HEALTH SYSTEMS DEVELOPMENT IN THE ENGLISH-SPEAKING CARIBBEAN: TOWARD THE TWENTY-FIRST CENTURY

Peter R. Carr

The countries of the English-speaking Caribbean area have made significant efforts to develop national health policies and programs in recent years. This article describes that progress, devoting particular attention to events in Dominica and Jamaica, and suggests measures needed to meet growing health care demands with the limited resources anticipated in the future.

Introduction

In 1977 the World Health Assembly resolved that the main social target for the world's governments should be the attainment of a socially and economically productive life for their citizens by the year 2000. In 1978 the Alma-Ata Declaration reaffirmed this pledge and stated that the "primary health care" strategy should be the main vehicle for achieving the goal of "Health for All by the Year 2000" within the broad context of national socioeconomic development (1). In 1979 the World Health Assembly urged member states to define and implement national, regional, and global strategies for achieving the goal of "health for all." And in 1981 the Assembly approved the global strategy of "Health for All by the Year 2000" (2).

A key implication of the "health for all" goal and the primary health care strategy is that the health of an individual depends not merely on the absence of disease but on the presence of a state of "well-being." Obviously, procuring this state requires a multisectoral approach in which such issues as unemployment, poor housing, illiteracy, and poverty become major areas of concern. This is a significant change in the concept of health found in most countries, including those of the English-speaking Caribbean, principally because it recognizes that health is not the goal of the health sector alone, but rather one to which all social and economic sectors must actively contribute. This requires the establishment of organizational forms that will ensure collaboration and link it with the overall socioeconomic development process.

It should also be noted that a key ingredient of the "health for all" effort and the primary health care strategy is community participation. This entails not merely "a temporary involvement of the community in health actions but a permanent educational process whereby the community's knowledge, efforts, cultural wealth, and resources are harnessed in a well-informed manner in the pursuit of its total well-being" (3). In short, a spirit of self-reliance must be developed at the individual, the family, and the community levels in the pursuit of health for all. People should be educated to understand what community actions must be taken to bring about better health and should be encouraged to take such action.

Health in the English-Speaking Caribbean

In many ways the health situation in the English-speaking Caribbean more closely resembles that of the developed rather than the developing world (see Table 1). Recorded life ex-
### Table 1. Basic population, health, and economic data for 13 English-speaking Caribbean countries—1984.

<table>
<thead>
<tr>
<th>Country</th>
<th>Year of data (except as noted)</th>
<th>Population (in thousands)</th>
<th>% of population under 15 years old</th>
<th>Annual growth rate (%)</th>
<th>Life expectancy at birth (in years)</th>
<th>Infant deaths per 1,000 live births</th>
<th>Deaths among young children (1-4 years) per 1,000</th>
<th>% of all deaths caused by heart disease</th>
<th>% of all deaths caused by tumors</th>
<th>% of population served with potable water</th>
<th>No. of hospital beds per 1,000 inhabitants</th>
<th>No. of physicians per 10,000 inhabitants</th>
<th>No. of dentists per 10,000 inhabitants</th>
<th>No. of nurses per 10,000 inhabitants</th>
<th>Per capita GDP (in US$)</th>
<th>% of total health expenditure made by central government</th>
<th>Per capita expenditure (in US$)</th>
<th>Health expenditure (in US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antigua/Barbuda</td>
<td>1984</td>
<td>77(83)</td>
<td>32.0(80)</td>
<td>1.5(80)</td>
<td>70.0</td>
<td>11.0(83)</td>
<td>0.1(83)</td>
<td>16.0(78)</td>
<td>17.6(78)</td>
<td>95(83)</td>
<td>6.9</td>
<td>4.5</td>
<td>0.6</td>
<td>16.0</td>
<td>300(E.C. currency)</td>
<td>11.8(83)</td>
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<tr>
<td>Bahamas</td>
<td>1984</td>
<td>226</td>
<td>37.7</td>
<td>2.1(80)</td>
<td>69.3(80)</td>
<td>24.7(82)</td>
<td>1.0(82)</td>
<td>20.1(82)</td>
<td>15.9(82)</td>
<td>—</td>
<td>4.3(83)</td>
<td>9.0(83)</td>
<td>1.5(80)</td>
<td>42.9(83)</td>
<td>6,666.0(82)</td>
<td>14.7(82)</td>
<td>207.0(83)</td>
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<tr>
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<td>250</td>
<td>29.4</td>
<td>1.0</td>
<td>70.0</td>
<td>17.6</td>
<td>0.6</td>
<td>17.1</td>
<td>20.5</td>
<td>100</td>
<td>9.0</td>
<td>8.8</td>
<td>2.9</td>
<td>3.0</td>
<td>3,603.0</td>
<td>8.0(83)</td>
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<tr>
<td>Belize</td>
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<td>157</td>
<td>46.1</td>
<td>3.0</td>
<td>70.0</td>
<td>21.3</td>
<td>1.1</td>
<td>7.6</td>
<td>21.2</td>
<td>77</td>
<td>2.5</td>
<td>5.1</td>
<td>0.6</td>
<td>17.2</td>
<td>970.0</td>
<td>10.0(83)</td>
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<tr>
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<td>76.5</td>
<td>47.2</td>
<td>1.8(81)</td>
<td>71.0(80)</td>
<td>13.0</td>
<td>0.4</td>
<td>21.0</td>
<td>22.0</td>
<td>77</td>
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<td>466.0(86)</td>
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<td>109</td>
<td>47.0</td>
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<td>67.0(82)</td>
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<td>0.5(81)</td>
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<td>85</td>
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<tr>
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<td>802</td>
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<td>2.6</td>
<td>70.5</td>
<td>47.9(80)</td>
<td>3.4(79)</td>
<td>4.9(79)</td>
<td>20.4(79)</td>
<td>93(79)</td>
<td>4.5</td>
<td>3.5(79)</td>
<td>0.4(79)</td>
<td>10.4(79)</td>
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<tr>
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<td>2,192</td>
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<td>2.1</td>
<td>70.1</td>
<td>16.2</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
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<td>2.4</td>
<td>0.9</td>
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<tr>
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<td>12</td>
<td>30.5(82)</td>
<td>11.6(82)</td>
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<td>21.6(81)</td>
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<tr>
<td>St. Christopher/Nevis</td>
<td>1981</td>
<td>42(84)</td>
<td>44.8(82)</td>
<td>15.2(80)</td>
<td>65.0</td>
<td>46.0</td>
<td>2.5(80)</td>
<td>11.8(83)</td>
<td>17.0(83)</td>
<td>100(83)</td>
<td>4.4(79)</td>
<td>4.0(62)</td>
<td>0.4(82)</td>
<td>22.7(80)</td>
<td>716.0(84)</td>
<td>14.2(84)</td>
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<tr>
<td>St. Vincent and the Grenadines</td>
<td>1982</td>
<td>128</td>
<td>28.0(79)</td>
<td>12.5(78)</td>
<td>67.0(79)</td>
<td>26.0(80)</td>
<td>7.2(80)</td>
<td>12.0(79)</td>
<td>19.0(78)</td>
<td>70(79)</td>
<td>2.4(60)</td>
<td>2.9(60)</td>
<td>0.6(60)</td>
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<td>544.0</td>
<td>14.2(81)</td>
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<tr>
<td>Trinidad and Tobago</td>
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<td>1.7</td>
<td>68.9(80)</td>
<td>19.7(80)</td>
<td>1.3(78)</td>
<td>10.6(78)</td>
<td>25.5(78)</td>
<td>95(84)</td>
<td>4.1(80)</td>
<td>10.5</td>
<td>0.9</td>
<td>28.3</td>
<td>6,691.0(82)</td>
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</table>


*Includes social security.
pectancy at birth ranges from about 65 years (in St. Christopher/Nevis) to about 71 years (in Dominica and Guyana). Recorded infant mortality per 1,000 live births ranges from about 11.1 (in Antigua/Barbuda) to 47.9 (in Guyana). The proportion of the population with access to potable water ranges from about 53% (in Montserrat) to 100% (in St. Christopher/Nevis and Barbados). And the number of hospital beds per 1,000 population ranges from about 1.2 (in Guyana) to 9.0 (in Barbados).

Morbidity and mortality data for the Caribbean for the 1970-1980 period also reflect the comparatively high standard of health within the area. Complete mortality data are not available from all the English-speaking countries. However, a sample of mortality data from five countries (Antigua, Barbados, Dominica, Saint Lucia, and St. Vincent) indicates that the major causes of death are hypertension, cerebrovascular diseases, and malignant neoplasms. The percentages of deaths caused by tumors and heart disease in 13 countries are shown in Table 1.

Other mortality data show that diarrheal diseases occupy a leading place among the infectious diseases as a cause of death, especially among children under one year of age, and that deaths from accidents have been increasing in all of the countries.

Morbidity data for the Caribbean area have been quite comprehensive, despite administrative problems involving incomplete data (underreporting) and lack of technical facilities for laboratory confirmation in some cases. Regarding the diseases preventable by immunization, prevalences of tuberculosis, diphtheria, and whooping cough have gradually diminished. Poliomyelitis is almost nonexistent. Vector-borne diseases such as malaria and dengue exist, the former principally in the mainland countries of Guyana, Suriname, and Belize, and the latter throughout the Caribbean (4).

The Health System Development Process

The commitment of the English-speaking countries to the primary health care concept and the goal of health for all by the year 2000 is suggested by the number of countries that are in the process of developing their own health systems (see Table 2). Some have made more progress than others, but most have at least de-

<table>
<thead>
<tr>
<th>Country</th>
<th>Health policy</th>
<th>Health plan</th>
<th>National programming</th>
<th>Local programming</th>
<th>Management information systems</th>
<th>Management support systems</th>
</tr>
</thead>
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<td></td>
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<td></td>
<td></td>
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<td>x</td>
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<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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</tr>
<tr>
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<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
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<td>Belize</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
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<tr>
<td>Dominica</td>
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<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Guyana</td>
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<td>x</td>
<td></td>
<td></td>
<td>x</td>
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<tr>
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<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Montserrat</td>
<td>x</td>
<td>x</td>
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<td>x</td>
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<tr>
<td>St. Christopher/Nevis</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
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</tr>
<tr>
<td>Saint Lucia</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>St. Vincent</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
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<td>Trinidad and Tobago</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
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</tbody>
</table>

Source: Narrative country reports for 1984 prepared by PAHO.

a In the process of being developed.
developed a health policy and health plan. Some of these policies and plans have been officially approved by the Cabinet, while others are still in draft form. The processes used for the formulation of these policies and plans have varied from country to country, but in general they have involved health system staff members at the head office and in the field. In most cases the countries have received support from an international agency such as PAHO/WHO or a regional institution such as the Caribbean Community (CARICOM) Secretariat. Such support has been directed at institutionalizing the planning process as part of the health services delivery system. In addition, the countries have sought to utilize an intersectoral approach (involving other sectors such as agriculture and education) in this planning process.

A number of countries have also been involved in programming at the national and local levels as part of the process of implementing national policies and plans. This programming process has been based on national guidelines and manuals prepared to deal with specific in-country situations.

In addition, specific projects are being implemented to strengthen management support systems. For example, the supply management system for essential drugs and medical supplies is being strengthened in a number of countries—especially through efforts to develop formulas, streamline procurement practices, and improve warehousing and distribution systems. Some countries have developed new approaches for financing their health services. Barbados has recently passed legislation that calls for all employees to pay a percentage of their salary for a national health service now in the process of being introduced. Some other countries are trying to improve the health manpower management process by various means, including development of health manpower policies.

The health management information systems have also been a major component of this development process. Ministries of Health have been defining and streamlining the data needed to manage the health services, improving the technology available for generating and processing these data, and training health personnel to use such data for making management decisions.

The concept of community participation has been present in all these development activities, despite variations in the degree of community involvement. For example, in Dominica—and also in Grenada before the October 1983 disturbances—local communities have been quite involved in the planning and programming process. In some countries, such as Belize, community participation and team-building are being used as a way of strengthening the management process at the health district level before involving these districts in the national health planning process.

Obviously, it would not be practical to provide a detailed analysis of this development process on all the English-speaking Caribbean islands in this article. Instead, a brief summary of this process in two countries, Jamaica and Dominica, will be provided. These countries have been selected not only because of the efforts they have made over the past five years or more to develop their health systems, but also because they vary considerably in area and population size, as well as in the size of their health service delivery systems.

**Dominica**

Dominica is an island of 289 square miles and a population (in 1979) of about 75,000 inhabitants. It is very mountainous and has heavy rainfall—circumstances that create frequent landslides and loss of road communication with affected sections of the country. Hurricane David, which struck in late August 1979, completely destroyed the main hospital and forced government authorities to address rebuilding of the health system. It thus provided a major cause, albeit an unwelcome one, for development of the present health services.

Before Hurricane David, responsibility for providing public health services was borne by the Department of Health and Medical Care within the Ministry of Education and Health. Policy decisions were made by the Minister of Education and Health on the advice of the Per-
manent Secretary. The position of the Chief Medical Officer—an official responsible for providing technical advice and executing health policy and programs—had remained vacant for many years, creating a vacuum between technical personnel and the administrative arm of the ministry. Furthermore, the ministry was organized with vertical lines of authority, there being no decentralization of authority to the field level.

The physical facilities of the health services included 45 health centers and clinics, three short-term “hospitals” with small numbers of beds, and a national “referral” hospital with 200 beds. The public health nursing (health visitors) services were divided into eleven zones covering the island, but there were only six districts for the District Medical Officers (DMOs) who provided the island’s outpatient medical services. These zones and districts did not coincide, causing organizational problems. Provision of services to the rural areas, where 90% of the population lived, was grossly inadequate. Of the six DMOs, only two lived in their districts. The others lived in the city, where they had private practices, and paid occasional visits to their government clinics. The staffing of the clinics presented a problem over and above the inadequate service from the doctors. Specifically, a number of clinics lacked resident nurses, and some were served only by auxiliary nurses or retired midwives. There was no organized health information system that formed any integral part of a planning, programming, and budgeting process. Overall, the hospital services normally accounted for 60 to 80% of the health budget. Health workers in the nonhospital services receiving the remaining 20 to 40% had little or no influence on preparation of the budget or expenditure of funds.

On the basis of these findings, and in the wake of Hurricane David, a reorganization of the health services began in 1980. This reorganization, which has continued to the present, has sought to establish three levels of responsibility and authority within the health services—these being the levels where policy is made, programs formulated, and programs executed.

Officials at the first (policy-making) level include the Minister, the Permanent Secretary, and the Director of Health Services—the latter occupying a newly-created post. The function of these officials is to establish health policy in keeping with government directives and overall national development policies.

Officials at the second (program formulation) level are technical and professional staff members with national responsibilities for formulating and implementing programs. These officials report to the Director of Health Services and act as a central technical committee for program formulation; development of guidelines, norms, and standards; and determination of health manpower development priorities. These duties are performed in close consultation with people at the third (program execution) level; and, in this same vein, headquarters staff members provide technical supervisory support for program execution to personnel in the field.

Personnel at the third (program execution) level are engaged in both institution-based and community-based activities. At this level, the most important changes have been introduced in management of the community-based activities. That is, “district” health teams have been established, and these are responsible for developing and implementing local programs in accord with national policies, and more generally for managing district health services. Each team consists of all the district and community health workers, including staff nurses from the district hospitals.

Dominica’s new health care delivery system is envisaged as providing four levels of care—through type I/II clinics, type III health centers, a proposed polyclinic, and the national referral hospital. The plans call for each type I/II clinic to be staffed by a primary health care nurse and to serve at least 600 people within a five-mile

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3The type I/II clinic provides home visits; ante-natal, intra-natal, and post-natal services; and family planning, school health, medical care, and environmental health services. Many of these kinds of services, particularly the last two, are performed with support from staff members at the type III health center.
radius. The type III health center, the administrative headquarters of each district, caters to a population of approximately 2,000. Services provided from this center include environmental health activities, outpatient referrals, limited inpatient maternity services, dental care, and supervision of the type I/II clinics in the district. To date, seven districts have been established, each with a type III health center and a network of type I/II clinics.

The district health teams, under the leadership of the District Medical Officer (DMO), have been delegated authority to manage these services at the district level. Norms, standards, and manuals have been prepared to guide them in this process, and special technical manuals have been prepared to assist priority programs in areas such as maternal and child care and environmental health.

This decentralization process has also included strengthening of administrative support services. Districts have been allocated their own budgetary resources, which are to be administered by the district teams. The supply management system for essential drugs has been strengthened by establishing a revolving fund and by improving procurement, warehousing facilities, and distribution of drugs to the hospitals, health centers, and clinics. Referral systems operating between the health centers and the hospital have been strengthened by providing transportation services for staff members and patients, and by setting up telephone and radio communication systems.

Considerable emphasis has been given to establishing the programming process at the district level, and also to strengthening the information system that supports programming. The actual programming process begins by defining the area to be served by each health center and clinic. It then proceeds to locate and map the houses served and to identify the individuals within each catchment area. The recording and reporting systems needed to accomplish such programming have been simplified and streamlined, and have been integrated into all aspects of program formulation, implementation, and evaluation.

Health manpower development has been an important element of this health systems development process. Dominica, like the rest of the Eastern Caribbean, has had considerable difficulty retaining trained health personnel. Faced with limited financial resources, limited opportunities for promotion, and problems convincing highly-trained professionals to live in remote rural areas, the Government decided to train and utilize a new kind of nursing worker, the primary care nurse. The training of these workers, geared to community health problems and needs, includes one year of general nursing, nine months of midwifery exposure, and three months of internship.

In addition, considerable emphasis has been placed on management training and organizational development. Management and supervisory personnel within the health services have attended workshops on management and supervision, team-building, and the change process. This has improved communication between the levels of the system and has increased the attention given to program planning and implementation.

Jamaica

Jamaica has the largest population (2.3 million inhabitants in 1983) of any country in the English-speaking Caribbean and an area of 4,244 square miles. As of 1982 its public health facilities included 27 government hospitals and 384 health centers.

Jamaica's recent health systems development process has evolved similarly to that process in Dominica, but it started two years sooner. That is, in March 1977 the Government decided to stimulate this process by formulating a health policy and health plan, and by strengthening the health system's operating capacity. (In general, the planning-related features of this process were directed at a broader goal, that of formulating a national socioeconomic development plan.)

As in Dominica, strong Health Ministry support was essential to this health systems development process. That support was demonstrated by the continuous and active participation of leading health authorities, including the political directorate. Among other things, the Ministry of Health established a steering committee com-
prised of selected senior Health Ministry personnel, Dr. Kenneth Standard from the University of the West Indies, Dr. Philip Boyd of the CARICOM health desk, and the PAHO/WHO Management Adviser in Jamaica. This steering committee served as the focal point of the process and set up subcommittees to deal with policy formulation, health planning, and management development—including restructuring of the health organization.

A health policy was formulated in 1977 that emphasized the "health for all" goal and the "primary health care" approach as the main strategy for achieving this goal. Although the policy document was prepared before the 1977 Alma-Ata Conference, it nonetheless reflected the essence of the Alma-Ata declaration. This document was used as a guide in formulating a national plan (prepared by extended subgroups of the planning committee that included program managers and senior field officers who focused on the program areas for which they had technical responsibility). This formulation process was a slow one that involved drafting several versions of the plan before the final version emerged.

The organizational development (management development) committee dealt with decentralization of authority down to the field level and with redefinition and enhancement of the head office role. As in Dominica, this caused the Ministry to be defined at the three broad levels of policy formulation, program formulation, and program execution. Personnel at the policy formulation level included those on the political directorate and senior health advisers; those at the program formulation level included senior health officers and middle-level health personnel; and those at the program implementation level included other hospital and health center workers.

The health development process in Jamaica was stimulated by two World Bank loans, one extended in 1970 and the other in 1976. The first of these was directed at improving the national family planning program and developing rural maternity services through maternity centers and postpartum programs. The second, which provided for the integration of maternal and child health and family planning services, emphasized community-based delivery programs for these services. In addition, this latter loan project gave strong support to development of a planning and evaluation unit in the Health Ministry’s head office.

Jamaica’s health policy, as ultimately formulated, identified many priority areas to be addressed by the health plan. In particular, the policy called for improving management of the health services, health manpower development, environmental health, food and nutrition, and the health of mothers and children. The ensuing health plan developed for 1978-1983 reflected these priorities and proposed decentralization of authority to health “area administrations,” which would be Health Ministry units responsible for management of health services at the operational level. These administrations are being established for direct management of nonhospital services in the first instance, with the option of incorporating the hospital services as a second phase.

In addition, the Ministry’s head office was strengthened, additional staff members being assigned to the Primary Health Care Unit, the Epidemiology Unit, and the Statistical Unit. In addition, these management improvement efforts extended to the system for managing supplies—with strengthening of the procurement, inventory control, warehousing, and distribution processes. The personnel management system was also improved through introduction of a computerized system for preparing post and staff lists covering the Ministry’s approximately 12,000 employees.

Considerable emphasis was also placed on health manpower development. A number of in-service training programs in management and supervision were implemented, and both training and utilization of community health aides were stepped up (there being about 1,142 of these aides in 1983, or 5.5 per 10,000 inhabitants). In addition, new categories of health personnel—such as family nurse practitioners, dental nurses, and pharmacy technicians—were trained and utilized.

Regarding health facilities maintenance, the unit responsible for this (formerly in the Ministry
of Works) was transferred to the Ministry of Health to ensure its responsiveness to health needs. The internal management of the unit was improved through development of a work-order system, provision of testing equipment, acquisition of technical manuals, and emphasis on personnel training. The international health agency, Project HOPE, has been very active in this endeavor.

The basic geopolitical unit used for delivery of nonhospital health services in Jamaica is the parish; and these parishes have been grouped to form area health administrations in places where these administrations have been established. The populations of these parishes, as of 1982, ranged from 60,420 (in Hanover) to 565,487 (in the combined parishes of Kingston and St. Andrew). Within each parish, three types of health centers are the basic units providing nonhospital services. These health centers have been classified according to the levels of care they provide. The type I health center serves a population of approximately 4,000 inhabitants and is staffed with a trained midwife and two community health aides. The type II center (the next level up) is staffed with a public health nurse and public health inspector in addition to workers found at the type I center. The type III health center, which provides the same services as the type I and II health centers, also functions as a referral unit for patients from the type I and II centers. This type III center is staffed by a medical doctor, a family nurse practitioner, and several other health workers. Some specialized health district services (the health districts are the subunits of the parish) are provided at the type III centers.

In addition to these central planning efforts at the Ministry of Health, a series of team-building exercises and workshops on programming have been held for senior parish staff members. In particular, a programming methodology and basic manual were developed to guide this process at the field level (5); and programming workshops were held in all the parishes to help strengthen the team, identify priority programs, and allocate resources for the implementation of these programs.

The management development process was strengthened in 1981 by establishment of a health system development team consisting of PAHO/WHO Advisers. Stressing the bottom-up approach to health planning and programming, this team selected one pilot district in each parish and worked for two years on improving the primary health care approach at the level of the district health services. More specifically, by means of an organizational development strategy, the team conducted an analysis of the district health services and fed the results of this analysis back to the districts. This process resulted in each district adopting an action plan for improving its management process—with emphasis on community participation, intersectoral coordination, and creation of a management team at the district level for guiding the change process.

Naturally, this health systems development program has been affected by the socioeconomic situation in Jamaica, whereby both manpower and funds have been dwindling as a result of marked inflation and migration. These circumstances have produced a considerable shortage of the health professionals and financial resources (both local and foreign) needed to manage the Health Ministry. Even so, as in the case of Dominica, the results of the health systems development program in Jamaica have been gratifying; and, accordingly, the Government is now revising its health policy as a first step in the continuation of the planned development process. Overall, the serious financial situation is making it imperative for the Government to continue to rationalize its health care delivery system and to improve the efficiency and effectiveness of its management, particularly in the hospital services.

**Future Developments**

**Socioeconomic Conditions**

Health systems development, particularly in the "health for all" context, will inevitably be affected by the socioeconomic environment of the next two decades. Unfortunately, analysis based on the socioeconomic situation of the En-
english-speaking Caribbean in the 1970s makes the probable future economic conditions of those decades look grim.

The oil crisis of 1973 and the serious inflationary trends that followed had a serious impact on the economies of the region. In most of the countries, real GNP grew less than 3% between 1970 and 1980, and a number of countries had negative growth. At the same time, shortages of foreign exchange seriously affected economic development, and in some countries severe import restrictions had to be imposed.

At present, most countries in the Windward and Leeward Islands seem to have very limited growth potential and depend heavily on agriculture and tourism. The servicing of foreign debts and the financing of balance-of-payments deficits will consume an increasing share of national resources and will diminish those resources available for social services. Hence, it is clear that a new approach to economic development will be needed if the countries are to maintain, if not increase, the level of health services provided.

This situation, which has imposed high (15-30%) unemployment, is being aggravated by the projected growth of the region’s population from 6.9 million in 1980 to 9 million by the year 2000. By the year 2000 it is projected that 29% of the population will be under 15 years old, 51% will be 15 to 44 years old, and only 20% will be over 44 years old (6). Many people will therefore be thrown on the job market at a time of marginal or declining economic growth. In addition, the demand for health services will be considerably increased at a time when the resources allocated to health may be shrinking.

Management Needs

One of the most critical issues that must be addressed concerns the development of managers within the health services who have the knowledge and skills required to cope with the administrative challenges ahead. Moreover, besides developing training programs that prepare managers for this task, it is necessary to develop strategies that will retain such personnel in the health services. Tertiary educational institutions, such as the University of Guyana and the University of the West Indies, must take the lead in accomplishing this as part of their wider management development programs. (Initial steps have already been taken at the University of the West Indies to develop such a health management program within the Social Sciences Faculty.)

The retention of such trained personnel within the health services, and even within the public services (given the demand for trained managers in other sectors of the public services and in private enterprise) is another problem that the health system will have to address. Because the personnel management function within the public bureaucracies of the region tends to be strongly centralized, the ministries of health have little control over the conditions of employment established for such managers. Therefore, they will have to exert considerable pressure on such controlling ministries as Finance and Public Services if more emphasis is to be placed on the recruitment and retention of good health service managers.

The tasks of these managers, which differ at different organizational levels, also need to be defined; and a balance should be struck as to the share of strategic, tactical, and operational decisions to be taken at different administrative levels. As Figure 1 suggests, at lower management levels the emphasis is more on implementing methodologies, techniques, and procedures and on making operational decisions. At the higher organizational levels, however, greater emphasis must be placed on determining the focal thrust, purpose, and mission of the health services and on making strategic decisions. Senior managers within the health services are slowly moving in this direction, but old bureaucratic habits die hard; hence, these managers still tend to spend too much time on operational issues and too little on strategic issues affecting future development of the health services (3).

Financing the Health Services

The socioeconomic scenario projected up to the year 2000 suggests that the financial re-
Figure 1. Appropriate shifts in the balance of strategic, tactical, and operational decisions at different management levels.

- **Strategic decisions**
  - Issues involving the focal thrust and missions of the health services
  - Issues involving goals, priorities, and policies
  - Issues involving planning, programs, and control
  - Issues involving methodology, techniques, and procedures

- **Tactical decisions**

- **Operational decisions**
sources allocated to government health services will be reduced, and that more resources will be allocated to the “productive” sectors. These reductions will occur not only in the resources allocated to the Ministry of Health but also in those distributed within the private health sector; this is especially apt to be true of scarce foreign currency allocations needed for the purchase of medical supplies and equipment. However, foreign currency shortage is an issue that extends beyond the health sector, and one that must be addressed in the wider arena of national economic development. (Some nations, such as Jamaica and Guyana, have sought to mitigate this shortage through bilateral trade arrangements with foreign countries.)

Some efforts are currently being made, notably in Barbados, to impose a health levy on salaried workers, and to use the resulting revenues to provide health care. That is, the Government of Barbados is establishing a national health service financed primarily from general revenues and a 1% levy on income. In addition, user charges are collected at hospitals, laboratory and X-ray services, and pharmaceutical services. The present trend is toward development of a comprehensive national health insurance system cofinanced by employers and employees, one that would enable patients to see any doctor of their choice and would eliminate payment of fees at the point of service. In a like fashion, the Government of Trinidad and Tobago has introduced a similar levy on salaries and is exploring options for developing its health services, while the Jamaican Government has reintroduced a fee collection system at its hospitals.

In any such negotiations on financing, interest groups such as the medical profession must be involved. That is because a major objective of these plans is to involve private practitioners in a government-financed scheme that would allow citizens to pay a fixed percentage of their salary and receive services according to their needs. If the primary health care approach is to be observed, then equity has to be a guiding principle in any system for financing and providing services. In addition, a number of safeguards must be adopted to ensure that neither health care providers nor health care receivers abuse the system.

**Strengthening Operational Capacity**

*Intersectoral coordination.* One critical element in the development of health services is intersectoral coordination. Clearly, other sectors such as agriculture, education, natural resources, and community development contribute to the mental and physical well-being essential to good health. Nevertheless, the government bureaucracies of the English-speaking Caribbean tend to function along vertical lines and to have inadequate mechanisms for effective coordination between ministries. Committees set up for interministerial coordination usually have power only to recommend, not to take action that would change policies. As a result, the efforts of these coordinating committees are often fruitless.

However, the health activities of other ministries tend to focus more on prevention and promotion activities than on curative and rehabilitative services; and since health promotion and prevention strategies must receive priority at a time of increasing resource scarcity, the time is ripe for health administrators to broaden their vision and support the allocation of resources to sectors other than the Health Ministry in order to achieve maximum health impact.

*Intrasectoral coordination.* Coordination of this type between the private and public components of the health sector is another critical matter. (The “private sector” includes not only workers in the officially accepted health professions but also practitioners in the traditional health system—e.g., birth attendants, nannies, traditional healers, etc.) Given the limited human and financial resources available to the governments, serious consideration should be given to upgrading these traditional workers’ skills and incorporating them into the official system. (In some countries, including Belize and Guyana, efforts in this direction are already underway.)

At the same time, coordination between the
government and members of the officially accepted health professions in the private sector (e.g., physicians, dentists, etc.) tends to be weak, with the government typically being found on the losing side of contentious issues. There is thus a need to treat the private sector as one element in the health system's operation, an element that should participate in the health development process, but one that should not be allowed to dominate it.

Reorganization. Several countries have recently been considering reorganization of their health services and decentralization of the decision-making process. The primary health care strategy implies provision of increased decision-making authority to the peripheral levels of the health system. However, in some countries where the economic crisis is deepest, powerful economic forces tend to retain tight control of financial resources. The “areas of freedom” for the decentralization of authority are therefore limited. Nevertheless, if increasing emphasis is to be placed on preventing the Health Ministry's head office from being involved in too many operational issues best handled in the field, then this decentralization process must continue, with proper monitoring and evaluation, in order to ensure good resource use.

One major reorganization proposal suggested from time to time has been to remove hospital services from the Ministry of Health and to create a public corporation for managing these services. The only advantage of such a proposal is that it supposedly would free the management process from "red tape," resulting in more flexible and dynamic decision-making. However, this same end can be achieved through administrative reforms within the public administration system and the Health Ministry without establishing a separate public corporation. It thus appears that the problem of bureaucratic red tape can best be solved not by creating a separate organization but by carrying out administrative reform within the Health Ministry and public service.

By now, most of the English-speaking Caribbean countries have established a decentralized Health Ministry administrative system—by establishing area administrations, county health services, regional health services, or district health services. The problem of relatively small size, as is commonly found in the Eastern Caribbean, has not proved a deterrent to this process. However, given the scarcity of resources within the government system, such decentralized administrative units must justify their existence by improving the management process within the health services—instead of merely creating an additional administrative layer through which all decisions flow to the central level.

Health planning and programming. It is expected that the health planning and programming process will become more critical as demands for services increase and resources become increasingly inadequate. Hence, identification of priority health problems at the national and local levels, and creation of programs to resolve them in an efficient and effective manner, will become increasingly important. Methodologies appropriate for this planning and programming process should be developed in keeping with each national situation. For example, establishment of a health planning unit may not be feasible for countries with limited resources. In such cases it becomes important for key health personnel to be involved in the planning process, and to be utilized as a part-time planning unit.

The management of support services—including personnel, drug and medical supply, transport, equipment, and health facility maintenance—will require priority attention. This is needed not only to ensure that timely and appropriate support is given to delivery of services, but also to permit maximum use of scarce resources. The maintenance of buildings and equipment will require special emphasis in order to maximize the returns on investment. Too often, little attention has been given to the allocation of resources for this purpose. The selection, use, and maintenance of health equipment, and the procurement, storage, and distribution of drugs and medical supplies are matters that must also be examined in this light with a view to rationalizing these processes, reducing waste, streamlining costs, and striving for maximum results.
Appropriate technology. This subject also has a strong bearing on health systems management. Basically, it involves recognition and stimulation of national initiatives for developing technologies that are appropriate and affordable. Such technologies should be scientifically sound and acceptable to both health providers and the communities being served. The general trend in the English-speaking Caribbean has been to depend on foreign technology—and to import expensive products that are often underutilized or incompatible with local needs.

The fact that medical technology has tended to increase health costs, at a time when resources are dwindling, underscores the need for a methodology to assess and evaluate the effectiveness, acceptability, reliability, and cost of such technology. Specifically, members of the national health team, technical institutions, and the wider community must seek to expand their technological horizons and develop technologies that are appropriate to the national socioeconomic situation.

Management Information Systems

Information is the life-blood of the management process. So it is not surprising that the need for relevant and timely information to support managerial decision-making has been stressed by all countries of the region. That is, the present efforts at organizational development within the region have all sought to streamline the collection, storage, processing, and distribution of information.

Until now, data collection within the Ministry of Health has tended to lack coordination, responding to the needs of specific individuals or offices rather than to the needs of an integrated information system. There is often duplication in the data being collected, and considerable time is wasted collecting the same data, in slightly different form, for different Health Ministry units. Even worse, in most cases the data are little-used in decision-making, partly because they are not timely and partly because many health professionals lack sufficient training in how to use them for this purpose.

A critical assessment of the management information system in each country is thus required to determine the data needed for decision-making, the methodology to use in gathering such data, and the technology to use in processing, storing, and updating these data. Above all, health professionals must be trained in the utilization of these data in their daily work of monitoring and evaluating existing programs and adjusting national plans and programs in the light of their assessment.

Health Manpower Management

The health services system is labor-intensive, in that over two-thirds of the Health Ministry budget goes to pay salaries and wages. Partly for this reason, the countries of the English-speaking Caribbean have been giving considerable attention to health manpower issues, and over the past decade they have created a number of new categories of health workers to cope with losses of health professionals and the ever-increasing demand for services. These new categories include workers known as family nurse practitioners, dental nurses, pharmacy technicians, environmental assistants, and community health aides, among others. These workers have been employed mainly in nonhospital services.

The retention of health professionals, especially highly trained ones, in the national health system has always been a problem in the region. Losses have typically occurred through migration—from the smaller to the larger Caribbean Islands or to North America—or through movement from the public to the private sector. This drain is a serious problem, particularly for the smaller island states and those severely affected by economic depression.

Another weakness of the health manpower system in most places is its inability to effectively project future needs. This problem is being addressed by strengthening the health planning process. In addition, however, there is often insufficient coordination between the institutions that prepare the health professionals and the Ministry of Health that employs them. In this vein, a number of attempts have been made...
to orient the training of such professionals toward the primary health care approach, but not without strong resistance from some professional groups.

An additional problem involves the distribution of health personnel. In most countries this distribution is very uneven, with most personnel residing in urban areas. If the health system really considers extension of health services coverage and easy access to those services as major objectives, then ways of motivating professionals to work in rural areas must be found. Motivating health professionals in the public sector is also an issue that needs to be addressed, because such motivation tends to be quite low—a circumstance arising partly from relatively low salaries and partly from chronic shortages of equipment, supplies, and transport services together with poor maintenance of health facilities.

Perhaps the major challenge in manpower development and utilization is increasing the productivity of health workers. All of the factors mentioned above have a significant bearing on this, and all need to be addressed. However, task analyses should also be conducted on a limited scale to ensure that health professionals are performing the tasks they have been trained for, and that they are not performing tasks which normally should be accomplished by less highly-trained personnel.

Community Participation and Education

These are key components of the health systems development process. The reason is that communities must assume increasing responsibility for their own health, and health education is needed to provide the necessary knowledge for enhancing the concept of self-care. In general, promotion of good health and prevention of illness are less costly than curative and rehabilitative services.

By now, all of the English-speaking Caribbean countries have established health education units (some have developed health education policies and programs) as an integral part of the health systems development process. The health education process has also been linked with other sectors such as education and agriculture. In the same manner, community participation efforts have strong links with the policies of ministries such as those responsible for community development and local government.

As was indicated during a recent Conference on Education and Community Participation for Health in the CARICOM Caribbean (7), discrepancies still exist between the stated support for health education and community participation on the one hand and allocation of resources to meet these objectives on the other.

In this same vein, the precise role of the community in health needs to be defined. Theoretically, that role can range from passive obedience and support for the health programs defined by the government to complete community responsibility for local health matters—supported by the technical assistance of health professionals. Although in general this role has not been clearly articulated, there is still a tendency to see the community as providing support for the health ministry’s program. This attitude promotes a passive role for the community and reinforces some health professionals’ reluctance to give the community a share in the planning and programming of health services.

Concluding Remarks

The foregoing is an overview of the health systems development process in the English-speaking Caribbean during the past five years. This process is quite complex and is influenced by many conditions. Among other things, it is influenced by the basic conditions needed to pursue the primary health care approach and the goal of “health for all by the year 2000”; by the projected national socioeconomic scenario and the national style of socioeconomic planning; and by the complex, fragmented, and conflict-prone procedures by which change is accomplished.

All of this suggests that the development process is not linear but spiral. That is, it is impossible to anticipate all the constraints that will hinder creation of the desired health system; and so the features of the desired system are adjusted
as new insights are gained into the present system, the feasibility of achieving change, and the nature of the system that should be established.

The English-speaking Caribbean countries are fully involved in this process. In the past there has been limited sharing of national experiences, mainly through seminars, workshops, and the occasional utilization of Caribbean nationals as consultants. These activities, which are very relevant to the health services development process, can be further stimulated by establishing information mechanisms for sharing national experiences and by encouraging the countries involved to learn from those experiences.

**SUMMARY**

This article provides a basic overview of progress nations of the English-speaking Caribbean have made in health systems development. Such development, generally in accord with the primary health care strategy and “health for all” goal, has resulted in most of these countries now having at least national health plans and policies. Also, a number of countries have been involved in programming health data, so as to improve the information available for implementing these plans and policies. A number of specific projects have been started to strengthen the management of medical support systems providing medications, other supplies, and equipment. Some countries have developed new approaches to financing their health services. And various countries are working to improve their management of health manpower through development of health manpower policies and other measures.

While it is not possible to thoroughly analyze the health services development process in each English-speaking Caribbean country within the space of a short article, it is possible to describe the progress made in one or two cases. Dominica and Jamaica have been chosen for this purpose.

In Dominica, much has been done in the wake of destruction wrought by Hurricane David in 1979. Specifically, a major reorganization begun in 1980 has sought to decentralize the health services and to establish three well-defined levels of responsibility within them—one for making policy, one for formulating programs, and the last for executing programs. Besides delegating authority to local health district personnel, actions performed to date have strengthened the referral system, improved management of district support services, and encouraged district programming activities. Also, a new category of health worker, known as the “primary care nurse,” is being trained and employed in an effort to deal with problems posed by limited funds, limited promotion opportunities, and reluctance of highly-trained professionals to serve remote rural areas. In addition, considerable stress has been placed on continuing training for managers and supervisory personnel—through activities that have improved communication between the levels of the health system and have increased the attention devoted to planning and implementing health programs.

In Jamaica, the health systems development process began in 1977, when the Government decided to formulate a national health policy and plan. This came to involve administrative decentralization down to the field level, establishment of three levels (those of policy formulation, program formulation, and program execution) within the Health Ministry, and identification of many priority areas to be addressed by the health plan.

The actual plan, developed for 1978-1983, called for major decentralization and for attention to priority areas including health services management, health manpower development, environmental health, food and nutrition, and maternal and child health. In addition to activities in these areas, noteworthy efforts have been made to strengthen the Health Ministry’s head office and to improve management of the medical and drug supply system. Steps have also been taken to improve health planning and programming at the central level and at the level of the health district.

In general, the socioeconomic prospects confronting the nations of the English-speaking Caribbean for the coming decade are pretty grim. Slow or negative GNP growth, high unemployment, considerable population growth, and shrinking resources available for health work can be expected. This must be considered in seeking to finance the health services, develop health managers who can cope with the anticipated challenges ahead, retain trained personnel within the health services, strengthen the health services’ operational capacity, improve health planning and programming designed to make better use of scarce resources, develop appropriate technology that can replace costly or marginally suitable technology imported from abroad, improve systems providing important information to health decision-makers, create new categories of health workers who can help meet the ever-growing demand for care, and enlist the participation of communities in meeting their own health needs. Overall, there is good reason to feel that more
health systems development rather than less is needed at a time of shrinking resources, because that development process provides the basis for making the best possible use of whatever limited resources are at hand.

REFERENCES


PUBLIC AWARENESS OF AIDS IN THE UNITED STATES

The results of two opinion polls carried out for the New York City Department of Health by the Gallup organization in June 1985 indicate that as of then 95% of the United States population had heard of AIDS. The simultaneous surveys tested a sample of New York City (NYC) residents and a national population sample excluding NYC. To ascertain levels of knowledge about AIDS among adolescents, the sample was enlarged to include 304 youths 13-18 years of age.

In both the NYC and the nationwide (US) polls, respondents with incomes under US$10,000 were less likely to be aware of AIDS. There were no major regional differences in AIDS awareness within the national sample, although respondents in the East and West exhibited slightly higher levels of knowledge than respondents in the South and Midwest.

When asked about who was most likely to have AIDS, between one-half and two-thirds of all respondents mentioned homosexual men. In answer to the same question, NYC respondents were two to three times more likely to mention intravenous (IV) drug abusers than were other US respondents. (IV drug abusers comprise 36% of NYC AIDS patients, compared with 26% of all other AIDS patients.) When given a set of questions to be answered true or false, each question was answered correctly by between 60 and 90% of both NYC and US respondents, and also the adolescents in both samples, demonstrating a high level of knowledge about AIDS.