,
regional, and national arenas to mobilize foreign investment and secure technical cooperation to advance the country’s health agenda. Saint Vincent and the Grenadines had the highest aid per capita (US$ 601) among 12 Caribbean countries in 2007. Some of the contributing countries and agencies are listed in Table 6.

SYNTHESIS AND PROSPECTS

Saint Vincent and the Grenadines has shown great resilience in the face of the economic crisis during the period 2006–2010. Although the country endured serious economic hardship, the Government was able to reduce the level of poverty, make education more accessible to many families, and continue to provide social services, including health care.

The country succeeded in maintaining many of the gains made in health care since the year 2000. Maternal and child health has remained a priority, immunization coverage stands at over 98%, childhood diseases have been addressed, and the nation’s children enjoy relatively good health. Access to drinking water and sanitation services has improved, and adequate provision has been made for solid and liquid waste disposal. Work continued during the period on various environmental issues, including climate change, and the National Emergency Management Organization continued to respond to disasters. There has been a marked decline in infectious and communicable diseases between 2000 and 2010. Noncommunicable diseases are now the leading cause of morbidity and mortality among the adult population, with malignant neoplasms ranking as the leading cause of death during the period 2006–2010.

Issues of concern for the future include the vulnerability of the population to financial shocks, population aging, substance abuse among teenagers, and increasing violence and crime. Greater attention must be paid to deterring harmful behaviors and to promoting health and self-care through education aimed at encouraging young people to adopt healthy lifestyles and practices and through interventions.

### Table 5. Comparison of number and ratio of health professionals, by category and year, Saint Vincent and the Grenadines, 2005 and 2010.

<table>
<thead>
<tr>
<th>Category</th>
<th>2005</th>
<th>2010</th>
<th>2005</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Ratio (per 10,000 population)</td>
<td>Number</td>
<td>Ratio (per 10,000 population)</td>
</tr>
<tr>
<td>Physicians</td>
<td>101</td>
<td>9.5</td>
<td>102</td>
<td>9.5</td>
</tr>
<tr>
<td>Registered nurses</td>
<td>228</td>
<td>21.5</td>
<td>229</td>
<td>22.9</td>
</tr>
<tr>
<td>Nursing assistants</td>
<td>124</td>
<td>11.7</td>
<td>128</td>
<td>12.8</td>
</tr>
<tr>
<td>Nursing auxiliaries</td>
<td>115</td>
<td>10.8</td>
<td>86</td>
<td>8.6</td>
</tr>
<tr>
<td>Laboratory technicians</td>
<td>13</td>
<td>1.2</td>
<td>10</td>
<td>0.9</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>36</td>
<td>3.4</td>
<td>12</td>
<td>1.2</td>
</tr>
<tr>
<td>Environmental officers</td>
<td>14</td>
<td>1.3</td>
<td>14</td>
<td>1.3</td>
</tr>
<tr>
<td>Psychiasts</td>
<td>2</td>
<td>0.19</td>
<td>1</td>
<td>0.1</td>
</tr>
<tr>
<td>Psychologists</td>
<td>1</td>
<td>0.09</td>
<td>1</td>
<td>0.08</td>
</tr>
<tr>
<td>Dentists</td>
<td>13</td>
<td>1.2</td>
<td>17</td>
<td>1.7</td>
</tr>
<tr>
<td>Counselors</td>
<td>5</td>
<td>0.5</td>
<td>4</td>
<td>0.5</td>
</tr>
<tr>
<td>Nutrition officers</td>
<td>12</td>
<td>1.1</td>
<td>3</td>
<td>0.3</td>
</tr>
<tr>
<td>Health educators</td>
<td>7</td>
<td>0.66</td>
<td>3</td>
<td>0.3</td>
</tr>
<tr>
<td>Social workers</td>
<td>1</td>
<td>0.1</td>
<td>4</td>
<td>0.4</td>
</tr>
</tbody>
</table>

aimed at reversing negative trends. This will require the effort of all sectors—private and public—coupled with serious political will and financial commitment.

REFERENCES