HEALTH SYSTEMS AND SERVICES PROFILE

DOMINICA

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ORGANIZATION AND MANAGEMENT OF HEALTH SYSTEMS AND SERVICES

DIVISION OF HEALTH SYSTEMS AND SERVICES DEVELOPMENT

PAN AMERICAN HEALTH ORGANIZATION

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EXECUTIVE SUMMARY

Dominica gained independence in 1978. The government is democratically elected and is organised on the British Westminster model. The economy, which has been essentially very dependent on banana exports, has experienced sluggish growth. In 2000, Gross Domestic Product (GDP) was US$ 2181 per capita. Agriculture was the highest contributor to GDP.

Traditionally, the Ministry of Health has played the focal role in the organisation and delivery of health services. The primary health care system, introduced in 1982 has been for the large part responsible for the improvement in health status and health indices. Given the changing epidemiological profiles and limited resource availability the service requires reorientation if it is to remain relevant, appropriate and responsive to the changing situations.

Rising health costs and increasing demands for more sophisticated services are impacting negatively on resource availability. The government is exploring new cost sharing mechanisms for the financing of health services. The level of funding to the secondary care hospital has continued to increase over the decade at the expense of primary health care, in a ratio of 2:1.

The centrally administered and controlled budget for health represents 14% of total government recurrent expenditure. Expenditures on personnel emoluments account for 75% of the total health recurrent budget. The relatively small private health care sector is not well regulated. There is little information available on its characteristics and performance. Similarly no data is available on health expenditure in the private sector.

Health Sector Reform in Dominica was initiated in 1982, with the implementation of the primary health care approach, with emphasis on decentralisation, deconcentration of services and extension of coverage.

Government has not yet defined a Health Sector Reform Programme in the 1990's. However, some initiatives have been undertaken. These include preliminary work on Value for Money directives under the Public Sector Reform Programme, introduction of a User Fee System at the secondary care hospital in 1996 and its subsequent revision in 2000 and groundwork for the implementation of a health promotion strategy. The government is continuing to examine the possibility of introducing National Health Insurance.

A well-defined programme for meaningful Health System Reform is required. This should of necessity respond to the financing of health services, resource management, including human resource planning, the reorientation of health services, information technology and information system needs and the empowerment of the public.

1. CONTEXT

The Commonwealth of Dominica, the largest and most northerly of the Windward Islands in the Lesser Antilles, is situated between the French islands of Martinique and Guadeloupe. The island covers an area of 790 square kilometres (km^2), and is the most mountainous of the Eastern Caribbean islands. It is volcanically formed and the most seismically active location in the region.[1] The island has 8 active volcanoes and is heavily forested (65%) with a large rainforest, and an abundance of rivers. Dominica is divided into 10 parishes. The parish of St. George is the most populous with a reported 28.6% of the island's total population.[2] The capital city, Roseau, is situated in the parish of St. George.

1.1 Political Context

Since the island gained independence in 1978, Dominica adopted the Westminster model of government and continues to be centrally administered with a parliamentary type democracy. General elections are constitutionally due every 5 years. The last election was held in January 2000. The Prime Minister is the Head of Government and the President is the Head of State. The parliament consists of 21 elected representatives and 9 senators appointed by the President, and has full legislative powers under the constitution for the enactment of Laws for the peace, order and good governance of Dominica. The Prime Minister chooses the cabinet from members of the legislature to assist him in the executive functions of government. The Cabinet of Ministers approves policy directives for the ministry, which they direct.

For more than a century there has been a system of local government authorities consisting of 4 municipal councils, and 37 village councils. This serves as a form of political decentralisation intended to encourage local autonomy and social participation in the development of the country. These councils are legally constituted under the revised Laws of Dominica and have the authority to make by-laws, to impose house and land taxes and to receive an annual subvention from Central Government. Elections to the councils are due every 3 years. An investigative study commissioned by the Local Government Department was conducted in 1999. Several recommendations were made for the increased autonomy of these councils and for their enhanced functioning.

The authority for health policy formulation is vested in the Minister for Health, who defines policy on the advice of the Permanent Secretary and Chief Medical Officer. Health policy, as outlined in the five year national health plan, is incorporated into the government's programs through Program managers, who influence policy directives through formal and informal means. A Management advisory committee meets quarterly to consider policy issues and to advice the Minister for Health.

The main political and social factors influencing the health sector include: (i) the depressed economy due to loss of preferential trading on bananas with World Trade Organization (WTO) and its implications for financing of the health sector;[3] (ii) decision-making is highly centralised particularly as it refers to

budgetary control and other resources management; and (iii) growing urbanisation and the adoption of western lifestyles have affected the mortality and morbidity patterns in the island.

1.2 Economic Context

The economy over the last decade has experienced sluggish growth. This is mainly the result of the continuing weakening of the banana industry and the inability of the growth experienced in the other foreign exchange earning sectors (manufacturing, tourism, non banana agriculture) to compensate for the resulting loss of momentum and the impact on employment levels. The Dominica economy currently can be described as an open economy with persistent internal and external imbalances. It is a monoculture economy attempting the transition from the reliance on banana export into a more diversified economy.

Selected Economic Indicators

INDICATOR	YEAR							
	1993	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
Per capita GDP in constant US$ prices	ND	2001	2015	2078	2111	2175	2177	2181
Economically active population, in thousands	ND	ND	ND	ND	25.7	ND	ND	ND
Total public spending as a percentage of GDP	38.8	36.3	38.9	39.4	42.8	43.9	45.9	50
Public spending on social programs as a percentage of GDP	ND	12	11	11.8	12.8	13	16.7	17.8
Annual rate of inflation	1.57	0.01	1.31	1.69	2.42	0.13	1.17	0.86

Source: Ministry of Finance.

The GDP per capita showed minimal increases during 1994-1999 and slight decrease in 2000. Agriculture, particularly bananas which was the highest contributor to GDP, averaging 20.6 % during the period 1995-1999 was overtaken by transport and communication in 1999 and 2000. In 2000, sector contributions to the GDP in ranked order were transport and communications, agriculture, government services, financial services and wholesale and retail trade. The communications sector exhibited the highest growth.[4] Data on the share of external financing in the total budget income of the public sector is not available.

Sectoral Distribution of GDP (%)

INDICATOR	YEAR						
	1994	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
Agriculture	21.7	20.4	20.8	20.9	20.2	18.4	18.2
Mining and Quarrying	0.8	0.9	0.9	0.9	0.9	0.8	0.8
Manufacturing	7.1	7.3	7.3	7.5	8.8	6.5	7.2
Utilities	4.1	4.1	4.3	4.6	5.0	4.3	4.3
Construction	8.3	9.2	8.9	8.4	7.8	7.7	8.2
Transport and Communication	16.6	17.6	17.3	17.3	16.8	22.3	21.0
Hotels and Restaurants	2.7	3.0	2.7	2.7	2.6	2.5	2.5
Wholesale and Retail Trade	11.3	11.5	11.5	11.6	11.3	12.7	13.0
Financial and Business Services	14.6	15.2	14.7	14.0	14.0	12.9	13.2
Government Services	19.6	18.4	18.6	18.4	18.8	17.4	17.8
Other Services	1.4	1.5	1.5	1.5	1.4	1.3	1.4

Source: Ministry of Finance.

1.3 Demographic and Epidemiological Context

The life expectancy at birth for both sexes for the period 2000 was as 73.6 years, 76.6 years for females and 70.7 years for males.[5] The trend is towards aging, and Dominica has the most centenarians per 1000 population. A negative population growth rate of 0.36% was recorded between the 1991 and 2001 census. Migration to neighbouring countries and declining birth rates were identified as important factors in the negative population growth.[6] The dependency ratio for 2001 was 58.5 per 100 population.[7] The trend towards declining fertility rates and birth rates continues. General mortality rates have remained relatively constant and maternal mortality rates are low. There was an increase in the infant mortality rate in 1999. All deaths are registered and must be certified by a licensed physician. However over the last 4 years, there continues to be a high percentage of deaths (8.7%- 1999) attributed to ill-defined causes. The 5 principal causes of death over the last 5 years in rank order are malignant neoplasms, hypertension, heart disease, diabetes mellitus and other diseases of the respiratory system.[8]

	YEAR							
	1993	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
Crude birth rate/1000 pop	24	21	20	19	18	16	17	16
Total fertility rate	3.0	3.0	2.8	2.7	2.5	2.4	2.4	2.0
Crude death rate	8	7	8	8	7	8	8	7
Maternal mortality rate	0	1	1	0	1	1	0	0
Infant mortality rate	14	22	16	17	13	13	15	18

Source: Ministry of Health

The mortality patterns reflect increasing deaths from chronic non-communicable diseases and continuing low mortality from communicable diseases. The number of deaths due to external causes is increasing, with a marked male preponderance (74%), occurring in the 15 – 44 years age group. A higher number of deaths from malignant neoplasm were observed among males (65%).

The incidence of Communicable Diseases continues to decline. There was one case of leprosy reported within the last 5 years. No strong association between tuberculosis infection and HIV/AIDS has been reported. Tuberculosis infection rates are low, averaging 7.9/100 000, over the last 5 years. During 1998-1999 a 100% increase each year has been reported in cases of syphilis, diagnosed by laboratory tests.

Diabetes and hypertension are major public health problems impacting on morbidity and mortality. Obesity is a major contributing factor. The food consumption survey conducted in 1996 reported a 49.3% prevalence of obesity among respondents.[9] The number of diabetics and hypertensives registered in the public sector health clinics constitute 2.7% and 5.3% of the total population respectively.[10]

Malignant neoplasm constitutes the leading cause of death over the last 5 years. Of these deaths, the main sites of malignancy were prostate (23.7%), stomach (6.9%), breast (5.3%) and cervix (4.3%).

Study of the nutritional status of children 0-5 years, revealed ninety percent (90%) are within the normal range while nine percent (9%) are obese. A growing trend to obesity is noted in this age group. Iron deficiency is an important problem in children, adolescent and pregnant women. The micronutrient study conducted in 1997 reported a 33% overall prevalence of anaemia. Vitamins A and Beta-Carotene deficiency are non-prevalent.[11]

Transport accidents are now well established within the 10 leading causes of death. This is expected to continue to rise with the sharp increase in the number of registered motor vehicles. Injury and death from violence have increased over the last 5 years, with increasing numbers reported in the criminal offence statistics.[12]

Perinatal deaths, particularly early neonatal deaths, have accounted for most infant deaths. The leading causes of infant mortality in rank order are: slow fetal growth, fetal malnutrition and immaturity, congenital abnormalities and hypoxia, birth asphyxia and other respiratory conditions. In children under five (5) years, deaths due to diarrhoeal diseases and acute respiratory infections are low in number. Over the last 4 years, two deaths from acute diarrhoeal diseases and one from acute respiratory infections were recorded.[13]

The incidence of AIDS cases continues to rise. Annual incidence rates have doubled over the period 1996 to 2000, with a male to female ratio of 3 to 1 and rising rates of infection among females. The disease is more prevalent in the 25 – 44 year age group. In the last four (4) years, eight (8) blood donors tested positive for HIV[14].

Dengue fever is endemic in the country. A large outbreak occurred in the year 2000, with dengue virus serotype III. Malaria was eradicated in 1962. However, during the last five (5) years there have been four (4) imported cases of malaria.

There has been no reported case of measles from 1991, when the campaign to eradicate measles was commenced.

Drug abuse is perceived a growing problem, particularly among male adolescent and young adults. Substances abused include cannabis, crack cocaine and alcohol. In the Adolescent Health Survey, 12% of respondents admitted to marijuana use.[15] No documentation outlining changes in patterns of consumption.

1.4 Social Context

The last national and population census was held in May 2001. The Central Statistic Office has reported the total population as 71727, with 50.8% males and 49.2% females. Further analysis of the census data is not available. However, based on the 1991 census the population less than 15 years of age in 1999 was estimated at 32.5% of the total population as compared to 40% in the year 1995. The number of individuals aged 60 years and over is growing. This age group accounted for 12.5% of the total population. The urban population was estimated at 71.3%. Women headed some 37% of households in

1999. The indigenous peoples, the Carib Indians numbering an estimated 4000 person or 5 percent of the population, are mainly concentrated on a reservation of 3782 acres.[14]

The literacy rate in 1998 was 85% with 84% female literacy. The highest illiteracy rates were recorded in the age groups over 50 years of age.[15] Enrolment in primary schools during the period remained high, with average gross enrolment ratio of 98.4% and 99.3% in the 1999/2000 school year. The primary school age is from 5 to 15 years. The gross enrolment ratio in secondary school during the same period averaged 86.3% with the highest ratio ever recorded, occurring in 1999/2000 at 88.3%. This reflects the policy towards universal secondary education. Enrolment of the Community College (tertiary education) continues to be low, an average 16% of students who enrolled in secondary schools attended the tertiary level institution.[16] Female participation in primary schools averaged 48% over the last ten years and was 47.1% in 1999/2000 school year. Consistently high rates for secondary education have been recorded, for females with an average 57.5 percent over the last decade.[17]

There is no recent comprehensive assessment on the extent and nature of poverty in Dominica. The household expenditure survey conducted in 1992 established that 27.6 percent household were living below the poverty line and were unable to adequately meet their basic needs.[18] A poverty assessment conducted in 1995, concluded that the Carib Indians, Dominica's indigenous people were one of the poorest communities in Dominica due to low status, a long history of neglect and loss of culture. The major determinant of poverty and vulnerability were identified as landlessness, non-viable, limited land ownership, single parent families, old age, ineffective social security system, insufficient non agricultural employment opportunities and poor marketing of non banana crops.

A labour force survey conducted in 1997, estimated unemployment at 23%, a marked increase from 9.9% reported in the 1991 Housing and Population census. There are significant regional and gender disparities. Unemployment among women is estimated at 27.1% and 19.6% among males. Labour force participation rates are particularly low for females without secondary education. In some parishes there are very high rates of unemployment – 45.9% and 25.9% of persons without jobs. The survey data suggests a high level of skills mismatch and a generally weak national skill base with more than half of the employed persons having no occupational training and 49.6% of the unemployed having no training that will make them suitable for employment.[19] Among persons less than 30 years, there is a 34% unemployment rate. In the face of the worsening economic situation, unemployment is expected to rise. Major private sector companies have begun retrenching and downsizing in response to the depressed economy. Government has also been advised by the International Monetary Fund to reduce the size of the public sector.

In 1996, Dominica ranked 64 out of 174 countries according to the UN Human Development Index (HDI). However in 1997, there was upward mobility with Dominica ranking 41 out of 175. The ranking declined to 51 out of 174 countries in 2000.

2. THE HEALTH SYSTEM

2.1 General Organisation

Health services in Dominica are primarily government operated and financed. The Ministry of Health has been charged with the responsibility for ensuring that every citizen attains the highest possible health status. The reorganisation of the health services was effected in 1982. Emphasis was placed on decentralisation, extension of coverage, increasing accessibility and empowerment of communities through health education and social participation. The private health sector is small in size.

Public Institutions. The Ministry of Health is the sole provider of health services in the public sector. In the reorganisation of health services in 1982, a decentralised approach was adopted. The island was divided into seven (7) health districts, each with defined boundaries, staff and facilities an responsibility for its operating budget. There is no coordinated approach to the decentralisation of services across government sectors or ministries. Each sector has defined its geographic districts, which are not coterminous. For the effective delivery of health care services, three (3) levels of care exist. At the primary care level, the health district is the key organisational unit. Each health district has a major or type III health centre and satellite, peripheral type I clinics. A type I clinic is staffed by a nurse midwife and serves a population of 500-2000 persons. There is a total of forty five (45) type I clinics delivering a comprehensive range of services including, maternal and child health services including deliveries and immunisation, medical care, cancer screening, diabetic and hypertensive clinics, health education, social mobilisation, dental services, home visits and environmental health monitoring. There is one (1) type III clinic in each health district. It also serves as the administrative headquarters of the district and is staffed by a resident doctor, family nurse practitioner, environmental health officer, pharmacist, community health nurses, registered nurse midwives, dental therapist and support staff. Staff at type III centres visit type I clinics to provide service, support and supervision. There are seven (7) type III centres on the island. In addition, two (2) small district hospitals, in Portsmouth and Marigot district are also included in the primary care level services. Specialists in psychiatry and ophthalmology also provide services at type III centres. All services delivered at the primary care level are free of charge.

The secondary level of care is the Princess Margaret Hospital, which is the only referral hospital on the island and is situated in the capital. The 224-bed facility provides inpatient services, ambulatory, emergency, specialist and diagnostic services. There are user fees applied to all services provided at this

level. Specialist services offered at this level include, internal medicine, dialysis, gastroenterology, surgery, ophthalmology, otolaryngology, obstetrics and gynaecology, dermatology, psychiatry, pathology, oncology, radiology, anaesthesiology and paediatrics.

Tertiary services are provided by visiting consultants, but are more frequently accessed from neighbouring islands. The cost of those services is borne by the individual patients. However government may make a small contribution to facilitate indigent persons. There is a well-organised referral system within the health district and from health district to the main referral hospital. The referral system is supported by defined referral norms.

Private Institutions. There are no main private institutions**.** Private health care services are limited to ambulatory care provided by practitioners; generally on a part time basis. Most private practitioners are also government employed. Ninety (90) percent of this service is located in the capital. There is one private laboratory located in the capital, offering a wider range of tests than does the government service. Private pharmacies offer drugs for sale to the general public. There is a private pharmacy located in two (2) health districts. The remainder are located in the capital city. The Dominica Planned Parenthood Association offers family planning services to the public, from its location in the capital city. A system for community based distribution has been organised with retail stores in the rural communities. There are referrals from private practitioners to the public hospital for inpatient and diagnostic services. The public hospital does refer patients to the private laboratory when necessary.

2.2 Health System Resources

Human Resources. There has been a minimal increase in human resources over the last decade. Health staff is concentrated in the public sector. The available skill mix does not reflect the governments stated intention of reorientation of health services, the stated intention of increasing individual health skills and empowerment of communities. Staff categories and staff utilisation favours the provision of curative services.

HUMAN RESOURCES IN THE HEALTH SECTOR

TYPE OF RESOURCE	YEAR									
	1991	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
Ratio of physicians per 10,000 pop.	4.8	ND	ND	ND	ND	5.0	ND	ND	7.8	8.3
Ratio of nurses per 10,000 pop.	45.4	ND	ND	ND	ND	47.9	ND	ND	46.4	48
Ratio of dentists per 10,000 pop.	0.8	ND	ND	ND	ND	ND	ND	ND	1.1	1.3
Ratio of mid-level laboratory technicians per 10,000 pop.	2.8	ND	ND	ND	ND	ND	ND	ND	2.9	2.9
Ratio of pharmacists per 10,000 pop.	2.9	ND	ND	ND	ND	ND	ND	ND	5.5	4.5
Ratio of radiologists per 10,000 pop.	0.1	ND	ND	ND	ND	ND	ND	ND	0.1	0.1
No. of Public Health graduates	0.7	ND	ND	ND	ND	ND	ND	ND	0.7	1.14

Source: Ministry of Health, private sector.

Coverage rates for physicians and doctors are satisfactory, but the distribution pattern is skewed in favour of the capital city and secondary care facility. There is a concentration of trained health personnel in the capital. Twenty (20%) percent of doctors practice in the rural communities and seventy percent (70%) are located at the secondary care facility.

All available professional health staff is employed, mainly in the public sector. The trend has been to fill vacancies by recruiting doctors from overseas under the French, Cuban and more recently, Nigerian Technical Cooperation.

HUMAN RESOURCES IN PUBLIC INSTITUTIONS Year 2001

Institution	Type of Resource					
	Physicians	Nurses	Nursing Auxiliaries	Other Health Workers	Admin Personnel	General Services
Princess Margaret Hosp.	30	161	60	91	20	103
Portsmouth Hospital	1	12	3	6	1	13
Marigot Hospital	1	9	3	6	0	10

Overall there are twenty-two (22) specialists and thirty-eight (38) general practitioners, a ratio of 1:1.7. In the public sector there are seventeen (17) specialists, thirty-two (32) general practitioners, a ratio of 1:1.9. The basic annual salary scales for doctors in the government sector is as follows: specialist medical officers US$20476, general medical officers US$(15816-17627).

Statistics on the number of patients seen in ambulatory care settings by doctors and nurses are routinely collected. On average, in 2000, each doctor in the health district produced 497 patient visits monthly, an average of twenty-five (25) patients daily.[20]

Drugs and Other Health Products.

INDICATOR	1993	1994	1995	1996	1997	1998	1999	2000
Total n° of registered pharmaceutical products	ND	ND	ND	ND	ND	ND	ND	ND
Percentage of brand name drugs	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Percentage of generic drugs	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9
Total spending on drugs (selling price to the public)	ND	ND	ND	ND	ND	ND	ND	ND
Per capita spending on drugs (sale price to the public)	ND	ND	ND	ND	ND	ND	ND	ND
Percentage of public spending on health allocated to drugs	ND	ND	ND	ND	ND	ND	ND	ND
Percentage of the expenditure executed by the ministry of health for drugs	4.13	4.14	4.19	3.52	3.43	3.43	3.9	2.95

There is no information on pharmaceuticals sales or stocks in the private sector. There is no comprehensive policy governing the pricing or sale of drugs to the public. Regulations governing the pharmaceutical sector are contained in the Medical Act (1937). Under this act, a licensed pharmacist is required to be present in every pharmacy, dispensing pharmaceuticals to the public. There is compliance with this provision. Anti-hypertensives, anti-diabetics, anti asthmatics and antibiotics are the top selling products on the national market. Since 1980, there is a public sector national drug list, currently with 471 items. Drugs are designated first line drugs for use in the primary care level, second line drugs for use at the secondary care level and special authorised drugs, which can only be ordered by hospital specialists. This list of drugs is reviewed annually, with submissions for deletions and additions addressed quarterly. The public sector formulary committee, established since 1980, meets regularly to consider submissions for formulary admissions and deletions, to monitor drug utilisation and expenditure and to ensure some level of rationalisation. The Central Medical Stores is the central purchasing unit, which procures pharmaceuticals for the public sector mainly through the regional pooled procurement scheme. Health districts and the secondary care hospital purchase supplies from the government central medical stores utilising their budgetary allocations for drugs. Drugs are free of cost to the patient at all primary care facilities and a pharmacy fee of US$1.84 per prescription is payable at the secondary care facility. The government has subsidies in place to facilitate access to drugs by any citizen e.g. patients undergoing chemotherapy.

The Caribbean protocols for treatment of diabetes and asthma are applied by public institutions. Blood banking and donation is performed at the secondary care facility only. Over the last four (4) years an annual average of 773 donors were screened. All donations are voluntary, with no remuneration paid. Each donor is screened with a questionnaire and routinely tested for HIV, hepatitis B antigen, HTLV-1 and syphilis.

BLOOD DONATIONS, 1990-2000

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Number of Donors	733	873	841	943	702	705	603	613	802	791	885

Source: Ministry of Health.

Equipment and Technology. In the health sector the equipment and technology available is generally basic. There are 224 beds in the secondary care hospital or 2.9/1000 population. There is no mammography service available.

AVAILABILITY OF EQUIPMENT IN THE HEALTH SECTOR - 2001

SUBSECTOR	TYPE OF RESOURCE			
	Beds available per 1,000 pop.	**Basic diagnostic imaging equipment per 1,000 pop.**	**Clinical laboratories per 100,000 pop.**	**Blood banks per 100,000 pop.**
Public	3.9	X-ray – 0.03	0.01	0.01
		Ultrasound – 0.01		
Private (non-profit and for profit)	0	Ultrasound – 0.03	0.01	0
TOTAL	3.9		0.02	0.01

Source: Ministry of Health

AVAILABILITY OF EQUIPMENT IN THE HEALTH SECTOR - 2001

Sub-sector	TYPE OF RESOURCE					
	Delivery Room		**Clinical Laboratory**		**Diagnostic Imaging**	
Public	**1st level**	**2nd level**	**1st level**	**2nd level**	**1st level**	**2nd level**
	3	52	1		1	
Private (non-profit and for profit			1			
TOTAL	3	52	2		1	

Source: Ministry of Health

There is a maintenance department at the secondary care hospital only, staff is limited with no biomedical engineer and two (2) trained technicians. There is no data on the percentage of equipment that is defective or out of order. Each health district has its own budget for maintenance. Moderate level technology units e.g. dialysis, intensive care and neonatology are concentrated at the secondary care hospital.

2.3 Functions of the Health System

Steering Role. The Ministry of Health, which is headed by the minister, manages the health sector. It is centrally managed and directed. The policy formulation level is comprised of the Minister for Health, the Permanent Secretary and the Chief Medical Officer. The Ministry of Health has the function of regulation of the sector. It fulfils this role through the Dominica Medical Board and Nursing Council, who are responsible for the regulation of standards governing the practice of medicine, nursing and pharmacy in the public and private sector. There is no legal provision for the regulation of other allied health services. There is relatively little regulatory control of the private sector. The control of public financing of the sector is maintained centrally by the Ministry of Health, under the aegis of the Permanent Secretary, who is the designated accounting officer. The Ministry of Finance however exerts strict control over expenditure and budgeting within the public health sector. Permission must be sought from the Ministry of Finance for expenditure over US$370. There are no regulatory mechanisms governing private health insurance. Intersectoral actions occur mainly at the implementation level, and are generally limited to small-scale programs. Information systems are minimally developed. The systems do not capture a wide

range of management information, are not linked and cannot deliver relevant, timely information for decision making. No data from the private sector is collected or analysed. The function of human resource planning and co-ordination is undertaken to a limited extent by the central office of the Ministry of Health, in collaboration with programme managers. There is no comprehensive human resources management plan or unit.

There are two (2) institutions in Dominica for training health care professionals – the Ministry of Health operated School of Nursing and a United States of America (USA) off shore medical school. The Dominica Medical Board, who conducts site visits, curriculum reviews and evaluations of the school, accredits the medical school. . There is no mechanism or legal requirement for the accreditation of health facilities in the private or public sector. Similarly, there are no mechanisms defined or operative for health technology assessment, accreditation or monitoring. Norms and standards, some of which are written, guide clinical practice in the public sector. There is no policy to define guidelines governing clinical practice in the private sector.

Financing & Expenditure. The Ministry of Health and Ministry of Finance prepare information on health costs in the public sector. Within the Ministry of Health the financial information system is not computerised. Information on financing from international cooperation agencies and external funding as donations or non- reimbursable loans is not available. The available information on financing and expenditure in the health sector is confined to the public health sector.

The Ministry of Health is allocated its budget by the Ministry of Finance, upon submission of its annual corporate plan and annual budgetary estimates and received the third largest share of government recurrent expenditure, an average of 13 percent of total recurrent budget. Seventy-five (75%) percent of public expenditure for health is directed towards personnel emoluments.

Health Sector Financing, 1995 – 2001 in US and % of GDP

	1995	1996	1997	1998	1999	2000	2001
1**. PUBLIC SUB-SECTOR**							
1.1 Ministry of Health and other public institutions at the central, regional and local levels	ND	ND	ND	ND	ND	ND	ND
1.1.1 Internal financing Funds from the Treasury Ministry's own funds	9,495,464	10,159,749	11,507,532	11,429,864	11,772,216	12,397,177	12,996,228
1.1.2 External Financing	ND	ND	4.61	4.33	4.32	4.31	4.81
1.2 Social; Security Member contributions							

Sales of goods and services Capital income							
2. PRIVATE SUB -SECTOR							
2.1 Private Insurance 2.2 Non profit NGO's 2.3 Household financing for private services	ND ND ND	ND ND	ND ND	ND ND	ND	ND	ND
TOTAL	ND	ND	ND	ND	ND	ND	ND

Source: Ministry of Health

PUBLIC EXPENDITURES ON HEALTH

	1993	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
Per capita public expenditure on health (in US$)	125.7	155.4	131.2	144	154.8	155.9	14	152.5
Public expenditure on health /total public expenditure	12.9	14.3	12.7	11.6	13	12.6	13.8	12.4
Total per capita health expenditure (in US$)	ND	ND	ND	ND	ND	ND	ND	ND
Total expenditure on health as a % of GDP	ND	ND	ND	ND	ND	ND	ND	ND
External health debt /Total external debt (%)	00	0	0	0	0.03	0.17	0.37	ND

Source: Ministry of Finance

There has been a trend to increase expenditures in the secondary care hospital as compared to primary health care. A review of expenditure 1997-2000 reveals that secondary care received an annual average of 48.7% of funds as compared to primary health care (22.5%). Hospital secondary care expenditure is more than doubling that for primary health care.

Expenditure patterns as percentage of total expenditure in health sector: 1995 – 2000

Expenditure	1995	1996	1997	1998	1999	2000	2001
Current expenditure	ND	ND	ND	ND	ND	ND	ND
Drugs, materials and supplies	17.9	17.8	23.3	20.7	19.4	19.7	16.3
Maintenance	7.2	5.5	6.7	3.9	4.1	1.2	1.2
Capital Expenditure	11.6	11.1	19.9	8.3	3	10.5	16.5

Source: Government Estimates

Social Security makes an annual subvention to the government to provide coverage to cardholders at a reduced cost. In 1998 and 1999 an annual average of US$ M 1.17 was paid to the government under this agreement.[21] There is no national health insurance scheme.

Health Sector Expenditure by Item 1995-2001 in US

	1995	1996	1997	1998	1999	2000	2001
PUBLIC SECTOR							
Services to individuals	ND	ND	ND	ND	ND	ND	ND
Population –based services	ND	ND	ND	ND	ND	ND	ND

Medicines and Pharmaceuticals	615,340	653,381	1.078,633	961,538	888,461	961,538	349,846
Materials & Supplies	1,121,088	1,190,365	1,658,869	1,449,947	1,435,846	1,523,861	1,813,483
Medical & health equipment	ND	ND	ND	ND	ND	54,638	ND
Other equipment and repairs	ND	ND	ND	ND	ND	90,998	ND
Construction projects	ND	ND	ND	ND	ND	ND	ND
TOTAL	ND	ND	ND	ND	ND	ND	ND

Source: Government Estimates

Private health insurance provides reimbursement of user fees to members. Contribution to private health insurance is not tax deductible. Revenue collection in the public sector is limited to the collection of user fees at the secondary care hospital, and negligible sums in the dental care service. Since the introduction of a revised fee structure in 1996 collections at the hospital has consistently fallen way below the projected estimates (30%). In 1999, total revenue collected at the secondary care hospital was US$774,715 with arrears of payment of US$728,353. In 2000 collections fell to US$724,178. The hospital generates 12.9% of its recurrent expenditure.[22]

There is no accurate data on the level of private household expenditure on health. The Household Income and Expenditure Survey conducted in 1998 weighted household expenditure on health as 31.5 of 1000, ranking seventh in the breakdown of household expenditure.[23]

Health Insurance. Health insurance is provided by private insurance companies – at least nine, who enter into private contractual agreements with groups or individuals. Generally the coverage includes reimbursement to individuals for costs incurred in the private sector, public sector and access to tertiary care overseas. The level of reimbursement or range of services covered differs. No information is available on the degree of coverage provided or the models utilised in private insurance. Large groups of employed individuals are covered including teachers, policemen, public servants, nurses, doctors, and senior and middle level staff of private sector institutions. In the absence of National Health Insurance, the unemployed, indigent and lower income groups are not covered by health insurance. However the Government of Dominica has guaranteed a minimum essential basic package of health services, which is universally accessible, and delivered at the public sector, primary health care level at no fee for service. This includes medical care, maternal and child health services including immunisation, health promotion and prevention programmes. At the secondary level, a system exists for exemption of those unable to pay user charges. The Social Security has uniform benefits for all subscribers. This includes sickness, maternity, pension among others.

Delivery of Services. The Ministry of Health is the major provider of population based health services. Private providers are limited to the 47% of physicians who deliver ambulatory care through private

practice. The ministry delivers its services through a network of clinics, district hospitals, and one (1) secondary referral hospital.

Health promotion and risk prevention programmes are integrated into the services provided through the primary care network, and are supported by the health promotion/nutrition unit, the environmental health and dental health departments. In recent years, programmes have been implemented in the following areas – sexually transmitted infections including HIV/AIDS, chronic non communicable diseases – diabetes, hypertension, cancer screening – mainly uterine cervix, prostate and breast, sickle cell disease, oral health, basic sanitation, food quality, liquid and solid waste disposal and occupation health and safety. These programmes have not been adequately evaluated. The most sustained has been the campaign for HIV/AIDS prevention, which has been supported by international funding. Screening programmes for hypertension, diabetes and cervical cancer are established and available at every health facility throughout the country. As a result more cases are being identified and early treatment started. The Expanded Programme on Immunisation offers vaccines for the following childhood diseases, diphtheria, pertussis, tetanus, polio, tuberculosis, measles, mumps and rubella. Hepatitis B vaccine was introduced during the last five years. The programme is fully decentralised since 1983 and is available at every government clinic. Coverage rates are high - more than 99% for all vaccines offered.[24]

Ninety-seven (97%) percent of women utilise antenatal services with an average of five (5) visits per pregnancy. Most deliveries (>99%), are attended by a trained health care professional, and 99.7% occur at a health facility. Therefore, access to prenatal and delivery services, is adequate.

Primary Care Level. The public primary care network ensures universal access. The 52 clinics are well distributed throughout the country, with all villages within a five (5) kilometre radius of a health facility. Private doctors' services are situated mainly in the urban centres in the north and south of the island. Information systems in the primary care level are not computerised.

The five (5) most frequent reasons for medical consultations are hypertension, diabetes, upper respiratory tract infections, injuries, and, arthritis and joint pains.

There is an organised home visiting programme at the primary care level for the sick and house bound, defaulters to child and prenatal care services and women in the puerperal period. Health aides, trained nurses and physicians, deliver these programmes. Private medical doctors provide a limited service of house calls.

PRODUCTION OF SERVICES, YEAR 2000

	Number	Rate per 1,000 population
Consultations and control performed by medical professionals	47,713	668.0
Consultations and controls performed by non-medical professionals (nurses)	121,143	1696.0
Consultations and control performed by dentists	NA	NA
Emergency consultations (main hospital)	42,902	600.6
Laboratory examinations	NA	NA
X-rays	13246	185.4

Source: Ministry of Health

Secondary Care Level. Secondary care services are governmental operated and delivered from one 224-bed hospital in the capital city. The management information system is not well developed and not fully computerised. Limited clinical data is captured and analysed and not utilised for clinical management.

Princess Margaret Hospital Service Production 2001

Total number of discharges 8271	8271
Occupancy index	75.4%
Average days of stay	4.8

The trend is towards a minimal increase in the number of discharges. A ten percent increase was reported in the last four (4) years of the decade as compared to the first four (4) years with an average length of stay ranging from 5.6 to 7.9 days during the decade (1990-1999).

In 1997, the five (5) most frequent reasons for hospitalisation were in rank order, obstetric causes, diseases of the circulatory system, diabetes mellitus, asthma and motor vehicle accidents. There is no documented information on waiting lists or waiting times, however, reports from the Medical Records department indicate that Opthalmology out patient appointments are long, because of limited human resource in that area. No established mechanism has been instituted to improve communication with clients, however, outpatient surveys, questionnaire, and suggestion boxes have been used to measure user satisfaction or to handle client complaints or suggestions.

Quality*:* Quality assurance programmes have been established at the two (2) laboratories, in the private and public sector and in the nursing service at the secondary care referral hospital. There is no ethics or professional oversight committees. The Ministry of Health is in the process of implementing a Continuous Quality Improvement Program island-wide. A draft plan and policy has been submitted for approval.

During the 1998-2000 period nine (9%) percent of deliveries were by caesarean section. Hospital infections are not consistently documented or investigated. A hospital infection committee has been established at the secondary care referral hospital but does not functional consistently.

Discharge forms are available on all wards of the secondary care hospital, but are not utilised by all specialties. No data is available on the percentage of patients issued with a discharge report or percentage of hospital deaths autopsied. However, in 2000, 16.8% of total deaths were autopsied. There is no formal mechanism for the investigation of infant or maternal deaths and no arbitration commission.

The main secondary care facility aims to improve user relations through its Friends of PMH program. The Nursing department at this hospital has an orientation program, and patients at this facility are oriented to the wards.

3. MONITORING AND EVALUATION OF HEALTH SECTOR REFORM

3.1 Monitoring the Process

Monitoring the Dynamics. The only meaningful health reform effort in Dominica occurred in 1982, following the destruction and severe disruption of health care infrastructure and services by Hurricane David (1979). This preliminary move towards sector reform was for the most part externally driven, particularly influenced by USAID donors and agencies that with the senior staff of the Ministry of Health constituted the principal actors. Public opinion was considered and a high level of participation of community members in an area designated as the "model health district" was achieved in the design and execution of the implementation framework. Since no well-defined sectoral reform agenda exists within the Ministry of Health Reform a piecemeal approach to its development has generally been adopted.

The emphasis of the reconstruction effort was focused re-organizing the health services through the implementation of the primary health care approach. Sectoral reforms are incorporated into the plans and programs through the five -year National Health Plan.

In 1996, Health financing reforms were introduced in the form of user charges at the secondary care facility, and a proposal for National Health insurance. The objective was to increase revenue for recurrent expenditure, as the government could not realistically allocate more. In 1996, the Government of Dominica launched a new phase of public sector development aimed at providing an impetus to reform within the public sector. The public sector development programme sought to improve productivity, efficiency and general performance of the public service. As a component of this programme, "Value for Money" reviews were undertaken, in 1998, in three (3) ministries, including the Ministry of Health. The objective of this review was to determine and implement the most efficient and effective organisational

structures, systems, procedures, staff compensation and staffing levels that would allow the Ministry of Health to achieve it's objectives and target service levels.

Staff at the managerial level of the Ministry of Health worked with a group of overseas consultants from KPMG to outline priority actions which included development of a strategy for quality improvement across the Ministry of Health and actions to improve revenue management, cost containment, and national health insurance.[25] The leadership for this initiative came from the Personnel Division. There was no participation from the private sector or civil society. A timetable for implementation was drafted and included in the final report. To date, there has been no implementation of the recommendations. The user charges were evaluated in 2000, revealed gross under collection, and overpricing in some cases.

Monitoring the Content

Legal Framework. Constitutional amendments in support of health sector reform have not been proposed. The introduction of the new User Fee System was effected through the amendment of the Roseau Hospital Act in 1996. There was a further amendment in June 2000. The Public Health Act (1968) was repealed and replaced with the Environmental Health Services Act No. 8 of 1997. This Act provides the legal basis for pollution control and waste management in Dominica and the jurisdiction to make regulations with regard to food safety. The Solid Waste Corporation was created following the passage of the Solid Waste Management Act 1996 was Equity is not defined in health legislation.

Right to Health Care and Health Insurance. The Government of Dominica and the Ministry of Health have repeatedly reiterated the policy that health is an unalienable right of every Dominican citizen. From 1982 to present it has organised and defined programmes in support of this policy, which is stated in all health plans and annual corporate plans.

Increased coverage for health programmes was achieved through the establishment of an island-wide primary health care programme. All services delivered at the public sector, primary care level are free at point of service and have been defined as constituting the basic package of care, which affords universal access. The Government is currently considering the implementation of national health insurance with the objective of improving equity, providing universal coverage, and increasing the capacity to respond to its policy orientation.

Steering Role. The Ministry of Health in its current health plan outlines plans for reorganisation of its health systems, using recommendations from CCH11 and the Value for Money Report. The functions of financing, providing insurance and delivering services are being reorganised through privatisation and greater participation by the private sector. No changes have been made to the health authority structure. The Solid Waste Corporation is a new institution responsible for the collection and disposal of solid waste. The Health Information Unit is presently developing a minimum dataset as part of the restructuring of the information system. Public institutions will be required to submit quarterly and annual reports.

Decentralisation. No steps are being taken to review and/or modify the various administrative levels in the health system. Each health district is assigned its own budgetary allocation which it manages; however, central budgetary control still exists.

Social Participation and Control. Social participation is effected through the inclusion of the public and civil society in the planning and evaluation of health services. Consultation takes place at all levels. Prior to the development of the current health plan, community consultations were conducted in over sixty (60) communities to identify the needs of the population At the lower level, groups are mobilised for needs assessment, small project planning and implementation, health risk prevention and promotion. The Health Promotion Unit is exploring other mechanisms, such as reorganisation of health committees, and working with local government authorities, and other community based organisations. Women are at the forefront of all actions for health and representation of minority groups such as the disabled, indigenous people and the elderly is ensured. Resources continue to be a major limitation.

Financing and Expenditure. The development of corporate plans has strengthened the information system on financing and expenditure. Each program area and institution is responsible for preparation of its own plan. Previous plans are evaluated and discussed in plenary. In June 2000, an assessment of the user fee system found gross under collection, negative impact on access to care, over priced services, and gross public dissatisfaction.[26] Consequently a schedule of reduced fees with exemptions for certain categories was approved and implemented in 2000. No measures have been taken to substantially modify the distribution of public expenditure on health. Given the current economic crisis, it is expected that such measures may soon become a reality.

Service Delivery. *Health Promotion Strategy.* At the 13th meeting of the ministers responsible for health in the Caribbean, the ministers formally adopted the Health Promotion Strategy as the new approach that would strengthen the capacity of individuals and communities to control, improve and maintain physical, mental, social and spiritual well being. The Government of Dominica participated and endorsed the resolution. The meeting mandated the development of a Caribbean Charter for Health Promotion.

Seven (7) health districts subsequently developed broad-based plans addressing a particular health problem. Under the PAHO funded, Healthy Community Award, six (6) communities implemented short projects, out of which three (3) received awards. At secondary level, day surgery has increased, dialysis services expanded, and dermatology services are now available. Vulnerable groups are receive special attention as outlined in the National health Plan, and priorities have been established with regard to different stages in the life cycle such as adolescence and old age. Home care is becoming more widely accepted. The referral system requires strengthening. The linkages with other sectors such as Welfare Department, remains strong.

Management Model. No formal changes are being introduced in the management model and in relationships between protagonists. No formal arrangements for public/private sector cooperation in health have been introduced, and privatisation of services within the public sector has not occurred nor have the public health services been organised on the basis of business or self management principles.

Human Resource. Human resource development in relation to Health System Reform has not been emphasised. However, one health promotion officer was trained and a unit established in 1999. No significant change in labour laws has been introduced, nor changes in the professional regulations governing health workers. The planning and management of human resources has not been assessed or modified. Consistent with public sector regulations, a system of financial incentives based on performance appraisal has been introduced. No incentives have been proposed for motivation of health workers. The School of Nursing is currently undergoing transition from the Ministry of Health to Education.

Quality and Health Technology Assessment: Procedures for the accreditation of health institutions are being created/reformulated under the CQI programme. The details have not yet been finalised.

3.2 Evaluation of Results

Health Sector Reform has not been designed or implemented in a systematic manner in this decade. Some initiatives have only recently been introduced in a limited fashion, within the last 3-4 years. A further evaluation of the impact of Health Sector Reform on equity, effectiveness, quality, efficiency, sustainability, social participation and control is therefore not feasible.

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