
SAINT KITTS AND NEVIS

GENERAL SITUATION AND TRENDS

Socioeconomic, Political, and Demographic Overview

Saint Kitts and Nevis occupies the northern part of the Leeward Islands chain: Saint Kitts has a surface area of 176.2 km² and Nevis spans 93 km². The twin-island nation is an independent Commonwealth Caribbean country, having assumed full sovereignty from Great Britain in 1983. The government changed for the first time in 1995, as the Labour Party defeated the People's Action Movement at the polls after 15 years of uninterrupted governance.

Saint Kitts and Nevis is readily accessible by sea and air and boasts a modern international airport, and both islands have an adequate network of roads, a modern telephone system, and an improving transportation system.

Saint Kitts and Nevis functions as a federation: the Federal Parliament, the highest decision-making institution in the country, resides in Saint Kitts, and Nevis operates under a local government, the Island Assembly, which has some degree of autonomy. This arrangement results in virtually parallel public service arrangements in both Saint Kitts and Nevis, with the Prime Minister assuming general control of all aspects of the nation's business, but with the Premier of Nevis having an extensive range of local authority. For example, Saint Kitts and Nevis have separate annual budgetary estimates that are approved by each island's statutory entity and are implemented relatively independently of each other. There are some areas, however—such as access to international assistance and implementation of national projects—in which collaboration is mandatory.

The Ministry of Health is the executive arm of the government responsible for mobilizing resources at all levels to promote the nation's health. The Ministry operates within the framework of the General Orders, which are the laws and regulations governing public service.

Saint Kitts and Nevis does not currently have a published National Development Plan, but clear national policy objectives, goals, and targets are presented annually as part of the budget proposals. The present development strategy, as outlined in the 1995 Annual Budget Address, includes the following key elements: promoting service industries such as tourism, informatics, and offshore financial services; encouraging light manufacturing and food processing with potential for niche marketing; diversifying agriculture, with special emphasis on livestock production; pursuing human resource and technological development through education and training and incentives; and supporting and strengthening the social infrastructure.

The economy of Saint Kitts and Nevis has achieved only moderate levels of growth in recent years. Real economic growth has averaged 4.4% during the 1992–1995 period, which compares unfavorably with the annual average real growth of 6.4% recorded between 1988 and 1991. Thus, the Government acknowledges that one of the country's major challenges is economic revitalization and attaining significantly higher rates of real growth.

The leading contributors to the gross domestic product (GDP) have been government services, wholesale and retail trade, construction, and communications. Tourism also has emerged as one of the stronger economic sectors, and its growth has directly affected several sectors, including hotels and restaurants, transportation, and retail trade. Per capita income in the country has grown in nominal terms, from US\$ 3,656 in 1992 to US\$ 4,473 in 1995.

Unemployment in Saint Kitts and Nevis is among the lowest in the Caribbean. According to the 1991 Population and Housing Census Report, only 4.9% of the population were unemployed at that time. A 1994 survey of the labor force, conducted jointly by the Organization of American States and the Government, confirmed an unemployment rate of just 4.3%. Thus, the trend suggests not only a healthy em-

ployment climate, but also the continuing creation of new jobs.

The leading employment area was the service industry (36.5%), which is heavily dominated by tourism-related activities, followed by professional and technical services (13.6%), agriculture and fishing (12.9%), and construction and manufacturing (12.7%). In 1994, income was approximately US\$ 18,500 or more in 9.3% of households; between US\$ 13,000 and US\$ 18,500 in 8.4%; between US\$ 9,300 and US\$ 13,000 in 13.6%; between US\$ 5,600 and US\$ 9,300 in 21.1%; between US\$ 3,700 and US\$ 5,600 in 15.5%; between US\$ 1,900 and US\$ 3,700 in 17.9%; and below US\$ 1,900 in 14.2% of households. Even though school attendance is not compulsory, in 1991 11,789 students were enrolled in public and private schools, representing 88.5% of the country's total population aged 5 to 19 years old. School enrollment in 1994 was 11,608 (89.2%).

According to the 1991 Population and Housing Census Report, the highest educational level attained by most residents of Saint Kitts and Nevis is secondary school education (39.2%), with an almost equal number reporting having completed primary school or basic level education (38.1%). Just 5.3% of the population had a pre-university education, defined as post-secondary vocational training, or a university education. In 1991, there were 12,056 households, an increase of 3.8% since the previous census count of 11,615 in 1980. A total of 8,921 households (74.0%) were owner-occupied and 2,242 (18.6%) were privately rented. The average number of rooms per household increased marginally from 3.2 in 1980 to 3.4 in 1991, while the average household size decreased from 3.7 persons to 3.5 in the period under review. Significantly, 30.3% of households had two rooms or fewer, an improvement over 1980, when the corresponding figure was 38.2%; 19% of households had three rooms, 23.0% had four rooms, and 12.7% had six or more rooms.

Given the low level of local crop and livestock production and in order to satisfy the needs of a booming tourist industry, the country must import most of its food for consumption. In 1992, livestock and crop production was valued at US\$ 3.1 million (1.9% of GDP), while the food import bill for that same year was US\$ 16.9 million (10.8% of GDP).

The country experienced a negative population growth of 6.2% during the intercensal period 1980–1991. This decline, from 43,291 in 1980 to 40,618 in 1991, was attributed largely to emigration, a phenomenon that has persisted with an average annual net emigration of 456 between 1992 and 1994.

The Planning Unit in the Ministry of Development and Planning estimated the mid-year population of Saint Kitts and Nevis at 43,530 in 1995, with an almost equal distribution of males and females. Just over 30% of the population was under the age of 15 years, while about 11.9% were in the

age group 60 years old and older. A total of 35,510 persons (81.6%) live on Saint Kitts, and 8,020 (18.4%) live on the sister island of Nevis (1995).

Between 1992 and 1994 the "Annual Digest of Statistics, 1994," reported an average annual total fertility rate of 2.4 among women 15 to 49 years old. The crude birth rate declined from 19.7 per 1,000 population in 1992 to 18.3 in 1995, with a rate of 19.6 for the period. There is no underregistration of births.

Mortality and Morbidity Profile

The crude death rate for Saint Kitts and Nevis during the 1992–1995 period was 9.2 per 1,000 population. Between 1992 and 1995, the infant mortality rate fluctuated between a low of 22.4 per 1,000 live births in 1993 to a high of 25.1 per 1,000 in 1995.

According to the "Annual Digest of Statistics, 1994," life expectancy at birth for both sexes was estimated at 68.9 years at the end of 1994; disaggregated figures for that year were 67.4 years for males and 70.4 years for females.

Diseases of the circulatory system were by far the leading cause group of death in Saint Kitts and Nevis between 1992 and 1995, with an annual average of 164 deaths (46.1%) falling into this category. Within this cause group, an annual average of 88 deaths was attributed to cerebrovascular diseases and an average of 71 deaths to diseases of pulmonary circulation and other forms of heart disease. The other important cause groups of death were communicable diseases (14.4%), involving mainly respiratory infections and septicemia, and neoplasms (11.8%).

An annual average of 17 deaths (4.9%) has been attributed to external causes, underscoring the impact of all forms of accidents and violence on the mortality statistics. The other defined group, conditions originating in the perinatal period, accounted for 3.5% of deaths.

It is difficult to present a comprehensive analysis of the country's morbidity data, because data are not always available due to delays in computer data entry and analysis, or because the Nevis component is not compiled. The best estimates suggest that hypertension and diabetes are the main causes of morbidity. In 1995, there were 1,147 hypertensives and 882 diabetics registered at health centers throughout Saint Kitts and Nevis.

Regarding infectious diseases in the 1992–1995 period, gastroenteritis has been the most common, followed by sexually transmitted diseases and dengue fever. It must also be noted that viral hepatitis and leptospirosis have been a consistent feature of the morbidity statistics, although the numbers of cases were mostly quite low. There were 14 cases of AIDS reported.

SPECIFIC HEALTH PROBLEMS

Analysis by Population Group

Health of Children

Infants and young children traditionally have been listed among the priority groups targeted to receive special health care services, including prenatal care throughout pregnancy and the provision of trained nurses and physicians to provide intrapartum care and continuous child health care.

Morbidity reports indicate that gastroenteritis and acute respiratory infections were the main causes of illness among children. For example, in 1995 there were 479 reported episodes of gastroenteritis in children under 5 years old, for a rate of 10,788 per 100,000 population. The main causes for hospital admission among children under 5 years of age have been gastroenteritis, acute respiratory infections, and trauma, both internal and external.

Diseases such as diphtheria, tetanus, whooping cough, and poliomyelitis, for which vaccines are widely available, are now unknown. A surveillance program for flaccid paralysis and rash/fever illness is ongoing. In 1994, there were two suspected cases of measles, but the Caribbean Epidemiology Center (CAREC) confirmed neither.

Children under 1 year old have consistently had 100% coverage against common childhood illnesses since 1992 and, although the coverage dipped slightly to 99% in 1995, the record remains excellent. Immunization against BCG is not included in this analysis, since the vaccine is not administered until age 5 years. The Community Nursing Service reports that 587 BCG vaccines were administered in 1995, covering 63% of 5-year-olds.

Hepatitis B immunization was introduced in 1995, targeting children 0 to 5 years old and health workers. However, the program was aborted, reportedly because of damage to vaccine stocks during a hurricane in that same year; cost considerations have delayed restarting the program.

While severe undernutrition is almost absent (0.1% of children under 5 years old seen in child health clinics), the level of mild to moderate undernutrition remains relatively high, although decreasing. In 1992, 7.5% of children under 5 years old attending health clinics were affected; 7.6% were affected in 1993, 5.9% in 1994, and 4.2% in 1995 (an average of 6.3% for the period). Obesity, on the other hand, may be rising slightly—6.5% of the children under 5 years old attending health clinics in 1992 were obese, 6.4% in 1993, 7.3% in 1994, and 6.7% in 1995 (an average of 6.7% over the four-year period). An annual average of 1,855 children under 5 years old were seen in child health clinics. Nutritional status is measured using height- and weight-for-age criteria set forth in the Caribbean Food and Nutrition Institute Growth Chart.

More than 90% of all newborns weigh more than 2,500 g at birth. During the 1992–1994 period, the percentage of low birthweight babies was 8.1% (74 babies) in 1991, 8.6% (73) in 1992, 9.0% (76) in 1993, and 8.8% (80) in 1994, indicating that this issue deserves attention. The percentage of low birthweight babies gathers even more significance when consideration is given to the link drawn by some experts in the country between prematurity and low birthweight and neonatal death.

Breast-feeding is actively promoted among new mothers; the objective is to achieve exclusive breast-feeding of infants for the first 3 to 4 months of life. Out of a total of 442 assessments completed in 1994, only 142 infants (32%) were fully breast-fed up to 3 months of age, and the number had declined to 23 (5.1%) by age 4 months.

Health of Adolescents

Births to teenage women continue to feature prominently among natality statistics. In 1995, 16.7% of all births were attributed to teenage women, and although that figure represented a drop from the 19.7% figure in 1992, the current situation continues to cause concern. There is no documentation on any other significant health or health-related problem among adolescents.

Health of Adults

Because women have been identified as an at-risk group that requires special attention, specialized programs relating to prenatal and postnatal care and family planning services have become institutionalized.

Primary care services cater specifically to the needs of all pregnant women through weekly prenatal sessions held at all health centers. If prenatal attendance at health centers is assumed to represent total prenatal care for the country as a whole, each woman makes an average of about three visits during her pregnancy, half the minimum of six prenatal visits stipulated by the national maternal and child health manual. It should be kept in mind, however, that an unknown number of pregnant women receive care exclusively from private physicians. All deliveries in the country take place in hospitals.

Hemoglobin levels among prenatal women are nearly perfect: according to the Ministry of Health's 1994 Annual Nutrition Report, 75.8% of women fell in the high category, scoring 11 g and higher; 23.9% were in the median range of 9.0–10.9 g; while a mere 1.3% registered hemoglobin levels under 9 grams; no absolute numbers are provided. Unfortunately, similar data are not available for other forms of

nutritional disorders such as iodine and vitamin A deficiencies.

The prevalence rate of contraceptive use is known to be relatively high. In 1992, there were 4,090 women, or 56.7% of women of childbearing age (15 to 49 years old) enrolled at health centers as active family planning users. Although the percentage declined slightly to 51.3% in 1995 (6,164 women registered), the level of contraceptive protection remained within acceptable limits. In 1995, oral contraceptives remained the most popular method of birth control among the women enrolled (51.1%), followed by injectables (13.3%), and the IUD (10.3%); a category listed as "other" accounted for 25.3% of current users.

All active family planning clients are offered cervical cancer screening services as part of their routine health care. The number of Pap test examinations conducted at the J.N. France Hospital has more than doubled since 1992, going from 712 to 1,749 in 1995. Similarly, the number of abnormal smears encountered has increased threefold, from 7 in 1992 to 22 in 1995 (including one invasive carcinoma in 1992 and one in 1995).

There has been one maternal death each in 1992, 1994, and 1995; there were no deaths in 1993. Although these figures are minimal, they still are unacceptably high in terms of zero-maternal-deaths target established for the Caribbean.

Health of the Elderly

In 1995, 5,200 persons in Saint Kitts and Nevis were 60 years of age and older, representing 11.9% of the total population. There are no specialized health services for the elderly, although they are exempt from user charges when using regular health care services. The elderly also are a major focus of diabetic and hypertensive clinics conducted routinely nationwide.

Family Health

Based on the 1991 Housing and Population Census Report, there were 12,056 households in the country, of which 9,350 were in Saint Kitts and 2,686 in Nevis. The 1994 Labour Force Survey showed that 5,672 households, or 47% of the total, were headed by women with dependent children under 15 years old. Among women who headed households, 58.1% were employed, 17.1% were retired, and 12.7% were housewives/homemakers.

All family members have access to primary- and secondary-level health services, including maternal and child health services, diagnostic services, emergency care, and treatment of illnesses and injuries.

Analysis by Type of Disease or Health Impairment

Communicable Diseases

Vector-Borne Diseases. There were 27 confirmed cases of dengue fever (16.2 per 100,000 population) in 1995, a significant increase over 1994 and 1993 figures, when only 7 and 1 cases, respectively, were reported. There were no confirmed cases in 1992. No deaths from the disease were recorded over the period.

An *Aedes aegypti* control program has been in operation for almost two decades. The 6% household index reported in 1995 is higher than the 1% recommended level for dengue control. Control methods involve source reduction and chemical treatment, although use of the latter is decreasing.

Vaccine-Preventable Diseases. There have been no confirmed cases of the childhood diseases preventable by immunization since 1992, except for two suspected cases of measles reported in 1994.

AIDS and Other Sexually Transmitted Diseases. A total of 14 confirmed AIDS cases were reported over the 1992–1995 period. Over the same period, a total of 7,157 persons were tested and 48 (0.7%) were found to be HIV-positive, with the highest number (18) occurring in 1993. Out of an annual average number of 322 blood donors routinely screened, only one was found to be HIV-positive.

Underreporting of sexually transmitted diseases is suspected. The figures show a decline in the number of reported cases of gonorrhea by more than 40%, while the number of cases of syphilis has stabilized. Laboratory data indicate that there was a 2.6% positivity rate for hepatitis B among blood donors.

Other Infectious Diseases. An established system is in place for the reporting and monitoring of infectious diseases, especially notifiable diseases, although data are not always complete and reliable. The Health Information Unit of the Ministry of Health is charged with collating and analyzing the information, but its resources are insufficient to do so.

Numerically, gastroenteritis tops the list of infectious diseases, and viral hepatitis, leptospirosis, and tuberculosis have been reported in all years over the period 1992–1995. In fact, leptospirosis has consistently ranked among morbidity statistics—four cases were recorded in 1995, up from two cases in each of the three preceding years. Most cases have been among agricultural workers employed in the sugarcane industry, which has a high rodent population. An information and education program for agricultural workers is ongoing.

Noncommunicable Diseases and Other Health-Related Problems

Oral Health. Dental services within the public system are delivered through a team that includes dentists, dental auxiliaries, and dental hygienists. Unfortunately, the output has declined significantly since 1992 due to shortages in personnel. Most activities involved extractions, although dental hygienists conducted some preventive work among schoolchildren. In 1992, a total of 8,699 patients were seen; there were 1,547 extractions of deciduous teeth and 2,311 extractions of permanent teeth. In comparison, in 1994 only 4,903 patients were seen and there were 863 extractions of deciduous teeth and 1,290 extractions of permanent teeth.

Malignant Tumors. During the 1992–1995 period, malignant neoplasms accounted for 167 or 11.8% of all deaths from defined conditions, ranking this cause as the third leading cause of mortality in Saint Kitts and Nevis. The digestive organs and peritoneum was the most common site, with 29 deaths, followed by the prostate with 28 deaths, female breast with 14 deaths, and the stomach and cervix with 13 deaths each.

Behavioral Disorders. The number of registered psychiatric patients has remained relatively constant between 1992 and 1995: end-of-year figures were 247 for 1992, and 243, 230, and 358 in each of the following three years, for an annual average of 244. Similarly, the total number of attendances among patients visiting community mental health services has remained stable, at an average of 1,416 annually. Of all visits made to mental health services in 1995, 51% (132 patients) was due to schizophrenia, 25% (67 patients) to alcohol addiction and drug induced psychosis, and 10% (26 patients) depression.

Since 1992, the mental health program has benefited from the services of a national psychiatrist. The program emphasizes the development of an integrated approach that links hospital and community services. There are plans to formulate a National Mental Health Plan to provide the framework for the operation of the services.

Accidents and Violence. Of the 9,484 reports made to the Police in 1994, 337 (3.6%) were offenses defined as grievous bodily harm and wounding; another 14.2% involved thefts, robbery, arson, and predial larceny. A total of 16 deaths attributed to homicide were recorded during the period under review, with two deaths attributed to injury undetermined, whether accidentally or purposely inflicted (ICD-9, E980–E989).

RESPONSE OF THE HEALTH SYSTEM

National Health Plans and Policies

Because Saint Kitts and Nevis does not have a national health sector plan, the following information regarding the sector's plans and policies has been collected from various reports and documents and from discussions with key officials.

The health sector is pursuing several broad objectives for the future. First, the sector's strategic and operational planning capabilities will be strengthened at all levels, so that each subsector can develop its own planning process according to an established national framework. Chronic diseases will be combated through an aggressive health advocacy and health promotion program that will cover all schools, nongovernmental organizations service clubs, and community groups. The hospital infrastructure will be improved: new facilities will replace the structurally compromised J.N. France and Alexandra hospitals, that repeatedly were devastated by hurricanes. The new J. N. France Hospital is estimated to cost US\$ 14.8 million, and preparations for its construction are in the final stages. Pogson Hospital also will be substantially refurbished, and services at the main hospitals will be expanded to include as complete a range of secondary care as available resources permit. Alternative funding sources to supplement Government funds will be explored, including direct cost recovery for services provided, private sector contributions and/or donations, and direct payment by the social security scheme for services provided to members. For example, Saint Kitts's fee structure for health services provided is being revised. Human-resource development will be strengthened to a point where in-service training programs for technical staff and management training can be undertaken locally; improving the management capabilities of key health personnel is an important component of this objective. Finally, specialized programs that stress community rather than residential care will be put in place for the elderly and the mentally ill.

As a way to achieve these goals, the Government is committed to provide for the needs of all vulnerable groups in society by strengthening programs targeted at women and children, the urban and rural poor, the elderly, and the disabled; to pursue an aggressive health advocacy and health promotion program; to continue the organizational reform of the health sector, involving key personnel in the decision-making process; to implement programs aimed at reducing the incidence and prevalence of chronic diseases, based on morbidity and mortality patterns; and to actively seek international partnerships in health.

Health Sector Reform

A reorganization of the health services is under way, but up to now reforms have taken place only in Saint Kitts. As part of this process and in order to better allocate resources, program areas for service delivery have been reorganized into five categories—administration, preventive services, hospital services, nursing education, and long-term care. In addition, at least four senior technical and administrative positions have been created in the course of the reforms. The new office of Health Planner is responsible for coordinating health sector planning; at this juncture that office is focusing on organizational reform. The new office of Director of Primary Health Care Services subsumes the functions of the Medical Officer of Health, taking responsibility for the technical development and supervision of all primary care services. The Director of Health Institutions is charged with supervising all health institutions under the purview of the Ministry of Health. Finally, the Director of Health Advocacy and Health Promotion oversees the health education, nutrition, and family planning services.

Organization of the Health Sector

Within the public health sector, the Minister of Health is responsible to the Cabinet for implementing relevant policy decisions, the Permanent Secretary functions as a Chief Administrative Officer, and the Chief Medical Officer coordinates the delivery of health services throughout the country. These positions are federal in scope, covering both Saint Kitts and Nevis. Nevis has considerable autonomy, however, and has its own Minister Responsible for Health and a Chief Secretary who directs administration of local health services. In practice Saint Kitts and Nevis operate two independent systems.

Institutional Organization

Health facilities include J.N. France Hospital (150 beds), Pogson Hospital (18 beds), and Mary Charles Hospital (10 beds). In addition, there is the Cardin Home (50 beds) for chronically ill, disabled, and geriatric cases. Nevis has Alexandra Hospital (54 beds) and a 22-bed infirmary that caters to psychiatric patients and the aged-poor. There also are 17 health centers spread throughout the two islands.

The district level has both primary and secondary care services. The network of health centers constitutes the bedrock for the delivery of primary care services: health centers are managed by full-time district nurses/midwives who are supported by a cadre of trained health personnel, including a medical officer, a family nurse practitioner, and a public

health nursing supervisor. Mary Charles, Pogson, and Alexandra hospitals provide the first line of secondary care and J.N. France Hospital functions as the main referral center.

Health Services and Resources

Organization of Services for Care of the Population

Health Education and Promotion. The newly established Health Advocacy and Health Promotion program area consolidates the efforts of traditional health education, nutrition, and family planning services. Its purview expands beyond public information, education, and training to embrace public policy issues, intersectoral cooperation, the mobilization of community support, and the development of media contacts, all of which are part of the Caribbean Charter on Health Promotion.

Health and family life education have been incorporated into the curriculum of all primary schools, which should exert a powerful influence on the lifestyles of the school-age population. Health promotion is considered to be a major strategy for addressing diseases closely tied to lifestyle, such as diabetes, hypertension, cancer, and sexually transmitted diseases.

Community Participation. Despite the existence of a policy to that effect, the community's involvement in the planning and implementation of health programs has been nonexistent. Moreover, there is no evidence that suggests that the health sector is actively seeking this level of involvement from the community.

This having been said, some outstanding examples of community support for health should be highlighted. For example, it has been reported that the ophthalmic unit at J.N. France Hospital has been fully equipped recently with donations from the private sector.

Environmental Protection. Marine environmental protection and preservation is of key importance to the economy of Saint Kitts and Nevis, given the country's reliance on the tourist industry. A Ministry Responsible for Culture and the Environment was created in 1995, and it is charged with preserving cultural heritage and implementing the Government's environmental protection program. The Environment Division within this Ministry is responsible for enforcing the provisions of the National Conservation and Environmental Protection Act; implementing programs in beach protection and coastal preservation, forestry management, soil conservation, wildlife management, and protection against marine pollution; coordinating all environmental protection efforts; and providing technical support to other Ministries in any envi-

ronmental matter, including implementation of public sector projects with potential environmental impact.

Water Supply. The 1991 Population and Housing Census Report showed that 7,993 households (66.3%) had their water piped into their premises from the communal system, and an additional 2,749 households (22.8%) had access to public standpipes; these figures confirm that at least 90% of households benefited from a potable water supply. The percentage of households that had water piped from the communal system increased from 39.3% in 1980 to 66.3% in 1991. Conversely, the number of households that accessed their domestic water from standpipes decreased from 40.8% in 1980 to 22.8% in 1991.

The Public Works Department in the Ministry of Communications and Works manages the water supply system. Water is chlorinated routinely to maintain bacteriological quality. The Public Health Department in the Ministry of Health is charged with monitoring the quality of water used for public consumption.

Sewage Disposal. The water closet/septic tank system is the most often used sewage disposal system in the country, which represents a change from the situation that prevailed in 1980, when the pit latrine was dominant. It also should be noted that 85.5% of households have exclusive use of their toilet facilities, while 11.1% share them. In 1995, 3.4% of households had no toilet facilities, but the situation is improving.

Occupational Health and Safety. A National Plan for Workers' Health is being formulated by a group made up of representatives from the Ministries of Health and of Labour, the trade unions, and the Employers' Federation, among others. Apart from injuries, no major occupational hazards have actually been reported. This intersectoral committee has identified the following potential problems: injuries, respiratory disorders, mental and physical stress, skin diseases, strains, and optical and hearing disorders.

The social security scheme, which is equivalent to a national insurance scheme, provides injury benefits to an annual average of about 300 of its members. Every worker is required by law to contribute to the scheme, and benefit claims are paid upon medical certification of injury. The scheme now pays about US\$ 800,000 annually in sickness benefits, maternity allowances and grants, and medical expenses for its members. The Labour Department and the Ministry of Health monitor work-related injuries.

During the 1992–1995 period, a total of 1,175 injury claims were paid, distributed as follows by nature of injury: 605 for contusions, abrasions, and cuts; 280 for sprains and/or strains; 69 for fractures; 53 for eye injuries; 41 for

burns; 26 for amputations; 22 for infections; 12 for dislocations; 4 for poisoning; 4 for concussions; 3 for electric shocks; 2 for tearing of internal organs; 48 for unspecified skin injury, and 6 for miscellaneous other causes.

Disaster Preparedness. A National Disaster Management Agency has been established to coordinate disaster management efforts throughout the country. This agency has a full-time administrative staff of four and receives directions from a Cabinet-appointed Board of Management. An update of the National Disaster Plan is in progress; the plan covers such aspects as disaster management, crisis management, disaster assessment, relief operations, public information, and liaison with nongovernmental organizations. The Plan's health component deals with such issues as mass casualty management, water supply management, and environmental sanitation; it also includes a section on maintenance of health facilities.

Organization and Operation of Personal Health Care Services

J.N. France Hospital provides inpatient and outpatient care in most major specialties. Mostly as a result of the devastation caused by Hurricane Luis, the Hospital's activity decreased in all areas except emergencies between 1994 and 1995. Total admissions fell by 15%, from 4,004 in 1992 to 3,397 in 1995; surgical operations declined by 10%; radiography examinations dropped by 11%; and the occupancy rate fell by 8%.

The system provides coverage in medical care, emergency care, maternal and child health and family planning, and chronic illness care, but the incompleteness of data makes it difficult to measure activity patterns and output in health services outside of hospitals. Gaps in data are most glaring in the area of clinic visits by number of patients and reasons for visits.

Public health nurses and family nurse practitioners conduct a school health program for primary school students aged 5 to 12 years old. During the 1992–1994 period, there were 443 visits to schools and 8,197 children were seen, for an annual average of 148 school visits and 2,732 children seen per visit. A total of 268 children were referred to the District Medical Officer, for an average of 89 per year. Services included rapid health assessments of children and visual and hearing check-ups.

Inputs for Health

Essential Drugs and Supplies. Saint Kitts and Nevis has actively participated in the Eastern Caribbean Drug Service, a regional pooled procurement scheme for pharmaceuticals and medical supplies. The approved 1995 budget for Saint

Kitts's portion of pharmaceutical purchases through the Service amounted to 6.4% of total health expenditure; figures were not available for Nevis.

A National Formulary establishes the type and range of drugs to be purchased within the government system; a comprehensive list of drugs is available within the private system. The trade in pharmaceuticals and medical supplies is largely unregulated, except for those classified as dangerous drugs and for which specific approval must be sought.

Human Resources

The health services in Saint Kitts and Nevis are administered and operated by a team composed of 21 different categories of workers, ranging from highly skilled technicians in the acute care institutions of J.N. France and Alexandra hospitals to the community outreach workers who provide domiciliary care. Human resources available for health in Saint Kitts and Nevis are difficult to quantify, because of the islands' separate budgetary proposals. Previous analyses have not considered this fact, resulting in underestimates.

In 1995, public sector health workers for both Saint Kitts and Nevis, by category, numbered as follows: 47 medical doctors, 8 dentists, 6 dental auxiliaries, 274 trained nurses, 21 pharmacists, 12 laboratory technologists/technicians, 6 radiographers and technicians, 19 public health inspectors, 4 nutritionists/dietitians, 2 veterinary officers, 11 veterinary assistants.

Expenditures and Sectoral Financing

The Government's recurrent expenditure on health for the entire Federation has averaged 10.6% of total recurrent disbursements over the 1992–1995 period. This ranks health as the third largest recipient of government financial resources, behind finance (26.6%) and education (15.4%). Expenditure on health represents 3.5% of the gross domestic product, somewhat less than the WHO's recommended target of 5%. The per capita expenditure on health was US\$ 163 in 1995. Differences in how expenditure items are classified in the budgetary estimates of each island preclude further analysis of financial resources.

External Technical and Financial Cooperation

The European Union is assisting the Government with the health sector's redevelopment, with funds allocated mainly to the rehabilitation of the two largest hospitals. There is little evidence of bilateral international aid for health beyond this initiative.

In its effort to find new ways to develop the health sector, the Government is more actively pursuing regional health initiatives and is working in close collaboration with established international and regional organizations such as PAHO and CARICOM. The Government's support for and involvement in the Caribbean Cooperation in Health Initiative is a good example of the latter.