BAHAMAS

GENERAL SITUATION AND TRENDS

Socioeconomic, Political, and Demographic Overview

The Commonwealth of the Bahamas is an archipelago of some 700 islands with a total land mass of 5,382 mi^2 scattered over 80,000 mi^2 of the Atlantic Ocean. Over 95% of the population lives on just seven islands. The two major population centers are Nassau, the capital, located on New Providence, and Freeport, located on Grand Bahama. The other populated islands and cays are called Family Islands. New Providence is the most densely populated island, with 2340.4 persons per mi^2. Only three other islands/island groups have population densities greater than 100 per mi^2. As of the 1990 census, New Providence accounted for 67.4% and Grand Bahama 16% of the population. The 1990 census showed an average household size of 3.8, with 3.9 in New Providence and 3.6 in Grand Bahama. Although there are areas where crowding is known to exist, this problem has not been quantified.

The Government's commitment to social development is evidenced by the fact that approximately 30% of the national recurrent budget is allocated to social sectors, with special attention given to education, health, and housing. The people enjoy universal access to health care, and basic services are available regardless of ability to pay.

Education is available to all segments of the Bahamian population and is compulsory to age 14 years. There are 213 schools in the country, 163 of which are in the public sector; total enrollment at the primary and secondary levels is about 61,500 and the teacher-to-student ratio is 1:18.

Tertiary education is provided at the Government-owned College of the Bahamas, which offers both associate's and bachelor's degrees in the arts and sciences. There are also a number of privately run institutions that also offer associate degrees and are affiliated with tertiary educational institutions in the United States of America. Technical and vocational training is also available at the Bahamas Technical and Vocational Institute.

In the 1996–1997 recurrent budget, US$ 102,021,118 (13.3% of the total budget) was allocated to the Ministry of Health, representing a per capita expenditure of approximately US$ 359.[1] Although expenditure in the health sector has increased steadily between 1986 and 1995–1996, it has decreased as a percentage of the national budget from 15.6% to 13.6%.

As an independent unitary state within the British Commonwealth of Nations since July 1973, the Bahamas is governed as a parliamentary democracy based on the Westminster/Whitehall model, with a Governor General who represents Her Majesty the Queen, a bicameral legislature including an elected House of Representatives, and an independent judiciary. The Cabinet of Ministers is headed by a Prime Minister who is also a member of the legislature. Government business is carried out by ministries, headed by a minister (political) and permanent secretary (administrative), and by quasi-governmental institutions. The 1992 elections brought the first change of government in 25 years, and this same government was returned to power in 1997.

The wide geographic dispersion of the islands presents the Government with many logistical problems for the organization and delivery of services, including health care services. In response, a system of local government, which gives Family Islands/Districts greater control over the administration of governmental business in their communities, has been established. The Ministry of Health has also embarked on an initiative to bring management of the health services closer to the people by development of local health systems on three Family Islands—Andros, Eleuthera, and Long Island. If successful, this initiative will be extended to other islands on a phased basis.

Tourism, including tourism-related commerce, constitutes by far the major economic activity, accounting for over 50% of

[1] Since 1972 the exchange rate with the US$ has been 1:1.

the gross domestic product (GDP) and 60% of employment. Service industries (such as government services, tourism, banking, and insurance), fishing, and agriculture employ approximately 80% of the eligible labor force. Some 30.4% of workers are employed in community, social, and personal services, 13.5% in hotels and restaurants, 13.2% in wholesale and retail trading, and 7.4% in financial, insurance, real estate, and business services.

According to data received from the Department of Statistics, the overall unemployment rate in 1996 was estimated at 11.5%, down from a high of 14.8% in 1992. New Providence, with a 1996 rate of 11.9%, has the largest number of unemployed persons; in Grand Bahama the rate is 10.6%.

Economic recovery from the 1991–1992 recession began in 1993 and has continued. Output grew by 1% in 1995. That year, GDP was estimated at US$ 3,053 million (in 1990 dollars), having increased steadily since 1993 after declining between 1990 and 1992. The average growth rate in the period 1990–1995 was –0.5%. During the same period, GDP per capita fell from $12,291 to $11,059, for an average annual rate of change of –2.1%. With respect to health expenditure, in 1990 public expenditure was estimated at 2.63% of GDP, while private expenditure was approximately 2.20%.

The main objectives of underlying monetary and fiscal policies pursued by the authorities remain the maintenance of macroeconomic stability, improvement in all aspects of competitiveness, and stimulation of sustainable development by the private sector in the short and medium term. A key issue in the Bahamas is diversification of the economy, which is to be accomplished by improving intersectoral linkages between the tourism sector and the rest of the economy and by improving infrastructure in the Family Islands to promote their economic development. This initiative, which started in 1994—particularly with regard to roads, airports, the water and sewerage systems, and electricity—has started to pay dividends, as evidenced by increased foreign investment outside of New Providence and Grand Bahama.

The budget for 1996–1997 reaffirmed the Government's commitment toward consolidating the improvements achieved in economic and social conditions, implementing necessary institutional reforms, and maintaining a climate conducive to domestic and international investment.

Demographic Situation

The 1996 midyear population of the Bahamas was estimated at 284,000. About one-third of the population is under 15 years of age and about 5% is over 65. Annual population growth was estimated at 1.97% between 1980 and 1990, while urban growth was 2.35%. The crude rate of natural increase rose from 18.1 per 1,000 population in 1988 to 20.4 in 1992, then dropped steadily to 16.2 in 1995. At the time of the 1990 census the dependency ratio was 58.5; youths (under 15 years) accounted for 51.0 of that number and the elderly (65 and over), 7.5.

Life expectancy at birth has increased steadily, rising from about 60 years in the period 1950–1955 to approximately 73 years in 1990–1995 (76 years for females and 69 years for males).

From 1988 to 1992 the crude birth rate fluctuated between 22.7 and 25.6 per 1,000 population. Thereafter, the rate fell steadily to 22.4 in 1995. The pattern of fertility has remained similar in the years between 1976 and 1995, with fertility being highest in the 20–24 and 25–29 age groups. There has been a marked decrease in fertility rates in these age groups in the last decade. However, in the 15–19 age group, which has the third highest fertility, and in the 40+ age group, there has been no change. The only group showing an increase is the 35–39 age group, probably because some women are opting to delay pregnancy in order to pursue a career.

Reliability of Vital Statistics Data

The registration of births, deaths, and marriages in the Bahamas is required by law. By statutory requirement, births must be registered within 21 days of the event. For deaths, a medical certificate of death giving details of direct and underlying causes must be provided by a physician (or, on rare occasions and in remote areas, a nurse) and submitted to the Registrar of Deaths before burial can take place. This officer registers the death and issues a death certificate.

An ongoing assessment of the coverage of the birth registration system is possible because the birthing facilities throughout the country, including private and public hospitals and clinics, routinely provide the Ministry of Health with reports of all births occurring in their establishments. These reports serve as the basis for an estimate of the actual number of births. This assessment revealed an underregistration percentage that has steadily increased to a high of 33% in 1995. It also allowed the necessary adjustments to be made to the basic health indicators derived from data on births, such as neonatal and infant mortality rates. The validity of this procedure is supported by studies that have shown that no more than 1% of the births in the country occur outside a health facility or without the knowledge and probable attendance of trained health personnel, who file their statistics on all known births with the Ministry of Health.

The data on stillbirths, particularly for 1991 and 1993, suggest that the registration system has less-than-satisfactory coverage, probably because of failures in documentation and in adherence to definitions.

In the Bahamas, current practices allow duplicate cause of death coding for all deaths occurring in government hospitals: first by medical records staff, and second by the staff of the Department of Statistics, the agency officially responsible for the publication of death statistics. For coding purposes, the Department of Statistics uses copies of the medical certificates of death obtained from the Department of the Registrar General, whereas the hospital staff have access to the medical records in addition to the certificates. Coding at these institutions is completely independent, with no cross-checking. National cause of death statistics are based on the coding of the Department of Statistics.

A study to assess the quality of mortality data was conducted in 1996 using 1994 data from the Princess Margaret Hospital, where upward of 80% of all medical certificates of death originate. Results indicated that underregistration, estimated at less than 5%, was not a major problem. However, the system for coding and processing death data needs to be improved. When the International Classification of Diseases (ICD) codes assigned to deaths occurring in or passing through the Princess Margaret Hospital were compared to the codes applied by the Department of Statistics, the agreement was only 65.7% for three-digit codes and much lower for the more precise four-digit codes. As a result of this study, it was recommended that workshops for physicians and other staff on the proper completion of the medical certificates of death be held (such a workshop was conducted in the first quarter of 1997), and that the institutions cross-check their coding and resolve discrepancies through bilateral discussions.

Less than 2% of the deaths recorded in 1995 were classified as due to ill-defined conditions.

Mortality Profile

In 1995, 1,604 deaths were recorded, for a crude death rate of 5.75 per 1,000 population. The 10 leading causes accounted for 86.3% of the deaths from defined causes. The crude death rate has been below 6.0 for at least the past two decades, but between 1990 and 1995 it increased from 5.3 to 5.7 per 1,000—the highest rate since 1989, when it was 5.9.

Diseases such as hypertension, diabetes, myocardial infarction, stroke, and cancers are major concerns for the population of the Bahamas. These diseases are among the leading causes of mortality and account for nearly 45% of all deaths in the country. These diseases also cause more morbidity than any other group of problems.

The top five causes of death are lifestyle-related, and three of those are nutrition-related. In 1995 the leading cause of death in the general population was diseases of the heart (102.9 per 100,000 population), which accounted for 18.2% of deaths. It was followed by AIDS (97.1 per 100,000 and 17.2%), malignant neoplasms (85.3 per 100,000 and 15.1%), cerebrovascular diseases (46.6 per 100,000 and 8.2%), and accidents, violence, and poisonings (39.8 per 100,000 and 7.0%).

Over the past decade or so, diseases included among the leading causes of mortality have remained relatively stable with the exception of AIDS and its related disorders. Since 1985, when testing for HIV was instituted in the Bahamas, the proportion of deaths attributable to AIDS has grown steadily, and in 1994 it replaced malignant neoplasms as the second leading cause of death. Also in that year, accidents, violence, and poisonings switched rank order with cerebrovascular diseases to become the fourth and fifth leading causes of death, respectively. In 1986—the first complete year for which data are available on HIV infection and AIDS—the proportion of all registered deaths attributable to AIDS was approximately 2%. By 1995 this proportion had increased to 17.2%. Prior to the appearance of AIDS, the only infectious disease appearing among the leading causes of death was pneumonia.

There are significant differences in the mortality levels and the ordering of the principal causes of death between males and females. In 1995 the death rate for men was 635.5 per 100,000 males, while the rate for women was 515.6 per 100,000 females. Since 1991 there has been a rise in the death rate of both sexes. But whereas the rate among men remained fairly constant between 1993 and 1995, that for women rose steadily from 441 in 1991 to 515.6 in 1995. Nevertheless, despite the increase in death rate among women in general, the death rate among the 15–44-year age group decreased from 195.1 to 132.4 between 1993 and 1995.

The three most significant causes of death among men were AIDS (a rate of 130.4 per 100,000 male population, 20.9% of deaths from defined causes), diseases of the heart (102.9 per 100,000 and 16.5%), and malignant neoplasms (91.3 per 100,000 and 14.6%). Accidents, violence, and poisonings, the second leading cause in 1994 at 113.6 per 100,000, fell to fourth place (66.7 per 100,000, 10.7%). When men 15–44 are examined as a group, by far the two most common causes are AIDS (171.0 per 100,000 population, 46.5%) and accidents, violence, and poisonings (85.5 per 100,000, 23.3%). They are followed by diseases of the heart and malignant neoplasms (both with rates of 18.5 per 100,000 and accounting for 5% of deaths each).

Among females the most frequent causes of death were diseases of the heart (102.8 per 100,000 female population, 20.3%), malignant neoplasms (79.4 per 100,000, 15.7%), and AIDS (64.5 per 100,000, 12.7%). Cerebrovascular diseases, the fourth most common cause of death, accounted for 10.6% of all female deaths, with a rate of 53.9 per 100,000. The biggest difference among leading causes between men and women is in accidents, violence, and poisonings, which ranked ninth in females, with a rate of 13.5 per 100,000. The order of the top three causes is reversed in the 15–44-year-old age group, with

AIDS being the most common (83.3 per 100,000 women in that age group, accounting for 41.1% of deaths), followed by malignant neoplasms (29.2 per 100,000, 14.4%) and diseases of the heart and accidents, violence, and poisonings (both at 12.5 per 100,000 and 6.2%). The top 10 causes of death in this age group account for 87.7% of deaths from defined causes.

According to 1995 data, cerebrovascular diseases and diabetes mellitus are the only two causes that pose a greater risk to the lives of the general female population than they do to males in the Bahamas. Diabetes, which seemed to be posing less risk of death to women in recent years (moving from third to sixth rank and with rates falling from 39 per 100,000 female population in 1991 to 27.7 in 1993), increased its toll again in 1994 and then moved to a ranking of fifth in 1995, with a rate of 42.6 per 100,000 and proportional mortality of 8.4% of deaths from defined causes. The death rate among men from this disease, already lower than that in women, had also fallen from 20 per 100,000 in 1991 to 16.7 in 1993, when it ranked 10th as a cause of death. But in 1994 diabetes moved up to seventh place and, as in females, the rate further increased to 29.7 per 100,000 in 1995, when it ranked sixth.

Accidents and acts of violence rank high on the list of causes of deaths in the overall population. Thirty-one percent of injury-related deaths in 1994 were due to violence. The problem is most significant among men 15–44 years of age and children under age 15 years. In 1994, about 37% of all deaths among men 15–44 were due to accidental events or acts of violence.

Between 1984 and 1995 maternal deaths were very few (between one and four per year) and therefore the rate fluctuated widely—from 1.5 to 6.4 per 10,000 live births, where it peaked in 1995. There were only two years between 1988 and 1995 when more than one death occurred: 1989 (two deaths) and 1995 (four deaths).

SPECIFIC HEALTH PROBLEMS

The main sources of the data in this section are the discharge diagnoses records from the Princess Margaret Hospital (PMH), which accounts for approximately 75% of all acute inpatient discharges in the public sector, and the Rand Memorial Hospital, which accounts for the rest. Data from the monthly reports of the community health clinics and the notifiable disease surveillance system are also used.

Analysis by Population Group

Health of Children

In 1994 the under-5 years age group had the highest number of admissions to the Princess Margaret Hospital per 1,000 population. Diseases of the respiratory tract were responsible for more than 75% of all admissions of children under 5; asthma, bronchitis, and pneumonia were the main causes within that group of diseases.

At the community clinic level, upper respiratory tract infection (URTI)—excluding the common cold—was the most common illness seen in children under 5 years between 1992 and 1995. This held true when the data were disaggregated for New Providence, Grand Bahama, and the Family Islands. In Grand Bahama and the Family Islands, injuries were the second most frequent problem seen in this age group, while in New Providence it was ear diseases. This may be a reflection of the health care choices available in New Providence, as children with injuries are probably taken directly to the Princess Margaret Hospital. Acute bronchitis was also among the top five causes of illness in the under-5 age group in Grand Bahama and New Providence, but not in the Family Islands. Acute gastroenteritis was among the top three causes in New Providence and the Family Islands, but was not among the top five causes in Grand Bahama. Thrush was among the top five causes in Grand Bahama and appeared as number five in New Providence in 1995, but was not among the most common causes in the Family Islands.

Children under 1 Year of Age. There has been a decline in infant mortality from the 1986 level of 30.2 per 1,000 live births to 19.0 in 1995. For the past two decades "certain conditions originating in the perinatal period" has been the principal cause of infant deaths. Between 1984 and 1994 the rate for this cause increased steadily from 10.4 to 16.8 per 1,000 live births. In 1995 it dropped to 8.8 deaths per 1,000 live births. Since 1989 "congenital anomalies" has been the second most frequent cause of death, with a rate between 2.4 and 3.9 per 1,000. Between 1989 and 1995 AIDS moved from the fifth to the third-ranked cause of death in infants; the rate increased from 1.2 in 1989 to 2.8 in 1994 and then dropped to 1.1 per 1,000 live births in 1995. This rate was expected to drop even further in 1996 because of the introduction of a program for treatment of HIV-positive pregnant women with AZT. The same three causes are responsible for both neonatal and post-neonatal deaths. Rounding out the picture, there were an estimated 79 stillbirths (10.7 per 1,000 total births, and perinatal and neonatal mortality rates were 19.4 and 11.5 per 1,000 total births and live births, respectively. The trend in both of these rates has been downward since the late 1970s.

In 1993 it was estimated that approximately 10.2% of infants were born with a low birthweight (defined as less than 2,500 grams). Records for 1995 show that 9.8% of newborns at the Princess Margaret Hospital in New Providence had low birthweights. At the Rand Memorial Hospital in Grand Bahama, 9.1% of newborns were so defined, and in the Family Islands this figure was 5.1%.

In 1991 (the most recent year for which data are available) there were 1,563 admissions to Princess Margaret Hospital of

children under 1 year of age. The leading cause, accounting for 18.9%, was pneumonia and influenza, followed by intestinal infectious diseases (12.7%), certain causes of perinatal morbidity (12.5%), diseases of the upper respiratory tract (9.0%), and other diseases of the respiratory tract (5.4%). The most frequently reported infectious disease was gastroenteritis. In male infants it accounted for more cases than the other four leading causes combined: amebiasis, dysentery, influenza, and chickenpox, in that order. In females the order was reversed.

No data are available on the nutritional status of children in this age group. For information on the diseases included in the Expanded Program on Immunization (EPI), see the section "Vaccine-Preventable Diseases."

Children 1–4 Years of Age. In 1995 the age-specific mortality rate in the 1–4-year age group was 4.1 per 10,000 population. There was a dramatic reduction in the number of deaths in this age group between 1994 and 1995, from 28 to 10. This was mainly due to the reduction in deaths from accidents, violence, and poisonings and from AIDS, the two most common causes of death in this age group between 1991 and 1994. Almost half (46.4%) of the 28 recorded deaths in 1994 resulted from accidents, violence, and poisonings, while AIDS was responsible for 21.4%. In 1995 AIDS was replaced by congenital anomalies as the second leading cause of death (two deaths, 20%). Accidents, violence, and poisonings, with three deaths and a rate of 12.0 per 100,000 age-specific population, accounted for 30% of deaths. The other causes of death accounted for one death each.

Children 5–14 Years of Age. In the 5–14 age group, 5 of the 20 deaths (25%) in 1995 were due to AIDS (9 per 100,000), and 3 (15%) each to pneumonia and to accidents, violence, and poisonings (5 per 100,000). Two deaths each (10%, 4 per 100,000) were due to malignant neoplasms and diseases of the heart. In recent years deaths in this age group have fluctuated between 10 (1993) and 20 (1991, 1994, 1995). The most common cause of death was accidents, violence, and poisonings until 1995, when it was replaced by AIDS.

Of the deaths in 1995, 11 were in the 5–9 age group and 9 in the 10–14 age group. In both groups AIDS was the leading cause, and other causes were pneumonia; accidents, violence, and poisonings; and diseases of the heart.

Health of Adolescents and Young Adults (15–44 Years)

Although there has been a steady downward trend in the birth rate among women under 20 years of age, teenage pregnancy continues to be a matter of concern in the country. In 1994 approximately 15% of births were to women in the 15–19-years age group. One disturbing development is the recent increase in registered births to girls under 15 years of age—a jump from 7 and 5 births in 1991 and 1992, respectively, to 34 and 20 births in 1993 and 1994, respectively. The number of births occurring to females in this age group in 1993 was the highest since 1987.

For the most part, birth rates among teenagers were highest in New Providence and Grand Bahama until 1990. Then there was a dramatic reduction in the rate in Grand Bahama, approaching the consistently lower levels found in the other Family Islands. This phenomenon may reflect the migration of persons in the reproductive age group to New Providence, even from Grand Bahama.

Only six deaths occurred in the 15–19 age group in 1995, two of which were classified in the category accidents, violence, and poisonings and one each in other categories.

The five leading causes of death in the 15–44-year age group in 1995 were the same for both males and females, but the rank order differed. In both sexes the leading cause was AIDS and AIDS-related complex. In males the age-specific rate was 170.5 per 100,000 population, up from 120.0 in 1993. AIDS replaced accidents as the highest ranking cause between 1991 and 1993 and has continued in that position. The other leading causes in males in 1995 were accidents, violence, and poisonings, at 85.5 per 100,000 (down from 97.6 in 1993), and diseases of the heart and malignant neoplasms (both at 18.5 per 100,000). The latter two causes have tended to increase. "Other diseases of the respiratory system" ranked number five in 1995 (17.1 per 100,000). There was an increase in the total number of deaths of males in this age group from 180 in 1991 to 260 in 1995.

The number of deaths among women in the 15–44 age group increased from 103 in 1991 to 147 in 1995. The age-specific mortality rate for AIDS in women was 83.3 per 100,000 population in 1995. The second most common cause of death among women was malignant neoplasms (29.2 per 100,000), followed by diseases of the heart and accidents, violence, and poisonings (both at 12.5 per 100,000). It should be noted that AIDS has by far the greatest impact of any cause on women in this age group, while for men AIDS and injuries are both important.

The total fertility rate of women in the Bahamas was estimated at 2.43 for 1995. A comparison of recent age-specific fertility rates with those in the 1970s and 1980s indicates that fertility is declining among all age groups except women 35–39 years, in which it has been increasing since the mid-1980s. Although women of this cohort are having more babies than women of the same age group in the 1980s, they are having fewer than those in the 1970s. The highest fertility rates are found in women 20–24 years of age (129.6 per 1,000 women), followed closely by the 25–29 age group. Women are choosing to postpone starting a family and are having babies for the first time at an older age, and the National Health and Nutrition Survey (1988–1989) found that older women pregnant for the first time had a higher level of education.

Between 1992 and 1994 the number of new prenatal clients attending community clinics decreased from 5,427 to 4,805. This pattern held true in New Providence, Grand Bahama, and the Family Islands. Women in the Family Islands and Grand Bahama tended to attend clinics earlier than those in New Providence, as evidenced by the percentage of those registering before the 16th week of pregnancy (38%, 31%, and 24%, respectively). The average number of visits per client during this time period remained fairly constant at about 7.1 in New Providence, 5.6 in Grand Bahama, and 5.5 in the Family Islands—the inverse of the order for early first-time registration at the clinics.

Health of Adults Aged 45–64 Years

Current data on morbidity in this age group are not readily available because incomplete computer software changes have delayed processing. The most recent morbidity data refer to leading causes of inpatient morbidity at the Princess Margaret Hospital in 1991. These were diseases of the heart, "other diseases of the digestive system," and diabetes. These data were not disaggregated by sex. The changes in ranking between the younger age group and this group mainly reflects the increased prevalence of chronic diseases.

In 1995 the three leading causes of mortality, together accounting for 57% of deaths, were malignant neoplasms (21.0%, with an age-specific rate of 2,136 per 100,000 population), diseases of the heart (19.7%, 2,004 per 100,000), and AIDS (16.6%, 1,688 per 100,000).

Health of the Elderly (65 Years of Age and Over)

Mortality in persons 65 years and over is dominated by the chronic diseases. In 1995 the four leading causes of death accounted for 72% of mortality. The most common cause was diseases of the heart (28.4%), with an age-specific rate of 1,376.5 per 100,000 population. It was followed by malignant neoplasms (18.6%, with a rate of 900.3 per 100,000), cerebrovascular disease (14.3%, 692.0 per 100,000), and diabetes mellitus (10.7%, 520.8 per 100,000). Although the rates for all of these diseases increased in the three years prior to 1995, that for diabetes mellitus almost doubled: from 283 to 521. Diseases of the respiratory and circulatory systems are also among the most frequent causes of death in this age group.

Between 1984 and 1995 the death rate from diseases of the heart remained much the same, although it rose slightly in 1989 and again, but to a lesser extent, in 1995. Up to 1993 the rates from malignant neoplasms and diabetes mellitus were falling, then they increased again. On the other hand, the death rate from cerebrovascular disease has been increasing steadily since 1984. Pneumonia deaths, which peaked in 1979, fell consistently thereafter.

In 1991 (the most recent year for which such data are available) ischemic heart disease and hypertensive disease were the major causes of death from heart disease in this age group. Malignant neoplasms of the digestive organs and the peritoneum, and the prostate were the leading causes of cancer deaths.

Family Health

The rate of marriages (number of marriages during a given year per 1,000 population) was fairly constant between 1988 and 1995 at between 8.6 and 9.7. In 1994, the most recent year for which such information is available, the majority (55%) of women getting married were between the ages of 25 to 30, while 52% of men got married between the ages of 30 and 39. During the same period the divorce rate (number of divorces during a given year per 1,000 marriages in the same year) fluctuated, showing no clear tendency. It peaked in 1994 at 18.7 (474 divorces granted). Divorces were more prevalent among couples who had no children (30%) and those who had only one child (26%). In contrast, couples who had five or more children accounted for only 4% of the divorces.

Just over half (53.3%) of all registered births were outside of wedlock in 1995. Of these births, 525 (23.1%) were to teenagers, 1,578 (69.3%) were to women aged 20–34 years, and 173 (7.6%) were to women aged 35 years and over.

According to the 1990 population census, 25.3% of private households were headed by single parents. The majority of these household heads (57.1%) were females.

Although it is known that domestic violence is a problem in the Bahamas, very few data are currently available upon which to estimate its extent. In 1993, of the 1,226 cases of assault against women seen at the Accident and Emergency Department of the Princes Margaret Hospital, the perpetrators were known in 245 cases, but their relationship to the victims was not documented. The Crisis Center (a nongovernmental organization), in cooperation with the Ministry of Health, operates a counseling and education service aimed at helping persons cope with violent home situations. In 1993 only 66 victims of domestic violence sought the assistance of the Center.

Workers' Health

Currently, medical care and compensation to workers injured on the job remains the responsibility of the National Insurance Board (NIB). Through this institution, workers with job-related injuries receive full coverage of all medical bills, both locally and abroad, if the correct referral procedures are followed.

Data from claims processed by the National Insurance Board suggest that in 1996 the five most common causes of absenteeism in the workplace were "female disorders," musculoskeletal problems, fractures, sprains/strains/dislocations, and infections, including AIDS. For invalidity, the five most frequent causes were AIDS, psychiatric disorders, cardiovascular diseases, arthritis/fractures/skin problems, and neurological disorders.

As would be expected from their proportional representation in the work force, hotel workers were the category of employees most frequently injured on the job, followed by government workers. The third highest frequency of injuries was found among construction workers.

Health of the Disabled

In 1993 the Bahamas was included in the Caribbean Cooperation in Health (CCH) initiative's Program on Community-based Rehabilitation. In preparation for the development of the project proposal, several islands were surveyed to identify prevalence and types of disability, so that pilot areas for this project could be established. An additional assessment was made from the National Insurance Board register. Out of a population of approximately 8,000, Eleuthera had 371 (4.6%) registered persons with disabilities. Of these, 108 (29.1%) had lower limb disabilities, 69 (18.6%) had impaired vision, 29 (7.8%) had a hearing deficit or were slow learners, 28 (7.5%) had speech problems, and 26 (7.0%) were mentally retarded. In Abaco 492 (4.8%) of the approximately 10,100 inhabitants were registered as disabled. As in Eleuthera, the most common disabilities were related to the lower limbs (130, 26.4%), with the second most frequent being sight-related (66, 13.4%), followed by hearing and speech deficits (43, 8.7%), upper limb problems (40, 8.1%), and mental retardation (39, 7.9%). In Long Island (north), 305 (16.0%) of the approximately 1,900 persons were registered as having disabilities. This was the site chosen to initiate the Community-based Rehabilitation Project. Subsequent evaluations have shown the project to be quite successful, and efforts are under way to extend it to Eleuthera and Abaco.

Analysis by Type of Disease

Communicable Diseases

The prevention and control of infectious diseases is one of the concerns of the Ministry of Health and Environment.

Vector-Borne Diseases. Malaria is not endemic to the Bahamas. However, the large number of illegal immigrants from countries where malaria is endemic, along with the presence of the *Anopheles* mosquito, increases the risk of this disease being reintroduced. Between 1993 and 1995 there were from 1 to 3 imported cases each year. No cases were reported in 1996. Although there has not been a case of yellow fever in the Bahamas for over three decades, the *Aedes aegypti* mosquito is indigenous to the islands and the threat is ever-present. The risk of an outbreak of dengue fever is high. There was one confirmed case of dengue in 1995. Prior to that, the last reported cases (numbering 87) were in 1989. The Vector Control Unit of the Department of Environmental Health Services carried out an *A. aegypti* survey in 1993 in Yellow Elder Gardens, a section of an urban area on the island of New Providence. It documented excesses in all the indices used to determine the extent of the problem. A second survey of the same area in 1996 showed a reduction in all the indices except the potential container index. The house index fell from 30.4 to 17.7, while the Breteau index fell from 43.1 to 21.1. This area was included in a pilot vector control project as part of the Caribbean Cooperation in Health initiative.

Vaccine-Preventable Diseases. Immunization of children against diphtheria, tetanus, whooping cough, poliomyelitis, measles, mumps, and rubella is available free of charge through the community health clinic system. As a result, immunization coverage against these diseases has been fairly high. In 1995, 87% of children under 1 year of age were fully immunized with three doses of DTP and OPV, and 90% with MMR. BCG is not included in the country's EPI protocol.

Like the rest of the Region, the Bahamas was declared free of poliomyelitis, the last cases having been recorded in the 1960s. The country's participation in the subregional initiative to eradicate measles has resulted in no confirmed case of measles being recorded since 1990. Diphtheria and whooping cough are no longer problems in the Bahamas. There have been no cases of diphtheria since prior to 1988, and the last three indigenous cases of whooping cough were recorded in 1993, with one imported case each in 1994 and 1995. Mumps continues to occur at low levels; the number of cases fell from 11 in 1993 to 2 in 1994 and 1 in 1995, then rose again to 6 in 1996. There have been no reported cases of neonatal tetanus since 1988, but in 1996 one case of tetanus was reported in an adult. Since an outbreak of rubella in 1990 (which caused 121 cases) there have been only sporadic cases, two or fewer per year between 1992 and 1996. No cases of congenital rubella syndrome have been reported since the 1970s.

The numbers of *Haemophilus influenzae* infections have been small, with decreases observed between 1993 (15 cases) and 1996 (10).

There was a sharp increase in hepatitis B cases between 1993 (92 cases) and 1994 (246). Since then, case numbers

have declined steadily to 137 in 1996. As of that year, the policy was to provide hepatitis B immunization to medical personnel and all members of the uniformed services. Donated blood is routinely tested for hepatitis core antibody, as well as hepatitis B and C.

Intestinal Infectious Diseases. The threat of cholera to the Region in 1992 put the Bahamas on full alert. Active public and environmental health teams were put in place for the prevention and control of this problem.

During May and June of 1991, a localized outbreak of seafood-related illness occurred in New Providence. Upward of 380 cases were reported during the peak week of the outbreak. This illness was primarily associated with (1) the consumption of raw conch obtained from wet storage sites in the waters of Nassau Harbor; and (2) contamination resulting from the food-handling practices of the vendors in that area, combined with the sanitation conditions in the area itself. The immediate response was to suspend all food sales in or around the suspected area and to launch a mass campaign to educate the public about the problem. Once its source was identified, the problem was rectified. In an effort to avoid future outbreaks of this type, the Department of Environmental Health has stepped up its campaign to eliminate illegal roadside sales of seafood and other products.

In spite of these efforts, intermittent outbreaks of foodborne illness due to the ingestion of raw conch continue. The identified pathogen was *Vibrio parahaemolyticus* in all outbreaks. The number of reported cases of foodborne diseases in 1996 was 1,061.

The occurrence of diarrheal diseases among children under 5 years of age continues at a high level. From 1988 to 1994 the number of reported cases fluctuated between 1,095 and 2,705, but showed a tendency to increase. In the over-5-year age group, the number of diarrheal diseases was low in 1993 and 1994, more than doubled in 1995, and increased another fivefold in 1996.

Intestinal infectious diseases are not a common cause of admission to hospital. In 1995 they ranked 10th at the Princess Margaret Hospital, accounting for 2% of admissions, and 15th at the Rand Memorial Hospital, where they accounted for 1%, although at the latter institution they had represented 3.1% of admissions the previous year. In terms of outpatient contacts, intestinal infectious diseases were the fifth most common reason for attendance at the general practice clinic of the PMH (1,390 cases, 3.5% of visits).

Chronic Communicable Diseases. The number of tuberculosis cases, which had been constant at about 50 per year, peaked at 63 in 1992 and then fell again in 1993. This reduction continued up to 1996, when only 32 cases were reported. Bahamas has been using the multidose regimen of rifampin, ethambutol, pyrazinamide, and isoniazid supplemented with vitamin B_6. A drug compliance methodology is utilized, whereby nurses visit patients on a periodic basis to confirm that they have been taking their medication as prescribed. As the human resource situation improves, this practice will be converted into the full "directly observed treatment, short course" (DOTS) method. Given the association between AIDS and tuberculosis and the high incidence of HIV infection in the Bahamas, a careful watch must be kept on the situation.

HIV-positive persons accounted for over 60% of all tuberculosis cases in 1996 (40 out of 59). A recent study of the incarcerated population demonstrated a positivity rate for tuberculosis of 20%. An alarming developing situation is the occurrence of an unknown multidrug-resistant strain of the bacillus in New Providence and the Family Islands. Its existence has been confirmed by the government research laboratory in Canada. Moreover, active tuberculosis has recently been identified in staff working in several acute care institutions.

Leprosy is not endemic in the Bahamas, but a case was diagnosed in 1996. The last known indigenous case was diagnosed in 1982.

Acute Respiratory Infections. This group is represented by diseases of the upper respiratory system, pneumonia and influenza, and bronchitis and asthma. Inpatient data from the PMH and the Rand Hospital between 1990 and 1995 were analyzed. Discounting normal delivery, acute respiratory infections (ARI) were the second most common reason for admission to hospital, after complications of pregnancy. Between 1991 and 1995, numbers fluctuated at the PMH, peaking in 1994 (1,764), when ARI was the leading cause of admission, then falling to below the 1991 figure. At the Rand Hospital, ARI was the third most common reason for admission, but cases have been declining since 1990.

Preliminary analysis of available inpatient data indicates that by far the most commonly affected age group is children under 5 years old, who account for more than 50% of the cases. More male children than females were affected.

In terms of outpatient attendance at the Princess Margaret Hospital in 1995, diseases of the respiratory system constituted the second leading reason for consultation (7,074 or 18.3%). Within this disease group, diseases of the upper respiratory tract (3,440 or 8.6%) and bronchitis and asthma (3,255 or 8.1%) were the most frequent causes of outpatient visits.

AIDS and Other Sexually Transmitted Diseases. Estimates of the prevalence of chlamydia were obtained from a study conducted in Grand Bahama in 1995. Results indicated that approximately 13% of all prenatal patients were infected. The percentage was the same among all clients with a suspected STD.

The incidence rates of syphilis and gonococcal infection have been decreasing since 1986 and 1987, respectively. Case numbers of the latter fell from 1,804 in 1987 to 92 in 1995, while the former decreased from 837 cases in 1987 to 115 in 1995. During the second half of 1985 the Ministry of Health and Environment started its campaign against AIDS, promoting abstinence and safe sex through the use of condoms. The decline observed in the reported incidence of these two STDs may well be a secondary effect of that campaign. If this is true, then one can expect a leveling off of the annual incidence rate of HIV infection in a few years, although the number of AIDS cases will continue to rise for some years to come.

The problem of AIDS and HIV infection has had a significant impact on the health services of the Bahamas ever since reporting of the disease began in 1985. It is now the second most frequent cause of death in the general population. Furthermore, it has become the leading cause of death among all males and among males and females 15–44 years of age. As of 31 December 1996, a total of 2,481 cases had been reported, of which 63% had died. A further 3,941 individuals were known to be HIV-positive, without symptoms of the disease. A geographic breakdown shows that 12 of the 22 inhabited islands have reported HIV infection; 86% of the cases have occurred on New Providence, 6% on Grand Bahama, 3% each on Eleuthera and Abaco, and the rest on the other Family Islands.

The disease occurs primarily among heterosexuals (87%), with a male-to-female ratio of 1.6 to 1. Homosexual and bisexual transmission accounts for approximately 4% of infections. At the start of the epidemic in the country, as many as 70% of the persons identified as HIV-positive were non-Bahamians (mostly illegal immigrants). The increasing spread of the virus has changed the percent distribution for Bahamians and non-Bahamians. Immigrants now constitute only 14% of the cases and known carriers. Freebase/crack cocaine addicts represent approximately one-third of individuals with HIV infection and AIDS. There has been a steady increase in the number of new cases of AIDS each year since 1985; however, the rate of increase has been declining since 1994.

A successful, voluntary, confidential contact-tracing program for HIV and other STDs has been in place since 1985. This program is well established and is probably one reason for the level of surveillance and completeness of data on HIV in the Bahamas.

Because of the mode of transmission, AIDS affects predominantly those in the sexually active age groups, with 75% of all reported cases since 1985 occurring in persons 20–49 years of age. Data indicate that most people are becoming infected between the ages of 15 and 25. The rapid increase in the death rate from this disease among women aged 15–44 indicates that young women are at particular risk. The fastest growing group of HIV-positive persons is teenage girls. Prenatal clients are now routinely tested for HIV (with informed consent).

A seroprevalence study carried out in 1990–1991 indicated that about 2.9% of prenatal clients were HIV-positive; in 1996 this figure was estimated at 3.2%. The study included approximately 95% of pregnant women attending prenatal clinics in New Providence and approximately 65% of all delivered pregnancies in that period. Bahamians constituted 79.2% of the women tested and Haitian-born women 17.7%. The rate of infection in the former was 2.5%, as compared with 4.5% in women of Haitian origin included in the study, a significant difference. None of the women included in the study who had been born in other countries were infected. The highest incidence was in women aged 25–34, and the prevalence of infection increased with increasing numbers of pregnancies, from 1.9% among women in their first pregnancy to 7.9% among women who had been pregnant seven or more times.

HIV prevalence figures for STD clinic patients were 10% and 5.2% in 1992 and 1996, respectively. Among male prison inmates the prevalence was 10.4%, and among female inmates, 19.6%. A 1993 study of inmates upon admission showed an even higher rate of HIV (up to 18%). These high rates are related to the fact that the majority of inmates have had a close association with the drug culture.

As evidenced by the sex ratio, AIDS affects women almost as frequently as men. There will therefore be an increase in deaths in a population—young women—that, prior to the emergence of this disease, was not at any increased risk of death from lifestyle-related causes.

Given the estimated lag period of eight or more years between infection and appearance of the disease, it is clear that young people in the 15–19 age group are at great risk. Among young people in this age group the rate of HIV infections per 10,000 population increased from 6.7 in 1990 to 14.0 in 1993, then fell slightly to 12.2 in 1994. In the general population, HIV infections steadily increased from 20.6 per 10,000 population in 1990 to 28.8 in 1994, and over the next two years the rate declined to 19.0 in 1996.

As of the end of December 1996, 339 children had tested positive for HIV since the beginning of the epidemic, of whom 173 had developed AIDS and 125 had died. Between 1990 and 1995, the transmission rate between mother and infant was about 30%. In 1995 a program providing AZT to selected pregnant women was introduced. In 1996 the transmission rate had been reduced to 7%.

There have been no cases of HIV linked to blood transfusion since HIV testing began in 1985 in the Bahamas. Screening revealed that the prevalence of HIV-positive potential blood donors was 0.4% in 1996.

The campaign against AIDS has focused on reducing sexual transmission by stressing condom use and partner reduction and by targeting young people and women.

Noncommunicable Diseases and Other Health-Related Problems

Nutritional Diseases. The diet-related noncommunicable disorders—such as obesity, cardiovascular disease, type II diabetes, hypertension and stroke, and various forms of cancer—are the leading causes of morbidity and mortality among adults. The problem of anemia in children and pregnant and lactating women is also an area of concern. Reports generated throughout the Bahamas by the Government's community health clinics indicate that approximately 19% of the prenatal clients screened in 1994 had hemoglobin levels <10g/dL. This proportion remained at 18.5% to 19% between 1992 and 1995. The problem is most prevalent in New Providence and least prevalent in the Family Islands. Severe anemia was diagnosed in less than 1% of the prenatal population.

Protein-energy malnutrition among children 0–5 years of age is not a serious public health problem, nor are deficiencies of micronutrients. The National Health and Nutrition Survey (NHNS), 1988–1989, revealed a general adequacy to a slight excess (15%) of energy, a large excess (83%) of protein, and an even larger excess (87.4%) of fat supply (based on average intake in relation to daily dietary allowance). These excesses are largely due to the high consumption of animal products, cereals, sweeteners, and fats and oils. Such dietary habits have implications for the progression of chronic noncommunicable diseases.

The survey also revealed that 6.7% of children 5–14 years of age were obese (based on NCHS standard weight-for-age). Overall, 48.6% of the population was obese (body mass index >25), with more females (53.6%) being affected than males (43%).

Findings from a 1988–1989 survey of preschool children indicated that a very small number of infants were exclusively breast-fed up to 4 months of age. Furthermore, 80% of the infants were introduced to bottle-feeding as early as the first week of life—90% of that group while in hospital—although 63% of mothers attempted to breast-feed.

In 1993 a Lactation Management Project was initiated to strengthen the breast-feeding promotion programs in the country. The project involved the training of more than 300 persons in government and private hospitals and clinics, as well as community health workers and health personnel from nongovernmental institutions. At the time of discharge from the Princess Margaret Hospital, where 72% of births take place, 34.6% of women were exclusively breast-feeding. Reports from clinics in New Providence indicate that three months after giving birth, 7.4% of women were exclusively breast-feeding, 8.6% were predominantly breast-feeding, and 40% were partially breast-feeding. However, since 1993 the percentage of women exclusively breast-feeding at three months fell steadily to 4.9% in 1995. In terms of differences between islands, the largest percentage of such women was in the Family Islands, followed by New Providence, and the lowest in Grand Bahama.

Cardiovascular Diseases. Based on results from the National Health and Nutrition Survey, it was estimated that 13% of the population 15–64 years of age of the Bahamas could be classified as hypertensive in 1989. The percentage was slightly higher for males (15%) than for females (12%). Another 17% could be considered borderline. Among the elderly (65 and over), 38% were hypertensive. The prevalence of hypertension was fairly equal in New Providence, Grand Bahama, and the Family Islands.

These results are in contrast to the figures reported from hospitals, which clearly show more females being treated than males. Given that the hospital figures are representative of other branches of the health care delivery system, this difference is a clear indication of the failure of the health service to detect and treat many male hypertensive cases. This observation is supported by the fact that in all three areas investigated in the NHNS (New Providence, Grand Bahama, the Family Islands), the proportion of persons in the community with hypertension who did not know that they had the disease was consistently higher for men than for women.

During 1991, there were 404 hypertensive patients admitted to the Princess Margaret Hospital, and in 126 (31.2%) of them, hypertension was the primary diagnosis. Almost two-thirds (62.1%) of all hypertensive admissions were female, a trend consistently observed over the last five years. For those cases with a primary diagnosis of hypertension, the total number of days spent in hospital in 1991 was 2,058, for an average length of stay of 16.3 days. In those cases where hypertension was accompanied by diseases of either the heart or kidney, the average length of stay was much longer. Approximately 83% of admissions diagnosed with hypertension were persons aged 45 and older.

Data available for the same period from the Rand Memorial Hospital indicated a total of 120 admissions, 29 (28.4%) of which had a primary diagnosis of hypertension. Of these, 62.5% were female.

The total number of new cases of hypertension reported from the community clinics in 1993 was 1,141. A total of 23,163 visits were made to these clinics by new and old hypertensive patients seeking care for their disease.

Diseases of the heart is the most common cause of death in the overall population and the leading cause in females. It was also the leading cause in males up until 1994, when it was replaced by AIDS. In the over-65 age group it is the leading cause of death, and between 1993 and 1995 the age-specific death rate slowly increased, from 125.8 to 137.7 per 100,000 population.

Between 1979 and 1989 the overall death rate from diseases of the heart increased from 78.8 per 100,000 to 104.8; thereafter it fell to 90.7 in 1993 and climbed again to 102.9 in 1995. This pattern was seen among both women and men.

Malignant Tumors. Between 1991 and 1993 malignant neoplasms were the second most common cause of death for all ages and both sexes. In 1994 and 1995 this cause moved to third place. Between 1970 and 1984 the rate per 100,000 population almost doubled, from 57.1 to 102.2. Thereafter, it slowly declined to 85.3 in 1995. This trend was found in both sexes: among men the rate went from 51.4 per 100,000 to 122.9 to 91.3, while among women it changed from 63.4 per 100,000 in 1970 to 87.5 in 1989 to 79.4 in 1995.

Between 1992 and 1995 the two most common sites of fatal cancer in males were the prostate and the trachea, bronchus, and lung. In 1995 cancer of the prostate caused 22.2% of all cancer deaths in males, while cancer of the trachea, bronchus, and lung accounted for 17.5%.

The two most common causes of cancer deaths in women are cancers of the breast and the cervix uteri. Deaths due to breast cancer comprised 23.2% of total female cancer deaths in 1995 and 3.6% of all deaths in females. Cervical cancer accounted for 9.8% of female cancer deaths and 1.5% of all female deaths.

Accidents, Violence, and Poisonings. In 1995 accidents, violence, and poisonings ranked as the fourth leading cause of death. This cause group is a leading reason for emergency room visits and admissions to both major hospitals, exceeded only by childbirth and complications of pregnancy, childbirth, and the puerperium, and respiratory infections. About 25% of these injury-related hospital admissions were due to violence, the main cause being homicide and injuries purposely inflicted by others. Motor vehicle traffic accidents, as a group, constituted the second leading cause of injury-related hospital admissions. In 1995 accidents, violence, and poisonings were also the leading cause of attendance at the General Practice Clinic of Princess Margaret Hospital, accounting for 34.1% of the 13,645 visits.

The problem is most significant among men, particularly those in the 15–44 age group, and among children 5–14 years of age, especially for accidents. In 1995 approximately 23% of all deaths of men 15–44 years old were due to accidents and violence. In women of that same age group, although accidents and violence ranked fourth as a cause of death, it accounted for only 6.2% of deaths.

In general, deaths from accidents, violence, and poisonings have been decreasing. Between 1990 and 1992 the rate of such deaths fell from 60.6 per 100,000 population to 43.6. It increased to 65.2 in 1994, and fell again to 39.8 in 1995. Between 1990 and 1994 homicide deaths increased from 24 to 56, then declined slightly in 1995 to 44. The weapon most commonly used was a handgun (44%) followed by a knife or sharp instrument (20%). During the 1990–1995 period, the number of deaths from motor vehicle accidents declined from 39 to 20, although it spiked to 36 in 1994.

Based on data from all three acute care hospitals (including a private one), in 1993 assaults (4,596) accounted for 4.5% of the 102,657 emergency room visits, and gunshot wounds (161) accounted for 3.5% of all trauma due to assaults. With respect to motor vehicle accident trauma presenting at the Princess Margaret Hospital, the numbers were fairly constant at about 2,200 between 1990 and 1992, then fell to 2,088 in 1994. The latter represented 11.5% of all trauma cases seen at the hospital. This percentage held true for the first half of 1994.

Behavioral Disorders. Alcoholism and other substance abuse, particularly cocaine addiction, are major health problems that remain at unacceptably high levels. This is of particular concern because of the positive correlation between cocaine abuse and HIV infection.

The number of new cases of cocaine abuse presenting for treatment at the Community Mental Health Clinic (the principal outpatient treatment facility in the country) jumped from 69 in 1993 to 102 in 1994; in 1995 the number of new cases was down to 52, but it rose again to 82 in 1996. The number of persons presenting with alcohol abuse tended to decline between 1990 (134) and 1996 (68), while the number of marijuana abusers who were treated rose from 8 between 1990 and 1992 to 47 in 1996.

The number of patients hospitalized for cocaine abuse at the Sandilands Rehabilitation Center had declined from the 1987 level, but not consistently. Indeed, there was no change in the annual number of new cases (109) during the three year period 1993–1995. A sharp drop to 53 followed in 1996.

In terms of the total picture of mental disorders seen at the Community Mental Health Clinic, there was a steady decline in numbers of new clients registered between 1988 (677 clients) and 1993 (476). Thereafter, numbers increased to 704 and 705 in 1994 and 1995. The trend was the same among both males and females. Between 1988 and 1994 the three most common disorders presenting at the clinic were drug abuse, alcohol abuse, and depression. Psychotic and psychosocial disorders rounded out the top five. In 1995 the number of psychosocial disorders doubled, making this problem second to drug abuse and more frequent than depression.

Oral Health. Data provided for 1995 from the school dental clinic in New Providence show that there was a 50.6% increase over 1994 in the number of procedures performed. Of

the 3,971 procedures done in 1995, 15.8% were restorations of permanent or deciduous teeth; almost three-quarters of the restorations involving fillings were done on deciduous teeth. Extractions accounted for 14.5% of all procedures; 9.5% of extractions involved permanent teeth, and 90.5% deciduous teeth.

In addition to the above-mentioned clinic there are three community dental clinics on the island of New Providence that serve the general population. Although the number of patients seen decreased between 1994 and 1995, the number of procedures increased. Extractions accounted for 27.5% of all procedures performed, and fillings and restorations 17.4%. Of the 994 extractions done, 68.2% were of permanent teeth.

According to data available from the Community Health Clinics, the most common problem noted among 5–14-year-olds in the school system is dental caries. This problem is most severe in New Providence, and least in Grand Bahama. Between 1993 and 1995 the percentage of children with caries in New Providence schools increased from 24.1% to 39.4%, while that in the Family Islands rose from 20.5% to 34.0%. On the other hand, in Grand Bahama the rate fell from 14.7% in 1993 to zero in 1995.

Natural Disasters. The Bahamas was hit in 1996 by two hurricanes, Bertha and Lili, but they were less powerful than the severely destructive Hurricane Andrew in 1992. The 1996 hurricanes caused infrastructural damage (power outages and disrupted telephone communications) and property damage in several Family Islands, but no deaths and few personal injuries. Several cases of post-traumatic stress syndrome were reported. Concerted efforts were made to reinstall services, remove debris, control insect proliferation, provide bottled water, and advise the public to boil drinking water.

Industrial Accidents. No major industrial accidents have been recorded in the Bahamas, but an emission of noxious gas in Freeport, Grand Bahama, resulted in the relocation of a school that was near the industrial site. During 1996 a fire in an old oil holding tank of the Bahamas Oil Refinery in Grand Bahama caused some concern. Although the fire itself was contained, residents worried about the potential for air pollution.

RESPONSE OF THE HEALTH SYSTEM

National Health Plans and Policies

The Government of the Bahamas subscribes to the internationally accepted principle that health is a fundamental human right, not a privilege, and to the view that quality health care must be universal in its application. There is full commitment to the global goal of "health for all," and community participation is accepted as a vital element of the health strategy.

The Ministry of Health's Policy Document, which was originally drafted in 1980 and most recently revised in 1988, is due for review and revision. In the meantime, the manifesto of the ruling party provides guidance in the form of politically directed emphases for the health services.

The people of the Bahamas already enjoy universal access to health care. However, the production of health services is inconsistent with the level of per capita government expenditure on health. The monitoring, evaluation, coordination, and planning of services need to be improved. Therefore, current emphasis is on upgrading managerial capacity, quality of care, and intersectoral coordination for development of local health systems. In this context, much attention is being paid to the development of human resources, establishment of norms and standards, and the strengthening of not only information systems but also the capacity to make effective use of them for planning, evaluation, and monitoring. In addition, a Planning Unit has been established within the Ministry with responsibility for coordinating and facilitating the internal planning process. It functions as the administrative and executive arm of: (1) the core planning group at Ministry Headquarters, comprising the chief administrative and technical officials, and (2) the extended planning committee, which includes the chairpersons of the executive management committees of each of the institutions/departments. The development and implementation of health projects of national priority are also facilitated through the Planning Unit.

The Government has indicated its intention to improve and expand services available at the Princess Margaret Hospital and to transform the hospital into a state-of-the-art diagnostic and therapeutic inpatient facility. Given that high technology demands the highest technical skills for maintenance of medical equipment, the Ministry is actively involved in strengthening the equipment maintenance program through pursuing the strategy of technical cooperation between countries. In addition, the availability of competent clinical and technical staff is being ensured through training in critical areas.

The Bahamas is experiencing a shift in its epidemiologic patterns away from deaths due to communicable diseases and toward those caused by chronic noncommunicable diseases, AIDS and AIDS-related complex, and accidents, violence, and poisonings. These changes, coupled with increasing health care costs, have served to highlight the importance of health education and promotion as a vital component of the health care system. The Ministry of Health and Environment is therefore putting in place the mechanism for development of a healthy public policy.

Health promotion and community participation are recognized as strategies to reduce health risk through mobilizing the populace to develop appropriate healthy lifestyles. Considerable effort is needed to educate the community as to its role in this regard, as it is only through the involvement of all social, political, and economic sectors that the state of wellness of a community can be enhanced. These strategies will be incorporated in all program plans, which will emphasize the need for proper food and nutrition, exercise, and smoking cessation, and pay particular attention to the areas of chronic diseases, STD/AIDS, and maternal and adolescent health.

In 1991–1992, the Ministry of Education implemented a comprehensive Family Life Education Program in primary and secondary schools. The Program is an important health promotion strategy that promises to have significant impact with time. A three-year National Plan of Action for Nutrition has already been developed, and its implementation will be the primary focus of the Nutrition Unit.

Maternal and child health concerns remain high on the health agenda. Within the context of the regional goal of health for all, the Bahamas has already achieved two of the three goals directed toward these at-risk groups. The regional goal for infant mortality at the end of the century is 30 or fewer deaths per 1,000 live births, while for children 1–4 years old it is 2.4 or fewer deaths per 1,000 population in the age group. In 1995 these two child health indicators were 19.0 and 0.41, respectively, for the Bahamas.

It is clear from the available data that in order to reduce the infant mortality figures further, special attention has to be paid to improving prenatal and perinatal care. In 1993 an Infant Mortality Reduction Project was developed. This project deals with three aspects:

- improving the quality of care during the prenatal period through the development and implementation of protocols for the management and referral of women with risk conditions;
- improving monitoring during the labor, delivery, and early neonatal periods; and
- providing special care for pregnant teenagers.

An important adjunct to the maternal and child health program is the establishment of an adolescent health care program. This program involves intersectoral collaboration between the several ministries. As an initial phase, a clinic for adolescents has been established at one of the comprehensive clinics on New Providence. The purpose is to promote healthy lifestyles in boys and girls, to reduce teenage pregnancy, and to encourage community-based services for adolescents.

A special group of youths will be targeted for specific family and community-based interventions. This will include any teenager who is sexually active and those who have been adjudicated by the courts for any criminal offense. The integration of this program will be greatly facilitated by the new ministerial portfolios, in place since April 1995, when Education and Youth became the responsibility of the same Minister. There is now a Minister of State for Youth, Sport, and Culture to give continued emphasis to youth issues.

Interventions aimed at promoting healthy choices among adolescents have been developed. Also, in collaboration with the ministries of Education and Social Services, the needs of pregnant teenagers are being addressed by coordinating reproductive health services with health promotion and continuing education.

The Ministry of Health has formulated a National Family Planning Policy, which was mandated by the Cabinet following the Caribbean subregional follow-up meeting (hosted by the Bahamas) to the UN International Conference on Population and Development (ICPD). This policy is seen as a priority within the overall health policy, which aims "to improve the quality of, and provide the opportunity for a productive life for every Bahamian . . . ." The policy stipulates that all members within a family should have access to information and services that empower them to enrich their quality of life.

Access to information will be provided through the family life education program offered by the Ministry of Education, and through parenting, peer counseling, and other programs integrated with existing programs in the workplace, places of worship, social clubs, and sporting and recreational environments. Services will be provided through community clinics, where all clients within the childbearing age group attending any designated health care facility for the first time each year will be offered counseling, education, and physical assessment, including cervical smear, breast examination, urine testing, and screening for specific STDs, including HIV. Prostate examination will be offered to males over 30 years of age. A full range of contraceptive methods will also be available to clients. These services will be provided on a cost-recovery basis, but no one will be denied service because of inability to pay. All providers of family planning services will be certified in family planning and STD counseling, contraceptive technology, and related screening techniques.

Client education will be provided through a comprehensive health education and promotion program, making full use of the mass media. In recognition that a national program requires the full involvement of many sectors of the community, an effort will be made to strengthen government agencies' collaborative ties with each other and with nongovernmental organizations, through the establishment of a National Family Planning Committee comprising representatives of related government programs and private-sector organizations.

Substance abuse, including the abuse of alcohol, is a high-priority public health problem in the country. The ef-

forts of the National Drug Council (NDC) are geared toward providing public education, fostering national awareness and serving as a catalyst, and facilitating and coordinating multisectoral, NGO, and community involvement and interventions.

A major NDC program aimed at demand reduction is well under way. Substantial support for this program was obtained under a special project funded by the United Nations International Drug Control Program. This project emphasizes the following demand reduction plans over the next three years:

- community prevention, which includes the development or strengthening of community organizations dealing with the antecedents to drug abuse and the establishment of alternative economic activities for young people in order to reduce the likelihood of them engaging in drug trafficking;
- prevention education, including ongoing support for the family life education curriculum, training for teachers and other persons responsible for the care of children who are at special risk for drug abuse, an aggressive public education campaign, and the training for youth in the techniques of peer counseling and the establishment of such activities in schools and communities; and
- treatment and rehabilitation, including ongoing evaluation of programs and the establishment of quality standards for treatment and rehabilitation activities, training of treatment and rehabilitation personnel, development of community-based outpatient rehabilitation and aftercare services, and rehabilitation services specifically designed to satisfy the needs of women, youth, and incarcerated persons.

There has been general agreement for many years now on the need to develop a comprehensive mental health program, integrated at all levels of the health system on all islands. The operationalization of this concept has been slow. The Ministry's recent decision to undertake a National Family Health Care Initiative, which will incorporate a mental wellness component (with emphasis on preventing family violence and coping with stress), will help solidify a comprehensive mental health program.

The Ministry of Health's dental health program is largely palliative in the public sector, with most of the preventive and restorative work carried out in the private sector. The ratio of dentists (public and private) to population was 3.0 to 10,000 in 1994. Continued expansion of the school dental program is warranted, as is greater emphasis on dental education and preventive care.

Disease surveillance and programs for the control of communicable diseases have a long history of development in the Bahamas. Prevention programs include immunization against vaccine-preventable diseases such as diphtheria, whooping cough, poliomyelitis, measles, mumps, and rubella; management of acute diarrhea; and screening programs for STDs including HIV/AIDS.

The HIV/STD 1993–1996 Medium-Term Plan II (MTP II) fostered a supportive social environment for the effective implementation of risk reduction and behavioral interventions directed toward vulnerable populations: young people between the ages of 10 and 19 years, females of childbearing ages, persons with multiple partners, pregnant women, incarcerated populations (past and present), and blood donors. All of the aforementioned groups include persons from the Creole community.

The National Disaster Preparedness Program focuses the Ministry's attention on the continued development and refinement of its Health Disaster Plan through training and disaster simulation exercises.

In response to growing dissatisfaction with the erratic availability and the high cost of pharmaceuticals to the public sector, the Ministry put in place a system of procurement and distribution of pharmaceuticals to ensure the population's access to essential drugs. The Bahamas Drug Agency was established in 1994 to address these issues as well as the development and maintenance of the pharmaceutical formulary for the country.

The Ministry has extended basic laboratory services to selected Family Islands, including services to facilitate the diagnosis of STDs. The laboratories at the Princess Margaret and the Rand hospitals participate in several WHO quality control programs and make full use of the facilities of the Caribbean Epidemiology Center for monitoring of blood bank and transfusion services. Within the hospital setting, a quality assurance program is being strengthened through participation in the Regional Hospital Accreditation Program and in a Ministry of Health initiative that began in 1996.

The Government proposes to privatize the collection of both commercial and domestic wastes. To this end, a comprehensive waste classification study (completed in 1992) was used as the basis for developing the privatization plan. A preinvestment study on solid waste and hazardous materials management was carried out through an agreement with the Inter-American Development Bank (IDB). It resulted in a Solid Waste Master Plan, developed in 1996. The Plan recommends, *inter alia*, waste reduction, rationalization of the collection system, and sanitary landfilling (in combination with composting in New Providence). Studies have indicated that total solid waste generation is 2.6 kg per person per day. Implementation of the Plan has commenced in several Family Islands.

Several air pollution monitoring stations have been installed in New Providence and in Freeport, Grand Bahama, as part of the Air Pollution Prevention and Control Strategy.

These monitoring stations are operated by the Department of Environmental Health Services, an agency of the Ministry of Consumer Affairs and Aviation, and measure suspended particulate matter, nitrogen oxides, and sulfur oxides.

Most fuel stations in the Bahamas now sell unleaded gasoline, with one company providing only unleaded gasoline. It is anticipated that a significant reduction of lead in the environment will result from this development.

The 1995 data on water supply indicated that 88% of houses in urban areas were connected to the drinking water supply system, while another 8% of urban houses had reasonable access to water. The situation was reversed in rural areas, where 86% of houses had reasonable access to water but no indoor connections. In contrast to the water supply situation, only 16% of houses in urban areas are connected to a public sewer, but the remaining 84% have adequate on-site excreta disposal. In the rural areas, 100% of the houses have an adequate on-site excreta disposal system. In addition, regular collection of solid waste is provided to nearly all (99%) of the houses in urban areas, but to none in rural areas.

A major concern with regard to drinking water quality is the proliferation of private shallow-water wells. Especially in residential and commercial areas with on-site sanitation, groundwater quality is compromised by nitrates, pathogens, and substances used in commercial activity. Although this well water is mostly used for washing, cross-connections have been reported, which could allow this polluted water to be pumped into the public distribution system and thus affect the potable supply.

Use of private wells is discouraged. Those who use them are urged to have their water tested periodically. Switching between public and private supply is also discouraged in order to reduce the risk of contamination.

In terms of human resource development, particular attention is being paid to the areas of maternal and child health, the health inspectorate, disease surveillance/epidemiology, hospital administration, program management, and project design and management. The Ministry recognizes that adequate human resource planning, coupled with development for health professionals and staff at all levels and in all areas, is a key to success.

Other Ministry programs include strengthening of the health information system and infrastructural development of hospitals and community clinics.

Health Sector Reform

In keeping with Region-wide developments related to changing national health systems, and as a part of the overall public sector reform efforts, the Bahamas' focus for health sector reform is on issues of modernization and decentralization; the organization and operation of services; complementarity with the private sector; and rationalization of human and financial resources.

Specific reform efforts under way in the Bahamas include (but are not limited to) the following:

- preparations for the devolution of management of the three public hospitals from the centralized Ministry to an autonomous, quasi-governmental hospital services board/authority;
- privatization of selected diagnostic health services in the public sector;
- the adoption of policies for the purchase, financing, and distribution of pharmaceuticals;
- selective privatization of decentralized financing/capital funding and decentralized management policies and practices; and
- the development of local health systems in the Family Islands.

Devolution of Hospitals. The decision to devolve the management of hospitals resulted from a determination that highly centralized government bureaucracy militates against the efficient and effective operation of the hospitals. The long-range goal is the establishment of a hospital corporation, directed by a board that will be responsible for the executive management and direction of the corporation. Some services within the hospital have already been privatized and the decision taken to contract out selected services.

Selective Privatization. Selective privatization grew out of the need and desire of Bahamian physicians to deliver quality health care to all residents of the Bahamas, in both the private and public facilities. Selective privatization was initiated within the context of availability of first-world health care providers, the existence of patients with first-world expectations, and the reality of limited budgets within the public health sector.

The central feature of selective privatization is the relationship between the management of the Princess Margaret Hospital and a private entity, the Physicians Alliance. Through this partnership, the Physicians Alliance provides capital for the purchase of equipment and for the renovation of the facilities and is responsible for equipment selection, transport, installation, maintenance, and replacement. In addition, the Physicians Alliance is responsible for employing the clerical and administrative staff, managing the service, and paying the technical and medical personnel. The Princess Margaret Hospital contributes the physical plant, staff for renovation of facilities, housekeeping and security staff, and funds for utilities payments and customs duties on imported equipment and supplies.

The other feature of the partnership is the equal sharing of any profits between the Physicians Alliance and the Princess Margaret Hospital. The policy of the Alliance is that indigent patients are not denied service. Fees for public patients are much lower than those charged in the private sector; fees for private patients, while higher, are set at competitive rates and are still significantly lower than the fees charged in the private sector.

On a smaller scale, radiology services, once provided to community clinic clients by the Princess Margaret Hospital, have been privatized.

Development of Local Health Systems. The concept of a local health system was first realized on Grand Bahama in 1985, when all the health services on the island were brought under one administrative umbrella. This arrangement afforded the maximum utilization of hospital-based skills, to the advantage of the entire system, and allowed for a two-way sharing of resources. During 1993–1994 this system was evaluated and a study was done to assess the feasibility of implementing a similar system in the Family Islands. As a result, a modified form of the system was introduced on the islands of Andros, Eleuthera, and Long Island. These islands are divided into health districts, each with its own health team. This system has not only brought the management of the services closer to the population being served, but has also facilitated the sharing of resources between districts. With the establishment of local government during 1996, it has become necessary to find ways to manage the health system within the mandates of local government to the benefit of the population. The phased extension of the system to other major Family Islands is proposed.

Within the context of local health systems, innovative ways will be sought to involve clients in determining the extent of the services provided and in setting priorities.

Organization of the Health System

Government Sector

In April 1997, following elections, responsibilities within the public sector of the health system were reordered. The Ministry of Health has overall responsibility for ensuring the health of the nation. It discharges this responsibility through establishing national policies and strategic plans for personal health; providing public services and facilities to support these interventions; and ensuring that public health regulations and activities for disease control and health promotion are maintained.

The Ministry is headed by the Minister of Health, who is assisted by a Parliamentary Secretary with specific responsibility for updating health legislation. The administrative structure is managed by the Permanent Secretary, and the technical head is the Chief Medical Officer. The senior technical directorate is completed by the Chief Hospital Administrator and the Director of Nursing.

The service areas and programs of the Ministry that fall directly under the purview of headquarters management include the Health Education Division, the AIDS Secretariat, the National Drug Council, Materials Management, the National Drug (Pharmaceutical) Agency, the Human Resources Development Unit, the Health Information Coordinating Unit, and the Health Planning Unit.

Hospital Services. The public sector operates three hospitals, the two largest of which are located on New Providence. The Princess Margaret Hospital, with 436 beds, provides general acute and specialized services including intensive care, hemodialysis, cardiology, and urology. The Sandilands Rehabilitation Center provides both psychiatric/mental health care on an inpatient and outpatient basis (352 beds) and geriatric care (130 beds). The third institution, the Rand Memorial Hospital, is in the nation's second largest city, Freeport, on Grand Bahama. It provides general acute care as well as basic levels of specialized services, and has a bed complement of 82.

Between 1992 and 1994 the occupancy rate of the Princess Margaret Hospital was around 90%, but in 1995 it dropped to 82%. High occupancy rates were also recorded at the Sandilands Rehabilitation Center in both the Psychiatric Unit (84%–88%) and the Geriatric Unit (93%–95% in 1992–1994, falling to 88% in 1995). At the Rand, however, occupancy rates were between 52.8% (1992) and 54.0% (1994).

The Executive Management Committee of each hospital consists of the Hospital Administrator, the Medical Staff Coordinator, and the Principal Nursing Officer; at the Princess Margaret Hospital it also includes the Financial Controller and the Chief Hospital Administrator. In 1996 a new category of staff was introduced: the Resident Specialist. These persons are full-time clinical managers who are responsible for managing their respective units and who sit on the Hospital Planning and Development Committee.

Laboratory, X-ray, and Pharmacy. These facilities are available within both the public and private sectors. The laboratory of the Princess Margaret Hospital serves the hospital and the Community Health Clinics. It also functions as the public health and referral laboratory and manages the blood bank. The Rand Hospital performs similar functions on Grand Bahama. These services are also available at the Doctor's Hospital, a private institution, and stand-alone facilities exist in the private sector.

The pharmaceutical services within the public sector are managed by the National Drug Agency, which was established

in 1994. It is responsible for the procurement and distribution of pharmaceuticals and biologicals to hospitals and community health services. In 1993 a technical cooperation project was instituted between the Ministry of Health and the Barbados Drug Agency to streamline the procurement and distribution of pharmaceuticals to government health facilities. This project is ongoing.

Purchasing of equipment and materials for the Ministry is carried out by the Materials Management Department. Requests are forwarded to it by the respective institutions following careful review by an in-house purchasing committee.

Public Health Services. These services are delivered through a network of 57 community clinics and 54 satellite clinics in New Providence and the Family Islands. They also encompass community-based programs such as home and district nursing, disease surveillance, and home-based rehabilitation. The management team in this area consists of an Administrator, Medical Staff Coordinator, Principal Nursing Officer, and Medical Officer of Health. There is a unit specifically responsible for coordinating service delivery to the Family Islands. Public health services include general practice, maternal and child health, and dental health. They are provided at the following types of health facilities:

(1) Comprehensive clinics (available only in Nassau), which are staffed by general practitioners, public health nurses, and other registered nurses. They have X-ray, pharmacy, dental, and limited laboratory services.

(2) District health centers, which have a resident doctor, nurse-in-charge, and administrative/clerical officer. These centers are the focal medical facilities in defined health districts and are equipped with most of the standard life-sustaining equipment.

(3) Community clinics, which take care of the needs of a specified community. A resident nurse is stationed at each clinic, and the district doctor makes weekly visits.

(4) Satellite clinics, which have no resident staff and are visited at intervals ranging from twice monthly to every six weeks by a doctor or nurse-in-charge.

Environmental Health Services. The environmental concerns of the Ministry are managed by the Department of Environmental Health Services (DEHS), whose functions are conducted through three divisions: the Health Directorate, Environmental Monitoring and Risk Assessment, and Solid Waste Collection and Disposal. The management team comprises a Director, Deputy Director, and the Assistant Directors responsible for the three divisions. In April 1997 this department was transferred from the Ministry of Health to the Ministry of Consumer Affairs and Aviation.

DEHS activities include monitoring the quality of groundwater, drinking water (including bottled water), and air; management of solid waste, chemical safety, and hazardous waste; inspection of ports for compliance with sanitation rules; monitoring of food quality; inspection of premises; and control of vector proliferation.

Most solid waste is disposed of in a landfill. In New Providence 28% of the total waste delivered to the landfill is hauled by DEHS (residential trash and waste from small businesses), and 72% by private haulers and waste management companies (from hotels and industrial and commercial enterprises). Infectious waste from hospitals is incinerated on-site, while the other waste is transported to the landfill.

The supply of drinking water is the responsibility of the Water and Sewerage Corporation (WSC). It is legally responsible for water resource management, water supply, and the provision of adequate facilities for the drainage and safe disposal of sewage and industrial effluent in the Bahamas, except on Grand Bahama, where a separate utility has been established for water supply and wastewater management.

The primary source of drinking water is shallow groundwater. The groundwater has a detectable saline taste, and many people use bottled drinking water (locally produced in reverse osmosis plants). Desalination plants have also been constructed at major hotel developments. A reverse osmosis plant was scheduled to be operational by the end of 1997 to augment public supply and reduce overall salinity levels. Rainwater collected in tanks and cisterns supplies less than 3% of the water consumed. Drinking water is also brought by barge from Andros to New Providence, the most populous island.

Since the Bahamas is heavily dependent on the tourism sector for its economic survival, sustained tourism development is vital. The Government has established the Bahamas Environment, Science, and Technology Commission (BEST) within the Office of the Prime Minister to address the issue of sustainable development. Commission membership is drawn from ministries, departments, corporations and private sector organizations, and individuals responsible for or involved in matters related to the environment, science, or technology.

The responsibilities of BEST are, *inter alia:*

- To serve as the Bahamas' national focal point for contact with all international organizations on matters relating to the environment, science, and technology.
- To coordinate work pertaining to international environmental conventions, treaties, protocols, and agreements to which the Bahamas is or will become a signatory.
- To coordinate national efforts to (i) protect, conserve, and responsibly manage the environmental resources of the Bahamas; (ii) develop a National Conservation and Sustainable Development Strategy Plan; (iii) identify suitable scientific and technological advances that can

contribute to the development of the Bahamas; (iv) draft legislation to enforce the provisions of the National Conservation Plan and other environmental policies; and (v) identify and apply for technical assistance and financial grants to meet the Commission's responsibilities.

Areas of environmental concern include pollution from automobiles, solid waste management, protection of the natural environment, coastal zone pollution, drinking water supply, and sewage disposal.

Legislation. Health legislation has not kept pace with the health care industry, technological advances, or the many environmental concerns that currently confront the country. New categories of staff and new types of facilities, especially within the private sector, need to be accommodated. Current legislation only covers the registration of doctors, nurses (including midwives), and dentists. Top priority is being given to laws governing the registration of pharmacists and laboratory technologists, and work has begun on laws pertaining to such disciplines as X-ray technology, optometry, podiatry, chiropractic, and physiotherapy.

Another legislative priority is the regulation of health facilities, including private hospitals, walk-in clinics, laboratories, and X-ray facilities.

Work has been ongoing in environmental health legislation, but much remains to be done. No legislation exists to control smoking in most public places, but the national airline and, as of 1 August 1997, national airports are smoke-free.

No legislation is currently in force regulating the use of seat belts or car seats for children, but active consideration is being given to such legislation. In the interim, the driving public is being encouraged to use seat belts.

Private Sector

Services. The private sector provides primary care services, emergency services, secondary inpatient care, and specialized clinical, diagnostic, and treatment services in both the medical and dental fields. There are two private hospitals providing secondary care. Doctor's Hospital has 72 beds and its services include emergency care, specialized medical care (including rheumatology and nephrology), surgery (including cardiovascular and neurosurgery), obstetrics, and diagnostic services (including nuclear medicine). The other private hospital, Lyford Cay, has 12 beds. It provides specialty services in cardiology, plastic surgery, urology, and podiatry. In addition, a number of private practices have birthing facilities but are not classified as hospitals.

Specialized ambulatory services are available in the areas of cardiology and nephrology. The Bahamas Heart Center offers a full range of cardiac evaluation techniques, including nuclear stress testing and cardiac catheterization. Pacemaker implantation is also available. Renal House offers kidney dialysis.

Health Insurance. There is no national health insurance scheme, but the National Insurance Board provides medical benefits for job-related injuries and illness. Partial salary replacement is provided during illness, as well as paid medical care for industrial injuries. Other benefit types include maternity, disability, and death. In addition, provision is made for invalidity, retirement, and survivor's benefits. Several options for health and dental insurance are available through the private insurance system.

Health Resources

Human Resources

The Bahamas is well supplied with physicians and dentists. Doctors increased from 373 (14.13 per 10,000 population) in 1992 to 417 (14.98) in 1995, and dentists from 58 (2.2 per 10,000 population) in 1992 to 80 (2.9) in 1995. In terms of distribution, 235 physicians were in government service and 182 (excluding consultants) were in the private sector. Consultants work in both the private and government sectors.

Within the government sector, 152 doctors (including 25 consultants) are attached to the Princess Margaret Hospital, 32 (including 7 consultants) to the Rand Hospital, 13 (including 5 consultants) to the Sandilands Rehabilitation Center, and 37 to the Community Health Services. It is noteworthy that in 1994, 15 of the Community Health Services doctors were based in New Providence, while 20 were in the Family Islands. In 1995, however, this situation was reversed, with 21 in New Providence and 16 in the Family Islands.

Of the 80 dentists in the country, 21 are in government service and 59 in private practice. Of the government service dentists, 13 are attached to the Princess Margaret Hospital, 1 to the Rand, 1 to the Sandilands Rehabilitation Center, and 6 to the Community Health Services.

The number of registered nurses in the government service increased only slightly between 1989 and 1995 (from 623 to 653). Thus the rate per 10,000 population decreased from 25.0 to 24.1. Between 1989 and 1993 the number of trained clinical nurses (TCNs) decreased from 467 to 416; it then recovered to 464 in 1995—still below the 1989 level. During that period the rate per 10,000 population dropped from 18.8 to 16.6. In terms of distribution, 362 registered nurses and 249 TCNs are attached to the PMH, 56 registered nurses and 53 TCNs to the Rand, 104 registered nurses and 88 TCNs to the Sandilands Rehabilitation Center, and 131 registered nurses and 74 TCNs to the Community Health Services.

With respect to other categories of staff, the Princess Margaret Hospital has 16 pharmacists and 16 pharmacy aides, 32 laboratory technologists, 7 physiotherapists and 5 aides, and 1 occupational therapist. The Rand Memorial Hospital has 7 laboratory technologists, 4 lab technicians, and 1 cytotechnologist.

There is no medical or dental school in the Bahamas. Most national doctors and dentists are trained at the University of the West Indies or in North America. As of April 1997 the Bahamas Government entered into an agreement with the University of the West Indies, whereby the Princess Margaret Hospital and community health facilities will provide clinical experience to medical students from the University.

Nursing training is carried out at the College of the Bahamas. The nursing department offers a program in midwifery, an associate of science degree in nursing, a continuing education program, and, since 1995, a bachelor of science degree nursing program for registered nurses. While there were 199 students registered in the associate of science degree program in 1995, the number of graduates had been relatively small in the period 1992–1995 (64), with only 7 graduating in 1995. There was only one graduating class of midwives during that time (15 in 1994). These numbers cannot satisfy the demands of the health sector, and nurses are still recruited from overseas from time to time.

The Health Sciences Department of the College of the Bahamas offers an associate's degree in environmental health. An associate of science degree in health sciences, with options in medical technology, pharmacy, occupational health, and physiotherapy is presently being developed.

Expenditures and Sectoral Financing

The national health expenditure by the Government has shown a steady increase since 1970, mirroring the increase in the total national recurrent expenditure. The percentage of the total government expenditure devoted to health increased from 10.8% in 1970 to 15.6% in 1986. Since that time, the proportion has fluctuated and has tended to fall; in the 1995–1996 budget it amounted to 13.6%. Nevertheless, because of the strengthening of the national economy, the actual amount spent has increased. The distribution of expenditure between the different divisions of the Ministry has remained fairly constant, with approximately 15% going to administration, 65.5% to hospitals, 8% to environmental health, and 11% to community health services. It is not possible to determine how much is spent on preventive as opposed to curative services, since both types of services are provided through the public health system.

The financial resources for health provided by the central government come from the consolidated fund. In addition, limited amounts are obtained from inpatient charges and fees for clinical and diagnostic services.

In addition to medical benefits, the National Insurance Board has provided funding for the construction of 11 health facilities on New Providence and five of the Family Islands, and another 5 are under construction.

The out-of-pocket expenditures of families for physician's fees, medications, diagnostic services, and private health insurance contribute to private sector resources. The IDB has estimated that private health expenditure amounts to 2.2% of GDP and 45.6% of the total health expenditure in the country.

Several nongovernmental organizations provide health services of one kind or another. Some of these organizations take an active part in government-sponsored health programs. Notable among these are the Cancer Society, Crippled Children's Committee, AIDS Foundation, Family Planning Association, Crisis Center, and Diabetic Association. Other organizations exist in the areas of drug abuse and care for persons living with AIDS.