
GUYANA

GENERAL SITUATION AND TRENDS

Socioeconomic, Political, and Demographic Overview

Guyana extends for 215,000 km² along the northeastern coast of South America. It is the only English-speaking country in South America and is a member of the Caribbean Community (CARICOM). Because of its historic, economic, and cultural ties with the English-speaking Caribbean, Guyana's economic and social conditions are more often compared with Caribbean countries than with countries in South America. In October 1992, a new Government was elected to office, marking the first change of ruling political party since the country's independence from Great Britain in 1966.

The 1980s witnessed a massive outward migration of skilled personnel to other Caribbean countries and North America because of the devastation of the Guyana economy and a dramatic decline in living conditions.

In 1996, the mid-year population was estimated at approximately 770,000 people. Males represented 49.2% and females represented 50.8% of the total population. The 0–14-year-old age group represented 36.8% of the population, the 15–64-year-old age group represented 59.3%, and those 65 and older represented 3.9%. The population growth rate was 1.1% in both 1995 and 1996, significantly down from the 1992 rate of 2.8%.

Amerindians or indigenous persons account for approximately 6.8% of the total population. Persons of East Indian descent account for 49.5% and those of African descent account for 35.6%. The remaining 15% are made up of Portuguese, Chinese, and persons of mixed descent.

In the 1992–1993 Household and Expenditure Survey, 68.9% of the total population was classified as rural. Approximately 61.3% of the total population resided in 2 of the 10 administrative regions. Georgetown, the capital, is located in Region 4 (Demerara-Mahaica), which has 41.4% of the country's population. Region 6 (East Berbice Corentyne) is

the second largest region, with 19.9% of the population. Approximately 51% of the Region 4 population is urban, compared with 28% in Region 6. Region 10 (Upper Demerara-Berbice) has 5.5% of the total population, and approximately 80% is urban. The population of Region 2 (Pomeroon-Supenaam) is 5.8% urban, and is the only other region not classified as 100% rural. Most of the estimated 49,713 Amerindians lived in the rural areas of Regions 1, 2, 7, 8, and 9.

The average household size is 4.28 persons. Region 4, which has 67.4% of the total urban population, has the smallest average household size (4.02), and Region 9 (Takatu Essequibo), has the largest average of 5.96.

In 1992, the illiteracy rate was estimated at 4% (2% for males and 6% for females); 52.5% of the population had attained the primary-school level, 34.5% had attained secondary-school level, and 10% had attained a level higher than secondary education. Despite the seemingly favorable literacy rate, questions exist as to the functional literacy level of the population, particularly in relation to school dropout rates.

In 1990, 12.5% of the country's population had no access to health services, an increase from 11% during 1987–1989.

Data from the Bureau of Statistics indicate that 89.6% of the urban population and 45.2% of the rural population had drinking water supply services. The Bureau of Statistics also reports that 91.8% of the urban population and 80.4% of the rural population had sewage and excreta disposal services.

Guyana's public sector monthly minimum wage was US\$ 63 in 1997, up from US\$ 52 in 1996, and US\$ 25 in 1992. The monthly cost of a basic diet of 2,400 calories ranges from US\$ 33, or 64% of the 1996 minimum wage in Region 6, to US\$ 42, 79% of the minimum wage in Region 10. As part of efforts to provide relief for the poor, the personal income tax threshold was increased from US\$ 107 per month in 1996 to US\$ 129 per month in 1997.

In order to assist the elderly, in 1997 Government pensions were adjusted to ensure that they fall no lower than 50% of the minimum wage in force.

The poor are seriously affected by a chronic shortage of housing and the negative effects of poor sanitation, limited access to piped water, flooding, and other such conditions in the unplanned housing areas that have sprung up around the country.

Average income and living standards have declined for nearly two decades, the burden of which was borne principally by the poor and underprivileged. Guyana's external public debt burden in the early 1990s was just over US\$ 2 billion. In 1989, the Government of Guyana embarked on an economic recovery program concurrently with an International Monetary Fund/World Bank-supported structural adjustment program to transform Guyana's state-dominated economy to a more market-oriented one. Toward this end, the Government removed restrictions on imports, relaxed foreign exchange controls, and began to privatize many state corporations.

Fiscal policy has been severely constrained by the high internal and external debt burden. In 1996, the external debt stood at US\$ 1.5 billion or US\$ 1,947 per capita. With total domestic and scheduled external debt services estimated at 61.2% of current revenues in 1996, very little revenue is available for expenditures on the social sector. From 1995 to 1997, the Government took aggressive steps to secure debt relief of US\$ 600 million through direct negotiations with its official bilateral creditors. These negotiations were held under the auspices of the Paris Club, the United Kingdom, and Trinidad and Tobago.

Guyana's abundance of natural resources and the Government's commitment to economic reform enabled the country to return to the path of economic growth in a short time after the introduction of the economic recovery program. Economic and social indicators for the 1992–1996 period suggest that living conditions are improving, despite the fact that the percentage of the population living below the poverty level is, by conservative estimates, just above 40%.

The sugar, rice, and bauxite industries account for a significant portion of the country's gross domestic product (GDP). Consequently, problems in the bauxite industry, together with problems in export markets for sugar and rice are serious causes for concern.

Guyana's per capita GDP was US\$ 766 in 1996, compared with US\$ 680 in 1995 and US\$ 454 in 1992. The average for the period 1991–1994 was US\$ 504. The growth rate of real GDP was 7.9% in 1996, up from 5.1% in 1995, and 7.7% in 1992. The average rate for the 1991–1994 period was 7.7%. Inflation, which was extremely high in the late 1980s and early 1990s because of the structural adjustment programs, has declined from a high of 101.5% in 1991. In 1995, inflation had fallen to 8.1% and in 1996 to 4.5%. The average rate for the 1991–1994 period was 27.1%.

In 1997, the Government published a draft of its National Development Strategy. A major objective of the Strategy is to provide conditions for the private sector to expand and flourish in order to create more and better paying jobs in the economy. Ensuring human development is the principal guiding orientation of the Strategy, which addresses four broad national objectives: rapid growth of incomes of the population in general; poverty alleviation/reduction (rapid growth of the incomes of the poor); satisfaction of basic social and economic needs; and sustaining a democratic and fully participatory society.

The National Development Strategy acknowledges the fact that the population in interior regions of the country has tended to be marginalized, especially the Amerindian groups. It puts forth new approaches for addressing the country's most basic social problems in areas such as health, education, housing, poverty alleviation, the role of women, and the role of Amerindians.

Mortality Profile

Life expectancy in Guyana was 64 years in 1994, compared with 64.9 in 1992. For females it was 67.7 years in 1992, compared with 62.1 years for males. The crude birth rate was 29.2 per 1,000 population in 1996 and 29.8 in 1995, up from 25.6 in 1992. The crude death rate was 7.3 per 1,000 population in 1996 and 7.1 in 1995, up from 6.6 in 1992. The fertility rate was 2.8 children per woman in 1994, the same as in 1992. The infant mortality rate as reported by the Bureau of Statistics was 27.8 per 1,000 live births in 1995 and 28.8 in 1994, significantly lower than the 1992 figure of 42.9. The Maternal Child Health Unit at the Ministry of Health reports, however, an infant mortality rate of 33.2 per 1,000 live births in 1995.

The estimates of the crude birth and death rates provided above are reported by the Bureau of Statistics and represent the official estimates used by the Government. Estimates reported by the Statistics Unit of the Ministry of Health differ from the official estimates although both sets are based on data collected from the General Registrar's Office. Ministry of Health estimates tend to be slightly higher. The differences between the two sets of figures are a source of much concern.

There were 5,098 deaths in 1995 compared with 4,372 in 1994 and 4,003 in 1992. The 60 and older age group accounted for the most deaths: 2,291 (45%) in 1995, compared with 1,882 (47%) deaths in 1992. The 20–59-year age group had the second highest number of deaths with 1,797 (35%) in 1995, compared with 1,416 (35%) deaths in 1992. In 1995, there were 737 (14.5%) deaths among children under age 5, up from 488 (12.2%) deaths in 1992, ranking this group third in number of deaths.

SPECIFIC HEALTH PROBLEMS

Analysis by Population Group

Health of Children

According to the Health Statistics Unit (Ministry of Health), there were 18,360 live births in 1995, of which 15.3% had low birthweight (<2,500 g). Of the 72,740 children under 5 years old who enrolled at clinics in 1996, 13,215 (18.2%) were assessed as moderately malnourished at least once during the year. The percentage of moderately malnourished children under 1 year of age was 21%. The percentage for children 1–2 years old, 3–4 years old, and 4–5 years old were 17%, 17%, and 12%, respectively. The number of children diagnosed as severely malnourished was 683 (less than 1%), with a rate of 2% for infants under 1, 1% for children 1–2 years old, and less than 1% for children 2–5 years old. A 1996 survey completed by the Ministry of Health assessed vitamin A, beta-carotene, iron, and iodine status in the population. The nutritional status of 288 children 0–4 years old was assessed and 34 (11.8%) of the children showed levels of undernourishment and stunting, and only 3 (1%) of the children were overnourished.

In 1996, of the 17,726 infants attending clinic at three months, 5,844 (33%) were breast-fed exclusively, 9,910 (56%) were partially breast-fed, 1,246 (7%) had stopped breast-feeding, and 611 (3.5%) were never breast-fed. The breast-feeding status of 1% of the children was unknown. Clinical data for 1995 showed that 30.5% of infants were being fully breast-fed at three months, with prevalence ranging from 18% in Region 4 (East Coast) to 79% in Region 9.

In 1995, the stillbirth rate was 22.9 per 1,000 total births. The perinatal mortality rate was 36.9 per 1,000 live births, while the neonatal mortality rate was 17.5 per 1,000 live births.

Between 1992 and 1996, vaccination rates for BCG, DTP, OPV, measles, and MMR were above 80% in most cases. In 1996, BCG coverage was 88.4%, DTP coverage was 83%, and OPV3 coverage was 83%. Measles vaccination, which was replaced by MMR in 1996, had a 1995 coverage rate of 84.1%. Special efforts were made in 1995 and 1996 to introduce MMR in line with measles reduction activities in the Caribbean. Introduced in late 1995, MMR coverage in 1996 was 96%, up from 76.7% in 1995.

For the 0–4-year-old age group, the five leading causes of illness treated at reporting clinics during 1996 were: acute respiratory infections, with 12,975 cases (43.2% of total cases); worm infestation, with 3,506 (11.7%) cases; diarrheal diseases, 2,689 (9%) cases; scabies, 1,036 (3.5%) cases; and accidents and injuries, 844 (2.8%) cases. Together, these five cause groups accounted for 70.2% of all cases treated in 1996.

In 1995, there were 736 deaths in the 0–4-year-old age group, compared with 649 deaths in 1994, and 488 deaths in 1992. The five leading causes of death for this age group in 1995 were: certain conditions originating in the perinatal period with 277 deaths (representing 37.6% of the deaths of this age group); intestinal infectious diseases, with 169 deaths (23%); other diseases of the respiratory system, 69 deaths (9.4%); congenital anomalies, with 57 deaths (7.7%); and nutritional deficiencies, with 38 deaths (5.2%). The top five causes were responsible for 610 or 82.9% of the 736 deaths in 1995, 532 (82%) deaths in 1994, and 348 (85.5%) deaths in 1992. Females accounted for 314 (42.7%) deaths in 1995, compared with 258 (48.5%) deaths in 1994, and 204 (58.6%) deaths in 1992.

The primary school-age population (5–9 years old) comprises approximately 11% of Guyana's population. In 1995, there were 41 deaths in this age group, compared with 43 deaths in 1994, and 22 deaths in 1992. The five leading causes of death in the 5–9-year-old age group in 1995 were: "other accidents," including late effects, with 7 deaths (representing 17.1% of deaths in this age group); "other violence," 6 deaths (14.6%); congenital anomalies, with 4 deaths (9.8%); diseases of the nervous system, with 3 deaths (7.3%); and accidental poisoning, with 3 deaths (7.3%). Together these five causes were responsible for 23 (56.1%) deaths in 1995. Females in this age group accounted for 18 (43.9%) deaths in 1995, compared with 18 (41.9%) deaths in 1994, and 7 (31.8%) deaths in 1992.

Health of Adolescents

Adolescents in the 10–14-year-old age group comprise 12% of the population, and those in the 15–19-year-old age group comprise 11.5%.

In 1995, there were 29 deaths among 10–14-year-olds, compared with 31 deaths in 1994, and 39 deaths in 1992. The five leading causes of death for this age group in 1995 were: "other violence," with 9 deaths (representing 31% of deaths for the group in 1995); "other accidents," including late effects, 5 deaths (17.2%); traffic accidents, 3 deaths (10.3%); infectious intestinal diseases, 2 deaths (6.9%); and diseases of pulmonary circulation, 1 death (3.5%). The five leading causes were responsible for 20 deaths (68.9%) in 1995, 14 deaths (45.3%) in 1994, and 9 deaths (23%) in 1992. Females accounted for 7 deaths (24.1%) in 1995, compared with 14 (45.2%) in 1994, and 20 (51.3%) in 1992.

In 1995, there were 97 deaths in the 15–19-year-old age group, compared with 71 deaths in 1994, and 67 deaths in 1992. The five leading causes of death in this group in 1995 were: "other violence," with 16 deaths (representing 16.5% of

deaths in this age group); "other accidents," including late effects, with 14 (14.4%) deaths; suicide and self-inflicted injury, with 10 deaths (10.3%); transport accidents, with 7 deaths (7.2%); and diseases of blood and blood-forming organs, with 6 deaths (6.2%). The top five causes were responsible for 53 or 54.6% of the 97 deaths in 1995, 38 (53.6%) in 1994, and 25 (37.3%) in 1992. Females accounted for 40 deaths (41.2%) in 1995, 30 (42.3%) in 1994, and 32 (47.8%) in 1992.

The five leading causes of illness treated in the 15–19-year age group at reporting clinics during 1996 were: acute respiratory infections, with 19.8% of total cases; accidents and injuries, 12.5% of the cases; malaria, 5.5%; worm infestation, 3.3%; and diarrheal diseases, 3.0%. Together these five cause groups accounted for 44.1% of all cases treated in 1996 and 42.8% of all cases treated in 1995. "Symptoms, signs and ill-defined or unknown conditions" accounted for 16.4% of the cases in 1996 and 16.6% in 1995.

Health of Adults

In 1996, of 17,496 women receiving prenatal care for the first time during a pregnancy, 11% were under 15 years of age, 10% between 15 and 17 years old, 81% between 18 and 34 years old, and 7% were 35 years and older. Of these, 25% of the women had 0 parity, 59% had a parity of 1–4, and 16% a parity of 5 or higher. Only 32% of the women sought care during the first 20 weeks of pregnancy, 61% had been pregnant for 20 weeks or more, and for 7%, the length of gestation was unknown. Of 15,856 women who received prenatal care for the first time during a pregnancy, 14% had had an abortion, 14% had had more than one abortion, 68% never had an abortion, and 4% would not give any information. Of the 1,869 women with high-risk conditions diagnosed or identified for the first time during a pregnancy, 29.2% had high blood pressure, 18.1% tested positive for syphilis, 1.7% tested positive for sickle cell, 4.9% had malaria, 14.7% had pre-eclamptic toxemia, 5.4% had diabetes, and 26% had conditions classified as "other."

In 1995, women under 20 years of age accounted for 3,786 (20.6%) of the 18,360 live births, while women under 16 years old accounted for 102 (0.6%).

The four leading causes of maternal mortality were toxemia of pregnancy; hemorrhage of pregnancy and childbirth; complications of the puerperium; and other complications of pregnancy (excluding abortion), labor, and delivery. Together, these four causes were responsible for 28 deaths in 1995, 22 deaths in 1994, and 9 deaths in 1992.

The maternal mortality rate among admissions in 1996 at Georgetown Public Hospital was 148 per 100,000; in 1995 it was 201 per 100,000, and in 1994, 310 per 100,000. The signif-

icant reduction in maternal deaths may be attributed to more timely recognition of life-threatening illness by medical staff as a result of ongoing training. There has also been a reduction in hospital staff turnover in the past three years.

Of the 12,603 clients attending family planning services for the first time in 1996, 5,469 (43%) used oral contraceptives; 479 (4%), IUDs; 1,313 (10%), condoms; and 990 (8%), other methods. In 1996, 758 abortions were performed at Georgetown Public Hospital.

The Guyana Responsible Parenthood Association, a non-governmental organization that provides sex and reproductive health services with support from several international donors, has clinics in Georgetown and several regions. It had 183 new clients for its Pap test service introduced in September 1996.

For the 20–64-year-old age group, the five leading causes of illness treated at outpatient departments of reporting clinics were: acute respiratory infections, hypertension, accidents and injuries, arthritis, and diabetes mellitus. Together, these five conditions accounted for 52% of all cases treated in 1996 and 45.2% of all cases treated in 1995. Symptoms, signs, and ill-defined or unknown conditions represented 15% of total cases in 1996 and 13.7% of cases in 1995.

The three leading discharge diagnoses in 1995 for the Georgetown Public Hospital were normal delivery (18% of total discharges), direct obstetric causes (7.4%), and abortions (3.9%).

In 1995, there were 1,797 deaths in the 20–59-year-old age group, compared with 1,526 deaths in 1994, and 1,416 deaths in 1992. In 1995, the five leading causes of death in the 20–59-year-old age group were: endocrine and metabolic diseases, 285 deaths (15.9%); ischemic heart disease and cerebrovascular diseases, each accounting for 173 deaths (9.6%); diseases of other parts of the digestive system, 165 deaths (9.2%); and diseases of pulmonary circulation, 111 deaths (6.2%). Together, these five causes were responsible for 50.5% of the deaths in 1995 and 49.6% of deaths from defined causes in 1995, 43% of deaths in 1994, and 36.7% of deaths in 1992. Females accounted for 35.4% of deaths in this age group in 1995 compared with 37.6% in 1994, and 35.8% in 1992.

Health of the Elderly

Persons 60 years and over, of whom 52.7% are female, represent 5.9% of the population. Of these older adults, 20,127 (20.5%) were National Insurance Scheme pensioners in 1996, compared to 17,559 (19.6%) in 1992.

For the age group 65 years old and older, the five leading causes of illness treated at reporting clinics in 1996 were: hypertension (26%); arthritis (11.6%); acute respiratory infec-

tions (9%); diabetes mellitus (9.6%); and accidents and injuries (4%). Symptoms, signs, and ill-defined or unknown conditions represented 10.8% of total cases in both 1995 and 1996.

In 1995, there were 2,291 deaths in the 60 years and over age group, 1,939 deaths in 1994, and 1,882 in 1992. The five leading causes of death for this age group were: cerebrovascular disease, with 515 deaths (22.5% of deaths in 1995); ischemic heart disease, 331 deaths (14.5%); diseases of pulmonary circulation and other forms of heart disease, 253 deaths (11%); endocrine and metabolic disease, 179 deaths (7.8%); and other diseases of the respiratory system, 172 deaths (7.5%). The top five causes were responsible for 63.3% of the deaths in 1995, 63.7% in 1994, and 60.8% in 1992. Females accounted for 48.7% of the deaths in 1995 compared with 48.1% in 1994, and 46.3% in 1992.

Family Health

According to data in the 1993 Household Income and Expenditure Survey, females headed 29.5% of households. The proportion is much higher in the depressed urban areas than in the rural areas. Afro-Guyanese women account for approximately 50% of all female-headed households, compared with East Indians (35.2%) and Amerindians (2.6%).

According to the 1996 Guyana Human Development Report, the increased incidence of female-headed households can be attributed to several factors, including: high rates of migration, which contribute to a breakdown in social mores and familial ties; the inability of the majority of the population to earn enough to maintain a domestic unit; higher divorce rates; and an increase in the number of women in the labor force, providing them with a greater degree of independence from male support. Approximately half (51.8%) of women heading households report their main activity as home duties. Women are strongly represented among the category of working poor, employed as household help, manual labor, and members of the nonprofessional ranks of the public services. It is therefore likely that many female-headed households find it difficult to afford the food, housing, medical supplies, and other inputs that contribute to good health.

Workers' Health

In 1995, based on information compiled by the Ministry of Health and the National Insurance Scheme, among employees (aged 16–59) registered by sex and average age, it is estimated that 44% of the insured labor force was female compared with 44.8% in 1992. Of the self-employed registrants, 47.4% were female in 1995 compared with 27.8% in 1992.

According to Ministry of Labor, Occupational Health, and Safety statistics, there were 3,848 reported industrial accidents in 1996. Of the accidents, 90% occurred in the agricultural sector; manufacturing accounted for 7%; mining, for 1.7%; and forestry, construction, communication, commerce, and electricity, for 1.3%. The 1996 figure represents a 26% reduction from the 5,174 accidents in 1995 and a decrease of more than 50% from the 1993 figure of 8,383. Despite the decrease in total accidents, the number of fatalities increased substantially; there were 11 fatalities in 1996, compared with 5 in 1995, and 8 in 1993. Only 3 of the 11 fatal accidents in 1996 were related to agriculture. Mining accounted for two accidents, commerce for two, electricity, gas, and water for one, and communications for one.

Health of Indigenous Populations

The Amerindian population is estimated to represent 6.81% of the total population and comprise most of the population in the remote interior of Regions 1, 8, 9, and a significant portion of Region 7. They have the highest incidence of poverty, with approximately 85% falling below the poverty line. The geographic isolation of many of the communities poses major problems in achieving equitable access to both health and educational services.

Malaria, tuberculosis, diarrhea, and respiratory infections are the leading forms of morbidity among the Amerindian population. By 1992, it was estimated that one-third of the Amerindian population was afflicted with malaria, with 60% of the cases attributable to *Plasmodium falciparum*. Diarrheal diseases affect the entire population, especially younger children. The prevalence of this disease stems primarily from contaminated water sources because of the lack of latrines, persistent flooding in the riverine areas, and inadequate methods of waste disposal.

In 1992, there were 556 cases of cholera, resulting in eight deaths in Guyana. These cases occurred among the Amerindians in the northwestern province that borders Venezuela. Environmental conditions and movement across borders accounted for the spread of the disease.

Analysis by Type of Disease

Communicable Diseases

Vector-Borne Diseases. In 1996, there were no cases of yellow fever, dengue, Chagas' disease, or schistosomiasis reported in Guyana, although vectors for all these diseases are present.

In 1996, malaria was the second leading cause of morbidity in the country, with 34,075 cases reported, or 44.2 cases per

1,000 population. In 1995, the number of reported cases was 59,311, or 77 cases per 1,000 population, as compared to a rate of 52.3 cases per 1,000 population in 1992. The percentage of positive slides was 13% in 1996, 20.4% in 1995, and 24.9% in 1992.

In 1996, *P. falciparum* accounted for 52.7% of cases, and 50% of cases in 1995, compared with approximately 60% of cases in 1992. The main vector is *Anopheles darlingi*. Males account for approximately 70% of the cases annually, reflecting the link between the disease and occupations in gold and diamond mining and logging.

Region 1, which was the most seriously affected during the 1988–1992 period, continued to be the most affected in 1995, accounting for 35.6% of reported cases. However, in 1996 Region 1 accounted only for 16.5% of the cases reported, surpassed by Regions 8 and 9, with 20.3% and 26.2% of the cases, respectively. There were 37 malaria deaths reported in 1995 (65% males) and 23 deaths (61% males) in 1992.

Vaccine-Preventable Diseases. Since 1991, an Expanded Program on Immunization (EPI) was established to report the prevalence of rubella and has shown yearly improvement. In 1996, 166 cases of rash and fever were reported in Guyana, of which 77% were confirmed as rubella either by laboratory or epidemiologically. In the first quarter of 1997, of the 69 cases of rash and fever reported, 51% were confirmed as rubella. A retrospective study completed for the years 1992–1996 showed 15 congenital rubella syndrome (CRS) compatible cases and 1 serologically confirmed case of CRS in 1996.

Regarding other vaccine-preventable diseases, measles has not been detected since 1992; yellow fever has not been reported since the 1970s; whooping cough was last reported in 1991; there have been no cases of neonatal tetanus reported since 1988; and no cases of poliomyelitis have been reported in recent years. Two cases of tetanus were reported as of mid-year 1997.

Cholera and Other Intestinal Diseases. In an outbreak of cholera, 556 cases were reported between November 1992 and early January 1993. No further cases of cholera have since been reported in Guyana. Vigilance has increased in the territories bordering Venezuela, where outbreaks continued to be reported in 1996 and 1997. In 1995 there were 257 deaths from intestinal infections, 8 of which were due to typhoid fever, 4 to amebiasis, and 245 classified as “other and ill-defined intestinal infections.” In 1994, there were 203 deaths from intestinal infections, of which 10 were due to typhoid and 193 classified as “other and ill-defined intestinal infections.”

Chronic Communicable Diseases. Tuberculosis cases have risen from 296 in 1995 to 303 in 1996 (38.27 per 100,000

to 40.19 per 100,000). Although the number of cases increased in 1996, the number of cases identified by sputum analysis has decreased because the service was unavailable in some areas. In Region 4, the major urban center in the country, where 52.98% of cases were found, only 11.8% were confirmed by sputum analysis, 73.5% were diagnosed by chest radiographs, and 3% were identified by pathological methods.

Major risk groups for tuberculosis are Amerindians, HIV-positive persons, the elderly, and young adults. In 1996, Afroguyanese accounted for 40.4% of the cases and Amerindians accounted for 24.2%.

In 1996, 32 deaths due to tuberculosis were recorded at Georgetown Public Hospital and the chest clinic, compared with 43 reported deaths in 1995, and 29 deaths reported in 1994.

In 1996, there were 21 new leprosy patients (13 males and 3 females), compared with 48 (28 males and 20 females) new patients in 1992. The incidence per 10,000 population dropped from 0.6 in 1992 to 0.3 in 1996. Two leprosy deaths were recorded in 1995 (one male and one female) and two in 1994 (one male and one female).

Acute Respiratory Infections. Acute respiratory infection was the leading cause of illness seen at outpatient departments in 1996. It was the leading cause of morbidity in the 0–19-year-old age group, the second leading cause in the 20–44-year-old age group, and the third leading cause among persons 65 years and older. Acute respiratory infections accounted for 50% of illnesses diagnosed in infants under 1 year of age and for 39% of illnesses in children 1–4 years old.

Rabies and Other Zoonoses. A rabies outbreak in cattle was identified in Region 3 in August 1996, and 45 cases (deaths) were confirmed. A vaccination campaign was conducted and 500 animals were vaccinated. There has been no rabies in dogs or humans. In 1996, 20 cases of equine encephalitis in Region 6 were diagnosed based on clinical signs and symptoms. A vaccination program was carried out in the affected area.

AIDS and Other STDs. Between 1987 and 1995 there were 1,241 reported cases of HIV and AIDS, of which 796 were AIDS cases. Females accounted for 34.4% of the cases. In 1992 there were 162 AIDS cases, of which 55 (34%) were females; in 1994 there were 105 cases (46.7% female), and in 1995 there were 192 cases (42.2% female). Of those affected, 76.8% were under 39 years old. Region 4 accounted for 71.3% of the reported cases, with an incidence rate of 29.3 per 10,000 population. Region 10, with 7.1% of the cases (a rate of 22.2 per 10,000 population), had the second largest prevalence rate. Of the cases reported since 1989, 45% were persons

whose major risk factor was heterosexual contact. This population increased to 77.8% in 1992 and to 85% in 1995. In 1995 there were 132 reported AIDS deaths, of which 48 (36.4%) were female, an increase from 75 deaths (36% female) in 1994. Deaths from AIDS-related complex decreased from 31 (32.3% female) in 1994 to 23 (30.4% female) in 1995. Up to the end of 1995, the National Blood Transfusion Service had screened 20,472 units of blood for HIV and 275 units (1.34%) tested positive. The seroprevalence of HIV among blood donors increased to 1.6% in 1992 but dropped to 1.5% in 1995 with no discernible trend in the intervening years. The lowest seroprevalence between 1989 and 1995 was 0.9% (in 1989) and the highest was 1.6% (in 1992 and 1994).

A survey was conducted by the Ministry of Health in 1995 of pregnant women who attended two health centers in Georgetown for the first time. Of the 70 samples collected, five (7.1%) tested HIV-positive. In a survey conducted in 1989 of 51 commercial sex workers, 22 (43.1%) tested HIV-positive. In a second sample of 108 sex workers in 1993, 27 (25%) tested HIV-positive.

In 1995, the following sexually transmitted diseases were diagnosed: 625 cases of gonorrhea (85.4% male); 325 cases of syphilis (85.5% female); and 856 cases of nongonococcal infections. The figures underestimate the prevalence of STDs in the country since they only include persons treated at the Genitourinary Medicine Clinic at the Georgetown Public Hospital. There were eight reported deaths from venereal diseases in 1995; five were the result of syphilis.

Noncommunicable Diseases and Other Health-Related Problems

Nutritional Diseases and Diseases of Metabolism. A 1996 survey by the Ministry of Health assessed vitamin A, beta-carotene, iron, and iodine status in the population. Of the 269 pregnant women and 438 adults aged 15–30 tested for hemoglobin, 52% and 42.2%, respectively, were found to have deficient hemoglobin levels. Severe iodine deficiency in the 5–14-year-old age group was higher in females (3.9%) than males (2.5%), while 2.1% of the 285 pregnant women tested had severe iodine deficiency.

In 1995 there were 65 reported deaths from nutritional deficiencies, compared with 51 deaths in 1994. In 1995, 37 of the deaths occurred in infants under 1 year old.

Cardiovascular Diseases. In 1995, cardiovascular diseases accounted for 1,966 deaths (38.6% of all deaths), compared with 1,650 deaths (37.7%) in 1994, up from 1,613 (40.3%) in 1992. Cerebrovascular diseases were responsible for 699 deaths (13.7% of all deaths) in 1995, 593 (13.6%) deaths in 1994, and 640 (16%) deaths in 1992. Ischemic heart

disease was responsible for 518 deaths in 1995, 456 deaths in 1994, and 386 in 1992. Diseases of pulmonary circulation and other forms of heart disease were responsible for 373 deaths in 1995, 345 in 1994, and 288 deaths in 1992. Hypertensive disease was responsible for 208 (4.1%) deaths in 1995, 193 (4.4%) deaths in 1994, and 252 (6.3%) deaths in 1992. Atherosclerosis was responsible for 22 deaths in 1995, 27 deaths in 1994, and 19 deaths in 1992. Rheumatic fever and rheumatic heart diseases were responsible for 9 deaths in 1995, 13 deaths in 1994, and 8 deaths in 1992. Cardiovascular diseases accounted for 992 (50.5%) male deaths and 974 (49.5%) female deaths in 1995.

Malignant Tumors. Malignant tumors were responsible for 319 deaths in 1995 (156 males and 163 females). Malignant neoplasms of digestive organs and peritoneum accounted for 110 of those deaths, and neoplasms of genitourinary organs accounted for 106. Together these two groups accounted for 67.7% of deaths due to malignant tumors in 1995, 66.1% in 1994, and 67.1% in 1992. Women accounted for 27 of the 33 deaths due to neoplasms of bone, connective tissue, skin, and breast in 1995, 21 of the 22 deaths in 1994, and 21 of 25 deaths in 1992. Statistics from the Georgetown Public Hospital indicate that in 1996 there were 65 discharges attributed to malignant tumors, of which 44 were females. Females accounted for 14 of the 16 discharges due to neoplasms of bone, connective tissue, skin, and breast, and for 20 of the 21 discharges for malignant neoplasms of genitourinary organs.

Accidents and Violence. Accidents and violence accounted for 525 (10.3%) of reported deaths in 1995, up from 474 (10.8%) deaths in 1994. Males accounted for 78.2% of those deaths in 1995. There were 96 deaths due to suicide and self-inflicted injuries, of which males accounted for 74 deaths (77.1%) in 1995 and 91 deaths (69% male) in 1994. There were 42 homicide deaths, of which 86% were male in 1995, down from 49 deaths (73% male) in 1994. In 1995, there were 54 deaths due to motor vehicle traffic accidents (83.3% male), compared with 23 deaths (78% male) in 1994. Statistics from the Police Department suggest that these figures underestimate the number of deaths due to violence and injuries.

Behavioral Disorders. Data on the prevalence of mental health problems in Guyana are not available. However, in April 1994, of the 272 patients at the Psychiatric Hospital in Fort Canje, Berbice, 150 (55.1%) were men and 122 (44.9%) were women. The majority suffered from schizophrenia, while the rest were destitute with or without pathology. In 1996, mental disorders ranked eighth among the 10 most common causes of discharges from Georgetown Public Hospital, with 400 discharges for the year.

Oral Health. The national dental program is essentially a tooth extraction service. It does not have the materials to offer more advanced care. In 1996, the service reported 86,782 extractions and 208 fillings. The number of prophylaxis decreased consistently from 1993 to 1995, but dramatically increased in 1996 when 5,102 prophylaxis were reported, compared with 867 in 1995, 3,012 in 1994, and 1,270 in 1993.

Natural Disasters and Industrial Accidents. The most recent major disasters in Guyana are associated with human error rather than with natural phenomena. This prompted the Government to re-examine the overall management of the environment and disaster management, and to establish an Environmental Protection Agency.

In August 1995, Guyana recorded its worst-ever environmental disaster when a breach occurred in the tailings pond used to store cyanide-laced water and waste at the Omai Gold mines. The Omai and Essequibo rivers were severely affected by the discharge, and many dead fish were sighted following the spill. By the time the breach was contained, 4.2 million cubic meters of tailings had escaped from the pond. Public reaction to news of the disaster was massive. According to the report of a Government-appointed inquiry commission, the contamination had both environmental and economic impacts.

In 1996, severe flooding due to extensive breaches in sea defense dams affected thousands of homes and farms in several communities in the upper Demerara and Upper Berbice regions. This resulted in damage to rice fields and other crops, along with the death of cattle. There were no human deaths or major health emergencies created by the flooding, and the impact was primarily economic. A United Nations Development Program (UNDP) report on the flooding indicated that 9 of the 10 administrative regions were affected by heavy flooding as a result of high tides and rainfall, and poor or non-existent drainage. The Government announced a state of emergency in July 1996. International agencies, nongovernmental organizations, and foreign governments contributed to relief efforts.

RESPONSE OF THE HEALTH SYSTEM

National Health Plans and Policies

The 1994 version of the National Health Plan prepared by the Ministry of Health identifies and analyzes many of the problems facing the health care system, identifies priority areas of health care, and raises concerns that must be resolved in the course of establishing a national health policy. Malaria, sexually transmitted diseases, acute respiratory infections, vaccine-preventable diseases, and perinatal problems have

been identified as priorities. The next set of pressing problems includes malnutrition, accidents and injuries, diabetes, hypertension, dental caries, mental health, drug abuse, and skin conditions (primarily scabies among children). The plan defines objectives and targets for expanding primary health care, improving secondary and tertiary health care, and strengthening the management of the health sector.

The Ministry of Health, with the assistance of the Attorney General's Chambers, has embarked on a major revision of outdated health legislation.

Health Sector Reform

Proposals in the 1997 National Development Strategy addressing health sector reform emphasize health promotion. The strategies proposed to improve the physical, social, and mental health status of all Guyanese are to: promote a better home, work, and general living environment; ensure that health services are as accessible, affordable, timely, and appropriate as possible, given available resources; ensure that health standards are developed, implemented, monitored, and updated; empower individuals to take responsibility for their own health through health promotion and disease prevention; enhance health personnel effectiveness through continuing education, training, and management systems; invest and share responsibility with communities, organizations, institutions, and ministries; and collaborate with other countries.

Organization of the Health Sector

Institutional Organization

The institutions, organizations, agencies, and individuals involved in health care delivery in Guyana can be classified into seven broad categories: (1) Government Ministries—particularly the Ministry of Health and the Ministry of Public Works, Communication, and Physical Development; (2) Government agencies such as the National Nutrition Council, the Guyana Water Authority, and the Guyana Sewage and Water Commission; (3) quasi-public institutions such as the Guyana Sugar Corporation and the LINMINE and BERMINE bauxite companies, that provide health care services for employees and their dependents; (4) the National Insurance Scheme, to which all employed and self-employed persons are required to make contributions, a portion of which is used to cover some health benefits; (5) nongovernmental organizations, a variety of which are involved in health delivery; (6) a private sector that includes six private hospitals; a large number of private medical and dental practitioners, pharmacists, and traditional healers; and private insurance companies that

offer health insurance; (7) international donor agencies including the Inter-American Development Bank, The World Bank, the European Union, PAHO, and the United Nations Children's Fund.

Health services in the public sector are provided at five different levels. Levels I and II include health posts and health centers, Level III includes district hospitals, Level IV comprises regional hospitals, and Level V includes the Georgetown Public Hospital and specialty hospitals.

Organization of Health Regulatory Activities

The Ministry of Health is responsible for the regulation of health policies and legislation, the establishment and enforcement of standards for the delivery of health care and the protection of public health nationally, accreditation of all health facilities, identification of human resource needs in the health sector, development and placement of health personnel, and promotion of health leadership.

A Standards Unit was created in the Ministry of Health in 1991. However, only a few standards have been established to date and the lack of resources makes monitoring and enforcement difficult. There are numerous other entities with an interest in standards development and enforcement. These include the Guyana Medical Council, the Guyana Nursing Council, the Guyana Medical Association, the Guyana Nursing Association, the Public Service Union, private hospitals, the Pharmacy and Poison Board, the Guyana Pharmacy Association, the Private Hospital Inspection Board, the Central Board of Health, and the Government Analyst Department. Adequate mechanisms to ensure effective coordination of these agencies are, however, not in place.

Health Services and Resources

Organization of Services for Care of the Population

The Minister heads the Ministry of Health. Reporting to the Minister is the Permanent Secretary, who is the Chief Executive Officer of the Ministry. The Ministry is organized into three major sections, the heads of which report to the Permanent Secretary. These include the Chief Medical Officer, the Hospital Administrator of Georgetown Public Hospital, and Administrative Services, which oversee finances and personnel.

The Chief Medical Officer is responsible for the supervision and coordination of health service delivery. Five major divisions carry out this task: the Department of Disease Prevention and Control, the Regional Health Services, Standards and Technical Services, the Planning Unit, and the Health Ed-

ucation and Health Science Education Directorate. Several other agencies and organizations are also involved in health education activities. These include the health education divisions within Georgetown City Council, the Guyana Sugar Corporation, the Ministry of Labor, private sector firms, and a variety of nongovernmental organizations including church and community groups.

The Ministry of Health and the municipalities have retained responsibilities for traditional environmental health concerns, while a variety of agencies are responsible for monitoring the environmental health impacts relating to business and industry.

Tuberculosis Control. The mission of the tuberculosis program is to reduce the mortality, morbidity, and transmission of the disease until it no longer poses a threat to public health in Guyana. Case-holding posed the major challenge to the program in 1996. Even though supplies of drugs were adequate, only 38.3% of infectious tuberculosis cases reported from June 1995 to June 1996 completed the six-month treatment course, 43.1% defaulted during the first four months of treatment, while 16% remained on treatment after the six-month treatment period. This trend is unsatisfactory and steps are being taken in 1997 to introduce the Directly Observed Treatment Strategy (DOTS) in selected regions of the country in collaboration with community agencies.

Vector Control. The Vector Control Service is responsible for the control of malaria, filariasis, leishmaniasis, and dengue fever, and is the Ministry of Health's main device for the diagnosis and treatment of malaria in Guyana. The unit presently collaborates with the primary health care system. Activities accomplished in 1996 include passive case detection in Georgetown and at all population centers in the interior; the enhancement of diagnostic capabilities in Region 8 with the training of community health workers in malaria microscopy; and residual house spraying with DDT in areas of high malaria transmission to supplement the other activities.

Oral Health. The mission statement of the Oral Health Program aims to provide appropriate preventive, restorative, surgical, orthodontic, periodontal, endodontic, and prosthodontic dental care to the population through the National Health Service, utilizing both professional and para-professional staff. However, dental service work was almost exclusively focused on extractions. In 1997, the Government began the design of a preventive dentistry program with the support of various donor agencies. The European Union provided funding for a new facility for expanded dental service in Georgetown.

A National Oral Health Education Program for primary schoolchildren was launched in 1995. The program aims to

reduce the prevalence of oral diseases by increasing children's awareness of the importance of oral hygiene, emphasizing that they take responsibility for their own oral health.

The American Dental Association in collaboration with Health Volunteers Overseas and the Guyana Dental Association has scheduled a program that includes a national oral health survey, continuing education for dentists and dental nurses, and oral health education. With the assistance of the Ministry of Health's Planning Unit, a five-year and annual work program for dental services was developed.

Maternal and Child Health and Family Planning. The situation regarding maternal and child health and family planning in Guyana has been strengthened over the last three to four years. A manual outlining norms and standards for maternal and child health was prepared, drawing on the existing 1973 manual, the 1993 Maternal and Child Health Strategy for the Caribbean, and consultation with persons working in the field. The manual was introduced to the staff in 1996 in a series of workshops.

In 1995, a simplified and computerized maternal and child health data collection instrument was introduced, allowing data to be summarized in a timely manner and returned to the respective Regions for prompt intervention. Regional supervisors received training in the use and interpretation of these data and, in turn, trained local staff members.

In the area of family planning, there have been special efforts to increase the involvement of men. A number of seminars conducted across the country geared toward men were well received. The three nursing schools continue to train nurses in family planning. However, the impact of this training is reduced because many nursing graduates emigrate or join the private sector soon after completing their studies.

Expanded Program on Immunization. In 1996, an MMR vaccine follow-up campaign was conducted as part of the strategy to eradicate the indigenous transmission of measles. Between April and September 1996, 76,384 children aged 12 to 59 months were vaccinated with MMR.

In order to ensure adequate immunization coverage for EPI target diseases, community health workers in remote communities received additional training in administering vaccines to their community members, which they do on a monthly basis. Quarterly EPI evaluation meetings continue, where targets are assessed and achievements and constraints in the program are reviewed.

Nutritional Surveillance. Using clinic-based services, in 1996 the Nutritional Surveillance Program provided nutritional assessments, breast-feeding promotional activities by clinic staff, iron/folate supplements to pregnant women at-

tending prenatal clinics, and a supplementary feeding program targeting pregnant and lactating mothers. The National Breast-Feeding Committee coordinates the establishment of regional committees on breast-feeding promotion. The Committee also developed a national policy on breast-feeding practices, which was approved by the Cabinet in 1997. A school-feeding program provides a mid-morning snack at nursery and primary schools in the Regions. Other accomplishments included the production of a Nutrition Surveillance Bulletin.

Hospital Standards. A major achievement of the Standards Department in 1994 was the inspection of private hospitals for the first time in more than seven years. Recommendations with respect to licensing were made to the Minister of Health and a set of minimum standards for hospital operations were developed. During 1996 and continuing in 1997 steps were taken to establish a quality assurance program for the clinical laboratory and to enhance infection control monitoring. These services support the quality control unit at the Georgetown Public Hospital. Staff continuity remains as a problem, affecting the sustained improvement in setting and implementing standards.

Environmental Health. The Environmental Health Service has suffered from a consistent decline in the number of qualified environmental health officers over the past several years for reasons associated with the country's economic conditions. To address this problem, a cadre of persons was trained to a lower level of skill to assist environmental health officers in their work program. These environmental health assistants were taught basic field inspection and health education skills in a one-year training program. Two one-year programs have been conducted, with 29 graduates, 25 of whom are still employed with local government and other agencies.

Another persistent environmental health problem has been the management of solid wastes in Georgetown.

Veterinary Public Health. The Veterinary Public Health Unit is located within the Ministry of Health and its main areas of activity are food hygiene and protection, zoonoses prevention and control, and health education. Currently, food hygiene and protection covers seafood and poultry, but not red meat. In 1996, the Unit developed a Food Safety Plan of Action and prepared for the introduction of the HACCP system in the fish and seafood industry. During the early part of 1997, surveillance activities for foot-and-mouth disease, rabies, and bovine tuberculosis were carried out in various regions.

Health Promotion and Community Participation. The Ministry of Health recognizes health education and promo-

tion as the strategic approach for the planning and delivery of health care in Guyana. To this end, the Directorate for Health Education and Promotion was proposed for inclusion in the new structure of the Ministry of Health, which is awaiting approval from the Public Service Ministry. The Ministry relies heavily on resources from international agencies (PAHO and UNICEF) for activities that include training of health workers and community groups in using health education and promotion.

With funds from the World Bank, the Ministry of Health embarked on a Primary Health Care Project in three regions that focuses on health development through community participation and action. In other regions, community organizations are being developed to assist in reducing the incidence of malaria and tuberculosis. In all of these areas, community response has been enthusiastic.

The primary health providers in the Amerindian communities are the community health workers, individuals who complete an 18-month training program conducted by the Ministry of Health. Their efforts are supported by visiting services from medex (paramedical personnel) and, occasionally, physicians. The terrain, transportation, and supplies are constraints to optimum service delivery.

Programs for the Disabled. People with disabilities indicate that there has been very little advancement made in their socioeconomic situation over the past five years. Rehabilitation professionals and planners agree that while the demand is increasing, the availability of services is decreasing, especially at the secondary and tertiary levels where there is a shortage of institutional and specialist care.

A serious access problem faces persons with disabilities in rural areas, since rehabilitation institutions are concentrated in the capital and larger towns. Several agencies provide aspects of rehabilitation for children with disabilities; services for adults are provided through the physiotherapy service of the Ministry of Health and the Guyana Society for the Blind.

At the community level, the nongovernmental, externally funded Guyana Community-Based Rehabilitation Program has reported success in widening access to basic but essential rehabilitation through service delivery to children and adults with disabilities. The program, which uses volunteers for the delivery of services, has gained the active participation of the family and wider community in the rehabilitation process, thus ensuring the utilization of all available community resources and sustainability of programs. Inherent in such a program is the need for an effective referral system between the community and other levels of rehabilitation care.

To address the inadequate supply of rehabilitation professionals, in 1997 the Ministry of Health initiated a training program for rehabilitation assistants, a new category of mid-

level, multi-disciplinary technicians. The training program will include components on speech, occupational, and physical therapy. The assistants will work under the supervision of professionals in clinics as well as in the community.

A draft National Policy on the Rights of People with Disabilities in Guyana was submitted to the Government for consideration. This document was formulated using United Nations Standard Rules of Equalization of Opportunities for Persons with Disabilities as a guide.

Organization and Operation of Personal Health Care Services

Health care services are delivered across five different levels. There are 39 health posts found in Regions 1, 2, 7, 8, 9, and 10 that provide mainly health promotion and preventive care in remote areas. There are 194 health centers throughout the country that provide mainly preventive care, as well as some promotion, curative and rehabilitative care. Eighteen district hospitals with 420 beds provide basic inpatient and outpatient care along with selective diagnostic services. There are four regional hospitals with 717 beds in Regions 2, 3, 6, and 10. They provide general inpatient and outpatient services, diagnostic services, and specialist services in obstetrics and gynecology, general medicine, general surgery, and pediatrics. The Georgetown Public Hospital has 601 beds and provides a wide range of diagnostic services and specialist inpatient and outpatient referral services. It is intended to provide high-cost specialized treatment and sophisticated diagnostic tests. There are three specialty hospitals including a psychiatric hospital in Berbice, a leprosarium at Mahaica, and a geriatric hospital in Georgetown. In addition, there are six private hospitals in Georgetown and five company hospitals located in Regions 1, 4, and 10.

Inputs for Health

In the public sector, drugs and medical supplies are purchased from a variety of sources including UNIPAC, a unit of UNICEF that provides drugs and medical supplies to governments at competitive prices. The Guyana Pharmaceutical Corporation produces some drugs and medical supplies for the local market. Private procurement and distribution of drugs and medical supplies is also extensive.

The Government Analyst Department must certify pharmaceuticals entering the country for use in both the public and private sectors. The Ministry of Health uses the Caribbean Regional Drug Testing Laboratory (established to allow Member States of CARICOM to benefit from cost-effective arrangements) to test the supplies it purchases. Distribution is done by the Ministry of Health or Regions, or it is con-

TABLE 1
Distribution of human resources by category of service, Guyana, 1997.

Health occupation	Central	Regional	Quasi-public	Municipal	Private	Total
Physician	—	43	—	—	—	43
General medical officer	50	—	6	1	26*	83
Consultant	9	—	—	—	18*	27
General dentist	9	9	—	—	14*	32
Dental surgeon	—	—	—	—	—	—
Pharmacist	8	7	3	—	111*	129
Professional nurse ¹	293	312	25	12	115*	757
Other health professionals ²	48	8	2	—	30*	88
Midwife (12-month training program)	48	109	5	—	3	165
Medex (18-month training program)	8	31	24	—	1	64
Health technician ³	8	3	—	—	9	20
Nursing auxiliaries ⁴	80	—	18	1	64	163
Other auxiliaries ⁵	112	111	—	4	8	235
Nursing assistants	245	267	20	—	10	542
Total health personnel	918	900	103	18	409	2,348
Administration and general services	32	10	2	—	9	53
General service and administrative technicians ⁶	131	30	3	—	124	288
General service and administrative auxiliaries ⁷	406	100	59	7	144	716
Total general service and administration	569	140	64	7	277	1,057
Total personnel	1,487	1,040	167	25	686	3,405

¹ Includes registered nurses, Registered Nurse/Registered Midwife, health visitors, public health nurses, and health service tutors.

² Includes physiotherapists, medical technologists, radiographers, and X-ray technicians.

³ Includes technicians (dispensers, multipurpose, orthopedic, biomedical) and physiotherapist assistants.

⁴ Includes nursing aides.

⁵ Includes assistants (dental, orthopedic, laboratory, dispenser, clinic) community health workers, and environmental health assistants.

⁶ Includes secretaries, receptionists, clerks, typists, office assistants, accountants, and statisticians.

⁷ Includes maintenance workers, drivers, porters, attendants, guards, maids, laundresses, cooks, seamstresses, and tailors.

tracted out to the private sector. Guyana has a draft National Drug Policy, but it has not been fully implemented.

A shortage of funds and human resources interrupts the supply of essential drugs, affecting both remote health facilities and Georgetown Public Hospital. On average, approximately 70% of essential drugs are stocked in the health centers and hospitals. In 1997, a revised essential drug list was introduced. The Ministry of Health is developing an essential drug list and a formulary for the Georgetown Public Hospital and other health facilities.

The cost and importance of drugs and medical supplies makes the availability of adequate storage facilities critical. However, there are not enough facilities in Guyana, and those that do exist are below standard.

Human Resources

Table 1 summarizes the distribution by category of health sector personnel.

Research and Technology

Guyana depends almost entirely on foreign imports for health technology. The development and maintenance of systems to monitor the quality, condition, location, and utilization of biomedical and other equipment are considered to be priorities. A preventive maintenance program is being established with the assistance of external agencies.

Expenditures and Sectoral Financing

Since 1990, government allocations to health have increased. In 1996, G\$ 2.88 million (US\$ 20.5 million) was spent on health, compared to G\$ 0.4 million (US\$ 10.1 million) in 1990—more than a sixfold increase in six years. In 1996, health expenditures accounted for 6.3% of the national budget, compared with 8.3% in 1995, and 5.3% in 1992. For 1992–1995, the increase in health spending was due primarily to capital expenditures, which accounted for 42% of total expenditures in this period, compared with 17% in 1990. The increase resulted from the construction of the Ambulatory Care, Surgical, and Diagnostic Center at Georgetown Public Hospital, and the 63% decrease in capital expenditures from 1995 to 1996 was due to the completion of this project.

Government health expenditure per capita also increased during recent years. While the figure amounted to G\$ 538 (US\$ 13.6) in 1990, it came to G\$ 3,741 (US\$ 26.56) in 1996. These figures are quoted in nominal prices, so part of the increase is attributable to inflation.

The inflation factor is largely eliminated when public health expenditures are seen in relation to GDP. In 1996, government health expenditures amounted to 3.45% of GDP, a decrease from more than 4% in previous years. In 1995, the figure was as high as 5.17%. Again, the relatively high figures for the years 1992 to 1995 can be explained by the capital costs of the construction at Georgetown Public Hospital. However, compared to the 1990 figure, estimated real levels of expenditures on health have still shown significant improvement, even when excluding the construction costs.

Traditionally, government and quasi-public institutions have been the dominant providers of health care in Guyana. In recent years, however, the decline in the quantity and quality of government services has made the independent private sector's contribution more important. In 1994, the private health sector comprised some 14 physicians with full-time practices. Approximately 15 others worked with the Ministry

of Health but also maintained part-time practices. In addition, there were some 20 physicians working full-time at six private hospitals, all located in Georgetown.

A new approach to health care financing, which includes the identification of user fees for certain services, is currently being designed by the Ministry of Health. Only three types of user fees are in place in the public health sector: fees for physiotherapy services, laboratory pregnancy tests, and rooms in private wards. Fees for rooms have been recently adjusted based on the amount private hospitals charge for a similar room, but fees for physiotherapy and pregnancy tests have not been adjusted in years, and do not reflect true costs.

In 1996, 30.85% of government health expenditures were used on drugs and medical supplies. In the 1997 budget, 30.96% has been earmarked for this expense. In theory, this amount could meet national needs, but due to inefficient procurement and distribution systems, drugs and medical supplies are not reaching a large portion of the population.

External Technical and Financial Cooperation

The United Nations Development Program's contributions to the health sector from 1992 to 1996 amounted to US\$ 1,097,473. In 1996, the contribution was US\$ 269,141, distributed through the United Nations volunteers Multi-Sectoral Project. The focus of this project with respect to the health sector is to provide technical assistance to enhance health service delivery as well as to strengthen the capacity of national counterparts working in the health sector. The project financed the contracts of 12 specialists in the areas of pediatrics, orthopedic surgery, anesthesiology, obstetrics and gynecology, general surgery, ophthalmology, speech therapy, and quality assurance. Some of the specialists are providing formal training at the School of Medicine, University of Guyana. A number of nurses have also benefited from training in midwifery and ophthalmic and pediatric nursing.