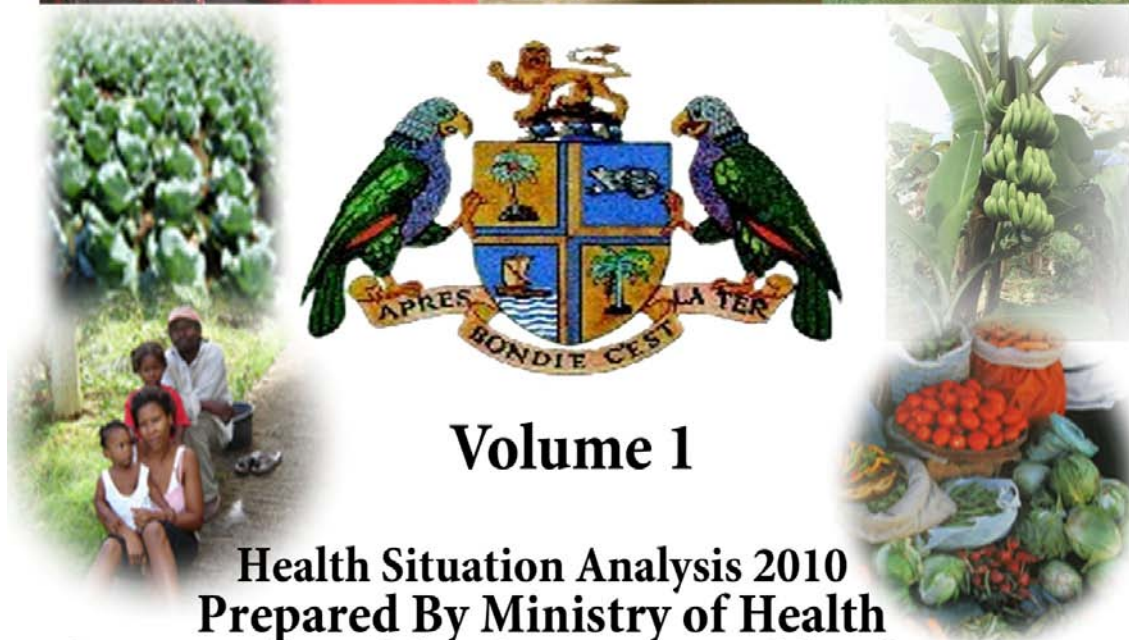


# STRATEGIC PLAN FOR HEALTH

Investing in Health-Building a Safer Future



## Volume 1

Health Situation Analysis 2010  
Prepared By Ministry of Health  
Government of the Commonwealth of Dominica



The Health Situation Analysis (HSA), attempts to characterize, measure, and explain the health-disease profile and trends of the Dominican population, including illnesses, injuries and other health problems and their determinant factors, whether they are the responsibility of the health sector or of other sectors. It also facilitates the identification of needs and priorities in health, as well as the identification of interventions and appropriate programs and the evaluation of its impact on health.

The situation analysis seeks to: define existing organization and management of health services and the health care delivery system and identify constraints which adversely impact health care delivery in the country. The main purpose of the HSA is primarily to inform the preparation of the 10-year National Strategic Plan for Health 2010- 2019.

The importance of the Situation Analysis resides in contributing the information that the technical component requires for directing, management, and decision-making processes in health. The specific purposes of the HSA are:

- Definition of the population health profile
- Determination of health trends
- Determination of unmet health needs
- Identification of critical or vulnerable groups and populations
- Measurement of health inequalities
- Priority setting
- Health impact assessment
- Evaluation of health program effectiveness and performance
- Identification of scenarios

The **analytical process** used for identifying the health needs of the population is as follows:

#### **a) The Health Determinants framework**

The “Health Determinants” conceptual framework allows identifying the principal components of health and also allows identifying health issues and problems and the means and activities to address them. This framework stresses the need to consider health as a result of the interactions of many determinant factors well beyond the health care services.

#### **b) The political, social and economic context**

It is important to characterize the forces external to the health sector that shape the context under which health is analyzed. These forces exert important influences on the health of populations. They include the overall organization and policies of the government, the demographic characteristics and their change; certain social issues like education; and, economic factors (including the level and distribution of its wealth (and its antithesis, poverty) and its trends).

### **c) Health status of the population**

The health of the population is analyzed from different perspectives: from the point of view of the populations being affected and from the specific diseases and health problems themselves.

### **d) The response of the health systems**

The health system involves not only the structure and resources for health care, but also the way it is organized including the legislative aspects in response to health problems in the population. It includes different forms of response that society has developed to address its needs of promoting, protecting and recuperating health of individuals and populations. This response includes policies, resources, coverage levels and health services for the population, according to the main providers: public and private.

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# Social and Economic Context



# 1. Social and Economic Context

## **Geography**

Dominica is the largest and most northern of the Windward Islands. Situated between Latitude 15° 20 minutes North and Longitude 61° 22 minutes West, it covers 289 square miles and has approximately 91 miles of coastline. Only 29 miles long 16 miles wide, the island is situated on the inner volcanic arc of the Lesser Antilles.

The island's **topography** is very rugged with steep luxuriant rain forest mountains, deep river incised valleys and tree –covered hills that produce and sustain pristine rivers, perennial streams and tumbling mountain waterfalls. The northern half is dominated by the cone of its highest mountain, Morne Diablotin (4,747 ft). Four of Dominica's mountains rise over 4,000 feet. A chain of seven other mountains extends from the island's center to the south. The Morne Trois Pitons National Park (incorporating the central mountain range) is inscribed on the United Nations World Heritage List since 1998, based on criteria of Outstanding Universal Value to Mankind, its natural aesthetic, rich bio-diversity and irreplaceable contribution to the understanding of science and natural landscape. Flatter areas are restricted to the coastal areas of the north east and center of the island.

The **geology** of Dominica is similar to the other volcanic islands in the Lesser Antillean Archipelago. Volcanic activity is present in regions of the Valley of Desolation and Boiling Lake, Wotten Waven and the Soufriere. Coral limestone areas are almost nonexistent and are restricted to small outcrops and uplifted areas on the west coast.

Dominica's relatively undisturbed and rugged landscape, extensive forest, pristine fresh and sea water and overall ecological system have contributed to the island being acclaimed as the "**Nature Island of the Caribbean**". This label has impacted favourably in positioning Dominica's global choices as a tourist destination for nature lovers and environmental adventure seekers. landscape Dominica boasts of a variety of natural attractions including numerous rivers and streams, deep river gorges, waterfalls, fumaroles, a boiling lake (considered the world's largest) and four cold freshwater lakes, two situated more than 2,500 feet above sea level. Dominica's rivers and lakes provide the island's water supply as well as leisure attractions for local and international tourists.

The **climate** is humid tropical marine. It is characterized by little seasonal variation in temperatures and strong, steady trade winds. The island is among the wettest in the Caribbean. The amount of rainfall is seasonal with the wettest months generally occurring between June and November.

Dominica's relatively high range of altitude, coupled with its rainfall, has given rise to a wide variety of vegetation. The undisturbed forests have been

described as the most extensive in the Lesser Antilles, while its rain forests are considered the finest in the insular Caribbean. Over 60% of island is still under some form of natural vegetation.

Native flora includes over 1,000 species of flowering plants including 74 species of orchid and 200 ferns. Twenty-two endemic species of plants have been identified. Dominica has a relatively varied fauna and hosts the most diverse assemblage of wildlife in the smaller Eastern Caribbean islands, with birds and bats particularly represented. To date, 172 species of birds have been recorded and two endemic and enlarged species of parrot – the Sisserou (Dominica's National Bird) and the Red-necked or Jaco Parrot. The twelve species of bat on the island are the only native mammals.

Several species of whales and dolphins are found in the waters around Dominica, which is fast positioning itself as the leading whale-watching destination in the region. There are several small coral reefs around Dominica with a variety of sponges, corals, soft coral and tropical fish. Molluscs and marine plants add to the marine bio-diversity of the island.

## **Social Setting**

### *Governance*

Dominica has a Westminster-style parliamentary government. A President and Prime Minister make up the executive branch. Nominated by the Prime Minister in consultation with the leader of the opposition party, the President is elected by the parliament for a five-year term. The president appoints as prime minister the leader of the majority party in the parliament and also appoints, on the Prime minister's recommendation, members of the parliament from the ruling party as cabinet ministers. The Prime Minister and Cabinet are responsible to the parliament and can be removed on a no-confidence vote. There are currently three main political parties.

The unicameral parliament, called the House of Assembly, is composed of 21 constituency representatives elected by universal suffrage and nine senators. Senators are appointed by the president – five on the recommendation of the opposition leader. Elections for representatives must be held at least every five years.

Dominica's legal system is based on English common law. There are three magistrate's courts, with appeals made to the Eastern Caribbean Court of Appeal and, ultimately, to the Privy Council of London.

Local government consists of councils with the majority of representatives elected by universal suffrage. Supported by property taxation and government grants, the councils are responsible for the regulation of markets and sanitation and the maintenance of secondary roads and other municipal amenities. The island is also divided into 10 parishes, whose governance is unrelated to the local governments. The Carib territory has its own ruling council with a greater autonomy.



## Population

### (a) Population Growth

The end of year population estimate of Dominica was 70,340, virtually the same as in 1991 and little different from that in 1970 (Figure 1.1). In the last 10 years, the natural increase (the excess of births over deaths) was 9,300. During this period, the birth rate decreased from around 25 per 1000 in 1991 to 18 per 1000 in 2001. There has been little change in the death rate which remains around 8 per 1000. As a result, the current rate of natural increase is around 1% per annum although this can be expected to further decline as the actual number of births has decreased by over 40% from around 1,200 in 1990 to fewer than 700 in 2000.

The fact that the population has hardly changed during the last 10 years despite the prevailing rate of natural increase indicates that there has been a high level of emigration; this is clearly shown in Figure 1.1.

Figure 1.1 Population Growth in Dominica, 1901 - 2001

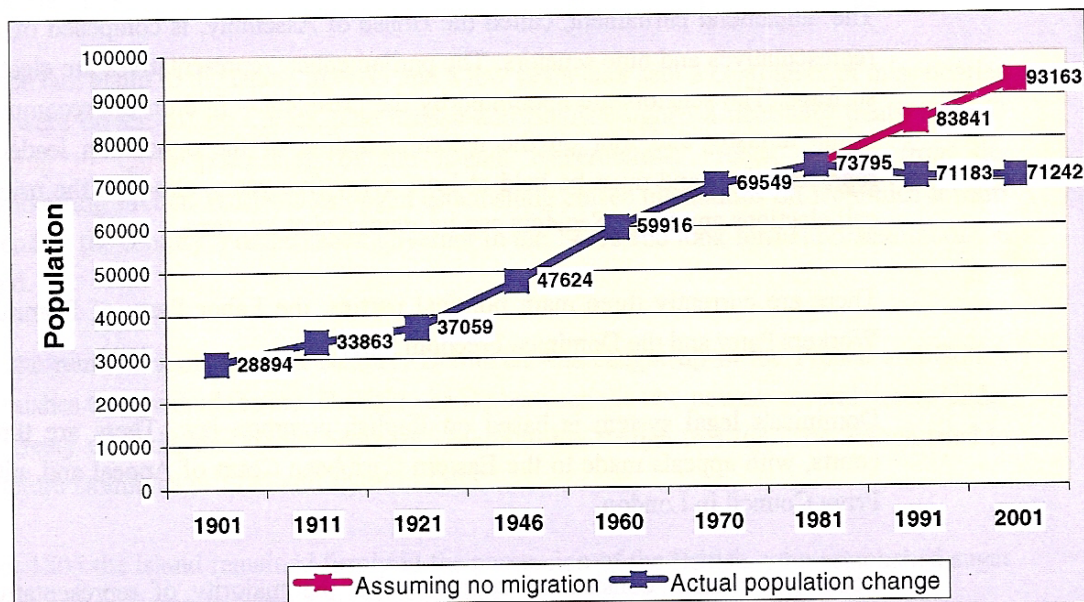


Figure 1.2 shows the geographic distribution of the population in 2001. It is notable for its overwhelming concentration around almost the entire coastline and particularly along the more hospitable west coast. The dominance of Roseau is also apparent – around 2 times larger than the next biggest settlement.

The geographic pattern of population change within Dominica has been uneven. Significant population growth occurred in the area surrounding Roseau (ie. rest of St. George) as well as St. John and St. Paul.

St. John contains Portsmouth, the second largest town after Roseau while St. Paul is located just north of Roseau. Areas showing the most pronounced declines are the city of Roseau, St. Andrew and St. Patrick.

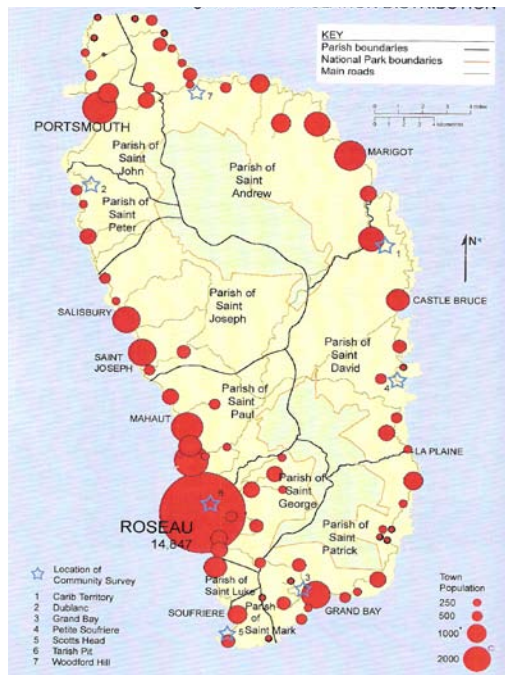


Figure 1.2 Population Distribution

## © Migration

The level of emigration over the last 10 years estimated from the SLC (around 10,000) is similar to that derived from the inter-censal change in population. Other relevant findings from the SLC are that:

- 55% of Dominican households have at least one (1) close family member (spouse, child, parent or sibling) living overseas;
- Over 30% of households have 'lost' family members to migration in the last 10 years;
- Approximately 40% of migrants reside in North America and a similar proportion in other Caribbean countries; most of the remainder lives in the UK;
- Over three quarters of migrants are working overseas. Just over half the remainders are studying abroad;
- Migrants are as likely, is not more likely, to be female than male;
- A large proportion (around three-quarters) of migrants in the last years were adults of prime working age (from 20 to 34 years); this is confirmed by the PPAs which found significant levels of out-migration of working age adults in all communities apart from Carib Territory.

Migration has been a continuing feature of Caribbean life over the last half century, almost always as a result of poverty and lack of employment. Without this safety-valve, it is difficult to see how most Caribbean islands could have coped with the population pressures on housing, land and services. Migration has also provided invaluable financial support to family members at home. Women as well as men have participated in this migration. However, migration also constitutes a brain drain, reduces support for elderly parents and, when men or women migrate without their families, there is often a negative impact on family life.

(d) Ethnicity

The Dominican population is predominantly (almost 80%) of African descent. Just over 4% are Carib, the only concentration of indigenous people in the Antilles. They occupy presently occupy a demarcated area called the Carib Territory, on the north-east of the island. Most of the remainder are mixed race.

Dominica inherited its official language English. Due to historical influences, the majority of the people speak a patois “kweyol” comprising of African and French linguistic structures.

***The Economy***

*Current State of the Economy*

The Dominican economy is based on agriculture with small elements of tourism and manufacturing. The economic history of Dominica appears to have followed a series of mono-crop booms and busts, from sugar to coffee to limes and vanilla to (now) bananas. Recent global and regional events have contributed to the declining dominance of agriculture in particular the cultivation of bananas.

Dominica pursues and maintains a free-market and liberal economy. Government is the key economic player.

Dominica is one of eight (8) Eastern Caribbean islands with a common central bank – the Eastern Caribbean Central Bank (ECCB) – and a common currency – the Eastern Caribbean (EC) dollar. The EC dollar has been pegged to the US dollar at a rate of EC\$2.70 = US\$1.00 since 1976. As noted in the International Monetary Fund’s (IMF) country report on Dominica this currency union has helped Dominica maintain monetary discipline and price stability.

Of the 171 countries listed in the 2008 United Nations Human Development Index (HDI), eight Caribbean Countries are in the ‘medium human development’ grouping including; Dominica (No.71), Saint Lucia (No. 72), Grenada (No. 82), Saint Vincent and the Grenadines (No. 93), Guyana (No. 97), and Jamaica (No.101).

The current labour force is approximately 37,000 with a participation rate of 66%. Unemployment is however very high particularly among the Youth.

With the decline in the banana industry, tourism has become a more important sector in the Dominican economy, especially in terms of foreign exchange earnings. Whereas cruise tourism has increased, this has not been reflected in the number of stay over visitors. The island has a potential to develop the industry around eco tourism which showcases its rich diversity of natural resources which includes a UNESCO World Heritage Site and world renowned whale watching and scuba diving.

The already fragile economy suffered following the passage of Hurricane Dean in 2007. Damage which was mainly to agriculture and infrastructure was estimated at 20% GDP. According to IMF report to donor groups in June 2008, the economy has weathered the effects of Dean better than expected. Donor assistance helped finance rehabilitation and emergency assistance was received from the IMF. The economic outlook looks encouraging with growth around 2 1/2-3% in 2008 and 2009. However, there are many challenges ahead if the island has to sustain growth, maintain fiscal stance, enhance competitiveness and reduce vulnerabilities.





# *Determinants of Health*



## 2. Social Determinants of Health

### What Determines Health

**Social determinants of health** are the economic and social conditions under which people live which determine their health. Virtually all major diseases are primarily determined by specific exposures to these conditions.

Many factors combine together to affect the health of individuals and communities. While health and social services make a contribution to health, most of the key determinants of health lie outside the direct influence of health and social care. Whether people are healthy or not, go beyond the provision of health services and are largely determined by their circumstances and environment. The context of people's lives determines their health.

To a large extent, factors such as where we live, the state of our environment, genetics, our income and education level, and our relationships with friends and family all have considerable impacts on health, whereas the more commonly considered factors such as access and use of health care services often have less of an impact.<sup>1</sup> These issues/factors are referred to as the “**social determinants of health**”.

These determinants can be broadly divided into three groupings:

- 'upstream' determinants -education, employment, income, living and working conditions
- 'midstream'- health behaviours and psychosocial factors and,
- 'downstream' - physiological and biological factors

These determinants can influence an individual's and the populations' behaviour and subsequent health in positive and negative ways.

Many modern health problems are multi-causal resulting from complex interaction of social, economic, environmental, behavioural, and genetic characteristics over the course of a person's life.

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<sup>1</sup> World Health Organization



**Figure 2.1 Determinants of Health**



Source: New South Wales Department of Health

## Unemployment

Employment has a significant effect on a person's physical, mental and social health. Paid work provides not only money, but also a sense of identity and purpose, social contacts and opportunities for personal growth. People who have more control over their work circumstances and fewer stress related demands of the job are healthier and often live longer than those in more stressful or riskier work and activities.

Un-employment and job security ranked the highest among the priority issues, affecting Dominican youth and women in particular. Unemployment was repeatedly cited as a serious problem during the Participatory Poverty Assessments (PPAs). The Medium-term Growth & Social Protection Strategy (GSPS) of 2006 states that the overall unemployment rate is 25%. Although the indicators related to the employment and economic activity of poor and non-poor households did not indicate a straightforward situation, the difference was

however extremely marked in the dependency ratio, with the ratio of poor households being over double that in non poor households.

Young people carry the greatest burden of unemployment and the economic and health consequences. Almost three- quarters of 15 – 24 year olds (who are not studying) from poor households are unemployed. This age group also comprises almost half of all unemployed persons, implying that the economy is failing to provide/create jobs for those entering the labour force.

The PPA's also revealed that employment is failing to generate enough income for many of those who have jobs.<sup>2</sup> Workers in poor households are more likely to be employed in the construction and agricultural sector and less likely to be found in the government sector.

Participants in community discussions identified lack of skilled personnel, inadequate education of young school leavers, poor environment for private sector growth, and lack of financial resources to provide jobs, as the main causes of unemployment on the island. Some of the risks to health, related to the effects of unemployment include:

- mental stress,
- poor nutrition and diet,
- Violence and crime
- teenage pregnancy and other sexual and reproductive health problems
- illegal drug abuse and trafficking

### **Implications for policy and programmes**

Policy should have three goals:

1. to reduce unemployment and job insecurity;
2. to reduce the hardship suffered by the unemployed;
3. to restore people to secure jobs so as to reduce their risk of chronic diseases.

### **Income and Social Status**

There is strong and growing evidence that higher social and economic status is associated with better health. High income determines living conditions such as safe housing and ability to buy sufficient nutritious food.

In 2002, a Survey of Living Conditions (SLC) recorded household poverty at 29% and population poverty at 39%. Approximately 10% of households and 15% of the population are indigent. The indigence line for an adult was estimated at EC\$2,000.00 per annum, while the poverty line was estimated at EC\$3,400.00 per adult per annum. Dominica's poverty is largely income or economic poverty

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<sup>2</sup> Growth and Social Protection Strategy

owing to the rapid decline in banana earnings (a once major export earner) which cuts across all sectors

**Table 2.1: Per Capita Household Expenditure by Quintile**

ITEM	Q1	Q2	Q3	Q4	Q5	ALL
Per capita expenditure-upper limit of Quintile (EC\$)	2,670	4,400	6,800	11,100	>11,100	
Average households size	4.6	4.0	3.1	2.5	2.4	3.3
Average total household spending	8,340	13,800	16,870	21,730	48,910	21,900 15,300*
Average spending per capita	1,830	3,450	5,400	9,570	20,640	6,550 5,300*
Food expenditure % of total	54%	47%	47%	38%	24%	43%
% total spending	7.6%	12.60%	15.40%	19.80%	44.60%	100.%
% spending -cumulative	7.6%	20.20%	35.60%	55.40%	100%	

Source: 2002 Survey of Living Conditions

\* Median

According to a World Bank Report, the share of Dominica's population living on less than US\$1 a day is below 2%. This is considered to be comparatively low (Grenada 4.7%, St Lucia 3.97% St Vincent 5.5%) and the MDG target of halving the proportion of persons living on less than US\$1.00 a day by 2015 is expected to be achieved well before that date<sup>3</sup>.

### Implications for policy and programmes

- Social justice issues
- Tackling the economic determinants of health
- Increasing life expectancy for those further down the social ladder
- Provision of safety nets and springboards to offset early disadvantage
- Reducing levels of educational failure, insecurity and unemployment

Other sections suggest ways that will improve health and reduce the social gradient in health

### Social Support Networks

The caring and respect that occurs in social relationships, and the resulting sense of satisfaction and well-being, seem to act as a buffer against health problems. Support from families, friends and communities is associated with better health.

<sup>3</sup> Survey of Living Conditions

Traditionally, communities in Dominica were very close knit; and citizens assisted each other in ways varying from the raising of children to building of homes and planting of gardens. The elderly were cared for at home by their children or relatives. The extended type of family structure was predominant, with the elderly looking after the very young thereby releasing parents to work. The parents in return supported and cared for the older ones. The out - migration, mainly of young people, including young families, has resulted in a decrease in the availability of traditional family supports for seniors. Consequently, an increasing number of elderly are left with no care and support.

Following the demise of the banana industry, many displaced from banana production sought work in Roseau, or the neighbouring islands. Some of the problems resulting from such moves were that young children were left with grandparents who could not effectively look after them and consequently, they became vulnerable to the ills of society such as drug abuse, delinquency, teenage pregnancies and gang violence. Day care nurseries have become a growing business, particularly in the urban areas. Many of these single parents are raising children with no guidance from seniors.

The circumstances related to weak and eroded support systems are many. There is need for support for the Youth, juveniles, the elderly, persons living with disabilities, HIV & AIDS and mental illnesses among others. Such social support networks could be very important in helping people solve problems and deal with adversity, as well as in maintaining a sense of mastery and control over life circumstances.

Government has recently implemented the “Yes We Care Programme” which is geared towards meeting the daily needs of the disabled and needy senior citizens who are home bound. Other efforts aimed at meeting some of the needs of some of these groups are small and fragmented:- organizations such as Operation Youth Quake for boys, Camp Londonderry, REACH – working with the elderly who are housebound and CALLS which targets adolescents in the Portsmouth area assist families. There is no organized system in place to provide support to the mentally ill.

The Diabetic Association and Cancer Society, once vibrant organizations, have been struggling to remain alive lately. The Committee for the Concerns of Children and the Dominica National Council of Women together with the Women’s Bureau are attempting to address the concerns of children and women, however, facilities to meet the identified needs of abused children and women are not yet available.

Of concern are the growing number of cases of sexual abuse of children and the rising divorce rate which is eroding the basic family unit.

### **Implications for policy and programmes**

If there is to be significant progress in reducing social and economic inequalities and reducing social exclusion to lead to greater social cohesiveness and better standards of health the following need to be considered:

- Improving the social environment in schools, in the workplace and in the community more widely, to help people feel valued and supported in more areas of their lives. This will contribute to their health, especially their mental health.
- Adopting a framework for social inclusion to guide the implementation of policies and practices that reduce inequities related to income, gender, traditions, geographic location, age and race.
- Promoting full employment, job security and healthy working conditions for all Dominicans. Make employment insurance available to workers in precarious jobs that need it most.
- Protecting universal access to a high quality health system that recognizes and addresses mental, social and spiritual health, and includes strong, adequately funded infrastructures for health promotion, disease prevention and health protection.
- Maintaining high quality public education system, expanding programs in early childhood education and care, and increasing opportunities for meaningful experiences in lifelong learning and employment training.
- Upholding and ensuring the right of all Dominicans to adequate housing and food.
- Reducing income disparities by ensuring minimum wages and levels of social assistance that allow all Dominicans to access the basic necessities for healthy living.

## **Education and Literacy**

Education contributes to health and prosperity by equipping people with knowledge and skills for problem solving, and helps provide a sense of control and mastery over life circumstances.

Dominica has an established education system ranging from preschool to University through the UWI School of Continuing Studies and the Dominica State College. The Education Act of 1997 mandates compulsory education for all children ages 5 – 16 years. Parents in Dominica place a high value on education and make considerable sacrifices to ensure that their children attend school. Many depend on assistance from the government administered Education Trust Fund and NGOs.

Dominica has more males than females, and this is reflected in school enrolment - primary 51.5% boys and 48.5% girls. The average gross enrolment ratio (GER) (total enrolment regardless of age) for the period 2006/07 was 82%, while the net enrolment ratio (total enrolment within the primary school age population 5 – 11yrs) for that same period was 77%.

The CPA revealed that 60% of households in Dominica have no one with secondary or tertiary education. This situation is not new, as educational policies in the last 20 years have sought to remedy this situation. Consequently, educational levels in Dominica have improved dramatically for the population as a whole.

The Adult Education Programme of the Ministry of Community Development incorporates literacy, parenting, Health & Family Life Education, skills training and outreach aimed at enabling adults to live full and productive lives.

### **Implication for Policies and programmes**

The Healthy School Policy should encompass all activities that schools plan and undertake in the area of health protection and promotion. It should consist of three interrelating pillars:

- Health and family life education in the classroom.
- Individual counseling and guidance for pupils and staff.
- Care for the school environment.

### **Social Environments**

The array of values and norms of a society, influence in varying ways the health and well being of individuals and populations. In addition, social stability, recognition of diversity, safety, good working relationships, and cohesive communities provide a supportive society that reduces or avoids many potential risks to good health.

In 2006, Dominica participated in a Comprehensive study of school discipline conducted among schools within the OECS. The study described and analyzed the prevalence, nature, and source of school discipline problems within schools in the OECS, with special emphasis on the types of violence involving teachers, pupils, parents or others that affect the school environment and to identify policy implications. A total of 694 students and seventy-five (75) teachers of the target sample completed the questionnaires.

The study outcomes variables were:

- School and classroom climate: the extent to which the school and classroom climate is perceived to be orderly, safe, positive and respectful
- Frequency and severity of pupil discipline problems: the frequency of various forums of indiscipline and violence observed by pupils and school personnel, at various times and locations
- Teacher involvement in disciplining pupils: the frequency of teacher involvement in positive and negative disciplinary action



- Teacher practices; presence/tardiness: frequency of teachers being absent, tardy or leaving class early observed by pupils and other teachers
- Attitudes toward misbehaving pupils: level of agreement with a remedial rather than a punitive approach to discipline problems

The results indicated the following contributing or predictor factors determined the outcomes examined in the study:

- Quality of school environment
- Quality of school discipline policy
- Quality of discipline management
- Preferred discipline strategies
- Presence of un-owned spaces
- Reasons for students' misbehavior
- Quality of school neighbourhood
- Parental involvement and support

Violence among youth is observed throughout society; in communities, at schools and among family members. Issues related to safety and discipline have tended to compromise learning conditions within some schools. Safety and discipline continue to be two of the most important issues in education in Dominica.

There has been an increase in violence among youth both in and out of school. Tolerance among that population group is low and the proliferation of gangs is cause for concern. Some communities, particularly those that are marginalized, experience higher levels of violence than others, and the children do not do well at school. The national crime rate, although considered to be among lowest in the Region, is rising, and new sophisticated crimes are becoming evident.

Violence among women remains a cause for concern, with agencies such as the Dominica National Council on Women playing key roles as advocates. Abuse of children is an issue which needs to be given serious attention, as the present system does not adequately address this growing problem.

### **Implication for Policies and programmes**

- Making the school environment more conducive to learning and improved academic performance, thereby reducing opportunities for school discipline problems.
- Reviewing Universal Secondary Education; making adjustment for improved student performance as a strategy to reduce violent behaviour among the under achievers.
- Implementing systems for supporting abused women and children, dealing with perpetrators and discouraging escalation of abusive behaviour

## Poverty, relative deprivation and social exclusion

The characteristics of poverty in Dominica were analyzed in 2002, when the first major Poverty Assessment was conducted. Poverty trends could not be ascertained accurately due to the absence of comparable data for previous years. However, it was generally accepted that the poverty situation has been exacerbated in recent years by the continuing decline in the agricultural sector accompanied by marked deterioration in government finances. The incidence of poverty in Dominica is presented in table 2.2 below:

**Table 2.2: Incidence of Poverty in Dominica**

Category	Households%	Population%
Indigent/Very Poor Poor	11%	15%
	18%	24%
ALL POOR	29%	39%
NON POOR	71%	61%
Total	100%	100%

Source: Country Poverty Assessment 2002

Poverty exists in both urban and rural areas. Three quarters of poor households live in rural areas where one in every two households is poor. The remainder of 24% is to be found in the capital city of Roseau and the second town of Portsmouth. Poverty among the Caribs is much higher: 70% of the Carib population is poor and almost half are indigent.<sup>4</sup>

Social exclusion also results from racism, discrimination, stigmatization, hostility and unemployment. People who live in, or have left, institutions, such as prisons, children's homes and psychiatric hospitals, are particularly vulnerable.

There are a growing number of vagrants and homeless people on the streets of Roseau, who are either mentally ill, or drug abusers locally referred to as "paros". The Community Mental Health Programme is actively engaged in trying to get the mentally ill who were previously abandoned at the Psychiatric Unit of the Princess Margaret Hospital, to be accepted by their families and incorporated into the communities. Stigma and discrimination against the mentally ill and those who have served time in prison make it very difficult for many of them to get employment, hence the reason for the high number of repeat offenders. Poverty and social exclusion increase the risks of divorce and separation, disability, illness, addiction and social isolation.

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<sup>4</sup> Social Indicators & Millennium Development Goals (SMIDG) National Report

Persons living with HIV&AIDS are afraid of declaring their status for fear of discrimination. Dominica has no workplace policies in place to protect citizens against discrimination. Years of Life is reduced greatly where its quality is poor.

### **Implication for policy and programme**

All citizens should be protected by minimum income guarantees, minimum wages legislation and access to services.

- Interventions to reduce poverty and social exclusion are needed.
- Legislation can help protect minority and vulnerable groups from discrimination and social exclusion.
- Public policies should remove barriers to health care, social services and affordable housing.
- Labour market, education and family welfare policies should aim to reduce social stratification in order to reduce people's risk to ill health.

### **Personal Health Practices and Coping Skills**

Personal Health Practices and Coping Skills refer to those actions by which individuals can prevent diseases and promote self-care, cope with challenges, and develop self-reliance, solve problems and make choices that enhance health. Lifestyle practices include not only individual choices, but also the influence of social, economic, and cultural environmental factors on the decisions people make about their daily living.

During community discussions organized to gather data for the development of the NSPH, lifestyle behaviours emerged as one of the priority areas for attention. Some of these behaviours included poor eating habits influenced by western culture and the cost of healthy foods; poor stress management; inactivity; smoking; unwise sexual activities; alcohol and other substance abuse and mental health issues. All these behaviours are major risk factors, for chronic non-communicable diseases.

In this regard, in 2008, the Ministry of Health in collaboration with the Pan American Health Organization (PAHO) conducted a national stepwise survey to obtain more scientific data on the distribution of these major risk factors so as to more efficiently plan for Chronic Non-Communicable Diseases prevention and management. CNCD risk factor data has not been routinely collected, except for nutritional status among school children under 5 years, and of persons who are diagnosed with these conditions as they visited the health care facilities. Self reported risk factor data was collected during the 2001 census.

The CNCDs are the leading causes of death and chronic illness in Dominica.

Cardiovascular disease and cancers, especially prostate cancer, dominate cause of death. Diabetes is a very significant contributor to death and illness, including eye and kidney diseases.

Population trends towards an ageing society imply that the CNCDs will remain a significant issue in health care services and have a significant impact on the health budget for the foreseeable future. Programmes geared at prevention, early detection and effective treatment are essential to minimizing these impacts on individuals and on the community<sup>5</sup>

It is hoped the findings from the CNCD BRF Survey will guide the development of a National Strategic Intervention Plan and provide opportunities to develop measurable indicators that will facilitate effective programme implementation, monitoring and evaluation to achieve good health outcomes.

Tobacco use is one of the chief preventable causes of death in the world and is a major risk for chronic non-communicable diseases in Dominica; however, information on the exact situation as it relates to public health impact of tobacco use, is limited to the Global Youth Tobacco Survey (GYTS) conducted in 2000 and 2004, and the micronutrient survey conducted in 1996.

The GYTS was repeated in 2004. Findings indicated definite evidence that students within the secondary and primary schools smoke cigarettes. In 2000, the percentage of students who ever smoked was between 41.0% and 33.2% while 2004 percentage was from 37.6% to 25.2%.

According to the findings, about 26.9% of the students surveyed in 2000 and 2004 started smoking before age ten. Current tobacco use and initiation remain constant for both survey periods. Level of susceptibility for all non-smokers did not change. These students continue to state their desire to remain tobacco free.

Prior to these surveys, the following was evident. Tobacco products were imported and sold locally. Anyone who desires to smoke has access to various brands and types of cigarettes. Tobacco was once grown and used to produce cigarettes and dried for pipe smoking. Presently, the factory continues to produce cigarettes but imports the tobacco. Cigars are imported from Cuba and Trinidad & Tobago.

The expense for tobacco and cigarette importation in 2008 was \$1,451,797 CIF Value for net weight 97,294-product kg, and income for cigarette exports was FOB \$1,000,822 for net weight 13,173kg. <sup>6</sup>

Currently, there is no legislation regarding the sale of tobacco products, consequently they can be sold to minors. Traditionally, children have always

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<sup>5</sup> National Epidemiologist Report Dec.2007

<sup>6</sup> Customs & Excise Division Dominica

been sent to purchase tobacco products for adults. There is growing demand for the provision of smoke –free environments

The following tables show the results for 2000 and 2004 surveys. Table 2.3 shows smokers, and table 2.4 factors that influence smoking among youth.

**Table 2.3: Tobacco Smokers**

<b>Year</b>	<b>2000</b>			<b>2004</b>		
Prevalence	Total	Boy	Girl	Total	Boy	Girl
Ever smoked cigarettes	37.1 ( $\pm 3.9$ )	42.7 ( $\pm 5.4$ )	30.9 ( $\pm 4.9$ )	31.4 ( $\pm 6.2$ )	30.7 ( $\pm 6.5$ )	27.5 ( $\pm 4.5$ )
First smoked cigarettes before age 10	26.5 ( $\pm$ )	( $\pm$ )	( $\pm$ )	31.4 ( $\pm 4.5$ )	30.7 ( $\pm 6.2$ )	27.5 ( $\pm 6.5$ )
Current cigarette smoker	13.0 ( $\pm 2.6$ )	13.7 ( $\pm 3.6$ )	11.4 ( $\pm 2.9$ )	13.2 ( $\pm 2.3$ )	12.3 ( $\pm 3.2$ )	10.9 ( $\pm 2.7$ )
Current user of other tobacco products	11.6 ( $\pm 1.9$ )	15.5 ( $\pm 3.3$ )	7.2 ( $\pm 1.7$ )	11.0 ( $\pm 1.9$ )	13.5 ( $\pm 3.1$ )	7.8 ( $\pm 1.9$ )
Never smokers likely to initiate smoking in the next year	30.7 ( $\pm 10.2$ )	26.8 ( $\pm 10.6$ )	33.0 ( $\pm 18.8$ )	13.8 ( $\pm 2.2$ )	14.3 ( $\pm 3.2$ )	12.8 ( $\pm 2.9$ )

Source: GYTS

**Table 2.4: Factors influencing smoking**

<b>Years</b>	<b>2000</b>			<b>2004</b>		
Factors	Total	Boy	Girl	Total	Boy	Girl
<b>Exposure to Smoke</b>						
1 or more parents smoke	22.7 ( $\pm 2.7$ )	21.4 ( $\pm 3.9$ )	23.7 ( $\pm 4.0$ )	25.5 ( $\pm 2.5$ )	23.1 ( $\pm 3.3$ )	25.9 ( $\pm 3.5$ )
Best friends smoke	13.0 ( $\pm 2.7$ )	13.1 ( $\pm 4.1$ )	11.6 ( $\pm 2.6$ )	10.6 ( $\pm 1.9$ )	11.9 ( $\pm 2.9$ )	7.9 ( $\pm 2.0$ )
Exposed to smoke in public places	59.1 ( $\pm 3.2$ )	60.0 ( $\pm 5.0$ )	57.3 ( $\pm 4.3$ )	59.9 ( $\pm 2.7$ )	59.5 ( $\pm 3.8$ )	59.2 ( $\pm 3.9$ )
Want “ban”	na	na	na	73.2 ( $\pm 3.0$ )	73.2 ( $\pm 4.1$ )	74.6 ( $\pm 3.4$ )
<b>School</b>						
Taught in school	58.3 ( $\pm 4.7$ )	53.3 ( $\pm 6.2$ )	63.7 ( $\pm 5.0$ )	56.3 ( $\pm 4.0$ )	52.5 ( $\pm 2.5$ )	60.7 ( $\pm 4.6$ )
<b>Media/Advertising</b>						
Saw Anti Messages	77.4 ( $\pm 2.6$ )	76.9 ( $\pm 3.4$ )	79.0 ( $\pm 3.8$ )	73.4 ( $\pm 2.8$ )	71.9 ( $\pm 3.8$ )	75.5 ( $\pm 3.5$ )
Saw pro message on billboards	na	na	na	na	na	Na

Saw pro message in newspapers or magazines	57.7 (± 2.8)	58.9 (± 4.1)	55.6 (± 3.1)	50.2 (±2.9)	51.6 (±4.0)	47.7 (±3.9)
Have object with “logo”	20.8 (± 2.1)	21.8. (±3.1)	18.3 (± 2.9)	17.0 (±2.0 )	17.6 (±2.9 )	15..2 (±2.3)
<b>Cessation</b>						
Desire to stop	54.8 (±11.8)	49.1 (±8.4)	66.4 (±17.0)	57.0 (±10.10)	55.2 (±16.0)	61 (±14.7)
Dependency	15.6 (±7.6)	12.9 (±7.8)	15.8 (±9.8)	14.8 (±8.4)	9.2 (±7.4)	15.2 (±11.7)
<b>Access</b>						
Not refused purchase	70.9 (±10.8)	69.1 (±14.8)	74.2 (±14.0)	66.6 (±20.8)	77.2 (±20.5)	65.8 (±26.9)
Received “free”	12.2			13.0 (±2.6)	15.9 (±3.4)	9.9 (±2.7)

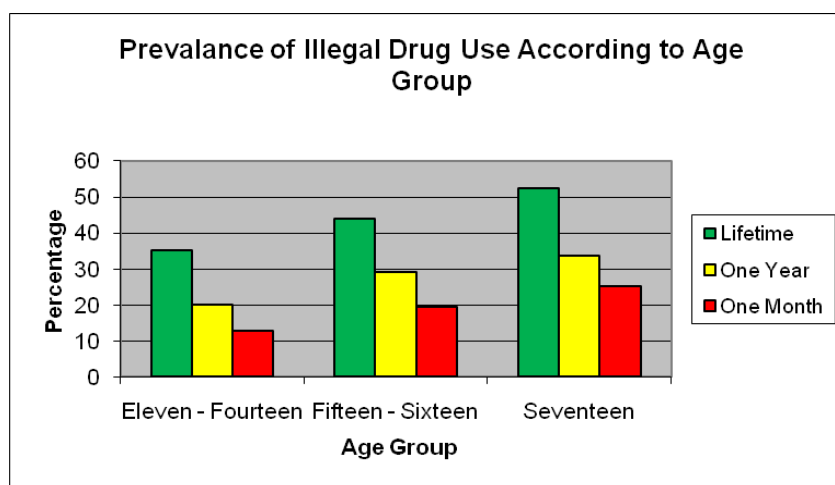
Source: GYTS

## Substance Use and Abuse

Individuals who use alcohol, drugs and tobacco are influenced by the wider social circumstances. These social and psychological circumstances can cause continuing anxiety, insecurity, low self-esteem, social isolation, and lack of control over work and home.

These issues affect mostly the male population and youth from 15 years and above island- wide. However, alcohol and drug abuse tends to occur more frequently. Staff of the Drug Abuse Prevention Unit revealed that over the past few months, there has been an increase in the number of individuals who walk-in, seeking help because of substance abuse.

**Figure 2.2**



Source: Drug Abuse Prevention Unit Ministry of Health



Challenges faced by the division included:

- Inadequate data on the number of drug addicts.
- Inadequate trained staff to serve communities
- Inadequate facilities to provide social services to individuals who abuse alcohol and other substances and their family members

The restraining factors include lack of financial and human resources, too low a priority placed on rehabilitation of affected individuals.

### **Implication for policy and programmes**

- Dominica is signatory to, and ratified the Framework Convention for Tobacco Control in 2006. Consequently, the county is expected to:
- Regulate the manufacture, labeling, promotion, distribution and use of tobacco products.
- Results from these surveys should stimulate policy makers to review present legislation for tobacco control, make the necessary adjustments and develop cessation programmes to implement.
- Attention needs to be focused upstream, on tackling the causes of ill health instead of applying the medical response of trying to control them with drugs
- Government should recognize the need for intervention programmes which address both psychosocial and material needs: both are sources of anxiety and insecurity.
- Effective drug policy must be supported by the broad framework of social and economic policy.

### **Physical Environment**

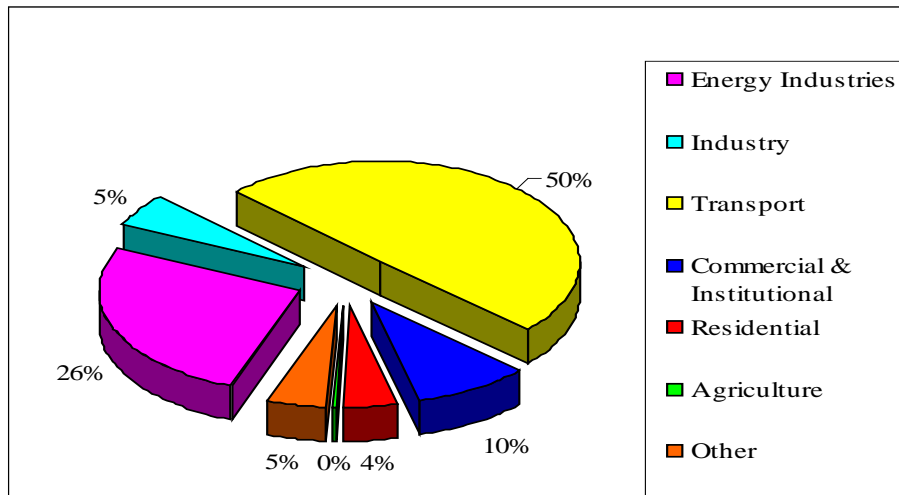
At certain levels of exposure, contaminants in our air, water, food and soil can cause a variety of adverse health effects, including cancer, birth defects, respiratory illness and gastrointestinal ailments. In the built environment, factors related to housing, indoor air quality, and the design of communities and transportation systems can significantly influence our physical and psychological well-being.

*Environmental Sanitation/Pollution* was the second major issue highlighted during the stakeholder consultation. These problems exist mainly due to lack of adequate human, material and financial resources to effectively manage garbage disposal island- wide; non-enforcement of litter act; improper management of raw sewerage; improper storage and disposal of chemical waste.

There are not many factories in Dominica. The quality of air in Dominica is stated to be the best in the Caribbean. According to reports on climate change it is said

that Dominica is regarded as the lungs of the Caribbean because of the size of the forest and numerous green trees. However, over the years green house gas emission has had some impact on the quality of air, as outlined in figure 2.3 below

**Figure 2.3 Green House Gas Emission**



Source: Environmental Coordinating Unit

As these green house gases absorb or re-emit infrared radiation in the atmosphere, warming the earth surface, creating global warming, the negative impacts will give rise to climate change.

- Climate change contributes to the global burden of disease & premature deaths.

### **Implication for policy and programmes**

These projected negative impacts require national and regional-level responses for revision and improvement in the health systems, and developing and implementing specific intervention plans. Increased resource mobilization for health programmes include:

- Strengthening public health institutions to implement integrated health programmes
- Strengthening primary health care services
- Maintaining health service infrastructure that is resilient to extreme events
- Training health professionals to understand threats posed.

## **HOUSING**

Poor housing conditions among low income families, and inadequate housing stock within communities broadly describe the housing problem experienced by many.

The problem that was identified in qualifying the housing situation is compounded by the inadequate, reliable and readily available gender disaggregated data regarding housing. However, information provided by community discussions indicated that an inadequate housing stock results in overcrowding, poor sanitation and other health related issues such as:

- Vulnerability to disasters and diseases
- Domestic violence
- Sexual and physical abuse
- Tension on single parents
- Teenage pregnancy

The main restraining factor for provision of adequate housing that is accessible to all is the lack of understanding of the interrelationship between housing and health. Unemployment, low income jobs, unfriendly lending policies, high cost of mortgage, high cost of labour, high number of single women facing family responsibility all contribute to the housing problem.

The government has outlined a policy intervention on the provision of housing and shelter, a package of measures described as the “housing revolution”. The main elements of that plan consist of a squatter regularization programme that qualified squatters for borrowing under a special mortgage facility operated by the AID bank and Credit Unions.

In some communities regularization was achieved through the sale of occupied lots at EC\$1.00 per square foot.

Other elements are the provision of serviced lots for housing construction; the national Housing and Sanitation Programme where government procured building materials to bring immediate relief to marginalized and indigent persons, and special mortgage facilities for financing home construction for low income earners including nurses, teachers and policemen.

A National Shelter programme is being developed with the objective of providing an all inclusive framework for shelter development in Dominica, and better planned human settlement.

### **Implications for policy and programmes**

A partnership with local government, government housing programme, Ministry of Health and Environment, and communities, to ensure adequate affordable

housing stock constructed favorable to improved health outcomes should be given priority.

It is hoped these proposed interventions will not only alleviate poor housing issues experienced by low income families, but will provide opportunities for recognition of the interrelations between housing and health.

## **HEALTH AND SOCIAL CARE**

### *Healthy Child Development*

Dominica, through its Primary Health Care System, boasts of a very successful Maternal and Child Health (MCH) Programme. Antenatal care is provided free of cost in the public health system. Protocol for care is outlined in the MCH manual of the Ministry of Health. All births are attended by a trained nurse midwife.

Immunization is provided through the Expanded Programme on Immunization and is free of charge at primary health care level. Dominica has maintained high levels of coverage (95-100%) over the years. The success of this programme can be attributed to the dedication of the nurses working at community level. There is need for legislation mandating compulsory immunization, as a small but growing number of parents refuse immunization of their children. Despite the lack of legislation, parents are required to present proof of immunization when registering children for school.

Other services provided under this programme include monitoring of growth and development in children. Slow growth and poor emotional support raise the lifetime risk of poor physical health and reduce physical, cognitive and emotional functioning in adulthood.

A few NGOs work with children in Dominica. The Christian Children Fund (CCF) through its Roving Caregivers Programme has trained a group of persons who visit the homes, providing stimulation for children and expectant mothers. Others include the National Children's Home (NCH), Dominica Save the Children, (DOMSAVE) and the Social Center which has a well established early childhood education programme.

The population at large has understood and embraced the concept of early childhood education, as reflected by the number of pre-schools on the island. Most preschool teachers have received formal training and continued training in young child feeding as part of that programme.

### **Implications for policy and programmes**

Policies for improving health in early life aim to:

- increase the general level of education and provide equal opportunity of access to education, to improve the health of mothers and babies in the long run

- improve growth and development before birth and throughout infancy and help reduce the risk of disease and malnutrition in infancy
- ensure that parent–child relations are supported from birth, increase parental knowledge of children’s emotional and cognitive needs, to stimulate cognitive development and pro-social behaviour in the child, and to prevent child abuse

## **Food Insecurity**

In developed societies, **food insecurity** is defined as "the inability to acquire or consume an adequate diet of quality or sufficient quantity of food in socially acceptable ways, or the uncertainty that one will be able to do so" (Davis and Tarasuk, 1994). Food insecurity also includes problems in obtaining nutritionally adequate and safe foods due to a lack of money to purchase them, or the limited availability of these foods in geographically isolated communities (Campbell, 1991).

Discussions conducted among communities during the assessment of social determinants of health indicated that young children, persons between the ages of 3 and 5 years and the elderly are those mostly affected. Provision of supplementary feeding within a number of primary schools, backyard gardening skills, social subsistence to the elderly and socially deprived, and education sessions at schools, the media, and formal training have been undertaken to address the issue. Educational interventions were not very successful in addressing the food insecurity problem due to the following reasons:

- Individuals’ food preferences
- Changes in lifestyle
- Inappropriate application of formal and informal instructions on the use of food for health and well-being.
- Inadequate access to food due to inadequate finances to purchase food
- Intake of unbalanced portions of food
- High cost of nutritious foods

## **Implications for Policy and programmes**

- Implementation of the recently upgraded food and nutrition policy and the food-based dietary guidelines.

## **Culture**

Culture influences health outcomes, as a determinant of and a benefit for health. The strong interrelationship between culture and the health status of the population creates an inseparable bond that is tightly intertwined and overlapping in such a way that makes it impossible to understand one without understanding the other. Traditionally, very few Dominican men participate in preventive health care. The power of herbal /alternative medicine is embedded in culture and shows no sign of diminishing. Like the rest of the Caribbean, Dominicans hold

fast to certain beliefs concerning treatment and causes of certain health problems

### **Implications for policies and programme**

- Conducting research on some of the herbs used locally to treat common ailments
- Targeting men to improve health seeking behaviours.
- Empowering communities, to the realization that the widespread of HIV/AIDS infection, cancer and hypertension among the populace have socio- cultural implications and needs to be considered priority.

Attempts to modify cultural belief and practice systems to positively influence health outcomes may necessitate legal intervention.

### **GENDER**

Gender refers to the array of society-determined roles, personality traits, attitudes, behaviours, values, relative power and influence that society ascribes to the two sexes on a differential basis. "Gendered" norms influence the health system's practices and priorities. Men and women suffer from different types of diseases at different ages. Life expectancy for males is 73.5 and 78.1 for females

Men are more likely to die prematurely than women, largely as a result of heart disease, fatal unintentional injuries, cancer and suicide. While women live longer than men, they are more likely to suffer depression, stress overload (often due to efforts to balance work and family life), chronic conditions such as arthritis and allergies, injuries and death resulting from family violence.

With the increased interest in health and wellness across the island, many are slowly beginning to recognize how other factors that are not health care related contribute to the health of the population.

**Population health** is an approach that addresses the entire range of factors that determine health and by so doing affects the health of the entire population.

In 1994, Dominica adopted the **Caribbean Charter for Health Promotion** to strengthen the primary health care model and explore how factors other than health care contribute to the health of its population. In that regard, the Ministry of Health in its plan for population health is moving to strengthen health services to address not just lifestyle behaviours but to create greater awareness to address these key determinants.

The health promotion concepts, principles and strategies have been underpinning the health services for over a decade. This social diagnosis model shows how population health approach can be implemented through action on

the full range of health determinants, by means of health promotion strategies. Some of the main achievements of the Health promotion Resource Unit include:

- Healthy Community Initiative
- The coalition of District Officers for health and social development with Terms of Reference and organizational structures at department, district and community levels.

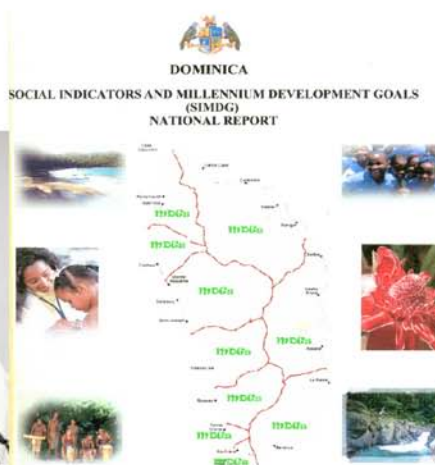
### ***The Role of the Health Sector***

Despite clear evidence that the social determinants of health affect health and illness, the health sector has been slow to champion policies that improve social conditions, because areas of social and economic policy largely fall outside of the jurisdiction of the health department. The health sector has at least three key roles to play in addressing disparities in the social determinants and the strategies outlined above:

1. **Leader.** In some cases, the health sector has a direct leadership role to play in addressing the health and long-term care needs of certain population groups, and as a large employer of many workers.
2. **Influencer.** In many cases, the health sector can act as an influential catalyst, advocate, mediator and collaborator in finding win-win situations that convince other sectors to develop public policies and assign public resources to improving the SDOH.
3. **Communicator and knowledge broker.** In all cases and at all levels, the health sector can communicate with the public and with decision-makers about the impact of policies in labour, finance, housing and other sectors on the health, well-being and productivity of the Dominican population. The sector can also serve as a knowledge broker in building and sharing our understanding about the value of, and mechanisms for reducing disparities in the SDOH, and subsequently in health status.



# ***Health Systems & Health Profile***





### 3. HEALTH PROFILE AND HEALTH SYSTEMS

#### Health Profile

##### Introduction

The **health profile** refers to those characteristics of the community that describe its current state of health and the factors that influence health. A description of the health profile therefore includes a description of

- The population and the demographics trends
- The mortality and morbidity patterns
- The risk factors that impact on mortality and morbidity

##### *Demographics*

Over the century (1901-2001), the population of Dominica moved from 26,841 in 1901 to 68,635 reflecting a 159.4% increase. After 1970, the rate of growth seemed to have slowed down. A negative growth rate of 0.4% was recorded for the period 1981-1991. According to the 2001 census the population dipped again, recording a negative average annual growth of 0.21.<sup>7</sup> The negative population growth in 1981 could be attributed to increased migration following the devastation caused by the passage of hurricane David in 1979

The 2001 census<sup>8</sup> indicated that the population of Dominica was 68, 635. This compares to a population of 71,183 in the 1991 census.

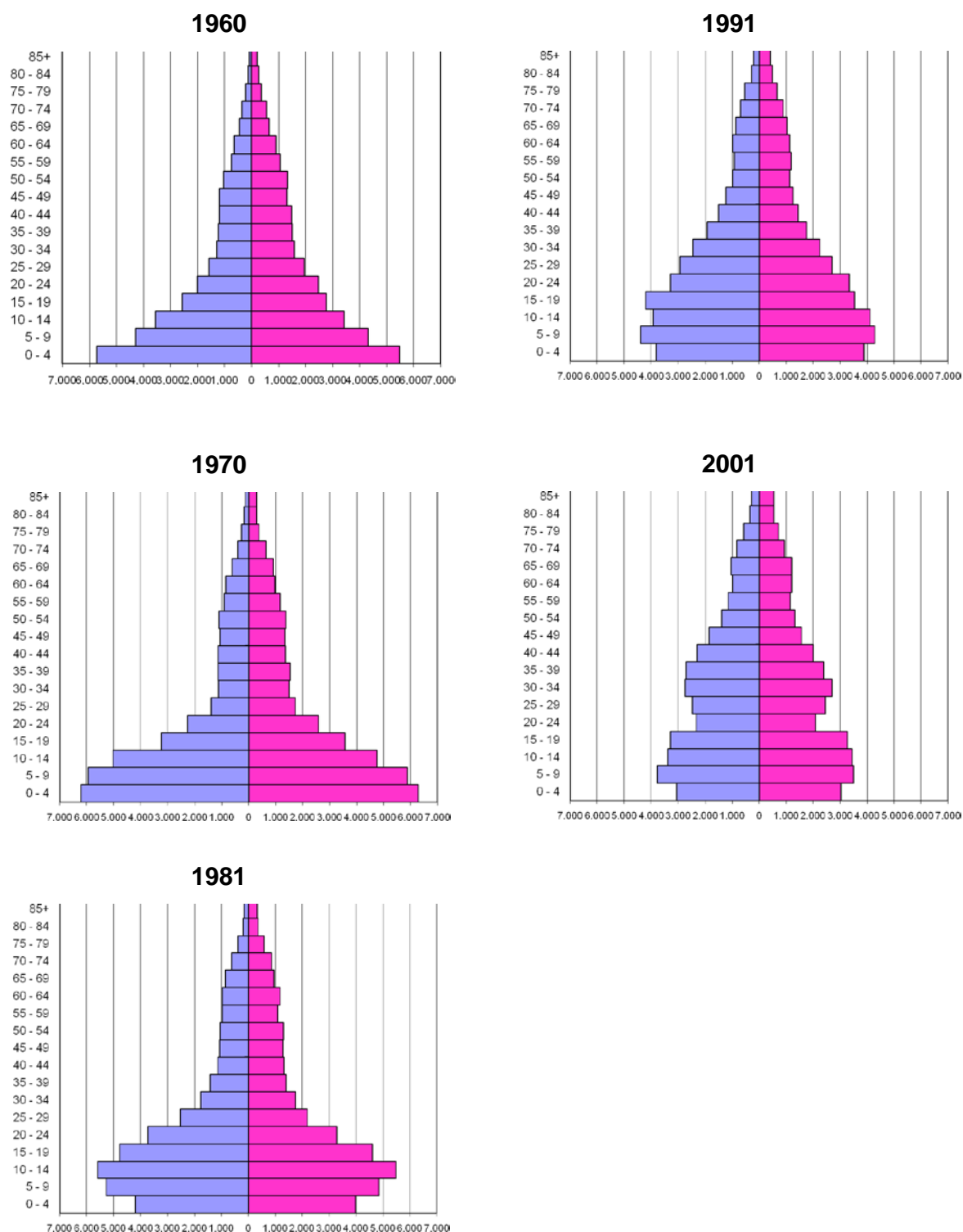
The population structure of Dominica is such that there is an increasing proportion and absolute number of older persons. This is demonstrated by the changing population pyramid for the country in Figure 3.1. The 2001 census revealed that the proportion of persons aged 60 years and over was 13.4% as compared to 8.1% in 1960 and 11.5% in the 1991 censuses. At the same time, however, 45.4% of the population in 2001 was under 25 years as compared to 61.1% in 1960 and 54.5% in 1991.

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<sup>7</sup> Social Indicators and Millennium Development Goals National Report

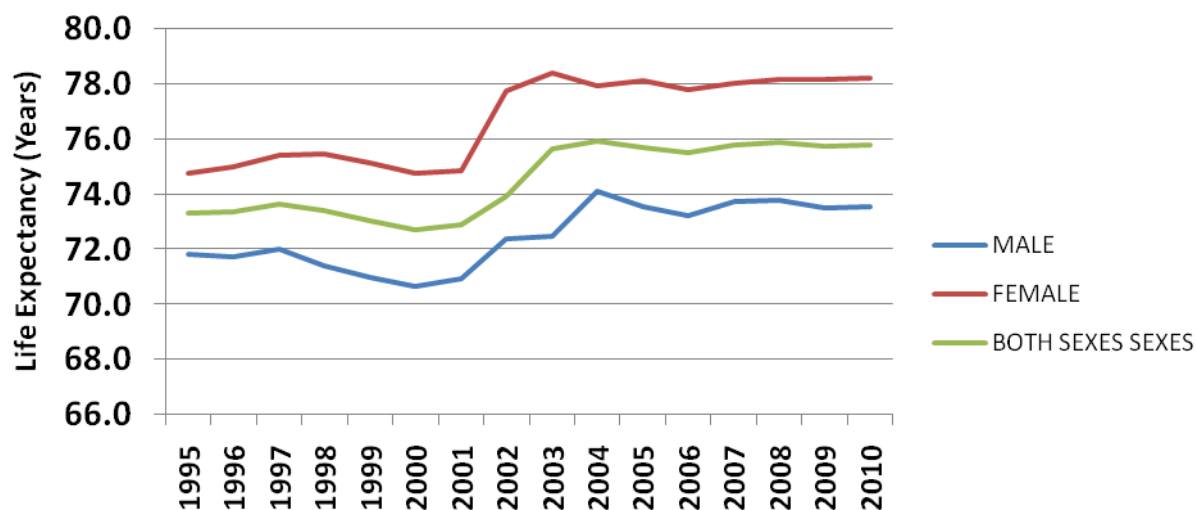
<sup>8</sup> National Census Report, 2001

**Figure 3.1: Population Pyramids for Dominica, 1960-2001**



This trend in increasing numbers of older persons is expected to continue as the life expectancy of Dominicans continues to increase (see Figure 3.2).

**Figure 3.2 Trend in Life Expectancy, 1995-2010**

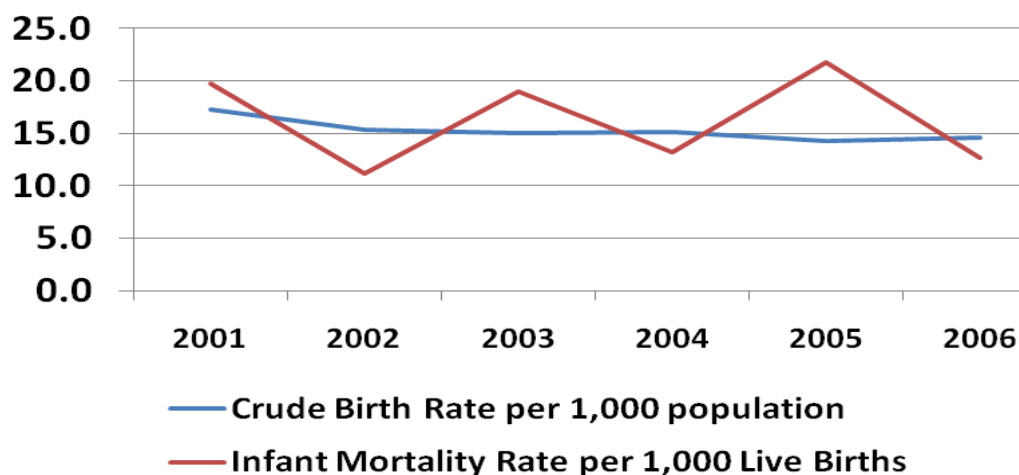


Source: Central Statistical Office

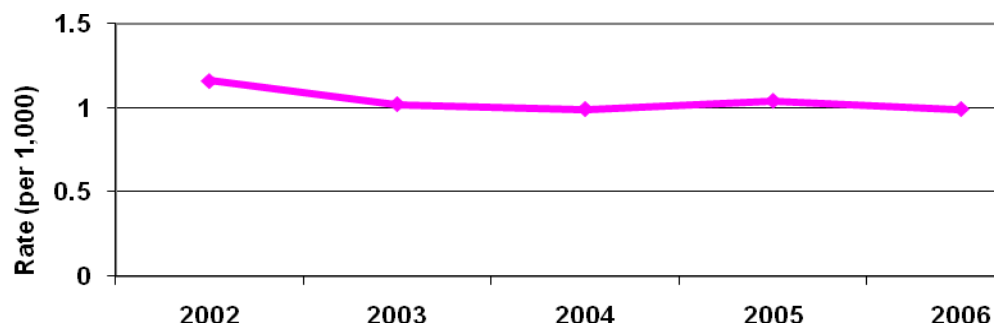
There has been an increase in life expectancy in the early part of this decade, especially for females. This trend towards increasing longevity has implications for the health care sector, since many of the chronic non-communicable diseases (CNCDs) are associated with increasing age.

Crude birth rate (CBR) and fertility rate have been declining at the same time that infant mortality rates are declining. The trend in the CBR is towards fewer births with the CBR being 17.3 per 1000 in 2001 and 14.6 per 1000 population in 2006 (see Figure 3.3).

**Figure 3.3 Trends in Crude Birth Rate and Infant Mortality Rate, 2001-2006**

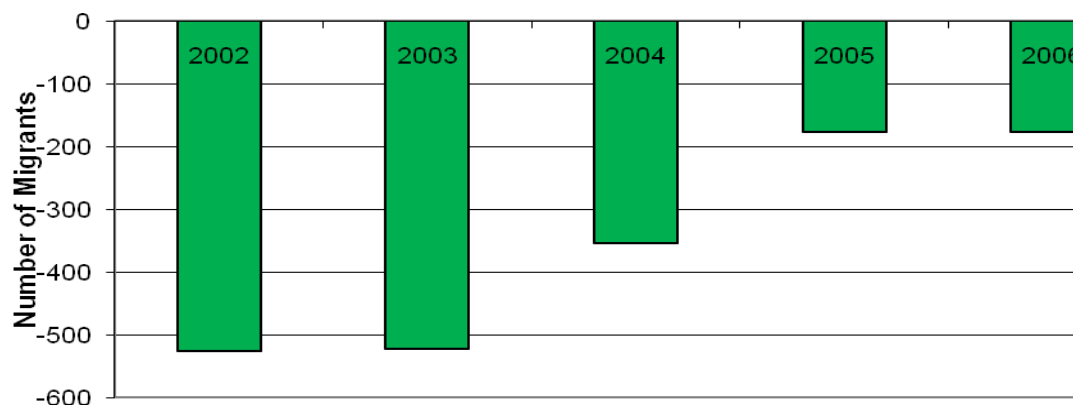


**Figure 3.4 Trend in Fertility Rate, 2002-2006**



These trends suggest that demands for services for mothers, children and the youth will continue to be important in the coming decade. The trend towards increasing numbers of immigrants may also affect the demographic trends, as working age individuals enter the country, particularly from Haiti and China.

**Figure 3.5 Trend in Migration**

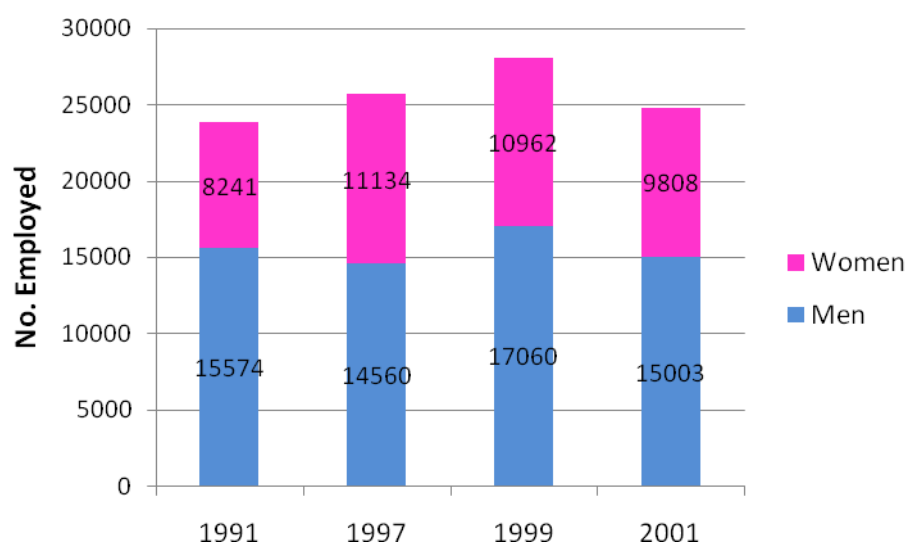


Source: Central Statistical Office

### ***Employment and Economic Activity***

A greater proportion and number of women were employed in the workforce in 2001 as compared to 1991 (see Figure 3.6)

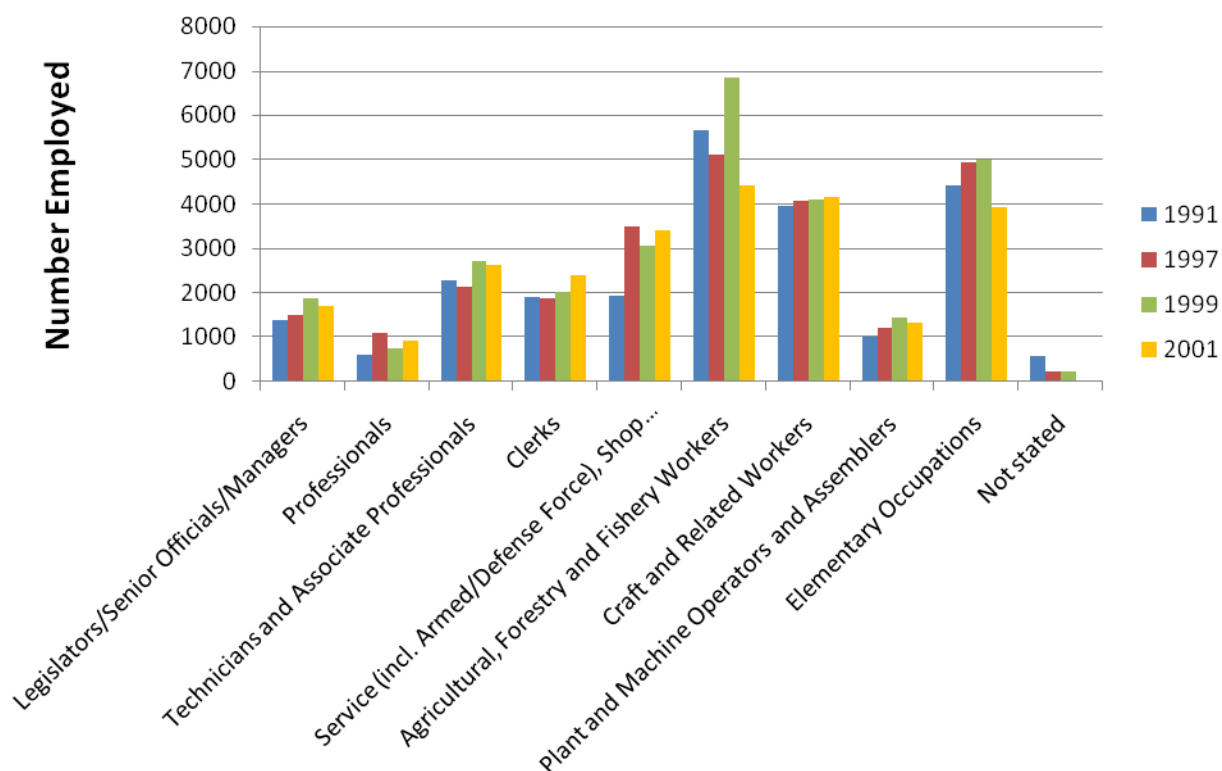
**Figure 3.6 Employment by Sex**



Source: Central Statistical Office

Most persons are employed in the agricultural sector and elementary occupations such as carpentry.

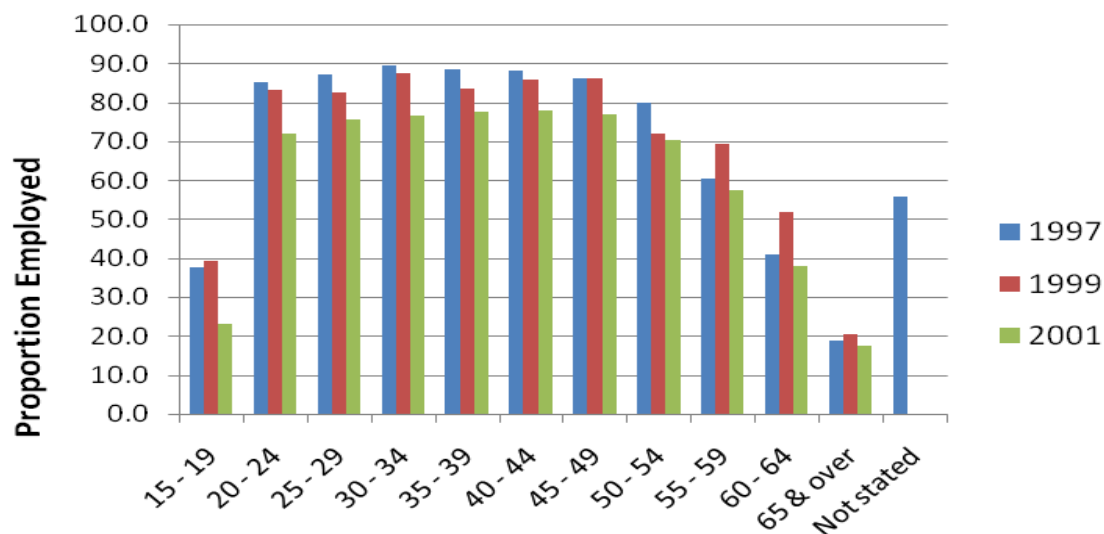
**Figure 3.7 Employment by Occupational Group**



Source: Central Statistical Office

Employment is greatest in the age groups 20-49 years. There were declining employment ratios from 1997 to 2001 (which are the years for which data is available).

**Figure 3.8: Employment by Age Group, 1997, 1999, 2001**



Source: Central Statistical Office

The overall economic situation in Dominica has been improving in recent years following a period of economic stabilization under the guidance of the International Monetary Fund (IMF), and is projected to continue to improve (although these projections would not have taken into account the current severe increasing trend in the price of food and oil). It must be recognized that there are significant areas of poverty in the population. The 2002 *Country Poverty Assessment* identified about 29% of households and 39% of the population as living in poverty<sup>9</sup>. Three quarters of poor households are located in rural communities, and the Carib people are particularly affected where 70% of them were found to be poor and almost half were characterized as indigent. The government's *Growth and Social Protection Strategy*<sup>10</sup> seeks to address the issue of poverty over the next five years.

### ***Housing and Water Supply***

Selected housing and water supply indicators are presented in Table 3.1. In 2007, the government began what it termed a housing revolution in an effort to assist low income people to own or repair their homes.

<sup>9</sup> Country Poverty Assessment, 2002

<sup>10</sup> Second Medium-term Growth and Social Protection Strategy, February 2008

**Table 3.1: Housing Indicators by Poverty Status**

Indicator	Poor *	Non-poor	Total
Tenure – House Owned	77%	74%	75%
Land squatted	4%	3%	3%
Overcrowding			
Up to 1 person/room	34%	71%	61%
Between 1 and 2 persons/room	37%	24%	28%
Over 2 persons/room	29%	5%	12%
Total	100%	100%	100%
‘Defective’ Housing			
House with wood/ plywood walls	60%	28%	37%
No safe water*	16%	7%	9%
No electricity	23%	8%	12%
No toilet or latrine	29%	11%	16%
No bathing facilities	35%	14%	20%
No kitchen facilities in house	41%	18%	25%
Does not use gas for cooking	38%	15%	21%
(Uses wood for cooking)	23%	8%	13%)
Total	100%	100%	100%

Source: Country Poverty Assessment, 2002

\*Water is not supplied by house connection or standpipe.

Poor households are more likely to be overcrowded and lack safe water connections, adequate toilet and cooking facilities. However, more households have access to adequate water and toilet facilities today as compared to years ago.

Over the past 10 years, female headed households stood at 36.9 per cent. Increases were recorded in households with 1- 4 persons, as much as 36.8 per cent in two person households. Conversely, households with six or more persons registered decreases over the period. Male headed households accounted for a higher percentage in all household sizes

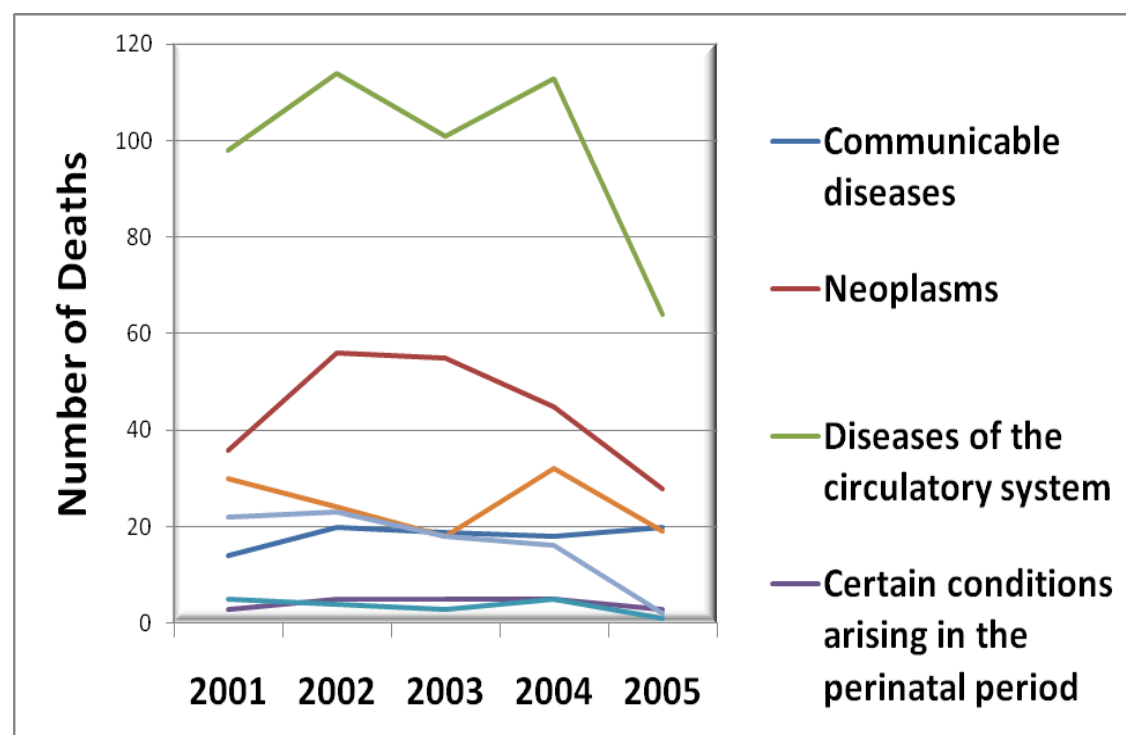
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<sup>11</sup> Social Indicators and Millennium Development Goals National Report

## Mortality

The chronic non-communicable diseases (CNCDs) dominate the causes for mortality in Dominica. Figure 3.9 shows the overall trend in mortality for 2001-2005 and illustrates the fact that diseases of the circulatory system and cancers are the most important causes of death<sup>12</sup>.

**Figure 3.9 Trend in Causes of Death, 2001-2005 (ICD-10)**



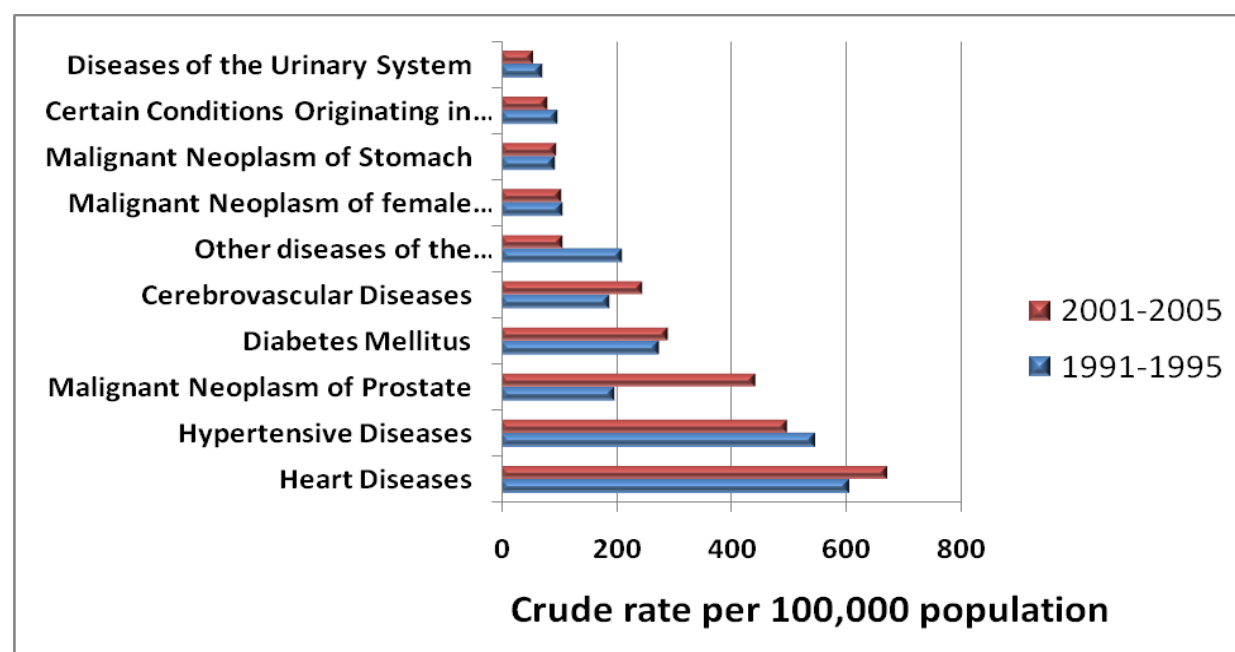
Source: Health Information Unit

A comparison of leading causes of death data for 1991-1995 versus 2001-2005 shows that the contribution of heart disease has increased over the past decade with increases in rates for prostate cancer, stroke, and diabetes, while deaths from diseases of the respiratory system, conditions originating in the perinatal period, and diseases of the urinary system declined.

<sup>12</sup> The PAHO 6\67 classification for mortality is used. ICD-10 coding was introduced in Dominica in 2001



**Figure 3.10 Leading causes of death (both sexes) 1991-1995 vs. 2001-2005**



Source: Health Information Unit Ministry of Health Dominica

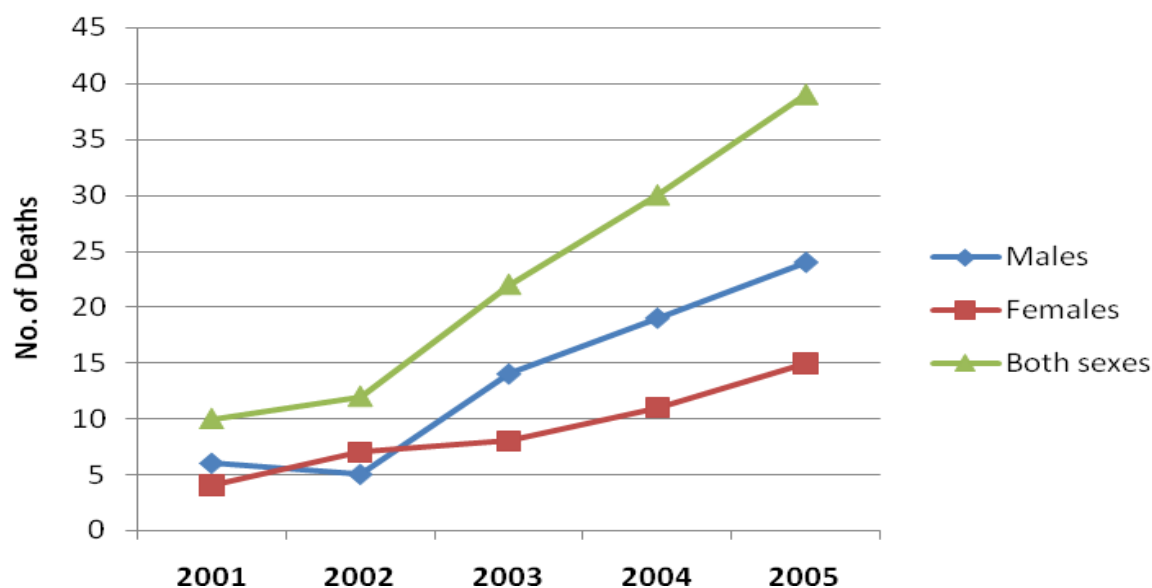
The importance of cardiovascular disease as a cause of death is further illustrated in the dramatic rise in the number of deaths from ischaemic heart disease between 2001 and 2005 (Figure ) where the number of deaths increased by 290%. Figure 3.10 provides further information on the leading causes of death by age group and sex.

HIV-related deaths are very significant for persons aged 25-44 years, being the number one cause of death among males and the joint number three cause of death along with heart disease and diseases of the urinary tract among women. The impact of the introduction of anti-retroviral medications on HIV-related mortality is seen in Figure 3.12. Antiretroviral therapy was introduced free of cost to patients through funding by the Global Fund for HIV and AIDS, Tuberculosis and Malaria in 2004.

Prostate cancer is the leading cause of cancer death among men, affecting mainly men over sixty years of age, while breast cancer is the leading cause of cancer death among women, being second only to heart disease among women aged 25-44 years, and second to heart disease and hypertensive disease among women 45-60 years.

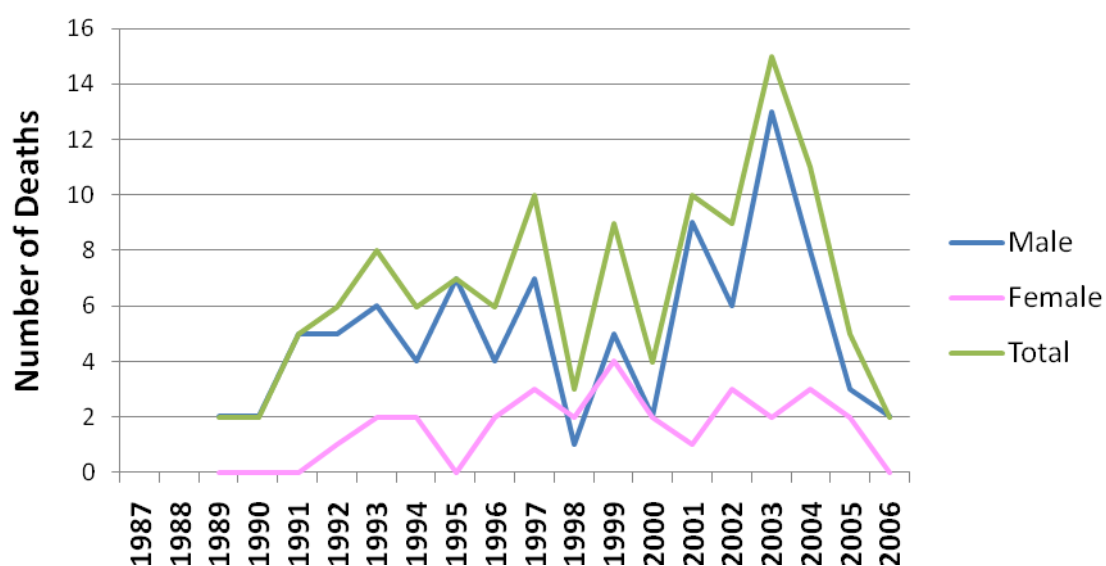
Land transport accidents are the number one cause of death among males aged 5-24 years, while heart disease was the number one cause of death among females in that age group. Diabetes was the fourth leading cause of death among males for the period 2001-2005, while it was the number three cause of death among females for the same period.

**Figure 3.11: Trend in Deaths from Ischaemic Heart Disease**



Source: Health information Unit Ministry of Health Dominica

**Figure 3.12: Number of HIV-related Deaths by Year**



Source: Health information Unit Ministry of Health Dominica

### **Morbidity**

Prevalence data for chronic diseases in the community is limited to self reported data collected in the 2001 census at the time of writing<sup>13</sup>. Table 3.2 shows that hypertension; arthritis, diabetes and asthma were the leading illnesses being reported by Dominicans. Almost 80% of the population reported that they had no chronic disease.

<sup>13</sup> Data collection for the national survey of CNCD prevalence and prevalence of risk factors using the PAHO/WHO STEPS methodology was completed in May 2008.

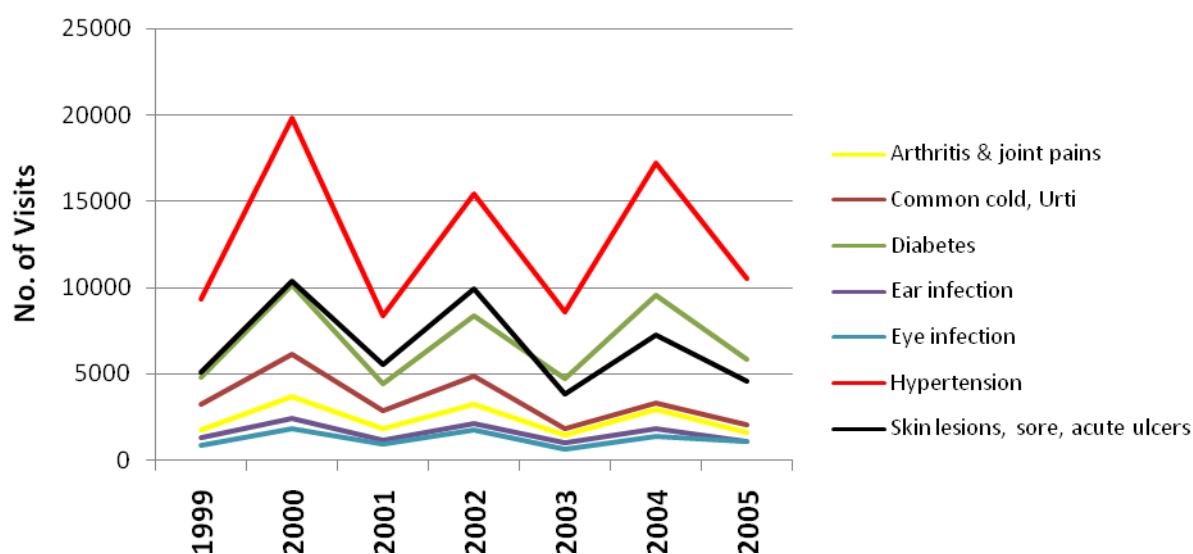
**Table 3.2: Prevalence of Selected Diseases/Conditions**

Disease/Condition	No. of Cases	Prevalence (per 10 <sup>6</sup> )	% population
Hypertension	5434	7917.2	7.92
Arthritis	4710	606.1	6.86
Diabetes	2399	3495.3	3.49
Asthma	1805	2629.9	2.63
Heart Disease	677	986.4	0.97
Sickle Cell Anaemia	416	606.1	0.61
Stroke	352	512.9	0.51
Kidney disease	129	188	0.19
Cancer	121	176.3	0.18
Carpal Tunnel Syndrome	35	51	0.05
Lupus	15	21.9	0.02
Other	2463	3588.5	3.59
None	54545	79471.1	79.47

Source: Health information Unit Ministry of Health Dominica

The pattern of visits to government clinics also reflects the significance of the CNCDs in the health of the Dominican community, with 22% of visits to District Medical Officers (DMOs) and Family Nurse Practitioners (FNPs) in 2006 due to hypertension, and 12.6% due to diabetes.

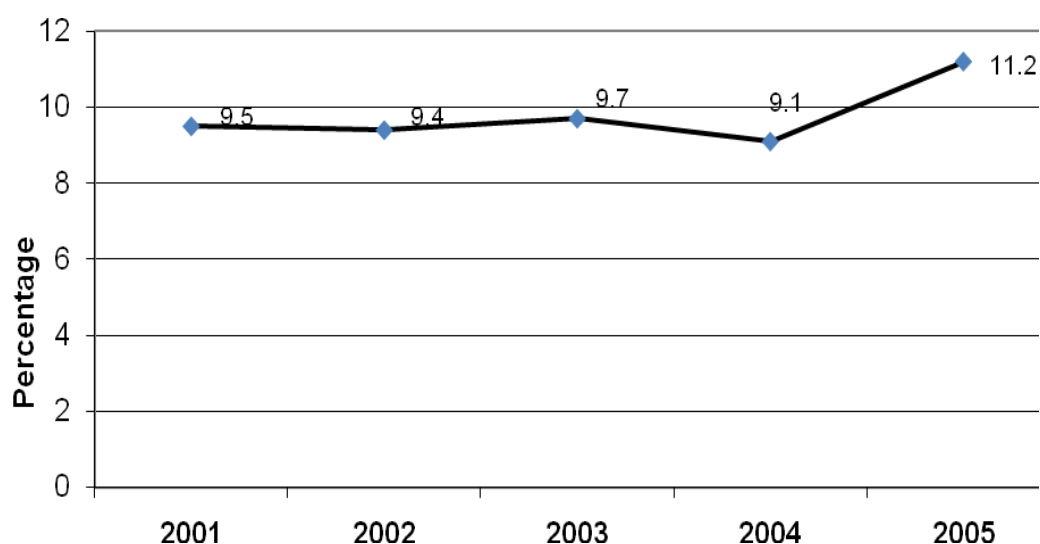
Figure 3.13 depicts the trend in the number of visits to DMOs and FNPs for the period 1999-2005 and reflects the importance of hypertension, diabetes and skin conditions over the years.

**Figure 3.13: Trend in Most Frequent Visits to DMO/FNP, 1999-2005**

Source: Health information Unit Ministry of Health Dominica

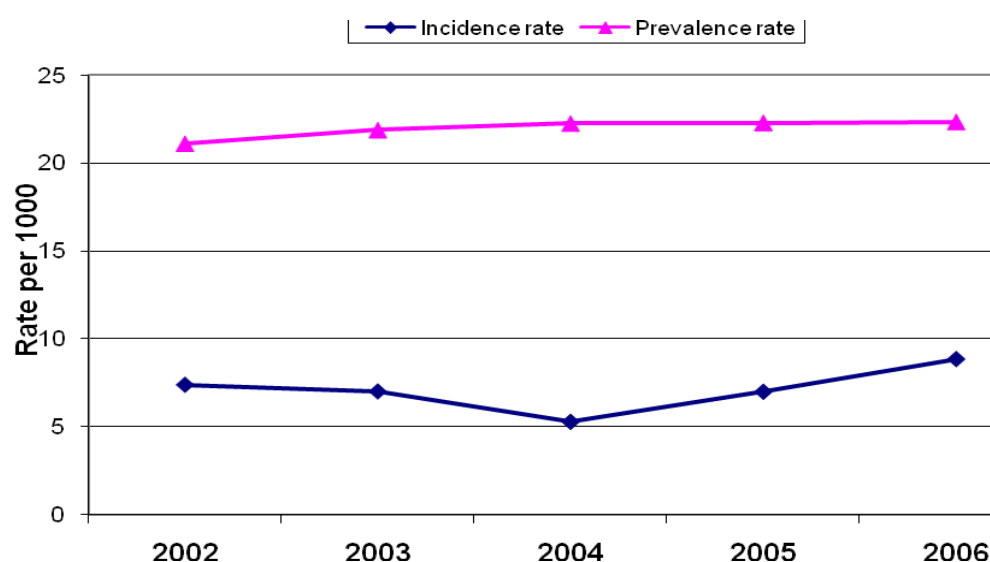
Obesity is a major risk factor for the CNCDs. Surveillance data for children aged 0-5 years shows that obesity is an increasing problem with a rise from 9.5% in 2001 to 11.2% in 2005 (see Figure 3.14). At the same time there is an increasing prevalence of children less than 5 years who are being identified as having Protein Energy Malnutrition (see Figure 3.15).

**Figure 3.14: Trend in Prevalence of Obesity among Children 0-5 Years**



Source: Health information Unit Ministry of Health Dominica

**Figure 3.15: Trend in Protein-Energy Nutritional Deficiency**

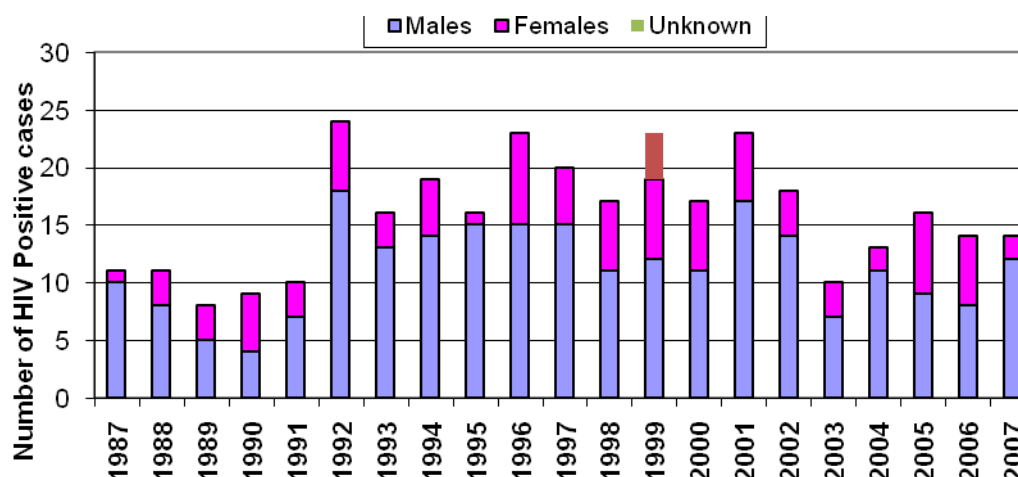


Source: Health information Unit Ministry of Health Dominica

The pattern of communicable diseases is such that HIV, dengue, influenza and tuberculosis remain threats with the greatest epidemic potential and therefore must continue to be addressed in a cost-effective and sustained manner.

Figure 3.16 shows the pattern of new HIV cases being identified in Dominica. The numbers of infections detected annually have declined in this decade as compared to the last one.

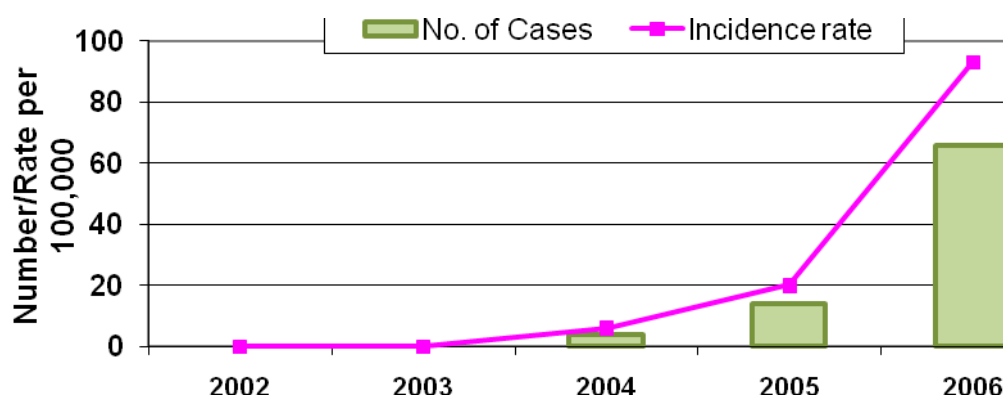
**Figure 3.16: Trend in HIV Infections, 1987-2007**



Source: Health information Unit Ministry of Health Dominica

The number of cases of dengue has been rising throughout this decade.

**Figure 3.17: Trends in Number of Dengue Cases, 2002-2006**

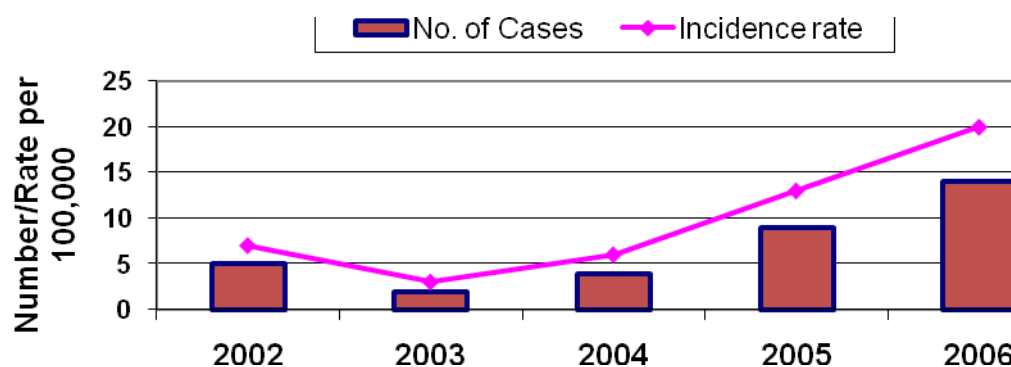


Source: Health information Unit Ministry of Health Dominica

If environmental conditions for mosquito breeding continue to be favourable, then outbreaks of dengue are more likely to occur in the future if vector control is not addressed.

The annual incidence of tuberculosis has been rising during this decade. Although the majority of cases are HIV negative, increasing prevalence of HIV infections will favour increasing incidence of tuberculosis in the coming years and suggests that careful planning of prevention and treatment programs for these diseases needs to be a priority issue.

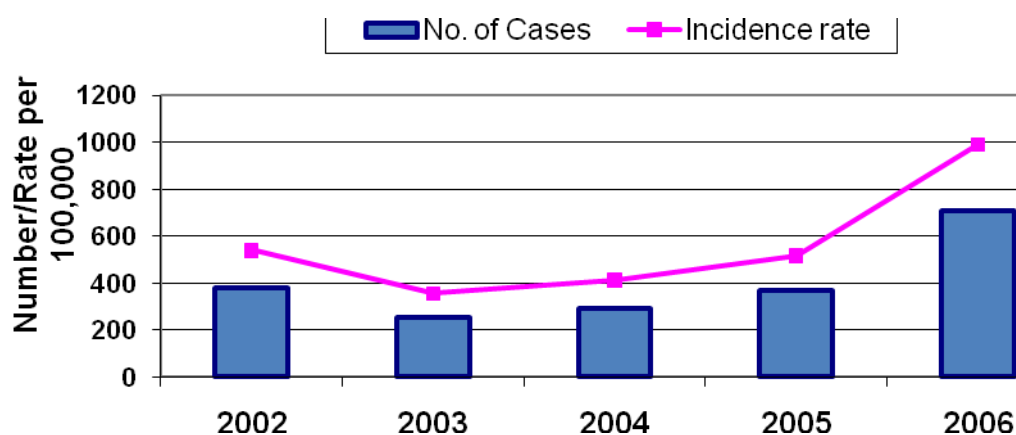
**Figure 3.18: Trends in Number and Rate of Cases of Tuberculosis**



Source: Health information Unit Ministry of Health Dominica

There was an increase in the incidence rate of food borne diseases during the period 2002-2006. This may be due in part to better reporting through the National Surveillance and Response Team which has been in operation since 2003. Surveillance and response to food borne illness and other communicable diseases is particularly important in order to avert potentially negative impacts on the tourism sector.

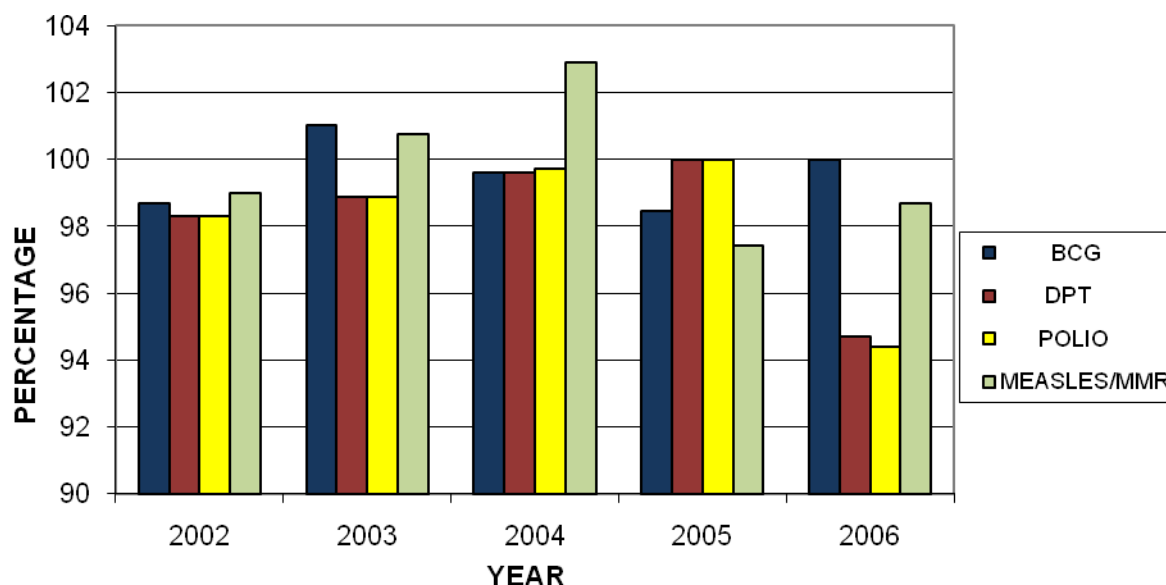
**Figure 3.19: Trends in Number and Rate of Food Borne Diseases, 2002-2006**



Source: Health information Unit Ministry of Health Dominica

Immunization coverage remains high for the period 2002-2006 (see Figure 3.20). The gains in immunization coverage need to be maintained.

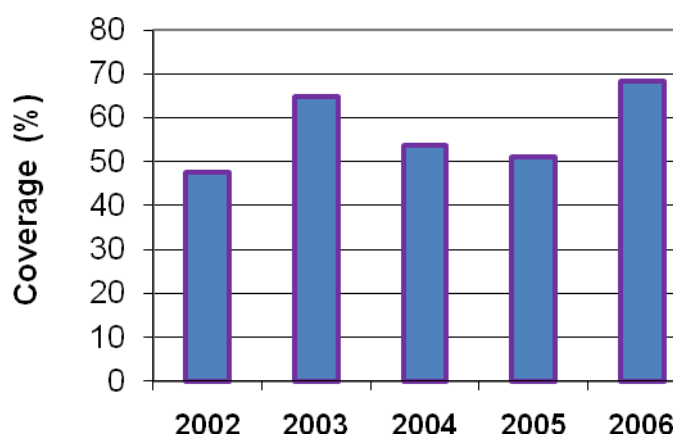
**Figure 3.20: National Immunization Coverage, 2002-2006**



Source: Health information Unit Ministry of Health Dominica

Cancer screening remains an important function of Primary Health Care (PHC). Figure 3.21 shows that although screening rates are improving, they need to continue to be improved and sustained. Given that breast cancer is such an important cause of death among women, there is a need to develop and implement a breast cancer screening programme in addition to the cervical cancer screening programme. The same is true for prostate cancer.

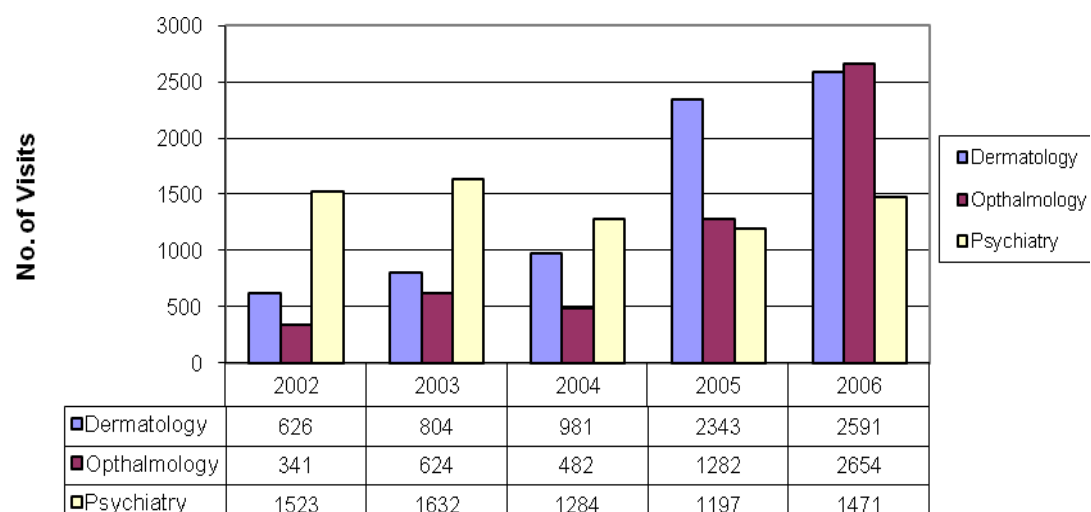
**Figure 3.21: Cervical Cancer Screening Coverage**



Source: Health information Unit Ministry of Health Dominica

**Figure 3.22** shows the increasing number of persons seen in the PHC setting by certain specialist services. The significant increase in ophthalmology and dermatology visits should be noted. Given that the most significant causes of death and morbidity are the cardiovascular diseases, consideration should be given to additional support for medical services at the PHC level.

**Figure 3.22: Number of Specialist Visits in Primary Health Care, 2002-2006**



Source: Health information Unit Ministry of Health Dominica



**Table 3.5: Leading Causes of Death Among Male and Female (0-4 years) - 2007**

Cause of Death	Male			Female		
	n	%	r	n	%	r
Respiratory disorders specific to the perinatal period	2	22.2	61.5	3	27.3	97.7
Acute respiratory infection	2	22.2	61.5			
Congenital malformations, deformations and chromosomal abnormalities	1	11.1	30.7	3	27.3	97.9
Diseases of the nervous system, except meningitis	1	11.1	30.7			
Bacterial sepsis of newborn	1	11.1	30.7	2	18.2	65.1
Slow fetal growth, fetal malnutrition, short gestation, low birth weight	1	11.1	30.7	1	9.1	32.6
Fetus and newborn affected by obstetric complications, birth trauma	1	11.1	30.7			
Heart diseases				2	18.2	65.1

Key

(n) = Number of deaths

(%) = Percentage of total deaths

(r) = Rate per 100,000 population

**Table 3.6: Leading Causes of Death Among Male and Female (25-44 years) - 2007**

Cause of Death	Male			Female		
	n	%	r	n	%	r
Land transport accidents	5	20.8	46.5			
Heart diseases	4	16.7	37.2	2	20	20.4
Diseases of the nervous system, except meningitis	2	8.3	18.6			
Assault (homicide)	2	8.3	18.6			
Intentional self – harm (suicide)	2	8.3	18.6			
Malignant neoplasm of digestive organs and peritoneum, except stomach	2	8.3	18.6	1	10	10.2
Diseases of the urinary system				1	10	10.2
Diabetes mellitus				1	10	10.2
Accidental poisoning by and exposure to noxious substances				1	10	10.2
Hypertensive diseases				1	10	10.2
Malignant neoplasm of lymphoid, other hematopoietic and related tissue				1	10	10.2
Malignant neoplasm of female breast				1	10	10.2
Acute Respiratory infection				1	10	10.2

**Table 3.7 Leading Causes of Death Among Male & Female (45 – 64 years) - 2007**

Cause of Death	Male			Female		
	n	%	r	n	%	r
Land transport accidents	2	3.4	35.4			
Heart diseases	14	24.1	247.7	3	15	55.7
Diseases of the nervous system, except meningitis	3	5.2	53.1			
Chronic lower respiratory diseases	6	10.3	106.2			
Cirrhosis and certain other chronic diseases of liver	4	6.9	70.8			
Malignant neoplasm of digestive organs and peritoneum, except stomach and colon				3	15	55.7
Diseases of the urinary system	3	5.2	53.1			
Diabetes mellitus	2	3.4	35.4	2	10	37.1
Malignant neoplasm of stomach	4	6.9	70.8			
Other infectious and parasitic diseases	3	5.2	53.1			
Malignant neoplasm of prostate	2	3.4	35.4			
Appendicitis, hernia of abdominal cavity and intestinal obstruction	2	3.4	35.4			
Cerebrovascular diseases	3	5.2	53.1	2	10	37.1
Malignant neoplasm of female breast (C50 in women)				3	15	55.7
Acute Respiratory infection	3	5.2	53.1			

**Table 3.8 Leading Causes of Death Among Male and Female (65years and over) - 2007**

Cause of Death	Male			Female		
	n	%	r	n	%	r
Heart diseases	34	20.7	1057.9	40	23.3	988.4
Hypertensive diseases	15	9.1	466.7			
Chronic lower respiratory diseases	8	4.9	248.9	9	5.2	222.4
Malignant neoplasm of digestive organs and peritoneum, except stomach and colon	5	3	155.6			
Septicemia, except neonatal				4	2.3	98.8
Diabetes mellitus	13	7.9	404.5	27	15.7	667.2
Malignant neoplasm of stomach						
Hyperplasia of prostate	5	3	155.6			
Malignant neoplasm of prostate	21	12.8	653.4			
Malignant neoplasm of cervix uteri				4	2.3	98.8
Cerebrovascular diseases	24	12.8	653.4	24	14.6	746.7
Malignant neoplasm of trachea, bronchus and lung	8	4.9	248.9			
Acute Respiratory infection	10	6.1	311.1	10	5.8	247.1
Diseases of the nervous system, except meningitis				5	2.9	123.5

## HEALTH SYSTEMS

A **health system** comprises all the organizations, institutions and resources, including people, devoted to producing actions whose primary intent is to improve health. The *World Health Report 2000* (WHO 2000) identifies the four key functions of the health system:

- (1) Stewardship (often referred to as *governance* or *oversight*),
- (2) Financing,
- (3) Human and physical resources,
- (4) Organization and management of service.

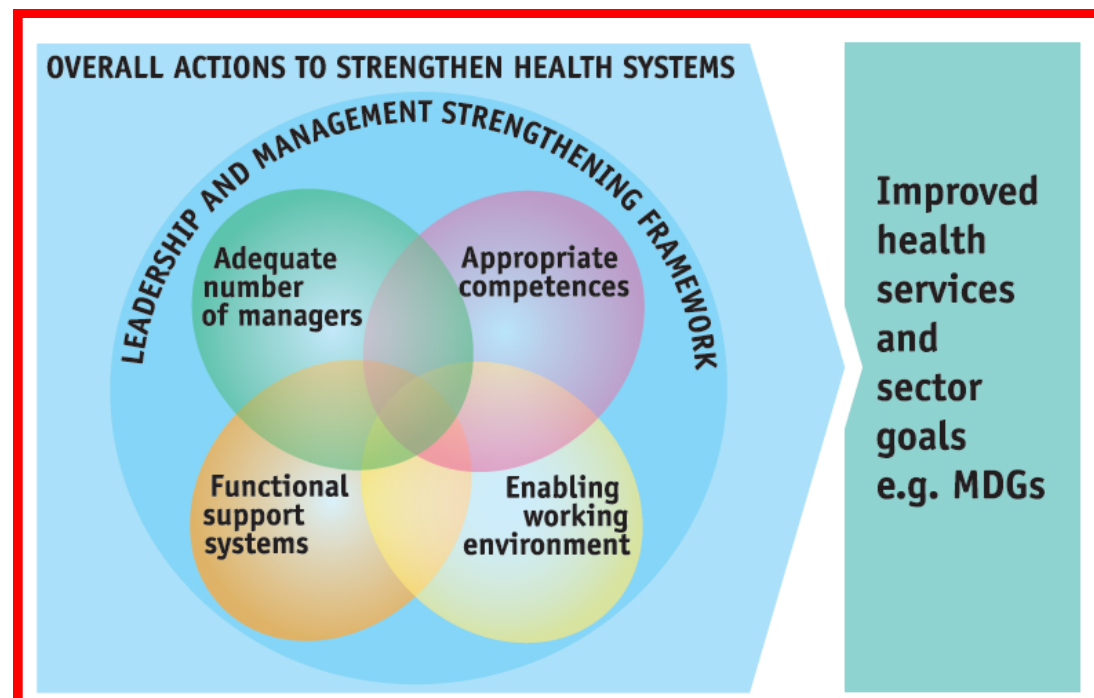
The World Bank and WHO define a framework for strengthening health systems. The six building blocks are as follows:

1. Good **health services**
2. A well-performing **health workforce**
3. A well-functioning **health information system**
4. Equitable access to essential **medical products and technologies**
5. A good **health financing** system
6. **Leadership and governance**

It may also be prudent to consider a seventh building block – **Community participation**.

If the Strategic Plan for Health 2010-2019 is to be successful in improving the health status of Dominicans, then it must address the issues outlined below.

**Figure 3.23: Leadership and Management in Health Systems**



Source: WHO

## **ORGANIZATION AND MANAGEMENT OF SERVICE DELIVERY**

This health system function includes a broad array of health sector components, including the role of the private sector, government contracting of services, decentralization, quality assurance, and sustainability.

### *Decentralization*

Health services were devolved as part of health sector reform and the implementation of Primary Health Care. Dominica is divided into seven health districts for the purpose of delivering primary health care. These seven health districts are grouped into two administrative regions. Each health district has one Type III health centre and 4 – 7 type I clinics. Each district has its own budget which is still centrally managed, due to lack of human resources. The Director of Primary Health Care is responsible for the management of the delivery of PHC. Each Region is supervised by a regional manager who reports to the Director. The management of the district is supported by a district management team.

Princess Margaret Hospital is managed by a tripartite team consisting of the Hospital Services Coordinator, Medical Director and Matron. Several recommendations have been made for some form of autonomy to be granted to the hospital, and for restructuring of the management system to include the appointment of a Chief Executive Officer.

Private services are still very small, with the majority of services limited to outpatient care provided by private practitioners. Most of these services are based in the capital, Roseau. There is one twenty-eight (28) bed private hospital, one medical laboratory and several pharmacies.

### *Contracting*

This is a relatively new phenomenon within the Ministry of Health. To date the services for vector control which were previously provided by the Environmental Health Department have been contracted out. Some of the ancillary services at PMH and Security services have also been out-sourced.

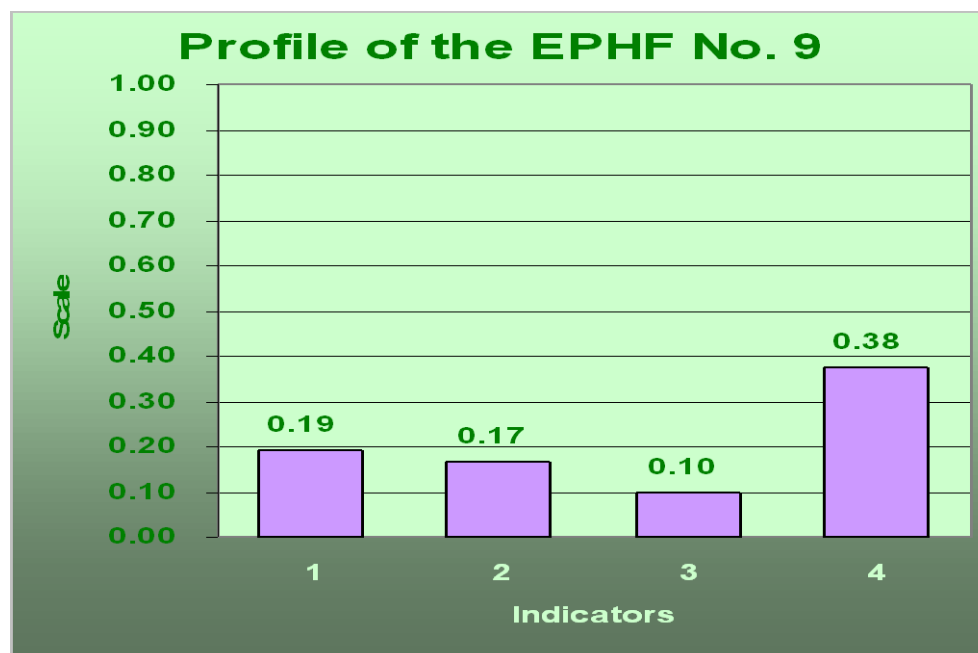
### *Quality Assurance*

Quality assurance is a health system element that has grown in importance, as costs of care have escalated, and consumer awareness and demand for quality services have increased.

Quality assurance and improvement with respect to personal and public health services is one of the eleven (11) essential public health functions. During an EPHF measurement exercise in December 2001, Function 9 – Ensuring the Quality of Personal and Population-based Health Services - had the lowest score. According to the PAHO report, this may reflect the lack of capacity to carry out quality assurance activities on a regular basis in the system, the emphasis being on those activities geared towards providing services.

## **Essential Function No. 9: Quality Assurance in Personal and Population-based Health Services**

**Figure 3.24**



Source: Pan American Health Organization

### **Indicators:**

1. Definition of standards and evaluation to improve the quality of population-based and personal health services
2. Improving user satisfaction with the health services
3. Systems for technological management and health technology assessment to support decision-making in public health
4. Technical assistance and support to the sub-national levels to ensure quality improvement in the services

The Health Sector in Dominica has had several attempts at integrating Quality Systems within its operations however success has been minimal. Although some components of quality assurance make up part of the operations of some sectors within the health care system, the holistic approach is lacking leaving some very pertinent areas in the Health Sector lacking in terms of quality assurance.

Despite several efforts over the years to develop a system of quality assurance at national level, Dominica still has not made much progress. The greatest gains were made in 2002; when following PAHO sponsored train the trainers regional workshops on Continuous Quality Improvement, extensive training was done for all heads of departments at PMH and focal points from each health district.

The CQI concept was taught and understood, with participants agreeing on the way forward; with both PMH and PHC identifying a Quality Coordinator to work with the focal points. Failure by the management of PMH to understand and commit to the process and lack of any incentive for the Coordinator, contributed to the program's failure.

The department of Nursing at PMH has managed to maintain a quality assurance program over the past two decades. The program consists mainly of annual audits to identify areas of weakness. The main weakness of that programme is its failure to identify strategies for strengthening identified weaknesses and putting the necessary mechanisms in place to facilitate that improvement.

Princess Margaret Hospital Laboratory Staff, through the efforts the Caribbean Epidemiology Centre has been part of a number of Quality training Programs. In 2006 two members of staff of the PMH Laboratory completed a three year Graduate Certificate program in Quality Management with the Michener Institute. As a result the Department is in the process of Developing its Quality Management System, having already drafted a quality policy and a number of standard operating procedures.

The current thrust, however, is the holistic approach to quality. This will be achieved by developing Quality Management Systems which are built-in as part of the operations of the health care institution. In June 2009, the national Quality Coordinator visited Trinidad to study their system of operation.

## *CHALLENGES*

A number of factors affect the delivery of Quality Healthcare Services in Dominica, including:

- Lack of qualified personnel with responsibility for Quality Management
- Lack of Structured Quality Management Systems within the Health Sector
- Lack of Leadership to drive the Quality Management Process
- Limited resources allocated for quality initiatives

## *HARMONIZATION OF SERVICE PROVISION*

*Harmonization* refers to:

- a). alignment of policies, practices and procedures with their simplification between donors and their partners.
- b). coordination and agreement with respect to priorities, practices and procedures;

Overseas organizations including faith-based organizations often bring in teams of health workers to provide specific services – not necessarily in the areas of greatest need. One example is in the area of eye care where for the past 13 years a medical team has been paying yearly visits (see Ocular health - Health Services) and the terms have never been reviewed in spite of the fact that the local services have improved significantly and a Cuban Eye Care Programme has been added to the list of services provided

As already indicated the government is the main provider of health services and therefore decides on which services are provided and where they are provided. Services offered in the private sector are not regulated. Funding for specific programmes is often linked to donor conditionality.

#### Weaknesses:

- Lack of written policies on major issues such as private provision of health care, quality of service provision among others
- Practices and standards are not standardized particularly in areas such as management of CNCD's
- Weakness in leadership of the MoH, due to
  - Capacity problems (limited number of staff with leadership competence and skills)
  - Multitude of tasks allocated to key management staff of the MoH
- Lack of information on donor financing / budget execution
- Lack of financial and technical monitoring tools (e.g NHA, service mapping, project-level monitoring)

#### Challenges to Health service harmonization:

- Access to health services is not available for certain segments of the population e.g. tertiary care only available overseas.
- The provision of health services for certain population groups such as adolescents, youth and men, is of poor effectiveness and quality
- Patients, who visit doctors privately in their offices, must pay surgical fees before being admitted to the government owned hospital, and then pay hospital fees to have the procedure done using government resources. In effect, these patients pay twice, and the hospital is not reimbursed for use of facilities, staff and supplies.
- Most procedures and investigations can only be carried out in the capital Roseau, thus limiting access.

### **CAPACITY OF THE MINISTRY OF HEALTH TO DEVELOP AND EXECUTE HEALTH POLICY**

For the past 5 years, the 2001-2006 Strategic Plan for Health has guided the work of the Ministry. Much has been achieved yet there is still much remaining to be done.

The Ministers of Health of the Caribbean and Latin America launched the Health Agenda for the Americas in 2007. In its statement of intent, the ministers reiterated their commitment to the vision of a Region that:

- Is healthier and more equitable with regards to health
- Addresses health determinants
- Shows improved access to individual and collective health goods and services
- Is a region where each individual family and community has the opportunity to develop to its greatest potential.

Dominica shares that vision and is committed to working towards its achievement. Despite the problem of migration of health care professionals, the Ministry has a small pool of qualified technicians who are committed to the provision of quality health care.

Currently at the Policy Level, a team of Senior Managers work closely with the Minister and the Permanent Secretary to advise on health policies and programs. Input is also drawn from various technical heads who also contribute to the process. There is support at the highest political level for development of health policies and programmes. Regional and international health institutions, especially PAHO, lend support to policy initiatives of the Ministry of Health.

While these strengths and opportunities facilitate decision making at the Ministry, implementation is not always carried out at the pace required due to a number of contributing factors including:

- Over stretched technical staff resulting in a number of persons multi-tasking for example
- National Epidemiologist also has responsibility for Health Information and IT initiatives of the ministry.
- The Chief Medical Officer performed duties of DPHCS for a long time
- The past Director of Primary Health Care was also the sole Consultant Psychiatrist on the island.

Similarly, there are also weaknesses at the level of the office of the Permanent Secretary particularly in the area of Human Resource Management, Information/Records Management and Financial Management. Monitoring and Evaluation is an area which has not received much attention.

## **SECTORAL REGULATION**

Due to the unique character of health discussed as a social and an individual right, government is expected to protect and promote the public's health and access to quality of health care. Health regulation can be defined as the government's use of its coercive power to impose constraints on organizations and individuals in a way that protects and promotes health and safety of the population<sup>14</sup>.

Some of the sectoral regulation tasks involved in exercising the steering function of the Ministry of Health are: a) Development and refinement of national health legislation and its necessary harmonization with the health legislation of countries participating in regional integration processes; b) Analysis, sanitary regulation, and oversight of basic markets allied with health, c) Analysis, technical regulation, and oversight of health service delivery, certification, and professional practice in health, as well as training and continuing education programs in the health sciences.<sup>15</sup>

The expansion of the health sector in Dominica particularly the private sector, has forced the Ministry to seriously consider updating many of its laws and regulations to promote quality of care and protect consumers. This will expand

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<sup>14</sup> <http://vle.worldbank.org/moodle/file/php/>

<sup>15</sup> <http://vle.worldbank.org/moodle/file/php/>



the role of government in developing and enforcing regulations in several areas of the health sector such as private health facilities, medical and nursing practice.

(i) *The Existing Health Legal Framework*

A listing of current enactments is shown in Table 3.3:

**Table 3.3**

<b>Public Health Legislation</b>
Accidents & Occupational Diseases (Notification) Act, 1952
Bills of Health Act, 1907
Compulsory Vaccination Act, 1922
Environmental Health Services Act, 1997 <ul style="list-style-type: none"> <li>• Environmental Health Services (Restaurants) Regulations, 2003</li> <li>• Environmental Health Services (Communicable and Notifiable Diseases), 2003</li> <li>• Environmental Health Services (Food Hygiene) Regulations, 2004</li> <li>• Environmental Health Services (Boarding and Lodging Houses) Regulations, 2003</li> </ul>
Epidemic Diseases (Importation of Goods Prohibition) Act, 1888
Human Remains (Importation Control) Act, 1980
Human Tissue Act, 1988
Infected Ports Act, 1888
Lepers Ordinance, 1938
Mental Health Act, 1987
Noise Abatement Act, 1993
Pesticides Control Act, 1974
Quarantine Act, 1951
Yaws Ordinance, 1876
<b>Regulation of the Medical Profession</b>
Accreditation Act, 2006
Medical Act, 1938
Midwifery Ordinance, 1931; Midwifery Rules, 1936
Nurses Registration Ordinance, 1954 and Nurses Rules, 1956
Overseas Nurses' Pensions Act, 1927
<b>Drugs</b>
Antibiotics Act, 1958
Drugs (Prevention of Misuse) Act, 1988
Noxious and Dangerous Substances (Control) Act, 1982
Use of Oestrogens, Arsenical or Antimonial Substances Prohibition Act, 1966
<b>Food Safety</b>
Food and Nutrition Council Act, 1981
<b>Regulation of Health Care Facilities</b>
Hospitals and Health Care Facilities Act, 2002
Roseau Hospital Ordinance, 1942, and Roseau Hospital Rules, 1956

An assessment of the adequacy of the existing legal framework reveals the following:

- Many of the laws are antiquated and in need of review;
- There is a need to create 'user friendly' and supportive health legislation that will assist the health sector in achieving its goals;

- Overall, the legal framework is fairly adequate; however there are significant gaps where legislative intervention is necessary.

*ii) Gaps/Areas in which legislative intervention is necessary*

*International legal framework*

- Implementation of the ***International Health Regulations 2005*** (IHR 2005)  
The IHR 2005 was adopted by the World Health Assembly in May 2005, and came into force on 15 June, 2007. Dominica is a signatory to the IHR 2005, and as such, is bound by its provisions which include the establishment by June 2012 of adequate systems for the detection and control of public health events of international concern.

As a State Party to the IHR 2005, Dominica is required to:

- Designate a national IHR focal point;
- Assess events occurring in the State and to notify WHO of all events that may constitute a public health emergency of international concern;
- Respond to requests for verification of information regarding events that may constitute a public health emergency of international concern;
- Respond to public health risks which may spread internationally;
- Develop, strengthen and maintain the capacity to detect, report and respond to public health events;
- Provide routine facilities, services, inspections and control activities at designated international airports, ports and ground crossings to prevent the international spread of disease;
- Report to the WHO evidence of a public health risk identified outside the State which may cause international disease spread;
- Respond appropriately to WHO-recommended measures; and
- Collaborate with other States Parties and with WHO on IHR (2005) implementation.

Thus far, Dominica has assisted in the promulgation of guidelines related to port health, and has already designated its national focal point. Assessment of the surveillance system has been undertaken.

However, there is a significant amount of work involved in putting the IHR legal and regulatory framework in place. Implementation of the treaty will also involve reviewing current legislation to ascertain what amendments might need to be made to the existing legal and regulatory framework.

The IHR 2005 is a significant treaty for Dominica. Because of its importance in the area of international public health, full and effective implementation of same will be especially important for Dominica's image generally, and as a tourist destination. Failure to implement the IHR 2005 will likely result in Dominica's being blacklisted and isolated.

- *Implementing legislation for the WHO Framework Convention on Tobacco Control*

The WHO Framework Convention on Tobacco Control (FCTC) came into force on February 27, 2005. The objective of the treaty is to protect present and future generations from the devastating health, social, environmental and economic consequences of tobacco consumption and exposure to tobacco smoke.

The treaty requires Dominica to:

- Impose restrictions on tobacco advertising, sponsorship and promotion;
- Establish new packaging and labeling of tobacco products;
- Establish clean indoor air controls; and
- Strengthen legislation to clamp down on tobacco smuggling.

The challenge for Dominica will be to implement the treaty and make it a reality. It will involve the putting in place of technical foundations and translating the treaty into national laws.

- *Domestic legal and regulatory framework*

- *Regulation of the medical and nursing professions*

The current Medical Act is a 1938 piece of legislation which regulates medical practitioners, dentists, opticians, chemists and druggists, family nurse practitioners and dental auxiliaries. The provisions as regards medical practitioners relate primarily to registration. The Dominica Medical Board has done significant work on the proposed new Act, highlighting the need for implementation of provisions which go beyond registration and address areas such as:

- Licensing
- Fitness to practice
- Discipline
- Continuing medical education post registration

Regulation of the nursing profession dated 1957 also needs to be addressed. The Act has been reviewed by the General Nursing Council for Dominica, and new rules as regards nurses have been proposed.

- *Public health emergency legislation*

The lack of legal provisions to equip public health authorities with the necessary powers to respond to catastrophic public health emergencies is another area of concern. Such powers are needed as regards testing, treatment, immunization, quarantine and travel restrictions.

Dominica requires legislation to assist in strengthening the following elements of public health preparedness:

- Planning, co-ordination and communication in a public health emergency
- Surveillance
- Management of property and protection of persons in a public health emergency

- *Regulation of pharmaceuticals sector*

It has been accepted that good governance includes the prerogative of the State to regulate the pharmaceutical sector. Drugs must be safe, efficacious and of acceptable quality.

Currently, pharmaceutical services are largely unregulated, with a few laws in select areas, to wit:

- Antibiotics
- Noxious and dangerous substances
- The use of oestrogens, arsenical and antimonial substances.

Dominica is a signatory to the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), however little has been done as regards implementation of legislation pertaining to gender-based violence. Statistics on gender based violence are not available. Rape of women and children continues to be a problem. Dominica has no Family Court, hence all cases are heard on open court.

There is need for:

- The development of laws and policies that support and facilitate universal and equitable access to sexual and reproductive health services; and
- Protection of women and children against gender-based violence.

- *Food Safety*

Dominica has in place a Food and Nutrition Council Act, however, no food law. It is important to have in place clearly articulated written policy and law on food safety, because of the health and economic consequences of food borne diseases particularly on the fledgling tourism industry.

- *Diet and Nutrition*

The WHO/FAO recently published a Global Strategy on Diet, Physical Activity and Health, based on the relationship between diet and physical activity patterns and major nutrition-related chronic diseases such as obesity, diabetes, cardiovascular diseases and cancer.

The challenge for the future will be to ensure the quality and efficiency of health services in both the public and private sectors through these regulatory mechanisms, while seeking to promote national health objectives.

## **HEALTH SECTOR REFORM**

Health reform was slow during the past seven years and was not as high profile compared to the previous period. Some achievements included:

- Free health care for all citizens over the age of 60 years
- Opening of the Diagnostic centre in Portsmouth: for the first time radiology, endoscopy and laboratory services were offered outside of PMH
- Intensive care Unit Opened at PMH
- Vector control services outsourced
- Private Sector Foundation for Dominica launched - to assist in financing of health care
- Patient Administration System initiated at PMH

In 2001, the government of France, through the OECS Secretariat, financed a health sector reform project designed to facilitate the improvement of health systems in six OECS countries including Dominica. The office of Program Coordination of PAHO was responsible for implementation of the project. The focus of the project was:

1. Strengthening of the Ministries of Health
2. Re-organizing of the health systems
3. Quality Improvement and assurance
4. Regional sharing of health services

Unfortunately, the project did not meet its desired objectives.

Dominica does not have a health sector reform plan. Health Reform initiatives currently on the government's agenda are listed below in a box:

#### **Agenda for Reform**

- Strengthening of the **Health Information System** to include expansion to all seven health districts
- Implementation of a system of **National Health Insurance**
- Implementation of a system of **Health Accounts**
- Improving management of **Human Resources** through development of HR database, broadening of human resource base and redefinition of roles
- Implementation of **Mental Health Plan**
- Greater **integration of Health System**
- **Legislative review**
- **Accreditation** of major institutions and programs
- Strengthening of **regulatory role of the Ministry of Health** to improve policy implementation and foster greater public –private mix.

## **TECHNOLOGY, SUPPLIES & EQUIPMENT**

Medical technology management in the MoH is done in an ad hoc manner. There are supervisory teams for both PMH and PHC, but one medical equipment committee for the entire service.

Financing medical equipment has for many years been donor-driven. Most of the medical equipment particularly at secondary care level, is financed by local private sector or overseas donor groups. Over reliance on outside financing as a strategy carries innumerable risks and challenges, hence there is need for more government finance leasing to ensure greater predictability. Although all service areas and clinics continue to operate, many are without some key and basic medical devices.

#### Key Issues affecting this area include:

- limited funds
- absence of standard minimum required equipment list

- absence of annual inventories
- absence of accountability system
- ambiguity regarding procedure for replacement
- over reliance on donations
- lack of medical equipment replacement plans
- Donations continue to be the main source of Medical Equipment. Most of these donations are often inappropriate, lack manuals, work on 110 voltage and many cannot be used. Allowance is not made for consumable and replacement parts.

The Organization of Eastern Caribbean States Pharmaceutical Procurement Service 2006/07 Report cited service level for drugs and medical supplies at 84%.

#### Key Issues to be considered

- under-financing
- V.A.T payments and its effects on the supply budget
- inadequate supply system inventory
- inadequate warehousing to store pharmaceuticals and medical supplies

Administrative arrangements established for procurement purposes are circumvented

#### Key Issues to be considered

- PPS and CMS as centralized purchasing entities
- effect of direct acquisitions by Personnel not trained and experienced in the art of procurement

## **HEALTH AND THE ENVIRONMENT**

The Environmental Health Department (EHD) is the monitoring and regulatory agency of the Ministry of Health and Social Security. The Department's purpose for existence is defined in the following mission statement: *"to undertake the necessary measures to ensure the physical, biological and chemical hazards in the environment are controlled so as not to endanger public health and safety...."*

### *Environmental Health Legislation*

In 1997, Parliament enacted the Environmental Health Service Act 8 which made provision for ensuring the maintenance and preservation of the environment and the protection of the health and safety of the public. Adequate provision is made in the Act for the passage of appropriate regulations to meet the objectives. The Department, however, continues to experience difficulties with the effective implementation of the Act, since few regulations have been passed.

Environmental Health Officers can be designated Authorized Officers to enforce such laws as the Litter Act 4 of 1990, Marine Pollution Act 2000, Quarantine Act, Solid Waste Management Act 2002, Employment Safety Act and Noise Pollution Act. Different government agencies are responsible for their enforcement. In the

absence of a comprehensive environmental law with clearly defined functions for the relevant agencies, a great deal of ambiguity of roles still exists among entities. The Department supports the adoption of harmonized regional legislation and works closely with Dominica Bureau of Standards in that regard.

### *Monitoring and Surveillance*

The Environmental Health Department like other sectors in the public service, had to adjust to Government's fiscal stabilization and structural adjustment policies which sought to reduce central government subsidies and encourage greater private sector participation in the delivery of health care. Services such as garbage collection and disposal, street sweeping and vector control which were traditionally carried out by the Department were either outsourced to private companies or taken over by statutory boards. It is clear that the role of the institution is changing from that of provider of services to that of monitoring and enforcement of standards.

This shift in emphasis necessitates a corresponding strengthening of the capacity to undertake effective monitoring and surveillance activities in order to ensure continuous quality improvement in environmental health. The Environmental Health Department shares the vision of other stakeholder agencies working towards the amalgamation of existing laboratories to establish a centre of testing excellence. This will provide an opportunity for the further development of the water laboratory into a full fledged environmental health monitoring laboratory.

The Department is in the process of updating the system in order to meet the **International Health Regulations (IHR 2005)** standards and timelines. Dominica must join the rest of the world community in putting the necessary mechanisms in place to effect the implementation of the regulations, and implementing standard operating procedures for handling highly contagious diseases, particularly with the emergence of Pandemic Influenza.

As part of its surveillance activities, the Department has joined its other regional partners in the establishment of a port surveillance programme to prevent the entry of exotic mosquito species, and observes a 400 metre perimeter *Aedes aegypti* free zone around ports of entry.

Other activities undertaken at the port include workers' health and safety programme, food inspection, rodent control, inspection of ships and inspection of cadavers. Dominica is signatory to the **MARPOL Convention**, and as part of the OECS Solid Waste Management Programme, must accede to the agreement of providing special MARPOL bins for the reception of solid waste from ships. Reception facilities for sewage and other types of liquid waste under the same agreement must therefore be provided. Dominica must also comply with the terms of the **Basel Convention** which concerns itself with the trans-boundary movement and disposal of hazardous waste. Materials which fall within that waste stream must be declared as such by the exporter, who must also obtain prior consent from the recipient country before export.

The definition and classification of hazardous waste within the Dominican context has been adopted from the Basel Convention and enshrined in the **Solid Waste**

**Management Act.** The Department serves as the monitoring agency for the Corporation, and is forging partnerships with the Corporation and generators of bio-medical waste to develop guidelines and standards for the management of this important waste stream. This approach will be broadened to include other hazardous waste streams that are relevant to the country, and in support of other international protocols to which the country has acceded.

Dominica has a vested interest in developing and implementing standards that promote best practices in areas of economic pursuit. The Environmental Health Department plays a critical role in the monitoring of sites and other important tourism infrastructure to ensure that the tourism product is of a high standard. The Department seeks to promote environmental programmes and public awareness to ensure that the **Nature Island Standard of Excellence (NISE)** programme is successfully implemented. As the lead agency for monitoring that sector, the Department works closely with the National Development Corporation (NDC), Tourism Ministry and other monitoring agencies in the tourism sector.

Food hygiene continues to be a priority activity for the Department. Strict guidelines are followed in the certification of food handlers and food establishments.

Protocols and guidelines for environmental health surveillance at mass gatherings have been developed. Annual events such as Creole in the Park and the World Creole Music Festival attract large crowds from within and outside the country.

#### *Health Information System*

A comprehensive set of data collection instruments has been developed over the years; several monthly, quarterly and annual reports are generated but not widely disseminated. Although the data collection forms were designed to accommodate an electronic format, the Department has not been able to access the necessary software for this purpose

## **IMPACT OF HUMAN RESOURCES ON THE HEALTH SYSTEM**

Chapter VI of the Constitution makes provision for the establishment of the Public Service, the Public Service Commission (PSC) and the Police Service Commission.

The authority for Human Resource Management in the Public Service is vested in the Public Service Commission by Regulations SRO No. 31 of 1975 and the Establishment, Personnel and Training Department (EPTD) by the Public Service Act Chap 23:01 Part III. The Public Service Commission is responsible for appointments, promotions, transfers, secondments, terminations and discipline in the Public Service.

The functions of the EPTD include establishing procedures for treating with representative bodies or with public officers in respect of:

- Classification of offices



- Grievances
- Pay and allowances
- Terms and conditions of employment, including promotion

### *Management of Employment*

The guidelines for the management of employment are set out in the Public Service Act, the Public Service Commissions Regulations and in Administrative Orders, primarily the General Orders. While the PSC is responsible for the administration of employment policies, the responsibility for establishing those policies and the structures is that of the EPTD.

The Public Service Act also gives authority to Permanent Secretaries to post or move officers from one office to a similar office within the Ministry and to the EPTD to post or move officers from one office to a similar office between Ministries. Any other movement would constitute a transfer and would properly fall within the purview of the Public Service Commission.

### *Training and Development*

The Ministry of Education, Human Resource Development, Sports and Youth Affairs has been assigned the ministerial portfolio for national training, which in practice constitutes overseas training. It involves largely the processing of scholarships, funding assistance and other related functions.

In-service training remains the responsibility of the EPTD. The department also administers the policies in respect of study leave and bonding arrangements for Public Officers pursuing tertiary level studies, locally or overseas. The Ministry of Health (MoH) accesses training opportunities for technical/professional staff through collaborating agencies and other entities.

The MoH is governed by the provisions of the Public Service Act, the Public Service Commission Regulations and the Finance and Audit Act. The allocation and deployment of staff is guided by the existing structure, levels and numbers. Changes in any of these areas warrant the approval of the EPTD, which is predicated on the availability of financial resources.

Since there is a pay structure and system in place, salary and other remuneration cannot be adjusted outside of existing levels and scales. Such change can only reasonably be accomplished through amalgamation, merger or closure of some positions to create avenues for increasing the number of other positions within certain levels and scales.

The Public Service Union represents public servants. Provision of human resources for health is a priority issue, mainly due to the global shortage of health workers and consequently, the migration of workers to more developed countries.

The health system in Dominica, although a bit more diverse than ten years ago is female dominated, except for the medical profession where the ratio of males to females is significantly higher. Skills and qualifications of health providers should be keeping in line with demands of services associated with growth in

industries, increase in cases of non-communicable diseases, generic population and immigration.

In Dominica, the main causes for migration are economic and educational reasons. The CARICOM Single Market and Economy (CSME) will also impact on the human resource base. Dominicans are known to be migratory in nature. Outward migration of health personnel will continue to increase, once the compensation package is more attractive than what exists locally. The situation will be further compounded by education and training opportunities which are more readily available in the more developed CARICOM territories. Anti-discrimination legislation to address harassment of persons based on gender and those with HIV/AIDS is required.

In today's work environment, individual and family commitments and other factors including technology are giving rise to changes in conditions of employment. Many persons, particularly nurses, prefer contractual and part-time employment. The long-term implications for such a situation should be carefully considered, since employment should provide an opportunity for old age pension, training opportunities and other benefits. Government has begun providing contractual employment in a few areas such as nursing. The idea of flexi hours must be considered if the services of health care providers are to be retained.

## **LABOUR MARKETS AND THEIR REGULATION (GOVERNANCE AND SECTORAL CONFLICT)**

Dominica, as a member of the Caribbean Common Market (CARICOM) and the Organization of Eastern Caribbean States (OECS), is sensitive to both the external and internal factors which influence *labour markets and their regulation*, as well as *governance and sectoral conflict*.

Dominica has been a member of the ILO since 1982, and has to date ratified twenty-six (26) ILO Conventions, including the eight (8) ILO core conventions dealing with Fundamental Rights and Freedom, the Right to Organize and Collective Bargaining among others.

In addition to these international instruments, Dominica to date has enacted sixteen (16) pieces of legislation all relating to Labour and Industrial Relations, including four (4) which include the Social Security Act, Public Service Act and the Public Holidays Act. Five of these Acts make up the Dominica Labour Code: The Industrial Relations Act, The Protection of Employment Act, the Labour Standards Act, the Labour Contract Act, and the Protection of Wages Act.

Dominica has been doing well in keeping up to date with the ongoing changes which affect the labour market. One of the major problems facing the region in this regard is the problem of **migrant workers**. Dominica struggles with the challenge of massive out-migration of skilled nationals while there has been an increase in the number of Haitian and Dominican Republic (Santo Domingo) nationals to fill the demands for workers in the agricultural, hospitality and domestic workers sector.

The areas of Occupational Safety and Health (OSH) and HIV/AIDS in the workplace are priority issues which are being addressed in accordance with the Caribbean Community's 1999 Declaration of Labour and Industrial Relations Principles.

Dominica has ratified ILO Convention # 155 on Occupational Safety and Health. The Employment Safety Act Chapter 90:08 of the Laws of Dominica and its Regulation i.e., the Factory and Machinery Rules, are the main legal instruments that regulate OSH in Dominica

In Dominica, there has not been much collaboration between the Ministry of Health and the Labour Division as it relates to OSH and HIV/AIDS, however, the new tendencies must reveal a consensus towards moving in this direction. Close dialogue between the public health division and the labour division must be pursued in order to develop joint strategies, efficient and functional mechanisms in their approach towards ensuring that the norms are consistent with required standards.

The Dominica Employers Federation has developed a basic document providing guidelines for the conditions of employment for people infected with HIV. All first time applicants for Work Permits, Permanent Residence or Citizenship, must present among other things a comprehensive medical report which includes an HIV test. While the results are not motive sufficient to deprive them such permits, it ensures that these migrant workers are screened, and allows for medical attention and counseling in case the results are positive.

## **MILLENIUM DEVELOPMENT GOALS**

In September 2000, world leaders adopted the Millenium Declaration of the United Nations from which the Millenium Development Goals (MDG) for improving human conditions by 2015 are derived. The MDG's are universal human development parameters which broadly embrace eight goals and eighteen targets.

In May 2003, an MDG National Committee comprising nine government departments, representatives of the private sector, three international institutions and one statutory organization was established for Dominica. A technical working group formed from the wider national committee monitors, analyses and makes recommendations on the MDG indicators. The Central Statistics Office functions as the secretariat for the MDG Committee. Data is updated yearly and released on the 30<sup>th</sup> of April each year. MDG recommendations are viewed vis-à-vis the annual budget process and the Growth and Social Protection Strategy Program<sup>16</sup>. Table 3.4 provides a curent assessment of the targets.

<b>Number</b>	<b>Goal</b>	<b>Remarks</b>
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<sup>16</sup> Report of the Social Indicators and MDG (SIMDG) National Committee 2006

1	Eradicate extreme poverty and hunger	Current poverty level estimated at 39% (headcount as defined by the national poverty line based on expenditure and not by the \$1 day concept) and is expected to be reduced to 15% by 2015
2	Achieve universal primary education	Dominica has already achieved universal primary and secondary education
3	Promote gender equality and empower women	Boys and girls alike have equal access to all levels of education
4	Reduce child mortality	Under five, mortality rate (2008) was 1.7% per 1000 live births.
5	Improve maternal health	Maternal mortality rate is 0.0
6	Combat HIV/AIDS, malaria and other diseases	Deaths from AIDS has decreased from 12.8% in 2002 to 5.6% in 2007 Dominica has eradicated incidence of malaria Incidence of tuberculosis is 0%
7	Ensure environmental sustainability	Process of integrating principles of sustainable development into country policies and programmes ongoing  Level of households without sustainable access to safe drinking water reduced from 7.9% (1991) to 4.4% (2001) with targeted access for all by 2010 Level of household without sustainable access to basic sanitation reduced from 25.5 % (1991) to 16.0% (2001) with targeted access for all by 2015. Slum dwellers – non existent. Percentage of squatted reduced following government initiative to sell the lands occupied to them at very favourable rates
8	Develop a Global Partnership for Development	Dominica is keeping pace with technology and communication. Massive increase in use of internet and cellular phones began in 2002.

**Table 3.4 Millennium Development Goals**

Source: Report of the Social Indicators and MDG (SIMDG) National Committee 2006

"The MDGs are still achievable if we act now. This will require inclusive sound governance, increased public investment, economic growth, enhanced productive capacity, and the creation of decent work."<sup>17</sup>

## **ENVIRONMENTAL COORDINATING UNIT**

The overall function of the Environmental Coordinating Unit (ECU) is to bring about more focused sustainable environmental management approaches to the

<sup>17</sup> United Nations Secretary General Ban Ki-moon.

solving of Dominica's environmental problems, advise government on the development of more coherent environmental policies, and enhance Dominica's compliance with international treaties and conventions to which it is signatory. In furtherance of its mission, the ECU is charged with working with all institutions that have jurisdiction or interest in sustainable environmental management.

The mandate of the Unit includes:

- Co-ordinating periodic studies/reviews on the impact of major infrastructural projects on the environment;
- Preparing environmental impact assessments (EIA's) before all major projects are executed;
- Liaising with government, and private sector agencies whose work impact on the environment;
- Promoting interest and encourage public participation in environmental matters;
- Assisting in the development of sustainable environmental policies and strategies;
- Serving as focal point for regional and international organizations with responsibility for the environment;

The Unit is required to report annually on the state of the environment.

## **ESSENTIAL PUBLIC HEALTH FUNCTIONS**

The Pan American Health Organization/World Health Organization (PAHO/WHO) defines the Essential Public Health Functions (EPHF) as *the indispensable set of actions, under the primary responsibility of the state, that are fundamental for achieving the goal of public health which is to improve, promote, protect, and restore the health of the population through collective action.*<sup>18</sup>

The EPHF describes the spectrum of competencies and actions that are required to reach the central objective of public health, improving the health of the population.

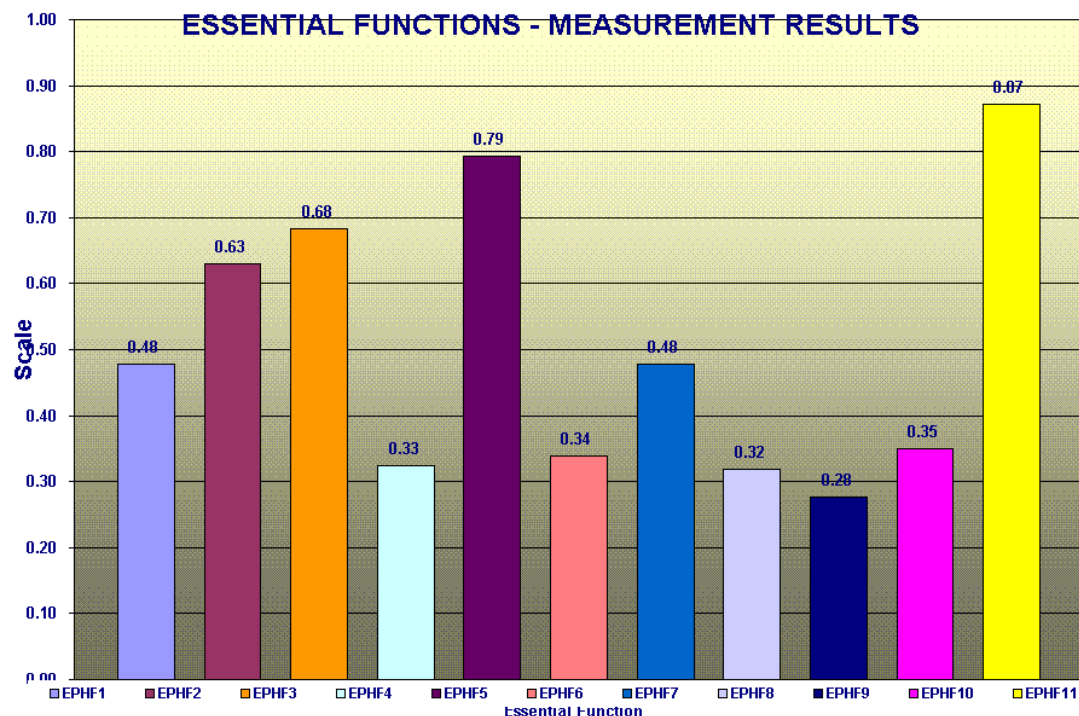
In December 2001, Dominica conducted the first performance measurement of the EPHF at the national level. The performance measurement exercise was organized by the Ministry of Health of Dominica, with the collaboration of the PAHO Office of Caribbean Program Coordination (CPC) in Barbados and of the Division of Health Systems and Services Development of PAHO in Washington.

## **Overall Analysis of Results**

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<sup>18</sup> Pan American Health Organization/World Health Organization (PAHO/WHO), *Public Health in the Americas: Conceptual Renewal, Performance Assessment, and Bases for Action* (Washington, DC: PAHO/WHO, 2002).

The following figure provides an overview of the performance of each of the eleven EPHF in Dominica.



**Figure 3.25: Results of the Measurement by Function for Dominica**

This overview of the performance of the eleven essential public health functions (Figure 3.25) shows how Function 11- *Reducing the Impact of Emergencies and Disasters on Health* - has the highest score. This could be interpreted as the result of the country's sensitivity to natural disasters following the country's devastating experience with Hurricane David in 1979. Dominica has made strides in formulating and testing disaster plans as well as training local personnel at all levels within the country to operate the plans.

Function 9 – *Ensuring the Quality of Personal and Population-based Health Services* - had the lowest score. This may reflect the lack of capacity to carry out quality assurance activities on a regular basis in the system, the emphasis being on those activities geared towards providing services. Evaluations will be ongoing.

## NATIONAL HEALTH ACCOUNTS

The health system in Dominica continues to expand its capacity to improve the well-being of the population, but in so doing has been incurring appreciable new costs. These costs make having better information about health system financing a crucial element for design of health care policy.

National Health Accounts (NHA) is an internationally accepted tool for summarizing, describing, and analyzing the financing of national health systems – essential to better use of health financing information to improve health

performance. NHA encompasses total spending in a country – including public, private and donor expenditures.<sup>19</sup>

*Health expenditure is defined as all expenditures which encompass that economic activity made with the intent of improving health, changing health-related behaviour or changing the systems of performance or financing that activity during a defined period of time.*

NHA for Dominica began in 2001, when the country participated in a 5 -day training course ***Development of National Health Accounts in the Caribbean***. The training course represented the launch of the *Development of National Health Accounts in the Caribbean Initiative* which was part of the “Shared Agenda for Health in the America’s programme” being undertaken with the collaboration of the World Bank, Inter American Development Bank and the Pan American Health Organization/World Health Organization. It was largely a development and training exercise to assist country teams to begin the process.

However, it was not until 2003, when following a workshop on National Health Accounts (NHA), that Dominica along with Barbados and the other Windward islands developed Terms of reference for the establishment of NHA Committees.

Apart from the budget estimates, there is very little information available on spending in health in Dominica. As part of the Health Sector Reform (HSR), the Government of the Commonwealth of Dominica embarked on a health financing reform programme, aimed at ensuring efficiency in mobilization, allocation and utilization of financial resources. While Dominica has achieved significant reduction in mortality and morbidity, at the same time, peculiar demographic changes, migratory practices and declining of economic conditions have placed greater strain on the available services, at a time when public spending on health service cannot be increased. It is difficult to determine the amount in real terms that consumers pay for health services. The level of private resources spent for health cannot be readily ascertained.

In 2002, at a meeting held in Martinique, Dominica expressed an interest in health financing projects. The proposal addressed four main areas

1. Assessment of NHA, including a household expenditure survey.
2. Development of minimum package of health services.
3. Costing of public and of private services and determination of fee schedule/rates of these services.
4. Examining the feasibility and design (if feasible) of mutual insurance in Dominica.

The overall objective of this programme was to assist the Government of Dominica in assessing its national health resources and expenditure, and the development of policies and mechanisms for health financing.

In 2003, a commitment was made to establish a NHA team, identify a national NHA focal point, and assign national staff to prepare NHA estimates as a prerequisite for the implementation of the project. This was a very ambitious undertaking given the human resource challenges in the country. That year, the

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<sup>19</sup> Partners for Health Reform *plus* Abt Associates Inc.

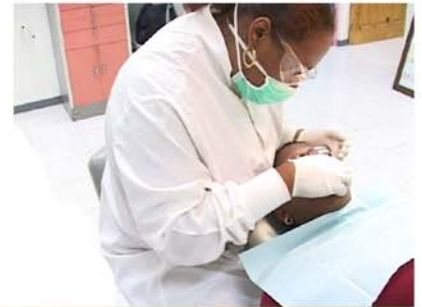
Government of France also entered into an agreement with the Association for Development and Coordination of International Relations (ADECRI), for the implementation of a project for the development of National Health Accounts in three countries including Dominica. The goal was to establish a sustainable financial base of the health system in Dominica.

An assessment of that project revealed that although the benefits of NHA were clearly understood, it was very evident that Dominica lacked the institutional capacity to implement such a programme.





# Health Services & Response Capacity

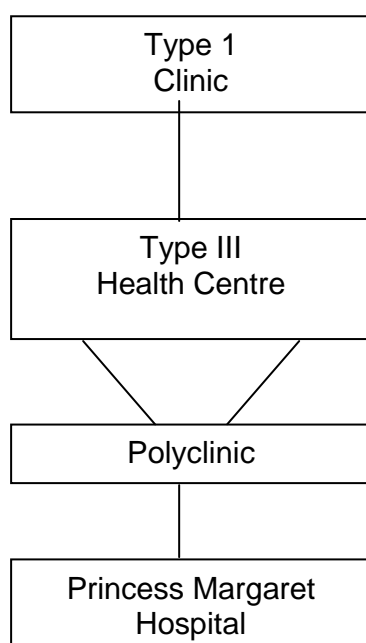


## 4. HEALTH SERVICES

This section provides an analysis of the organization of the health services, management and response capacity. Information is presented on factors affecting the ability of the health system in Dominica to deliver the continuum of services required to meet the changing health needs in Dominica, and these factors are analysed vis-a-vis the capacity of the health system to provide the needed health services.

Health services in Dominica are primarily government operated, and financed through the Ministry of Health. Services are delivered at two levels: primary and secondary. Tertiary services are accessed outside of Dominica, mostly in the neighbouring islands of Martinique, Guadeloupe and Barbados.

**Figure 4.1 Health Care Delivery System - Dominica**



**Primary Health Care Services** are decentralized, and delivered from facilities located in villages throughout the island. These facilities include fifty-two (52) health clinics/centres, and two district hospitals. For each of these facilities, the catchment population is well defined.

Each Type I clinic serves a population of 600 - 3000 persons within a five mile radius and is staffed by a Primary Care Nurse or District Nurse Midwife. At Type I clinics, services delivered include child health, reproductive health, nutrition, health education, medical care, community action and emergency services. Staff from the Type III centre, pay scheduled visits for health care delivery and supervision.

**Table 4.1 Distribution of Health Facilities by Health Districts**

Health Districts	Population	Hospitals	Health Centre Type 1	Health Centre Type III	Total
Roseau	36,275	1 General	15	1	16
Portsmouth	8,203	1 (district)	7	1	8
Grand Bay	5,924		4	1	5
Marigot	8,310	1 (district)	4	1	5
St Joseph	6,278		4	1	5
La Plaine	3,299		4	1	5
Castle Bruce	3,877		4	1	5
<b>Total</b>	<b>72,166</b>	<b>3</b>	<b>45</b>	<b>7</b>	<b>52</b>

*Source: Primary Health care Services Records*

The Type III centre functions as the administrative headquarters for each district, and is staffed by a multi-disciplinary team of health care professionals including various categories of nurses, medical doctors, pharmacist, drug abuse prevention officer, environmental health officer, and dental therapist.

Each Type III centre is equipped with a dental unit; one or two beds for delivery of pregnant mothers, and provides a comprehensive range of services including health education.

Two small district hospitals (26 beds) located in Portsmouth and Marigot (20) provide for inpatient care. In 2006, Primary Health Care (PHC) services expanded to include a diagnostic centre at Portsmouth, providing basic laboratory and imaging services. There is a **referral system** from primary health care to secondary care with some guidelines for referral.

The core services at the community level include the following:

- Prevention services, such as immunization and basic dental services.
- Basic health examinations, such as screening/early detection of some possible health risks like hypertension.
- Health promotion (health education) geared to individuals, groups and families.
- Diagnosis and management of acute and chronic phases of common conditions
- Case management and community development, including the mobilization of resources to address the health problems in the local population.
- A system for dealing with emergencies
- Rehabilitation through household and home visits

Dominica has managed to build a health system based on Primary Health Care, that effectively guarantees universal and equitable access, is participatory, while ensuring efficiency, effectiveness, and quality. This successful experience could be attributed to strong political will, and concerted and sustained efforts by dedicated health care workers and members of the community.

## Maternal Health

The main objective is to ensure early identification/detection of high risk cases and to institute appropriate courses of action. Standardized norms and procedures are utilized to improve quality of care, and ensure a healthy baby and mother after delivery. An increasing number of women access services in the private sector. Most deliveries are done at the Princess Margaret Hospital; however, all Type III clinics are equipped to take deliveries.

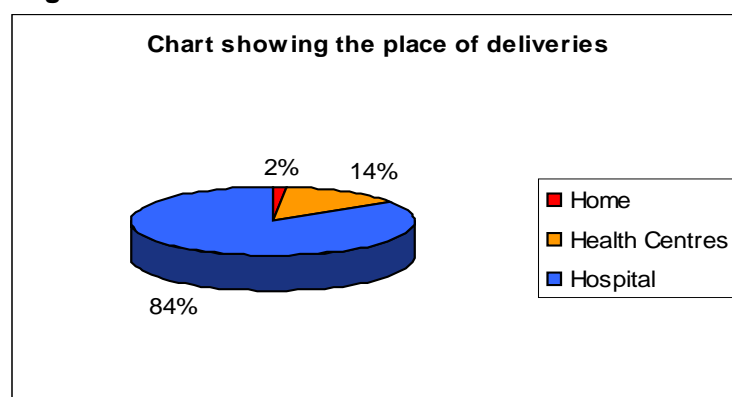
Total births declined by 14.6 % from 1998 to 2003, with 2003 registering a birth rate of 15.0. The total fertility rate, according to the 2001 census registered 3.0. Women under 20 years of age accounted for 18.5% of pregnancies detected in 2006. In 2006, sixty five (5.4%) of live births weighed under 2,500g.

*Antenatal* clients are advised to register before the 12<sup>th</sup> week of pregnancy. Anaemia in pregnancy remains a problem, particularly among primigravida. In 2006, 14.5% of pregnant women had Hb levels of <11g at booking; with La Plaine Health District registering the highest percentage (26.9%), followed by Castle Bruce Health District with twenty five percent (25%).

HIV tests were done for 74.9% of all pregnant women in 2007. La Plaine and Portsmouth Health Districts had the highest percentages of pregnant women tested, 98.6% and 86.8% respectively. St Joseph registered the lowest, 49.5%. Treatment is available free of cost to those testing positive, consequently, over the past five years, Dominica has not recorded any child being born with HIV. Women are also tested for Sexually Transmitted Infections.

All deliveries are attended by skilled health personnel. Most deliveries are done at the PMH, resulting in a significant increase in workload on the limited number of midwives at the hospital (see Figure 4.2). The Maternal and Child Health (MCH) policies are currently being reviewed.

**Figure 4.2.**



Source: Health information Unit

*Post natal*- mothers are visited by the District Nurse. In Roseau, puerperal visits are done by a designated post natal nurse. The majority of women (82.8%) have post natal checks done by the nurse even though they saw a

private doctor during pregnancy. Family planning is initiated and those whose immunization is not up to date are given MMR vaccine. The infant is registered at the child care clinic during that visit.

## **Child Health**

### *Children 0-4 years*

Neonatal health services at PMH are limited to basic secondary services. Like other services, tertiary care must be accessed from the neighbouring islands. All neonates are given a complete physical examination before discharge. Those requiring further care are referred to the Pediatrician. Common causes for referral are jaundice and prematurity.

Exclusive breast feeding up till the age of four months is promoted. On average, 32% of infants are breastfed exclusively. Most health districts fall below average, with the exception of Castle Bruce and Roseau which achieved rates of 76.4% and 36% respectively. The PMH achieved Baby friendly status in 1996.

### *Immunization*

Under the Expanded Program on Immunization (EPI), children are currently immunized against ten (10) diseases, namely; tuberculosis, diphtheria, pertussis, tetanus, poliomyelitis, measles, mumps, rubella, Hib Influenza Type B infections and hepatitis B. Pentavalent and hepatitis B vaccines were introduced in 2006. Vaccines are available island-wide in both public and private health sectors. They are free of cost in the public system.

For the past ten (10) years, Dominica has maintained coverage of over 95%. Continued out-migration has made it impossible to achieve full coverage. A few parents refuse immunization based on religious grounds.

The country is presently engaged in upgrading its laws regarding immunization. Children are required to show proof of immunization before being admitted to primary school.

Vaccines are purchased through Pan American Health Organization (PAHO), and Caribbean Epidemiology Centre (CAREC) oversees monitoring of the programme. Supplies such as syringes and needles are purchased by the Central Medical Stores. All episodes of adverse effects occurring in the public system are recorded and submitted to CAREC, however there are challenges in obtaining this information from the private sector. The main difficulty in monitoring immunization practices in the private system is the management of the cold chain.

An EPI manager has responsibility for coordination of the programme. There is a technical advisory group in place with an annual work plan, however a multi year plan would be more desirable. The last vaccine management assessment was conducted in 2006. The EPI Manual was updated in 2007.

### *Children 5-9 years - School Health*

Currently, the school health programme is limited to primary schools. All new entrants are screened to identify specific health problems, including vision and hearing. Preschoolers are screened for developmental disabilities. Physical assessment and screening of vision and hearing for school entrants and leavers are conducted by Family Nurse Practitioners. Basic equipment for screening children for eye conditions is available in all health districts.

Dental services are provided to school age children by the dental therapist. Immunization is administered at both primary and secondary schools.

In 2006, a total of 818 preschool and 1082 primary school entrants were examined. Twenty (20) preschoolers and thirty five primary school entrants were found to have hearing difficulty above 25 decibels. One hundred and forty- five (145) children had uncorrected vision problems. School health coverage in Portsmouth Health district is very low.

There are protocols in place for the management of common childhood diseases such as gastroenteritis and Acute Respiratory Infections (ARI).

The prevention and management of child abuse remains a priority, and there are protocols in place for the management of sexual abuse.

**Table 4.2. Reported cases of Child Abuse 2001 -2007**

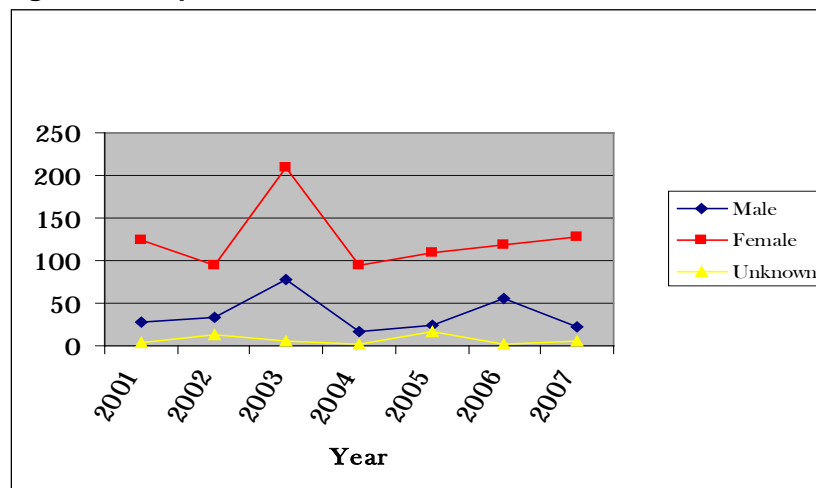
Type	2001	2002	2003	2004	2005	2006	2007	TOTAL
Emotional	15	16	5	2	7	6	1	52
Emotional/Neglect			2					2
Neglect	11	10	145	1	6	30	10	213
Neglect/Emotional							2	2
Neglect/Physical	1	1	2	0	3	9		16
Physical	18	31	27	17	26	26	25	170
Physical/Emotional	11	9	10	3	4	4	5	46
Physical/Emotional/Neglect						1		1
Sexual Abuse	85	61	87	84	101	96	104	618
Sexual/Emotional	4	3		2	1	3	1	14
Sexual/Emotional/Neglect						1		1
Sexual/Emotional/Physical						1		1
Sexual/Neglect	3	2	3	0	1		1	10
Sexual/Physical	4	3	2	3	3	3	3	21
Sexual/Physical/Emotional			1					1
Sexual/Physical/Emotional /Neglect			1					1
Unidentified	3	4	7	0	0	0	3	17
<b>TOTAL</b>	<b>155</b>	<b>140</b>	<b>292</b>	<b>112</b>	<b>152</b>	<b>180</b>	<b>155</b>	<b>1186</b>

*Source: Welfare Department*

Cases are heard in the Magistrates Court, since there is no Family Court in place, consequently, parents opt to receive out -of -court settlements particularly in cases of sexual abuse of female children; rather than subject their children to the system. In spite of continuing public education, most cases are not reported.



**Figure 4.3 Reported cases of Child Abuse 2001 -2007**



*Source: Welfare Department*

Human resource constraints make it impossible to carry out a comprehensive school health programme, particularly in the Roseau Health District where most of the secondary schools and the State College are located. Whilst the demand for the service grows, given the large concentration of adolescents and youth with their concomitant challenges; the health services on the other hand, have been unable to respond effectively. The Ministry of Education may now have to consider the training and employment of school nurses to meet these needs.

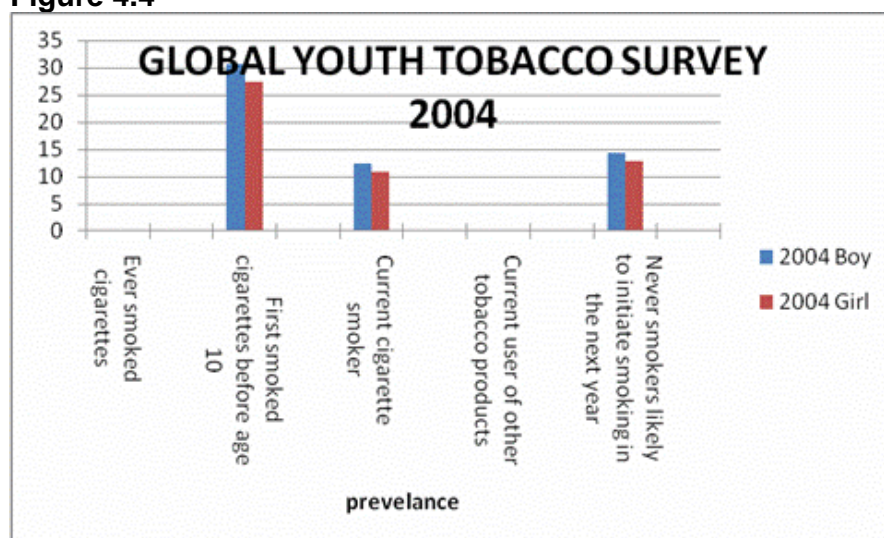
### **Adolescent & Youth**

Adolescent health encompasses not only the prevention and treatment of disease and disability, but also behavioural and social issues. Issues of safety, social relationships, self-esteem, education and skill development all figure into healthy adolescent development. The Adolescent Health Survey (2004) revealed a number of sexual and reproductive health threats, alcohol use, violence, accidents and obesity among others.

The Ministry of Health has no specific programs for adolescents, and consequently, public health facilities do not provide services specially tailored for them. A few programmes are provided by NGO's such as the Centre where Adolescents Learn to Love & Serve (CALLS), Dominica Save the Children (DOMSAVE), and the National Children's Home (NCH). In the public system, programmes are provided through the Health and Family Life Education (HFLE) and the Youth Division of the Ministry of Education.

The teenage years are a critical time for the initiation of tobacco use. Results of the Global Youth Tobacco Survey (GYTS) of 2004 are seen in Figure 4.4.

**Figure 4.4**



Source: GYTS

The greatest risk to adolescents is caused by their lack of parental guidance. Parents depend upon the school system, but the schools lack the capacity to meet the needs of that group. Negative peer pressure, poor negotiating skills, limited preparation for adulthood and society were among issues identified in recent surveys carried out among secondary school students. There are no physical facilities catering to the needs of adolescents. Available data on adolescents is disaggregated by sex and age.

Issues/factors that provide the greatest barriers to success in improving adolescent health include the absence of a national body dealing with matters germane to adolescents, lack of organized programmes, narrow view of educators, and the failure of the Ministry of Health to manage adolescent health as a priority. Thus, to make progress in improving adolescent health, a combination of perspectives and approaches is needed.

## **Reproductive Health**

Reproductive health services are available and accessible within the seven health districts. Public provision has decreased significantly over the past five years. Dominica Planned Parenthood Association (DPPA) is now the main provider of contraceptive services.

Condoms are the only method of contraception provided at government clinics, contributing to the significant decline in the number of persons accessing the service. In an effort to assist those requiring the service, district nurses sometimes purchase contraceptives from the DPPA on behalf of their clients.

## *Women's Health*



Attention is given to programmes that ensure the enhancement of the health of women aged 25-59 years. Screening is done for breast, and cervical cancer.

Efforts are made to empower women in abusive sexual health situations through counselling and health education. This is particularly important, given the growing incidence of HIV&AIDS.

### *Men's Health*

This is an area of apparent neglect. Data reveals very low utilization of health services and late entry by those who attend. Traditionally, men have failed to utilize the services provided. Many only access health care when it is too late for preventive or curative action. During the past two years, programmes for men's health have received priority attention in all health districts, with some employing very creative methods to reach this group; however, there is need for a national approach to problems affecting men. Unlike Pap smears, PSA tests are not free, and the majority of men recoil at having rectal examinations done. The main causes of morbidity among men are heart disease and prostate cancer.

### **Elderly**

Dominica has an aging population, with 13.7% 60 years and older in 2003. The island boasts of contributing factors to increased life expectancy, and in 2001 had a total of 22 confirmed centenarians with the oldest at 128 then, who was possibly the oldest living individual in the world. To date, June 2008, there are 21 centenarians. Consequent upon the realization of this ageing phenomenon in the Dominican Society, representatives of various groups and organizations with active programmes for older persons, and representatives of Government Ministries involved in the provision of care and welfare of older persons formulated a "policy on ageing". This policy emphasizes independence, participation, care, self fulfillment and dignity. The final draft was approved by Cabinet in October 1999.

Programmes and services for older persons in Dominica are provided by Government and Non-governmental organizations as well as by religious groups.

Training programmes have been developed for persons wishing to provide home care to older persons, and for relatives and family members of older persons aged 80+ who are either bed bound or home bound. They are also visited at home by the FNP.

The elderly are affected by chronic diseases which are long term and costly to treat. Health services will need to be modified to meet the needs of that sector of the population. Effective July 2008, all public health services to persons 65 yrs and over are free of charge.

*The Dominica Council on Aging Inc.* is a voluntary not-for-profit NGO which was established in 1993. It serves as coordinating body for national groups

concerned with the welfare of older persons. Presently, the Council is made up of over twenty (20) corporate members. The broad objective of the Council is to empower Older Persons in Dominica through promoting and facilitating implementation of the United Nations Principles of Older Persons, and address issues which adversely affect Older Persons in the society. The President of Dominica serves as honorary patron to the Council.

The Council embarked upon a programme of development of Day Centres in the various communities throughout the island. Presently, there are 6 such centres catering for social activities for the older persons.

One of the main providers of services to the elderly is R.E.A.C.H - *Reaching Elderly Abandoned Citizens House-bound* ; a community-based organization which addresses the needs of elderly poor by providing food, clothing, transportation and assisting with domestic chores.

*The Dominica Infirmary*, a home for about 100 older persons is an institution founded by the Roman Catholic Church. A day care centre was recently added to that facility. There are homes for the aged in Portsmouth and some other communities, including a few private facilities such as the Greenhill Retirement Home. Meals-on-Wheels programmes have run successfully using a community approach. Government has recently launched a “**Yes we care**” programme to assist the elderly, poor and housebound.

### *Challenges*

- Limited financial resources both in the public and private sectors
- Human resource limitations – quantity and availability of necessary trained personnel in the field of geriatric/gerontology
- Infrastructural barriers and weaknesses
- Implications of other policies such as mandatory retirement age with limited opportunities for continued employment/involvement of older persons.
- Lack of implementation and follow-up of recommendations on policy issues.
- Lack of public awareness of ageing and ageing issues
- Changing family structure
- Protection of the rights of older persons

## **Indigenous People**

The Carib Territory is served by the Castle Bruce and Marigot Health districts. The total population is approximately 2287. The area is served by three Type I & two Type III health centres. Everyone has access to health care services. Nurses of Carib descent are encouraged to work in the Territory.

The incidence of poverty among the Caribs is extremely high – 70 %, with almost half being indigent. The Caribs represent around 4% of the total population and 7% of the poor population. Overcrowding is very common. The CPA revealed that housing conditions amongst the Caribs are substantially worse than for other poor households, with many of them having

no proper kitchen and toilet facilities. Socio-economic conditions may be the leading factor impacting on the health of the people. Illegal adoption of children, particularly those of young single women, by foreigners, is a cause for concern for local authorities.

Tuberculosis is endemic, and has been one of the leading communicable diseases among the Carib population. In the last five (5) years there were four reported cases of Tuberculosis. Three of the four (4) reported cases were of the same household.

To date, there have been seven AIDS related deaths. Anti retroviral treatment is available to the Carib population. Worm infestation, particularly hookworms, ascaris and trichuris; have always been present in that community. Although not as prevalent as in the past, this problem is mainly due to poor sanitation, and a culture of walking bare footed.

Teenage pregnancy remains a cause of concern, with a large percentage of these mothers presenting with anaemia.

The abuse of alcohol has always been one of the leading problems among the Caribs, affecting both sexes, however, recently, it has been noted that there is an increase in alcohol use among the female population. Other illicit substances such as cocaine and marijuana are used.

### **Marginalized populations**

The urban squatter communities of Tarish Pit, Yampiece, Gutter Village, Benna Ravine and Silver Lake, all located within the Roseau Health district, were identified as being at-risk communities, based on various criteria ranging from overcrowding to high levels of criminal activity. These communities were built without permission from Planning authorities, resulting in lack of space for building necessary infrastructure such as roads, and sewage systems. Associated risk factors include inadequate toilet facilities, extremely high levels of indiscriminate garbage disposal, and the high incidence of illegal drug use, among others. Public conveniences have been built in all the communities, contributing significantly to improved quality of life. At Silver Lake, three Long Houses were constructed and subdivided into rooms to accommodate families.

Health programmes planned are usually not successful because of poor participation and high drop out rates.

### **Challenges:**

- High mosquito indices, rodents and other vectors.
- Indiscriminate dumping of garbage in drains.
- Illegal drug use
- Gambling
- Sexually transmitted infections especially syphilis.
- High levels of unemployment

- The underutilization of health facilities leading to high levels of defaulters especially for maternal and child health services.
- Poor utilization of health care facilities by the men.
- Lack of community participation regarding self help and health programmes
- Lack of interest in personal health care.

## **Disabled**

The 2001 population Census recorded a total of four thousand three hundred and ten (4310) persons with disabilities; two thousand one hundred and seventy five (2175) males and two thousand one hundred and twenty five (2125) females. The main forms of disability were mobility (1,131), behavioural (566), sight (773), speech (475), body movements (435) and hearing (320).

Mobility was the main form of disability among children 0-4 yrs, and among children 5-9 years of age. Speech (49) came next and was followed by learning (29) and behavioural (28) disabilities. The same pattern continued among adolescents, teenagers and young adults. The pattern shifted among adults to behavioural disabilities, followed by mobility. Mobility (761) was the main form of disability among the elderly followed by sight (565). See Table 4.5.

More females (55.1%) have difficulties with sight, mobility and body movements, however, males lead in all other categories. Of particular interest is the ratio of male with behavioural (61.7%) and learning challenges (59.8%), compared to females.

The Dominica Association of Disabled Persons (DADP), with a current membership of two hundred and sixty, is the main organization championing the cause of the disabled in Dominica. It was established twenty five years ago and is a national cross disability self help movement. The association acts as an advocate in all matters concerning the development and welfare of disabled people in society, including promotion of policies and programmes which have as their objectives the prevention and control of disabilities.

Some of the health needs identified by this group are:

- The availability and affordability of Aids and equipment to assist with mobility and functioning
- Increase in the number of Speech and Physical Therapists
- A comprehensive rehabilitation and adjustment to Blindness programme for persons who are visually impaired.
- An early intervention programme to assist with treatment and management of disabilities
- Improved physical access to health facilities
- Increased rehabilitation services

**Table 4.5: Types of disabilities by sex**

Types of Disability	TOTAL	Male	Percentage (%)	Female	Percentage (%)
Sight	773	347	44.9	426	55.1
Hearing	320	161	50.3	159	49.7
Speech	475	279	58.7	196	41.3
Mobility	1131	507	44.8	624	55.2
Body Movements	435	190	43.7	245	56.3
Gripping	136	76	55.9	60	44.1
Learning	249	149	59.8	100	40.2
Behavioural	556	343	61.7	213	38.3
Other	191	103	53.9	88	46.1
Not Stated	34	20	58.8	14	41.2
<b>TOTAL</b>	<b>4300</b>	<b>2175</b>	<b>50.6</b>	<b>2125</b>	<b>49.4</b>

Source: Dominica Population & Housing Census 2001

### **Household visits**

*Household visits* are categorized into normal and high risk, and visits are made as per standard by the district nurse and environmental health officer. In normal households, the coverage goal is a minimum of 2 visits per year at interval of 6 months per household. One visit should be carried out by the district nurse/ primary care nurse, and the other, by the district environmental health officer or jointly.

*High risk households* should be visited four (4) times per year, a frequency of no less than once per quarter. Two of these visits should be carried out by the district nurse/ primary care nurse and two by the environmental health officer. Additionally, 25% of high risk households should be referred to the district medical officer.

*Defaulter tracing* is carried out for all service areas, based on the gravity of problem.

## **OCULAR HEALTH**

Blindness and low vision constitute a major public health problem in developing countries like Dominica. It is estimated that 1% of the adult population is blind. In nearly two thirds of these cases, sight can be restored with appropriate interventions.

The most important causes of blindness in Dominica are cataracts, glaucoma, diabetic retinopathy, idiopathic choroidal vasculopathy in the eastern part of the island and uncorrected refractive errors. Childhood blindness is not very prevalent, but remains one of the causes of blinding years in the population.

### **VISION 2020 MISSION IN DOMINICA**

Vision 2020: The Right to Sight is a global initiative for the elimination of avoidable blindness as a public health problem by the year 2020, provided

adequate resources are available. It was introduced to the Caribbean in 2000 during the annual convention of the Ophthalmologic Society of the West Indies, and was implemented in the National Health plan of Dominica in 2001.

## *CATARACTS*

Blindness from cataracts (in both eyes) is still a reality in Dominica, however, the eye services in Dominica can achieve the cataract surgical rate established by WHO to achieve the goal of the VISION 2020 program.

Eye care is accessible throughout the island. Eye clinics are held throughout the seven health districts including the Dominica Infirmary. Pre and post-operative care is delivered at the district level for many who cannot readily travel to the hospital. All eye surgeries are performed at the Princess Margaret Hospital.

Presently, cataract surgery is offered by two independent services in the public sector. One is provided free of cost to the patient in Cuba, while patients are required to pay user fees for surgery done at PMH. This has resulted in under utilization of the local services.

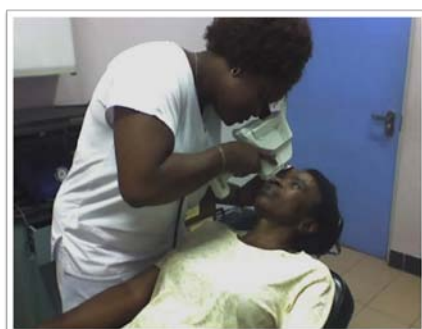
### *Challenges*

1. Limited public awareness that blindness due to cataract can be cured by a simple outpatient, surgical procedure available in Dominica.
2. Patients who are unable to pay do not utilize the provisions for public assistance available from the Social Welfare Services; because they resent the social assessment (including finances) before they are granted some form of exemption of fees.
3. Lack of home support post-operatively for some patients who live alone.
4. Delays in scheduling of surgery for patients who suffer from illnesses such as uncontrolled hypertension or patients on anticoagulants.
5. Lack of data analysis to provide information needed to evaluate surgical outcome as part of the accountability process.

## *DIABETIC RETINOPATHY*

In Dominica, the prevalence of diabetes mellitus is estimated to be about 4%. Diabetic retinopathy is the leading cause of blindness in the working age group. Treatment of diabetic retinopathy is available except for vitreo-retinal surgery.

Due to the large number of diabetics in Dominica (approximately 3000), it is impossible for the only ophthalmologist to conduct eye examinations and implement timely intervention.



In an effort to address this concern, the Diabetic Fundus Photography Program was established in 2005 as a pilot project of the Pan American Health Organization (PAHO)

and the Caribbean Council for the Blind (CCB).

A nurse was trained as an Ophthalmic Technician, at the University of Ottawa Eye Institute and took over in 2006. Table 4.6: outlines the results of 2005 using the film camera.

**Table 4.6**

## Results 2005

Number of diabetic patients screened with film fundus photographs (190 photo sessions; approx. 10/session)	1707 (72%) M-494; F-1213
Total number of photos taken (approx. 7 per patient)	13,668
Number of photos discarded because of poor quality	830
Number of days worked by Photographer	239
Number of patients' fundus photos screened by Ophthalmologist	1363 (80%) M-346; F1017
Number of diabetic patients who were diagnosed with diabetic retinopathy from photos	334 (25%) M-82; F-252
Number of diabetic patients treated with Laser for the first time (Diabetics scheduled from all eye clinics)	40 (12%) M-16; F-24
Number of diabetic patients receiving augmentation of laser treatment. (Diabetics scheduled from all eye clinics)	30 M-10; F-20

Source: PMH Records Dept

The film camera was changed to a digital camera in 2006, greatly improving the service as the patients could view the photos immediately. Seeing the diabetic changes helped them to understand their disease and comply with treatment. It also permitted patients to follow their progress over time, especially if laser treatment was implemented.

In 2006, a dedicated diabetic retinopathy clinic was started at the hospital. Table 4.7 outlines the results of 2007, when the ophthalmic technician using the digital camera implemented the diabetic fundus photography program.

**Table 4.7**

## Results 2007

Number of diabetic patients screened with digital fundus photographs (115 photo sessions; approx. 6/session)	684 (29%) (M-187; F-497)
Number of patients' fundus photos screened by Ophthalmologist (random checks)	261
Number of diabetic patients referred by Ophthalmic Technician to consult with Ophthalmologist	243 (M-76; F 167)
Number of diabetic patients who attended the DR eye clinic at PMH: First visit or noncompliant follow-up patients	109
Number of diabetic patients diagnosed with diabetic retinopathy at the DR eye clinic	54 (50%) (M-11; F-43)
Number of diabetic patients treated with Laser for the first time (Diabetics scheduled from all eye clinics)	18 (M-8; F-10)
Number of diabetic patients receiving augmentation of laser treatment. (Diabetics scheduled from all eye clinics)	17 (M-5; F-12)

Source: PMH Records Dept

Patients requiring laser treatment, who access care through the public health system, receive it free of cost. Those who require vitreo-retinal surgery and are able to afford this treatment are referred overseas, and post-op follow-up is continued in Dominica. Those who are blind or have severe visual impairment are referred to the Dominica Association of Disabled People for rehabilitative services for the blind. A Rehabilitative Officer for Dominica was trained in the 1990's.

Table 4.8 clearly illustrates that less men accessed the program as compared to women.

**Table 4.8**

### Results 2005 and 2007

	2005	2007
Percentage of diabetics screened by sex	M-29% ; F-71%	M-27% ; F-73%
Percentage of diabetics who had laser for the first time by sex	M-40% ; F-60%	M-44% ; F-56%

Source: PMH Records Dept

Reasons explaining the reduction in numbers of diabetics screened in 2007 compared to 2005 include:

1. All of the referred diabetics seen by the ophthalmologist in 2005 had follow-up appointments with her and many did not return for fundus photos in 2007.
2. Scheduling and other difficulties explained below.
3. The Cuban eye program by not being integrated into the National Eye Care program was viewed as an alternative service and hence it undermined the diabetic program.

#### *Challenges*

- Absence of a National Register of Diabetics.
- Lack of patient awareness that optimal intervention for diabetic retinopathy is while their vision is normal. This lack of understanding has resulted in adverse publicity for laser intervention, and reluctance in patients accepting this form of treatment with disastrous outcomes.
- Cost of treatment deters patients from accessing laser treatment.
- Lack of funds for maintenance of office equipment. For the last seven months the computer used for the diabetic fundus photography project has been under repairs.



- There is no regular servicing of the laser machine, consequently, average down –time is on average six months, since repairs have to be done overseas.
- Shortage of consumables such as dilating eye drops due to poor inventory control and delay in obtaining finances.
- Poor scheduling of clients resulting in their absence at photo sessions
- The technician is not yet appointed; therefore she has not been assigned as a travelling officer. Since she works four days a week out in the field, in the interim, the CCB has provided a transportation allowance,
- Data collection is not done in the eye clinic due to lack of resources.

## *GLAUCOMA*

Glaucoma is the leading cause of irreversible blindness. It is estimated that there are approximately 2000 persons in Dominica with glaucoma.

All adult patients presenting to the eye service are screened for glaucoma with intraocular pressure and examination of their optic disc. Those suspected of having glaucoma are referred for computerized visual field testing in the private sector.

Treatment with eyedrops and Trabeculectomy surgery with Mitomycin C are available. Drugs such as Timoptic, Pilocarpine and Diamox are available free of cost in the public service; while Alphagan, Trusopt and Xalatan/Lumigan are available at cost price i.e without profit mark up. Recommendations have been made to have these included in the government formulary so that the patients can receive these free too. The use of these newer eye-drops has resulted in a drastic reduction in the need for trabeculectomy surgery and hence its inherent complications.

Glaucoma shunt surgery is available overseas.

## **Challenges**

1. Lack of public awareness to have regular eye exams after the age of 40 years
2. Number of patients, especially men who are being diagnosed with end-stage glaucoma with severe constriction of their peripheral vision and legal blindness on their first eye exam.
3. Poor compliance with treatment and follow-up eye examination
4. Poor compliance with treatment due to lack of finances.
5. Lack of access to computerized visual field test in the private sector due to lack of finances
6. Stock outs of the EDTA used in the compounding of eye-drops locally

7. A Humphrey visual field analyzer which was donated to the hospital two years ago is still in storage because of lack of space to install it.

### *REFRACTIVE ERRORS*

It is estimated that uncorrected refractive error affects about 9% to 20% of school children. The public eye service receives donations of second-hand spectacles. The spectacles prescriptions given to patients are optimized by harvesting the correct prescription lenses from different spectacles.

In the school health program, vision screening is performed for school entrants at age 5 (approx 600) and is repeated in grade six at age 10-12 years (approx 1100). This screening is performed by the Family Nurse Practitioners. Children who fail this screening are referred to the eye clinic in their district or to the hospital eye clinic.

### **Issues**

1. The cost of high refractive error spectacles is prohibitive for poor people.
2. Spectacles are subjected to 15% VAT which increases the cost to the patient.
3. Though all schools facilitate the school health program, not all the schools are screened as required in a school year. This allows children especially the younger ones with reversible amblyogenic conditions to go undetected until it is too late to recover the lost vision.
4. Data on the number of school children screened is not readily available from all the health districts.

### *CHILDHOOD BLINDNESS*

This is blindness occurring in children under the age of 16 years. Though this condition is not prevalent, it is responsible for a large number of blind years.

In Dominica most cases are due to congenital abnormalities in the visual system and cerebral ischaemia due to birth asphyxia.

Severe visual impairment is mostly due to corneal problems, Ocular Albinism and uncorrected high refractive errors. Screening of all newborns for eye abnormalities (especially large hazy corneas and cataracts) and infections form part of the midwives duties. Ophthalmia Neonatorum prophylaxis is practiced using Erythromycin or Chloramphenicol ointment at birth.

Screening of premature babies for Retinopathy of Prematurity is performed at PMH. Although Laser treatment for this condition is available in Dominica there has been no indication for this treatment since the ILO was purchased.

Known blindness from cataract and glaucoma is non-existent in children in Dominica. The main causes of Rubella and measles have been eradicated

due to the achievement of high rates of immunization. Known blindness due to nutritional causes like vitamin A deficiency is non-existent in Dominica, due to the maternal and child health clinics that monitor the nutritional status of children and provide nutritional education. Sickle cell retinopathy, although not a common cause of bilateral blindness, is a cause of unilateral blindness that can be prevented. Annual screening for patients with sickle cell disease is provided from puberty. Laser treatment is provided for those with proliferative sickle retinopathy. Vitrectomy service is accessed overseas if needed.

### **Challenges**

1. Anaesthetic support for premature babies is questionable in the event treatment has to be implemented in Dominica.
2. Children with severe congenital abnormalities are not brought to have eye examinations. Hence prevalence data on possible blindness in that group cannot be ascertained.

### *IDIOPATHIC CHOROIDAL VASCULOPATHY FROM THE EAST*

This is a degenerative condition of the choroid of unknown etiology and has no known treatment. It is found exclusively in people from the south and south-east and east coast villages from Fond St Jean, Petite Savanne, Bagatelle across to Laronde, La Plaine, Delices, Riviere Cyrique to Good Hope and San Sauveur.

This condition affects persons in their fifties, progressing slowly and painlessly from the peripheral retina without symptoms, until the central vision is affected. Several patients have travelled overseas to consult Retinal Specialists and had many investigations.

A Canadian team of Retinal and Genetic Specialists collaborated in an investigative research with the eye service in Dominica for a genetic cause. To date, no conclusive results have emerged. However, several papers have been presented at international meetings. Laser therapy has been used with success in some patients with limited disease threatening their macular.

### **Challenges**

1. The unavailability of low vision aids to optimize their visual function, in spite of the availability of trained persons to evaluate and recommend the type of low vision aid required.
2. Limited public education on the need for regular eye examinations.

### *EDUCATION OF MEDICAL PERSONNEL*

Education in eye care is provided by all the staff at the eye clinic to student nurses, medical students, interns, junior doctors, and ophthalmology residents visiting from the residency program at the University of Ottawa Eye Institute.

Training of surgical eye nurses have been provided by the operating theatre nurses for nurses from St. Lucia and Jamaica. Continuing eye care workshops have been provided for the family nurse practitioners.

### *EQUIPMENT & SUPPLIES*

While the Ophthalmology department has the basic equipment needed to function effectively, there is need to replace a number of pieces of equipment that are not functioning properly, while others require servicing and repair. Frequent breakdown of equipment, lack of preventive maintenance and spare parts plague the service, resulting in surgeries being postponed for several months.

There is need for an additional ophthalmologist and Medical records staff. The service would benefit greatly from training for maintenance of eye equipment.

### *INFRASTRUCTURE*

The eye clinic operates from the Ob/Gyn clinic at PMH. The space there is limited consequently, is no room to mount all the equipment needed. After eight years, the construction of the Brenda Strafford Foundation Eye Centre is still pending.

### **Challenges**

- Construction of the Eye Centre

There is need for legislation making vision testing mandatory for drivers and wearing of occupational eyewear.

**Voluntary Optometric Services to Humanity** - Michigan (VOSH) through the Rotary club of Dominica, has conducted eye care missions to Dominica for the past fourteen years. The team comprises optometrists, optometric students and other medical or non medical personnel. They perform eye examinations and dispense second hand spectacles and eye drops. Patients found to have diseases such as cataracts; glaucoma and diabetic retinopathy are referred to the local ophthalmologist for further management.

### **Special Clinics**

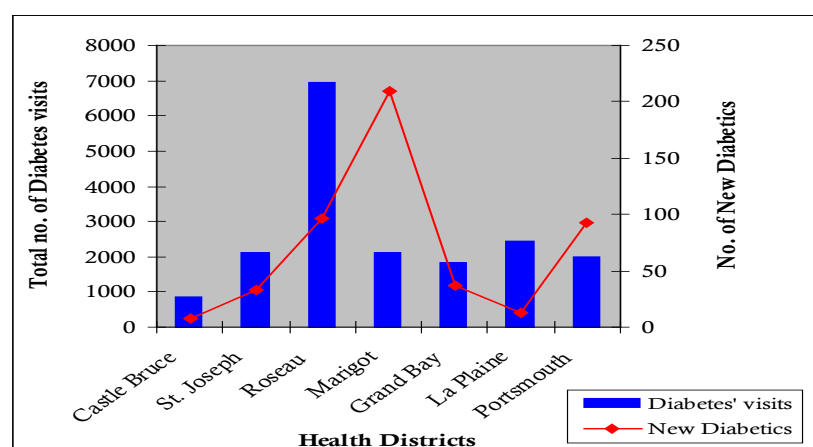
Medical Clinics are held at least twice weekly at Type III centres and monthly at Type I centres. Visiting consultants provide specialist care in the areas of Ophthalmology and Psychiatry. The majority of clients seen at the clinics suffer from diabetes and hypertension.

**Table 4.9: Number of clients seen at PHC clinics (2007)**

Medical Care	Health Districts						
	Castle Bruce	St. Joseph	Roseau	Marigot	Grand Bay	La Plaine	Portsmouth
Number seen by nurse	7654	10852	30413	17435	14724	8974	11122
Number seen by doctor	2585	4478	7424	4969	4301	4111	3394
Number seen by FNP	1372	1958	2096	572	2752	1075	1909
Diabetes' visits – Total	872	2105	6955	2131	1820	2432	2010
New Diabetes	8	33	96	209	37	13	93
Hypertensive visits	1307	4516	13662	2939	3673	5028	4159
New Hypertensives	14	59	87	34	30	27	32
Defaulters	26	0	27	4	3	10	11
<b>Dermatology</b>	77	97	110	2	1	1399	188
<b>Ophthalmology</b>	201	122	2396	0	102	210	88
<b>Psychiatry</b>	74	128	0	95	152	216	341

Source: Health Information Unit- Ministry of Health

**Figure 4.5: Diabetics seen at PHC clinics 2007**



Source: Health Information Unit- Ministry of Health

### **Mental Health Services**

The WHO in the global Burden of Disease reported that Depressive Disorders rank as the second leading contributor to the global burden of disease. In Dominica, it is estimated that over 700 persons may be disabled with serious mental health problems requiring immediate and continuous public health interventions. Most are presumed to be suffering with schizophrenia while others are affected with bipolar disorder and substance induced psychosis. Table 4.10 shows the number of admissions to the Acute Psychiatric Unit over the past five years. The information is not disaggregated by diagnosis.

**Table 4.10 Admissions to APU**

	2004	2005	2006	2007	2008
<b>Male</b>	248	259	259	294	266
<b>Female</b>	101	125	118	124	83
<b>Total</b>	<b>349</b>	<b>384</b>	<b>377</b>	<b>418</b>	<b>349</b>

Source: PMH Records Department

Most admissions were recurrent, signifying problems of continuation of care for persons with mental disorders. This conservative estimate is a subset of the over 1400 registered patients of the outpatient clinics in the past two years. Furthermore, this group does not include a greater number of persons with less debilitating mental conditions such as major depressive disorders, anxiety disorders, childhood emotional and behavioral problems, and relational conflicts related to stressors. Most of these conditions are not managed by physicians in the public health system.

Although it is difficult to quantify the apparent increase in the prevalence of mental disorders in Dominica over the past five years, the increase in public demand for special mental health services is a challenge to the current system of care. Over the past ten years, the quality of mental health care delivered by the public health system has improved significantly. Services are currently available within and outside the government system at the following locations

1. The Acute Psychiatric Unit, a community based psychiatric inpatient service located within the Princess Margaret Hospital that offers:
  - critical care to approximately thirty acutely ill persons on a daily basis;
  - housing accommodation for sixteen chronic socially destitute individuals;
  - forensic psychiatric care for over eighteen persons who are inmates at the State prison
2. Outpatient clinical coverage for over 1400 clients within Primary Health System.
3. The Drug Abuse Prevention Unit offers drug prevention tips particularly to in-school populations.
4. The Grotto Home for the Homeless is a community residential facility that offers accommodation for over fifty persons who would otherwise be vagrants in their communities.

The WHO report of 2001 issued the following ten (10) recommendations for addressing key components of mental health systems development; (WHO-AIMS assessment tool). The Caucus of Health Ministers (2001) affirmed the WHO recommendations. This forms the framework for an analysis of the mental health situation in Dominica.

### **1. Provide treatment for mental disorders in Primary Health Care**

One of the glowing areas of success is the integration of mental health services within primary health care. District teams are responsible for the continuation of care for persons with mental health problems while specialist services are offered through regular monthly visits to each health district. The

human resource in the primary health care system was reinforced in 2002 when specially trained nurses were assigned to the seven health districts throughout the island. As integral members of the district health team they manage the entire caseloads of mentally ill persons in conjunction with the other team members. Other stakeholders such as the security services, local government and other social service sector bodies are able to collaborate with these change agents to deliver a better quality of care at the district level. In addition, they constitute the basis of operation for the Community Mental Health Team (CMHT) national program.

## **2. Involve Communities, Families, and Consumers**

The Community Mental Health Team was formed in 2001 by workers and friends of the Acute Psychiatric Unit, Princess Margaret Hospital. A principal aim of the CMHT was to add value to the mental health services on island. At present, the Acute Psychiatric Unit has been rehabilitated; families are more engaged in providing support to their relatives with mental health problems, and consumers and the general public show greater understanding and appreciation to persons with mental health problems. Each year, the Team organizes a series of events to promote good mental health among the public.

## **3. Provide care for vulnerable groups**

The situation of the socially destitute/vagrants within the city of Roseau highlights the scope of the challenge facing mental health management in Dominica. Approximately forty persons roam the streets. Many are chronic drug abusers while others are mentally challenged unemployed young persons. In 2006, the Canadian Fund for Local Initiatives (CFLI) sponsored a project, titled "Ensuring the Rights of the Mentally Ill to Appropriate Health Care through a National Mobile Unit Service".

## **4. Establish National Policies, Programs and Legislation for Mental Health**

There is no national mental health authority within the Ministry of Health for planning and management of services. The existing health information system does not include mental health data and information generation. The Ministry of Health is in the process of developing a national mental policy and plan in place to guide the process of developing the mental health program. The government, through PAHO, has secured the services of a Canadian specialist to assist in development of a mental health plan. Presently, there is no steering mechanism within the Ministry of Health to lead a national mental health program. The task of delivering mental services overwhelms the efforts of the limited human resources available. Therefore, a national coordinator is needed to guide the process of policy/plan development.

## **5. Develop Human Resources**

The major challenge confronting the system of mental health care in Dominica is the limitation of human and material resources. Many critically needed services are either inadequate or unavailable and include 1) substance abuse treatment program; 2) child and adolescent guidance and counseling clinic; 3)

community residential facilities; 4) forensic inpatient unit; and 5) day treatment facility. Consequently, the community care of the mentally ill is affected by inadequate physical infrastructure to provide shelter and other forms of continuation of care.

The input of twenty one level II Nurses with special training in mental health into the community system was critical; however, presently, more than half (12/21) of the nurses are no longer engaged in this task. There is no clinical counselor or occupational therapist assigned to the mental health program, and the use of a single psychiatrist for the entire population is inadequate.

## **6. Link with other Sectors**

Although other sectors within and outside of health recognize the relevance of linking with the mental health services, collaboration has been limited by negative attitudes and misconceptions. The stigma associated with mental illness limits the access of the public to professional care and attention.

Corporate citizens provide much support for community activities and events organized by the Team, however, failure by other sectors to effectively collaborate with mental health services, often results in difficulties for clients in need of the available specialized services.

## **7. Monitor Community Mental Health**

Acutely mentally ill persons have access to inpatient care at the Acute Psychiatric Unit, Princess Margaret Hospital. Assertive inpatient treatment plans over the past ten years have resulted in zero admissions of long-stay or permanent patients to the Unit. The average length of stay on the Unit is three weeks. Recurrent admissions are high, while continuation of care in the community continues to pose a critical challenge. This problem is not simply limited to medication therapy, but involves the availability of social services for the mentally disabled and often social destitute. A drug rehabilitation program at the community level will directly offset the number precipitant for hospitalization to the Unit.

## **8. Support more Research**

In 2001, the Ministry of Health conducted a Knowledge, Attitude and Practice survey of health care workers in Dominica. The results on the attitude section of the study showed that the mean attitudinal scores (**MAS**) of the health care workers varied significantly between a) genders; b) health districts; c) employment positions; d) professional preparation; and e) personal experiences. Respondents who pursued courses in mental health during their formal training ( $p < 0.01$ ) and those who attended training sessions ( $p < 0.01$ ) had significantly better attitudes to the mentally ill. In addition, those who had intimate contact with a relative or friend who suffered mental health problems ( $p=0.02$ ) and those who perceived their risk of becoming mentally ill as high ( $p=0.03$ ) showed an attitude that was significantly more favorable. The Family Nurse Practitioners, the Community Health Nurses and the Health Educators had significantly better attitude ( $p < 0.01$ ) towards the mentally ill than the rest



of the health care staff interviewed. In conclusion: the myths and misconceptions displayed by health workers about the cause and nature of mental illness have critical influence on quality of care delivered to mentally ill clients. The strong association between a positive attitude and various factors such as 1) professional preparation, 2) knowing a family or close friend with mental illness, and 3) perception of high risk by respondents suggest that mental health literacy is the key to managing the stigma characteristic of mental health services in Dominica.

There is a dearth of information available on mental health services in Dominica. The national health information system excludes data collection from mental health. Therefore implementing the AIMS tool is a critical start to establishing an adequate MHIS.

### Diagnostic Centre

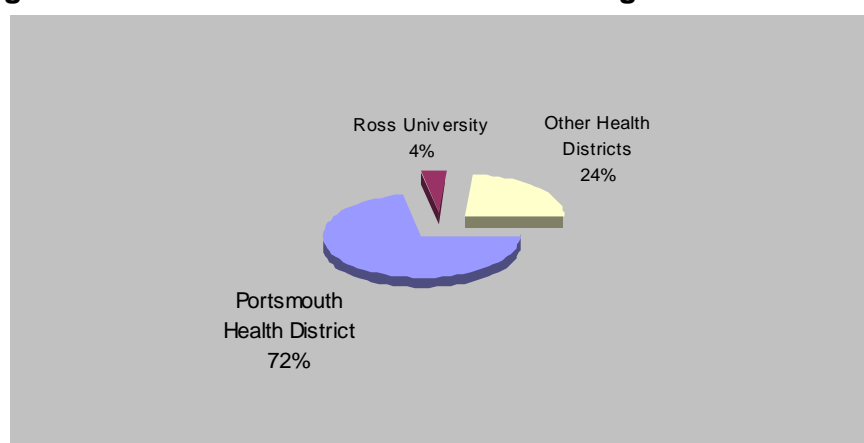
The Diagnostic Centre and Stabilization Unit were established in September 2006 as part of the Primary Health Care Services of the Portsmouth Health District. Services offered include:

- *Ultrasound Studies of Soft Tissue*
- *X-Ray/ Radiology Studies*
- *Gastroscopy/Endoscopy*
- *Stabilization Unit Services*

*Accident & Emergency Services*  
*Laboratory Studies*

A total of 948 ultrasound studies were conducted on 916 people during the period October 2007 to January 2008. Approximately 72% of these persons live in the Portsmouth Health District, 24% live in other health districts, and 4% are students from Ross University School of Medicine.

**Figure 4.6 Ultrasounds conducted at the Diagnostic Centre**



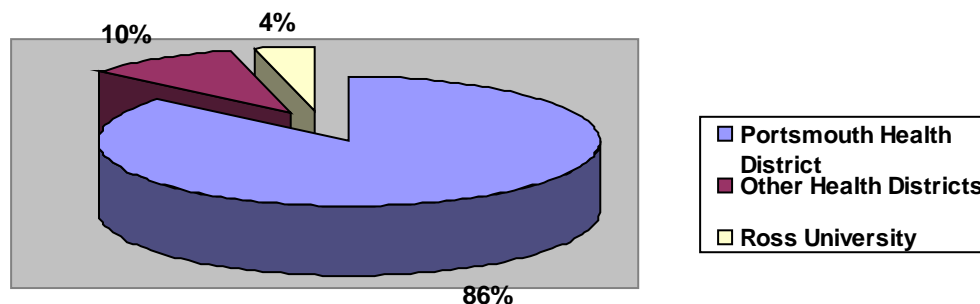
Source: Medical Records RFA Hospital

### *Challenges:*

Because this is a primary health care facility, services are free of cost. Concern has been raised over the large number of ultrasounds, endoscopies and X-Rays done, and whether there is abuse of the facility. There are no policies and guidelines in place governing the use of the services.

All the personnel at the centre were contracted from Cuba. There are no locals currently being trained to take over when they leave, therefore, the sustainability of the programme depends on availability of trained personnel from Cuba.

**Figure 4.7: Clients accessing X-ray services**



Source: Medical Records RFA Hospital

From October 2007 to January 2008, 86% of persons accessing radiology services were from the Portsmouth Health District, 10% from Other Health Districts, and 4% from Ross University. Four hundred and sixty seven (467) endoscopies were done during one year.

### *Laboratory*

Due to the inability to obtain reagents for chemical analyzer at the Diagnostic Centre, many blood tests must be sent to the lab at PMH for analysis. Lab testing and analyzing procedures are non- automated.

PMH Lab has difficulty monitoring quality standards at the Diagnostic Centre, since the system is not automated, unlike that at PMH.

### **PMH LABORATORY**

The PMH Laboratory is owned by the Government of Dominica and operates as the National Laboratory. It performs both clinical and public health functions and provides services in the areas of Haematology, Blood Banking, Clinical Chemistry, Microbiology, Histology and Cytology.

Under the Regional Laboratory Strengthening Project, a number of capacity building initiatives were realized. Two Technologists received graduate

certificates from the Michener Institute in Canada, after having successfully completed a three year training program in Laboratory Operations and Quality Management.

Two staff members were trained as Regional Laboratory Assessors. This intervention was conducted by CAREC, in pursuance of a mandate from its twenty one member country Caribbean Governments to support regional Medical Laboratory Operations, and in particular, the assessment or auditing of Caribbean Medical Laboratories according to the ISO 15189:2003 medical laboratory standards. The Trainees form part of a core expert group of assessors that will support the functioning of the regional accreditation systems, as well as address requests for accreditation from regional medical laboratories. They will be expected therefore to be engaged in accreditation activities across the region.

A number of other staff members also received training in procurement, equipment maintenance, data management and strategic planning.

Two (2) staff members of the blood bank received advanced training in Blood Banking, and have attained the level of Blood Bank Specialist.

In 2007, the development of a phlebotomy training program at the PMH Laboratory was a success, with three individuals receiving training in Phlebotomy, two of whom are now employed at the PMH laboratory.

## **Equipment**

Over the past five years, two major pieces of equipment were acquired by the PMH Laboratory; a Chemistry and Haematology analyzer. Other significant acquisitions were: a microplate reader, and a CD4 Machine. The latter has impacted positively on the care and treatment of persons living with HIV and AIDS.

## **Infrastructure**

There has been limited improvement to the physical structure of the Laboratory; however, in 2008 renovations were completed on the Blood Donor and Phlebotomy Centre.

## **Partnerships**

Global Healing, a U.S.-based non-profit organization dedicated to bringing modern medicine to the developing world, is currently working with the Ministry of Health in Dominica to further improve the Blood Bank. The goal is to empower a population to take care of its own and attain self-sufficiency. In September, 2008 this non-profit organization donated a significant amount of equipment and supplies to the PMH Laboratory.

While the institution achieved much over the past five years, there remain a number of challenges which continues to impact negatively on the operations of the department.

## Challenges

- Recruitment of Trained, qualified Technologist
- Equipment Maintenance and Replacement
- Limited workspace

## Medical Stores

Central Medical Stores serves as the sole importer of Pharmaceutical products, Laboratory Reagents, and Dental Supplies for the Ministry of Health. The unit exists to provide logistic support to health care providers by ensuring the availability of selected medical products and devices in the correct amounts and at minimum cost to government.

The unit's product profile consists of 1750 products; the chief vendor being the Organization of Eastern Caribbean States Pharmaceutical Procurement Services (OECSPPS). Its clientele includes seven health districts, the islands main referral hospital, Dental Services, Medical Laboratory, doctors in private practice and non-governmental organizations.

There are a number of privately owned pharmacies operating in Dominica.

Table 4.11 compares the top 10 drugs purchased by the CMS (in no particular order) with those sold by private pharmacies.

**Table 4.11 Top 10 drugs purchased by Central Medical Stores**

PRIVATE	CMS
<ul style="list-style-type: none"><li>• Amoxicillin</li><li>• lisinopril</li><li>• captopril</li><li>• atenolol</li><li>• amlodipine</li><li>• diclofenac</li><li>• bendrofluazide</li><li>• gliclazide</li><li>• metformin</li><li>• omeprazole</li></ul>	<ul style="list-style-type: none"><li>• Human insulin</li><li>• Amlodipine</li><li>• Daonil tabs</li><li>• Metformin tabs</li><li>• Atenolol tabs</li><li>• Ringers Lactate</li><li>• Normal saline</li><li>• Blood glucose strips</li><li>• Salbutamol inhalers</li><li>• Dialysis products</li></ul>

*Source: Central Medical Stores & Jolly's Pharmacy*

Approximately 35% of the Pharmaceutical and medical supplies budget is spent on the purchase of drugs to treat CNCD's.

Figures in table 4.12 reflect the escalating increase in drugs and medical supplies requested and consumed by health facilities during 2006/07 and the first 10 months of 2007/08. The phenomenon is more prominent at PMH, Roseau District, Portsmouth, Castle Bruce and St Joseph Health Districts.

**Table 4.12**  
**DRUGS AND MEDICAL SUPPLIES ISSUED JULY 1<sup>ST</sup> 2006 – 30<sup>TH</sup> APRIL 2008**

Districts	2006/2007		1 <sup>ST</sup> JULY 2007 – 30 <sup>TH</sup> APRIL 2008	
	DRUGS	MEDICAL SUPPLIES	DRUGS	MEDICAL SUPPLIES
Roseau	273,376.94	25,717.95	352,941.87	31,989.60
PMH	672,255.56	1,334,815.98	767,796.03	1,108,092.93
Laboratory		351,088.13		353.316.68
Marigot	141,838.13	41,117.13	126,025.37	21,111.47
Portsmouth	150,500.64	44,239.75	199,726.62	83,534.68
Grand Bay	100,685.67	16,997.71	91,214.01	13,703.93
LaPlaine	59,376.67	11,199.59	55,768.84	9,619.16
Castle Bruce	23,940.00	10,911.96	43,206.88	12,469.22
St. Joseph	63,815.24	10,016.41	81,082.93	12,594.84
Dental		39,690.56		48,382.54
Global	1,485,789.57	1,885,795.31	1,717,762.55	1,694,842.05

*Source: Central Medical stores*

In spite of nagging challenges, the Ministry of Health through Central Medical Stores has been able to:

- Provide adequate supplies to sustain dialysis and other new services
- Upgrade its vaccine portfolio to include Pentavalent vaccine
- Increase service levels at pharmacies from 82% to 86%
- Reduce payment lead time from 120 days to 60 days
- Readjust procuring priorities, placing emphasis on acquisition of pharmaceuticals essential to the treatment of Chronic Non-Communicable Diseases
- Secure much needed storage space as a result of construction of new east wing and renovated basement

### **Challenges**

- Increased gap between allocated budgeted and total consumption value
- Inadequate space to store medical supplies at PMH

- Inadequate cold storage capacity
- Outdated pharmacy law, the current law is about 40 years old.
- Lack of public education on the following:
  1. The need to see a doctor before coming to the pharmacist. Patients sometimes want the pharmacist to issue the drug without a prescription.
  2. Actual cost of medication provided in the public service; as many clients continue to collect the drugs and store them at home. Drugs at the PMH Pharmacy are provided at a nominal fee of \$5.00 per prescription and they are free of charge at the health centres.

## ENVIRONMENTAL HEALTH

The EHD is responsible for environmental monitoring in the interest of public health. Some of the major programmes implemented by the agency include Food Safety, Water Quality Control, Solid and Liquid Waste Monitoring, Workers' Health and Safety, Vector Control and Institutional Health.

The Environmental Health Services Act 8 of 1997 sets the policy framework within which the unit functions and is defined as "*an act to make provision for the conservation and maintenance of the environment in the interest of health generally and in relation to places frequented by the public.*" The Act is administered by the Minister responsible for Health and he may delegate any of his functions to the Chief Medical Officer or the Chief Environmental Health Officer. The Act also empowers the Minister to make regulations in certain areas stipulated in the Act for the purpose of its proper execution.

Staff includes a Chief Environmental Health Officer, four Senior Environmental Health Officers, thirteen District Environmental Health Officers and one Laboratory Technician.

## PROGRAMME DELIVERY

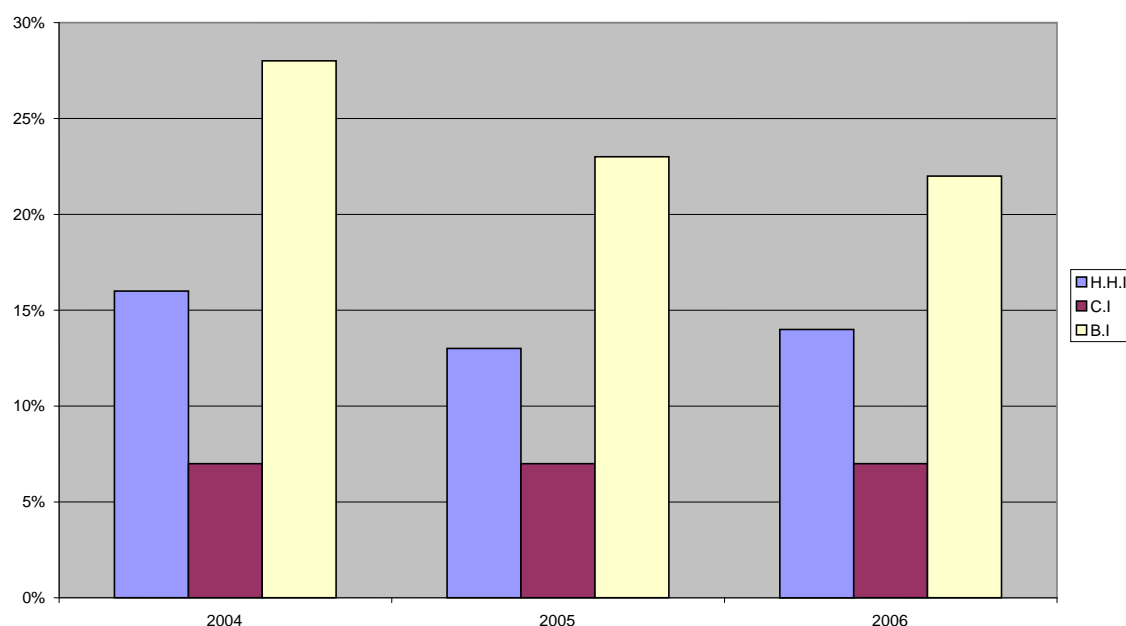
### VECTOR CONTROL:

These services were outsourced in 2006; however, the Environmental Health Department continues to retain responsibility for the programme, and supervises the company's operations.

Areas of national importance in vector control include routine larval treatment of mosquito foci, targeting especially the *Aedes aegypti* mosquito which is the vector of dengue fever. National *Aedes aegypti* indices are relatively high, accounting for the annual outbreaks of Dengue fever and the need for heightened prevention preparation during the rainy season.

Fig. 4.8 shows the distribution of *Aedes aegypti* indices for the three years from 2004 to 2006. For the period under review, the *Aedes aegypti* household index fluctuated between 16% and 14%. The Breteau Index was reduced from 28% in 2004 to 22% in 2006. The container index remained constant over the same period.

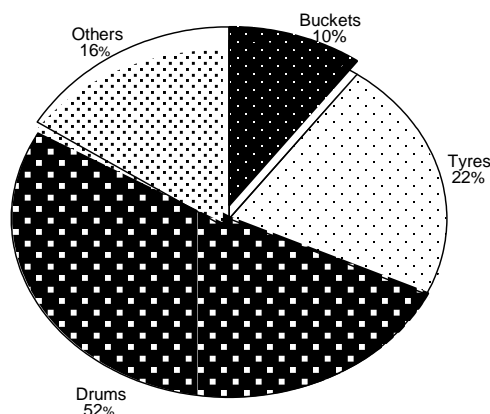
**Fig. 4.8: Distribution of National Indices for the period 2004 to 2006**



Source: Environmental Health Department Records, 2004-2006

The data further revealed that the main *Aedes aegypti* breeding containers were water storage drums (52%), tyres (22%), buckets (10%) and others (16%) (See Fig. 4.9). Any considerable reduction in *Aedes aegypti* infestation requires the targeting of water drums as important containers for future mosquito reduction efforts.

**Fig 4.9: Distribution of Breeding Foci**



Source: Environmental Health Department Records, 2004-2006

The Department of Environmental Health continues to implement the integrated vector control strategy to reduce infestation levels. Other vector control activities include maintenance of a port surveillance programme to maintain a 400 metre *Aedes aegypti* free zone and prevent the entry of exotic species, rodent control, public education programme and community clean up campaigns.

Table 4.13 shows the distribution of dengue cases as the leading cause of mosquito transmitted diseases on the island during the same period 2004 to 2006. The *Aedes aegypti* as the vector of interest is also the vector of yellow fever. The Department is also concerned about the re- emergence of malaria which was at one time prevalent on the island till its eradication in the 1960s. The *Anopheles* vector is however found in the Portsmouth area and some other locations on the island. While there has been no evidence of the disease circulating in Dominica, there have been reported imported cases on a periodic basis.

**Table 4.13 Distribution of Dengue Cases in Dominica reported for 2004-2006**

Year	No. of reported cases	No. of confirmed cases
2004	4	0
2005	11	4
2006	60	6
<b>TOTAL</b>	<b>75</b>	<b>10</b>

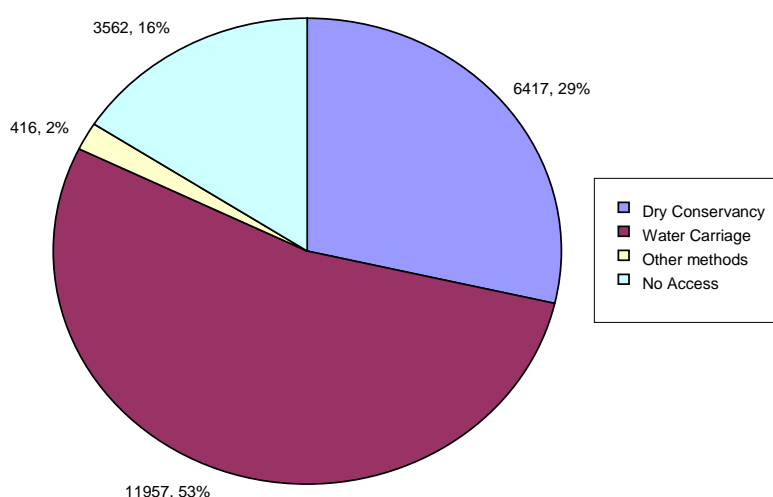
*Source: Health Information Unit, P.M.H – 2007*

### **Excreta Disposal:**

The Environmental Health Department supervises the construction and installation of excreta disposal facilities throughout the island. All new development plans are routed through the Department for review and technical input.

The Environmental Health Department also promotes the use of alternative excreta disposal facilities, to meet the challenges posed by inadequate or unsuitable soil types to accommodate conventional methods of excreta disposal facilities. This situation is further compounded, especially in squatter settlements and hillsides, where lot sizes are small and or located in steep areas. There was a decline in the demand for pre-cast units used for the construction of the pit latrines. In 2006, 16% of the population was reported to be without excreta disposal facilities. Twenty-nine (29%) was reported to have dry conservancy system constructed, comprising of pit latrines and double vault privies; 53% had access to water carriage system and 16% had no access. (See Figure 4.10 below).

**FIG 4.10 Status of Household Access to Excreta Disposal System in Dominica - June 2006**





## **SOLID WASTE MANAGEMENT:**

The Dominica Solid Waste Management Corporation (DSWMC) is a statutory body established by an act of parliament and guided by the Solid Waste Management Act of 2002. The Corporation is mandated ' to provide for the management of solid waste in conformity with best environmental practices.' The Corporation is also required to manage hazardous solid and liquid waste.

The Corporation is required by law, to prepare a solid waste management strategy to incorporate critical elements of the solid waste management programme into a five-year planning cycle. Under the Environmental Health Services Act 8 of 1997, the EHD retains the legal responsibility to monitor the operations of the Corporation.

Dominica completed the construction of a sanitary landfill as part of the OECS Solid Waste Disposal Project. As a result of the inflow of resources from the project, the island has greatly improved its national solid waste management system and has vastly improved its collection and disposal of solid waste. The garbage collection system covers the entire island. A 2007 pilot survey of the collection system indicated over 80% of residents store refuse in the manner advocated by the Corporation.

Prior to 1979, most of the refuse generated was of an organic nature and was managed through composting and disposal at community dumps. Following hurricane David in 1979, the change in work habits and improvement in the standard of living, lead to a considerable increase in imports of “consumables” most of which were non biodegradable materials; creating a substantial challenge with disposal for waste management agencies on the island. These items included styro foam, glass, tins, plastics, paper, used oil, tyres, derelict vehicles and white goods.



The Fond Cole Landfill, which was commissioned in February 2007, also serves as the facility for the disposal of special waste. The Corporation was able to transport six million kilograms of refuse to the Fond Cole landfill during the first nine months of 2007. An electric weighbridge is installed at the landfill.

The present fleet of refuse collection vehicles is inadequate to properly deliver an effective service to the public. Frequent breakdown of vehicles negatively impacts the collection system. This situation is further compounded by the unavailability of spare parts locally and regionally. The Corporation is currently exploring the option of outsourcing part of the collection system to private haulers.

The constant breakdown of equipment used for cutting cover materials and covering of the landfill, has led to the contracting of privately owned heavy equipment to perform the above mentioned function, and thus increasing significantly, the operating costs of the Corporation.

## **SHIP GENERATED WASTE**

Under the Global Environmental Fund, DSWMC received equipment, bins and staff training for management of the above-mentioned waste. A barge assists in collection of waste from ships. A procedure for the management of ship generated waste has been developed between the Dominica Air & Sea Ports Authority, and the Dominica Solid Waste Management Corporation, in fulfillment of our obligation under Marpol V convention.

Presently, ship generated solid waste is being landed at the ports of Roseau, Portsmouth, and at a number of other marinas. It is collected by the DSWMC and transported to the sanitary landfill for disposal. There is need to strengthen this ad-hoc system of management of ship generated waste in order to protect the island against infections and exotic pests.

Only paper; plastics, crushed glass, ash from incinerators and other dry floating material are accepted. Unacceptable waste includes garbage (moist from kitchen) medical and chemical.

### *Challenges*

- Some residents do not adhere to the collection times and days which contributes to endemic littering
- Bulky and oily waste are being disposed indiscriminately in the environment
- Stray dogs and other animals scavenge, creating litter problem
- Poor road surface, narrow roads and poor parking practices, make it difficult for collection vehicles to access garbage in certain communities.
- Bio medical waste is mixed with household refuse posing a threat to health of workers
- Environmental Laws – Litter, Solid Waste, Environmental, Forestry, Physical Planning and Fisheries Acts are not enforced.

- There is inadequate public education on re-use, reduction and recycling.
- Mentally challenged individuals forage for food, creating an aesthetically unacceptable vista

### **Water Quality Monitoring:**

The Environmental Health Department is mandated by law to monitor the drinking water supply provided by the Dominica Water and Sewage Company (DOWASCO). The Department seeks to further enhance its capacity to improve its monitoring activities. Water produced by DOWASCO must meet World Health Organization drinking water quality standards. Activities in water quality monitoring and surveillance include:

1. Conducting risk assessments of all water catchment areas, intakes and storage tanks.
2. Weekly collecting of samples on all distribution systems for chlorine residual testing.
3. Collecting of water samples for bacteriological testing.

The entire Dominican population is served by 43 water supply systems serving a population of 70,697 and consisting of 23,149 households. The largest water distribution system is the Springfield system serving a population of approximately 27,500 in Roseau and surrounding areas. About 13,825 households are served with house connections, and 549 stand pipes are means of access for the other households. Twenty-two (22) of the forty three (43) systems use gas chlorination; the others use tablet chlorination methods. The total water storage capacity is estimated at about 3,101,450,000 imperial gallons of water.

In 2007, approximately 93% institution and 80% of samples submitted by the EHD met WHO standards [YEAR]. Tests conducted were Chlorine Residual, PH, Temperature, Sulphate, Nitrate, Copper, Iron, Phosphate, Total and Faecal Coliform and E.Coli. The number of samples received from the EHD increased by 100% during 2005-2006. This indicates a heightened interest in water quality monitoring and its importance to the department.

Complaints of poor water quality to DOWASCO generally received rapid attention by that Company. The water quality-monitoring program is hoping to realize a 95% of samples meeting the WHO guidelines for drinking water. Heavy rainfalls and breakdown in treatment schedules contributed to the quality ratings.

#### *Recreational Water Quality Monitoring:*

The Department of Environmental Health has been involved in sporadic sampling of recreational and coastal waters, but has not developed a data base for this activity. Funding has been secured from National Oceanic and Atmospheric Administration; to carry out a recreational water quality monitoring programme to run concurrently with a drinking water quality

assessment project. The programme seeks to achieve the following objectives:

1. To evaluate the pollution load to which bathers are exposed and to minimize and or prevent infections.
2. To provide information to bathers.
3. To generate reliable information on recreational water quality and assess pollution events.
4. To provide a tool to monitor improvements in local sanitation.

#### *Food Safety:*

The main objective of this programme is to ensure that food served to the public is safe and wholesome. The Department's activities are designed to ensure that the incidence of food-borne disease is reduced or eliminated. To achieve this goal, a comprehensive food safety programme was implemented consisting of but not limited to:

1. Certification of food handlers. This involves the food handler being medically certified and attending food handlers training sessions.
2. Registration of food handling establishments – the Department coordinates its activities with other stakeholders such as Discover Dominica, in helping to certify hotels and other service sectors in the tourism industry.
3. Investigation of food borne diseases.

The Department records indicate a total of 3481 inspections were undertaken at food establishments in the districts of Roseau, Portsmouth and Marigot in 2007. Approximately 60% met basic food safety standards. Main problems identified were:-

- limited space allocation for preparation
- inadequate cold / dry storage facilities
- inappropriately attired food handlers
- lack of sanitary facilities
- uncertified food handlers

A total of 2258 food handlers were certified for the period. These food service workers were exposed to at least one hour of information on aspects of food safety. In 2006/07, the department saw a 29.9% increase in the amount of meat inspected for all categories of animals over the 2004/05 figures Cattle 30.7% and pigs 30.5%, made up the majority in both years.

During the period 2005-2006, a total of 56,051lbs of condemned foods consisting mainly of frozen meat/fish, dry goods and other processed foods were removed from the food chain and disposed at landfills.

#### **Port Health**

In May 2005, the World Health Organization revised and updated the **International Health Regulations (IHR)** for the purpose of improving global health security. Member States were urged to build, strengthen and maintain

the capacity requirements under IHR 2005 to mobilize the resources necessary for the above mentioned purpose.

Small Island developing states like Dominica have special cause for concern as our present economic thrust is on Eco-tourism with Cruise Tourism as a major pillar. There are causes for alarm, as increase in travel and operations at ports are not supported with the infrastructure to cope with risks associated with such activities. The areas of concern being; food safety, water quality, vector borne diseases, animal and plant health, exposure to occupational hazards and other communicable diseases

In an effort to strengthen the capacity of the islands of the Eastern Caribbean to deal with the vulnerability of their points of entry, PAHO, at the request of the Governments of Dominica, St. Lucia and St. Kitts/Nevis, brought together a team of environmental health resource professionals to assess and document existing procedures of port health surveillance systems in all the six countries, and developed standard guidelines for health management at their Points of Entry. Protocols were developed with stakeholders, a pilot programme outlined, and implementation of the program commenced in September 2006.

Port health services are now being offered at points of entry and include activities such as inspection of imported foods, ship inspection, vector and rodent control, and liquid and solid waste management.

The quantum and quality of work needed to be done in port health, is still not yet realized, due to a lack of presence, and of adequately trained officers to undertake full time duty at the major points of entry.

#### *Institutional & Occupational Health & Safety Programme:*

During the past few years, a number of initiatives and achievements were realized. Seven safety committees were established at workplaces. The main function of these safety committees is to promote safe work practices by identifying potential hazardous conditions or situations which may predispose the worker to injury, and help to reduce or eliminate such risks.

A number of work places were introduced to the key concept of maintaining fully stocked first-aid kits in the workplace, for use in event of minor on-the-job injuries or mishaps.

Continuing liaison was either established or re-enforced with other critical stakeholders such as Trade Unions, Fire Department, Labour Division, Pesticide Control Unit, Employers' Federation and Ministry of Agriculture.

Educational sessions were conducted island-wide at various schools and also for workers in the Auto body Repair, Arc Welding and Spray Painting operations.

The Department participated in the establishment of the *Farmer Certification Programme* in collaboration with Dominica Banana Producers Association. This component of the programme includes:

- medical certification of farmers
- cholesterase tests assessing levels of pesticides in blood of farmers, while the education components looked at principles of safe storage of pesticides/ foods, personal hygiene, and uses of personal protective equipment.

Various concerns pertaining to occupational hazards, either perceived or real, from both public and private sectors, have been addressed. The majority of the concerns focused on problems related to asbestos and insulated fibre glass material. The guidelines for the treatment and disposal of Asbestos Containing Material (ACMs) were reviewed and updated.

Some positive measures for promoting preventive measures to reduce injuries in the workplace were realized; there was also an increase in the use of Personal Protective Equipment (PPE) in various at-risk occupations, due to on-the-spot education as to their benefits.

Main **constraints** identified include:

- Lack of specialist training of Environmental Health Officers in Occupational Health and Safety
- Lack of some basic equipment for use in Occupational Health and Safety and Industrial Hygiene
- Lack of information on workplace injuries

#### *Human Resource:*

Less than 50% staff members are trained. This includes one member at the Masters level, four at the Post Basic level, three at the Associate Degree level, and ten are at present being trained at the State College at the Associate Degree level. Eight other persons will also complete the 3- Step programme in September 2009.

#### *Legislation:*

The following Regulations under the Environmental Health Services Act 8 of 1997 were submitted for approval to the Cabinet of Dominica during the reporting period.

##### *i) Environmental Health Services Act 1997:*

Environmental Health Services (Air, Soil, water pollution) 2003  
Environmental Health Services (Nuisances) 2003  
Environmental Health Services (Mosquitoes) 2003  
Environmental Health Services (Rodent Control) 2003  
Environmental Health Services (Hairdressers) 2003

##### *ii) Draft Food Safety Act 2005 with the following regulations:*

- Food Inspection

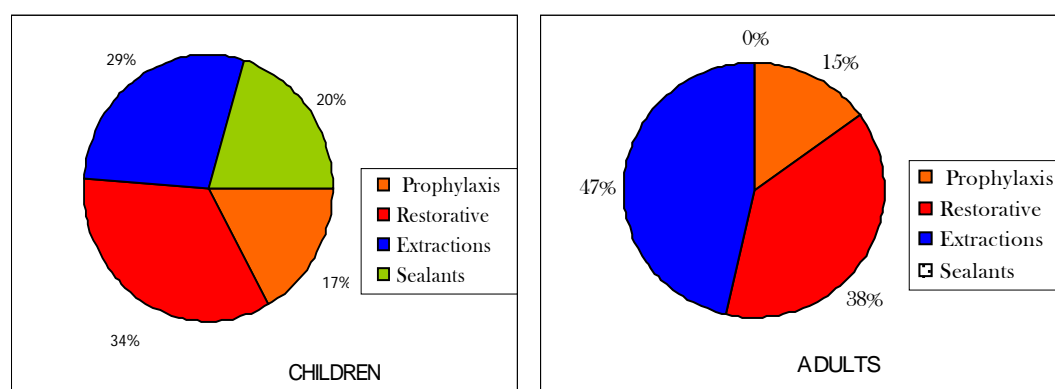
- Sampling
- Food Production and Processing
- Food Handling Establishments and Canteens

## **DENTAL SERVICES**

The MoH provides services which promote oral health and provide preventative, curative and restorative dentistry. Public services are available in all seven health districts, with private services available in Portsmouth and Roseau. Dentists provide services to adults, while the children 0- 18 years are seen by dental therapists. Adult dental clinics are held in out districts twice a month, except in Roseau where all emergencies are seen on a daily basis and other conservative and preventative treatment offered to the public.

A total of six thousand and ninety four adults (6,094) and five thousand six hundred and twelve (5,612) children were seen in the public health system for the year ending 2007. Figure 4.11 below compares the services provided for children and adults.

**Figure 4.11: Treatment done for year 2007**



*Source: Dental Unit, Ministry of Health & the Environment*

The **School Dental program** has been very successful, notwithstanding the many challenges, such as shortage of therapists in some districts, cost of materials and supplies to perform the various duties. Fluoride treatment in the school dental program was very successful in the past, but was discontinued because of the government's inability to sustain the program. It is envisaged that the program can be re introduced in the near future with assistance from PAHO.

In the early part of 2006, a total of 1298 school children (ages 6, 12 and 15) in Dominica were clinically examined in order to enable the Ministry of Health to assess the oral health status of children in these age groups in the country. Interview data was not collected along with data from clinical examinations.

According to the survey results, data from the clinical examination showed that

- 47.8% of the children were cavity free.
- 38.8% and 41.8% of 12 year olds and 15 year-olds respectively had at least one decayed permanent tooth.
- 6 year olds had a mean of 2.11 decayed, missing (due to extractions) or filled temporary teeth (deft), and a mean of 0.4 decayed, missing or filled permanent teeth
- DMF scores for 12 year-olds and 15 year-olds were 1.20 and 1.68 respectively.
- Significant Cavities Index (SCI) scores were 3.79 overall; 3.20 for 12 year olds and 4.34 for 15 year olds.
- The percentage of 12 year olds and 15 year olds with DMFT scores higher than 3 were 10.8% and 8.0% respectively.
- 63.3% of the children with at least one decayed tooth had fissure sealants listed as one of their treatment needs.
- Cavity severity was higher among 15 year olds than among 12 year olds.
- Only a small percentage of decayed teeth were reported to be filled.
- 62.5% of the children needed treatment.
- Reported treatment needs included fissure sealants (42.7%); single restoration (30.8%), multiple restoration (19.8%) and extraction (6.5%)
- Examiners rated the urgency of treatment as 'Advanced Urgency' for 11.95% of the children and 'Low Urgency' for 45.3% and 'High Urgency' for 1.5%
- Prophylaxis was recommended for 3.6% of the children.
- Evidence of fluorosis was reportedly noted in only 1.6% of the children.
- Differences in caries prevalence were also observed between school districts but not between boys and girls.
- Significant differences were observed between districts with respect to the prevalence of caries.
- Since no interview data were collected, it was not possible to test for association between cavity severity and level of education of parents, household income, oral care practice or other socio-economic factors.

The severity of dental cavities as reflected by DMFT scores among 12 year-olds in Dominica was lower than the WHO target of 3. At the same time, 10.8% of 12 year-olds and 18.0% of 15 year-olds had scores higher than 3. Since no data were available with respect to treatment it was not possible to estimate the percentage of children with untreated decayed teeth.

Analysis of the data concluded that the burden of illness and possible intervention measures could not be fully established and recommended in the absence of interview data. In addition, the highest level of education of parents and household income would have been useful to inform policy decisions for dental health services in Dominica, while results from previous studies would have enabled the comparisons of gains and losses in the interim between the 2006 study and the previous surveys.



## **Challenges: -**

- Some of the equipment needs replacing
- Funds are limited for sourcing of materials and supplies
- There is no system of preventive maintenance in place
- There are human resource issues including lack of opportunities for upward mobility of staff; no continued training of dental assistants, therapists and dentists.

## **HEALTH PROMOTION SERVICES**

In an effort to enable the Government to achieve its mission, to promote the well being of all citizens of Dominica, the health promotion strategy was adopted and has been implemented through various intervention programs.

The Healthy Community approach is undertaken to harness resources for healthy living by fostering community involvement through partnership, among officers of governmental, non-governmental departments/agencies, community and voluntary groups. Activities of the Department include:

- Community based health promotion and disease prevention programs for clients, their siblings, caretakers;
- Health and social communication for public education through media awareness and prevention campaigns;
- Continued education and training for health care providers on new trends in the management of health and health related conditions;
- Advocacy for cessation of tobacco use among students; implementation of legislative policies to regulate sales to minors, curb media advertisement, and eliminate environmental tobacco smoke.

The department is staffed by a Coordinator, two Health Educators including a TAC volunteer; one Communications officer, one nutritionist, and an audio visual technician

The HPRC has been able to achieve most of its activities through the commitment and support of the inter-ministerial committee of district officers and community members. Through a critical reflection of the Health Promotion Approach implemented from 1994, the HPRC has gained a wealth of knowledge, insight, and collective wisdom, working together with other partners and key community stakeholders.

As health care costs continue to rise, the HPRC continually evaluates how the preventive, promotive and advocacy programmes it provides; complement the curative and rehabilitative services of the ministry.

The staff within the Centre recognizes that the pace and pressures of daily living for Dominicans is at an all time high. Consequently, quality of the living environment has become increasingly important and is a central factor in the lives of most Dominicans.

As the Ministry of Health focuses increasingly on the determinants of illnesses, disabilities and death among the populace, it has become clearer that a defined Health Promotion agenda is required to identify and address these health and health related issues for sustainable results.

The goal of the HPRC is to: Promote health among the Dominican populace in partnership with local communities, NGOs, and other departments. The Healthy Community Approach was one of the processes established to achieve this goal, as it became necessary for the HPRC to communicate the process that has the capacity to empower the many social partners for active participation.

Staff motivation and team cohesiveness enabled HPRC to accomplish several capacity building activities through the following programme areas:

- Health & Social Communication - includes advocacy, social and community mobilization, information, education and communication. The department's capacity to facilitate programmes is limited due to inadequate staffing and equipment.
- Promotion and maintenance of healthy lifestyle practices
  - Coordination and facilitation of health education programmes within all health districts.
  - Evaluation on use of various intervention programmes - hypertension, diabetes and cancer
  - Production and dissemination of educational supportive materials to the entire populace using the various print and electronic media
  - Monthly Media Awareness Programme for prevention of Lifestyles Conditions
  - Educational sessions conducted at Institutions and community forums and village councils within the various Districts
  - Workshop for Media Workers on media advocacy for health
  - Developed, Produced and distributed an Information, Education and Communication Mental Health Campaign using popular theatre
  - Needs Assessment Survey conducted in one district among men 15-44 yrs in preparation of a men's Health Programme.
  - Piloting of Men's Health Programme in two health districts



## NUTRITION

The Nutrition Unit forms part of the Health Promotion Resource Centre. Despite the increase in prevalence of conditions related to Food and Nutrition e.g. hypertension, diabetes, obesity, certain cancers; the main responsibility for the planning and implementation of nutrition projects and Programmes for the entire Ministry has been vested in only one nutritionist since 1991. The department works closely with the Caribbean Food & Nutrition Institute.

Major achievements

Development of Food Based Dietary Guidelines; The project seeks to develop, disseminate and promote country specific Food-Based Dietary Guidelines (FBDG) in the Windward Islands to improve the Nutritional Status of the populations in these countries

Development of a Young Child Nutrition Programme;

- Training of trainers for health care providers on Breast Feeding and complimentary feeding
- Training workshop in data collection for young child nutritional status survey
- Nutritional Status Survey on infants and preschoolers conducted.  
All infants between the ages of 0-47 months were weighed and measured. Infants between 48-59 months in selected pre-schools were also weighed and measured. The parents and or guardians of all the children who were included in the survey were interviewed.
- Pre-School Snack Box Survey:
  - a) To determine the type of snacks given to pre-schoolers and,
  - b) Develop appropriate nutrition messages for the children, parents, and teachers.

Survey results revealed that the snacks of the pre-schoolers contained high levels of sugar, salt and fat.

Nutrition Education to Community, Schools and Organizations

- Training for health care providers on Nutrition Management for HIV/AIDS
- Education sessions on nutrition management for persons living with HIV/AIDS
- Lectures to various groups including Pre-Nursing Students of the State College, Health teams; Pre-Schools- Foster parents, PTA's, PLWHA's and adolescents.

Presently the only data collected and analyzed specific to Nutritional Status pertains to infants 0 -59 months

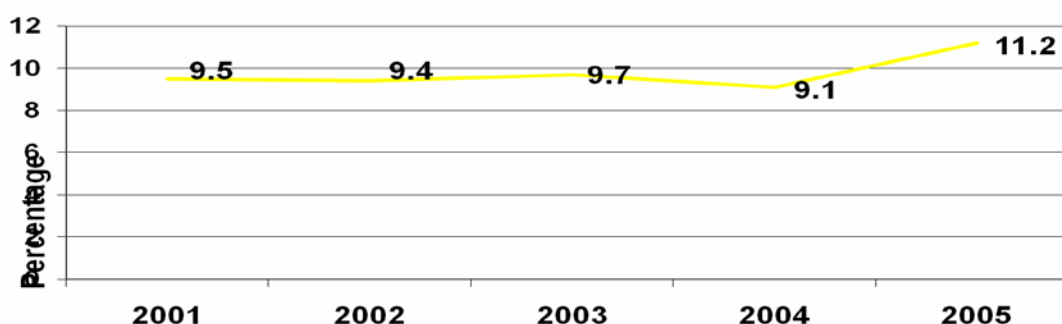
**Table 4.14 Nutritional Status 0-5 Yr Olds**

<b>7</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>Severe</b>	0	0	0.1	0.1	0	0.1	0.1	0.1
<b>Mild-Moderate</b>	0.7	0.6	0.7	0.8	0.8	0.9	1	0.7
<b>Normal</b>	90	89.8	89.8	89.5	90	87.8	89.1	87.4
<b>Obese</b>	9.3	9.5	9.4	9.7	9.1	11.2	9.8	11.8

*Source - Nutrition Unit Ministry of Health & Environment*

In spite of limited resources, the unit was able among other accomplishments, to review the Food and Nutrition Policy to address present trends and develop Food Based Dietary Guidelines for Dominica.

**Figure 4.12: Trends in obesity among 0-5 year olds (2001 – 2005)**



Source: Health Information Unit- Ministry of Health

## HEALTHY COMMUNITY APPROACH

This process continues to be strengthened at national as well as community levels. Core components are partnership building, capacity building of officers and community leaders, community assessments, community profile documentation and community participation in planning solutions for healthy community programme.



Training in the healthy community approach during the 2004 to 2007 period, enabled community members and district officers to implement training experiences and to start mobilizing communities and resources to participate in the Healthy Community Award

Programme. This award programme was initiated to help stimulate communities to move towards building healthy communities.

The department partnered with Ministry of Tourism ECO-Tourism Department in this venture to obtain funding for the awards in exchange for use of the healthy community process as a marketing tool for the Ministry of Tourism's Community Tourism Programme.

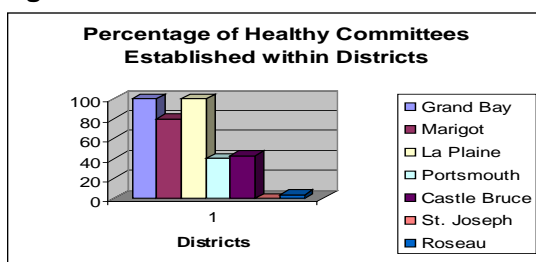
### Activities Accomplished

- Coordinating Committees comprising Inter-ministerial officers and community leaders were formed within all districts.
- The Healthy Community Awards Programme began in March of 2005
- Training for community leaders and district officers was undertaken along with community mobilization.
- At the invitation of the Ministry of Community Development, Information, Culture and Gender Affairs, the HRPC collaborated with Community development the National celebration activity to be undertaken on Community Day of Service. The Healthy Community Approach/Initiative (HCA) became the centre- piece of The National Clean up and Beautification Programme.
- Healthy community award programme was renamed- Healthy People and Beautiful Community Award Programme. Details of that

programme can be found in the National Clean-up and Beautification Campaign document.

- Several community visits were conducted within the piloted districts by officers to assess work done within communities that were registered to participate in the HCAP
- All necessary tools for judging of the participating community were completed in collaboration with district officers.
- Pilot communities were judged and prizes awarded to deserving communities.

**Figure 4.13**



- Healthy community coordinating committees set up within the various communities at district level
- A Coalition of District Officers was formed, for continued partnership and

collaboration for health and social development that are to be undertaken within participating Ministries

- Commenced documentation of the healthy community process and achievements, this is due to be completed second quarter 2007

### Chronic Non-Communicable Diseases

These conditions continue to be the leading cause of illness, disabilities and death among the populace. In order to help people reduce risks, manage their health conditions and prevent complications, several activities were undertaken in an effort to establish a comprehensive national programme.

### Develop National CNCD programme

- Formation of a National Advisory Team to coordinate the implementation of CNCD Programme
- Development of a draft policy for chronic non-communicable diseases
- Revision and distribution of Manual on Protocol on Management of Diabetes and Hypertension to all Health Districts
- Protocol on management of cervical cancer was reviewed and updated.
- Sessions were conducted for health care professionals to improve management of cervical cancer and pap smearing taking.
- Training in use of the guidelines for Asthma management was conducted; health providers and family members of persons with asthma were invited to attend.
- A Public Officers Healthy lifestyle survey was conducted at Government headquarters
- Healthy lifestyle programme was developed to address the findings of the Public Officers survey

### Decrease incidence of breast and prostate cancer

- Education campaign for health care workers and community was implemented in all health districts; health care providers conducted breast examination for women, and screening for men 40 and over

### Improve quality of Pap Smears taken among women 15 – 65yrs

- Training in pap smear taking techniques for District Nurses and DMOs
- Training in culdoscopy for junior physicians and nursing staff

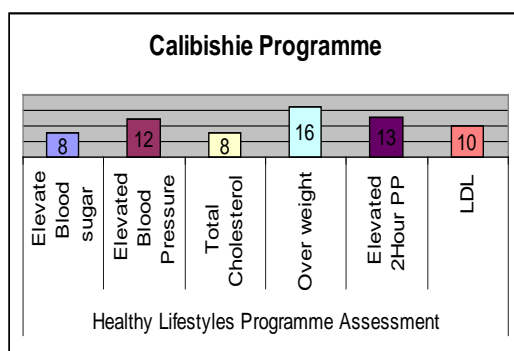
### Incidence of cervical cancer among women 15–65 reduced by 20%

- Education sessions on cervical cancer for various target audiences conducted in all health districts
- Screening for cervical cancer conducted in health districts

### Promote the prevention and management of Diabetes and Hypertension

- District training sessions conducted for people with CNCs, family members, care givers and health care professionals in the management of hypertension and diabetes

**Figure 4.14**



- Negotiated funding from a non-governmental agency of Holland to implement a community hypertension and diabetes prevention programme in the Calibishie community

### Monitored use of the of Protocols for Diabetes and Hypertension by district nurses

- Provided funds for purchase of Greenhouse to the La Plaine Health District
- Provided funds for the purchase of equipment to establish a diabetic foot care component of prevention of diabetes amputation.
- Developed and distributed Educational Materials on the prevention and management of Diabetes and Hypertension
- Participated in the Global Youth Tobacco Survey
- Training workshop on Asthma management for health care workers, asthmatics and caregivers conducted.

- Social partners trained in community mental health

## Challenges

- Inadequate staffing
- Lack of timely transportation to Roseau
- Late or incomplete radio and television programmes
- Many interruptions of scheduled programmes because of unscheduled activities at central level
- Poor secretarial services; officers who were assigned to the department over the past year were inexperienced and that caused much frustration when formal documents were needed.
- Inadequate trained staff; causing work overloads and late completion of scheduled tasks by officers
- Inability of the HRPC to be an efficient clearing house because of very slow response from government printers
- Fatigued audio/video equipment
- Insufficient funds

It is evident that the Ministry plans to embrace the attention/importance that CARICOM has recently placed on Healthy Living (especially for the prevention and management of Obesity, CNCD and HIV/AIDS) among others. Promoting health requires the ministry to focus its efforts and prioritize its action through the implementation of the health promotion strategy.

## Drug Abuse Prevention

The National Drug Abuse Prevention Unit (NDAPU) was established by the Government in 1997, as a response to addressing issues highlighted in the evaluation of the former Drug Education Programme (1993-1997) that is, to harmonise and coordinate all anti- drug activities on the island. The Unit is currently staffed by a Director, three (3) Drug Abuse Prevention Officers, one Research and Information Officer, and one Junior Clerk.

Drug Abuse Prevention Officers work in assigned districts, designing, implementing and monitoring prevention programs at the community and school levels. Utilizing family and individual interventions as their primary model of operation, the staff seeks creative ways in reaching as many persons as possible through three (3) main programme areas:-

1. *Community Prevention Programmes* ; the NDAPU seeks to empower **communities** to deal with drug problems in several ways including :

- Training of Community Leaders
- Assisting in the formation of anti-drug groups
- Facilitating groups in implementing Community based programmes
- Implementing alternative programmes to drug activities
- Promoting the collaboration of efforts among anti-drug groups

2. *School Prevention Programmes*: the NDAPU endeavours to reduce the impact of drugs on the **school** population by:

- Conducting Peer Counselling Workshops for students, teachers and parents
- The formation of anti-drug clubs
- Providing Educational Materials on Alcohol and Substance Abuse
- Conducting Training Camps for students
- Reviewing of Life Skills and Drug Education Curriculum
- Conducting training programmes for teachers
- Production of curriculum materials for secondary schools

3. *Research and Information*: the Unit seeks to provide up to date **information** on the drug situation by:

- Conducting School and Community based surveys
- Production of Quarterly Newsletters on drug issues
- Production and dissemination of materials to support Education and Community Programmes
- Providing data\ information to guide programme planning and implementation.

Drug Awareness Month takes place during the month of January each year. Ongoing activities of the Unit include the monthly radio programme, training workshops, parenting programmes in collaboration with the Ministry of Education, rallies at primary schools, working with at risk youth, and partnering with parent teachers associations to conduct drug awareness workshops for parents.

During the last year, some of the major achievements included:

- Re-establishment of the Drug Advisory Council
- Revamping of the National Anti-Drug Coordinating Committee
- Development of a new 10 year Plan

### *Challenges*

- Limited human resources
- Lack of trained counsellors for drug addiction counselling
- No programme or structure in place where persons can make referrals geared towards helping drug addicts and families
- Finding convincing ways to counteract the profits of drug proceeds
- Non-enforcement of laws. Laws are not being enforced pertaining to seizure of drug dealers property, sale of alcohol to minors and intoxicated persons/ users
- Non-involvement of community groups and schools, due to lack of finances or incentives
- Absence of the Drug Prevention Education Manual
- Absence of rehabilitation / halfway house and drop-in centre leading to more social disintegration of society



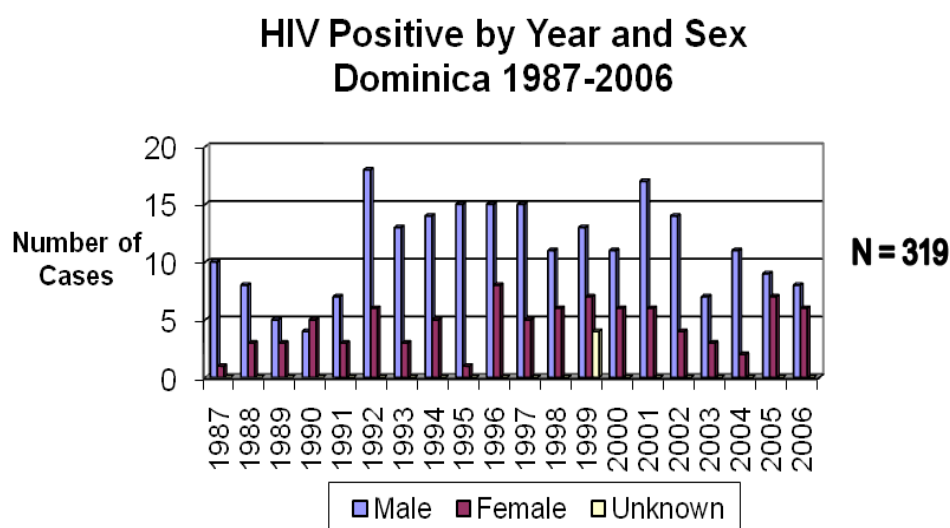
## HIV & AIDS Response

The first documented case of HIV & AIDS in Dominica was in 1987. The Country's initial response was the establishment of an AIDS Central office within the Ministry of Health, with responsibility for implementation of HIV awareness programmes. A Prevention of Mother-to-Child Transmission (PMTCT) Programme was established in 2001, followed by the National HIV & AIDS Response Programme (NHRP) with a National AIDS Programme Coordinator in 2003. The main responsibility of the NHRP is to coordinate efforts and activities related to implementation of the National Strategic Plan (NSP) and other HIV-related programming. The NHRP reports its progress to National bodies and also to UNGASS and Global Fund for AIDS, Tuberculosis and Malaria (GFTAM), through performance indicators.

Over the last 20 years, a total of 333 cases have been documented. Dominica's HIV & AIDS prevalence rate stands at 0.75% with males representing 72% of all diagnosed HIV cases. Approximately 70% of all HIV & AIDS cases occur in the 25-44 age groups.

In 2006, a total of 2414 persons were tested through the Government Laboratory. Eight (8) males and six (6) females tested positive. The data suggests that more females are being tested for HIV than males. A total of 1899 (78.7%) were female; while 490 males were tested. Sex was not recorded for 25 persons. Among the females testing for HIV in 2006, 1,244 (65.5%) were pregnant women. In 2007, twelve (12) males and two (2) females tested positive.

Figure 4.15



Source – Health information Unit / Princess Margaret Hospital

A **National AIDS Committee (NAC)** was created as a multi-sectoral advisory board to provide technical support and oversight to the National HIV Response Program (NHRP).

In 2006, Dominica surpassed its Global Fund against Tuberculosis, AIDS and Malaria (GFTAM) targets and thus contributed greatly to the OECS's bid for PHASE II funding.

## ***Advocacy, Human Rights, Policy Development and Legislation***

In 2006, an HIV Policy and Procedure manual and a **contact tracing protocol** were developed to guide health care professionals in the Commonwealth of Dominica. The manual incorporates comprehensive care, management of People Living with HIV & AIDS (PLWHAS), Prevention of Mother-to-Child Transmission (PMTCT), Voluntary Counselling and Testing (VCT) and Home Based Care.

A **Law Ethics and Human Rights Assessment** was conducted in Dominica in 2005. The consultations were aimed at focusing on key areas of law and policy which impact on HIV and AIDS related issues and made recommendations for a programme of legislative and policy reform which would address the issues of stigma, discrimination and human rights.

The attitude of the population towards people living with the virus remains a challenge for the national programme, consequently, those persons opt to seek treatment, care and support overseas, even if the services are readily available in Dominica.



Currently, there are three support groups for PLWHA on the island. **Life Goes On** - a non profit organization geared towards advocating for people infected and affected by HIV and AIDS; **Fouche La Vie**, a support group which aims to support women/mothers and their families of PMTCT programme; and the newly formed **Dominica Inc**, an NGO that provides support and advocates for people infected and affected.

## ***Provision of Care and Treatment for PLWHIV and AIDS***

### *Clinical Care Programme*

The Infectious disease clinic which provides access to high quality of care for all PLWHIV & AIDS was started in August 2004. A multidisciplinary Clinical Care Team provides quality care to persons living with HIV & AIDS. The number of PLWHA's accessing care and treatment at the clinic is increasing. A total of 51 persons are accessing care and treatment, thirty seven (37) of whom currently receive free antiretroviral treatment.

### *Prevention of HIV Transmissions among the General Population*

Following an ILO **Caribbean Sub-regional Meeting on HIV/AIDS and the World of Work** held in Barbados in 2002 at which Dominica was represented; the participants spearheaded the development of an HIV & AIDS Workplace Policy in collaboration with the Dominica Employers Federation, trade unions and other stake holders. To date, nine (9) companies have adopted the HIV & AIDS workplace policy, while two (2) other companies have developed their own policy. The National Response is now developing a workplace programme to address HIV & AIDS related issues in the workplace.

### *Testing and Counselling for HIV*

VCT services are available island-wide in both the public and private health systems. Since 2005, a total of 52 professionals have received VCT training. Provider Initiated testing and Counselling was introduced in March of 2007. A total of 52 health care professionals have been trained so far. In 2006, seven hundred and sixty-five (765) persons participated in VCT services. Eighty six percent (86%) of those who received counseling got tested, but only fifty two (52%) had post test counselling. In order to complement the Counselling and Testing Programme, the NHRP has made both male and female condoms available free of cost to all persons accessing the CT Services in the Public Health Care System.

### *Prevention of HIV&AIDS among vulnerable Groups*

The **National Strategic Plan** for HIV&AIDS (**NSP**) (2010- 2014) defines Dominica's vulnerable groups as Men who have unprotected sex with other men, Commercial Sex Workers, Youth 15 – 24, and Prison Inmates.

In January 2006, the NHARP in collaboration with the Population Service International (PSI) and the Centro de Orientación E Investigación integral (COIN) from the Dominican Republic, conducted a mapping exercise in Dominica to identify the areas where Commercial Sex Workers (CSW) were concentrated. This Mapping Exercise was very vital in assisting the National Programme in developing educational materials and educational sessions targeting the Commercial Sex Workers in those communities where they are most concentrated. This has enabled the NHARP in collaboration with the Dominica Planned Parenthood Association to plan educational sessions for the CSW community, and also provided an opening to reach one of the hard to reach populations.

In 2004, The MSM community conducted a Knowledge Attitude and Practice (KAPB) study in collaboration with CHAP; to identify some of the health, social and personal needs of men who have sex with men" (MSM) within the Dominican Community. This provided a clearer picture as to the behaviours among this specific group, and plans were put in place to provide continuous education for the group.

In May 2005, an HIV Sero-prevalence survey was conducted among male inmates at the Stock Farm Prison in collaboration with CAREC and the Ministry of Health. One of the objectives of the survey was to provide evidence supporting the development of expanded voluntary counselling and testing, prevention education, care and treatment for HIV in the prison.

Of the 251 inmates at the time of the study, 191 participated in the survey giving a participation rate of seventy-six (76 %). The mean age of the participants was 33 years, the youngest being 15 years and the oldest 67 years.

The survey revealed that five (5) inmates tested positive for HIV, giving a prevalence of 2.6%. Training has been offered to the prison officers in areas

of Voluntary Counseling and Testing, and provision of continuous education for inmates and officers.

### *Behavioural Surveillance Survey (BSS)*

In 2005, the BSS survey was conducted among the general population 15-24 years, general population 25-49 years, in school Youth 10-14 years and youth on the Block 10-19 years. The survey provided critical information, on the existing gap between prevention knowledge and practice. Although young persons are aware of the different modes of transmission, they acted contrary to that knowledge. Myths related to HIV transmission were still prevalent. Some in-school youth did know the ABCs of prevention, and the need to provide information on delaying sexual experience to young persons, was evident. In relation to testing for HIV, many persons are concerned about the level of confidentiality associated with testing positive for HIV. The NHRP is in the process of scaling up prevention in schools through the Health and Family Life Education (HFLE) teachers at the various high schools around the island. The guidance counsellors and other teachers have been trained to provide correct prevention education with in -school youth.

A BCC Programme is being implemented to improve uptake of males who are classified as out of school youth. This encouraged more males to get tested for HIV and also to use Latex condoms consistently and correctly at each sexual experience.

The BSS informed the National AIDS Response in its programming for different target populations, and prompted the NHRP to collaborate with the Government Laboratory to implement a mini “know your status” campaign among males. Over 80 males were tested in one day.

### *Service Provision*

An assessment of 18 facilities (16 public facilities) including laboratories, was conducted to evaluate HIV/AIDS related services such as counselling and testing capability, care and support services, ART Post Exposure Prophylaxis (PEP), PMTCT and youth friendliness. Fifty-four (54) % health workers surveyed had a positive attitude towards PLHIV.

### *HIV Testing system*

- Most of the public facilities (15 of 16 surveyed) have an HIV testing system.
- Advance care and support services were available
- Infrastructure for in-patient HIV/AIDS services were satisfactory,
- Strong presence of a referral system of home-based care services (HCS) among facilities providing CSS.

### *Prevention of Mother to Child Transmission*

### 6.1 Testing among Pregnant women

Testing for HIV is free at the Laboratory once it has been accessed through the government system

**Table 4.15: HIV Testing among Pregnant women in Dominica 2001 – 2006**

Year	No. of Births	No. (%) of Antenatal Women Tested	No. (%) of Women Testing Positive
2001	1233	750 (60.8%)	2 (0.2%)
2002	1096	824 (75.2%)	2 (0.2%)
2003	1072	807 (75.2%)	0 (0%)
2004	1077	957 (88.9%)	0 (0%)
2005	1022	1160 (113%)	3 (0.25%)
2006	1054	1224 (116%)	1 (0.08%)

*Source - National HIV/AIDS Response Programme, PMTCT*

*The high figures for 2005 and for 2006 would reflect those antenatal mothers who have opted to test twice during their pregnancy. As stated in the PMTCT protocol, an antenatal mother should be encouraged to test twice and there are those who test in one year and deliver the following year.*

A total of 14 paediatric cases have been diagnosed since 2001, and this number has remained the same after five years.

### **HIV Testing among Blood Donors 1997 – 2006**

All blood donors are screened for HIV and other diseases. In 2006, 765 clients donated blood to the blood bank; there were no HIV positive clients.

The National AIDS Response Programme has moved from an activity based structure to having programmes which address specific areas:

- ❖ Treatment and Care
- ❖ Testing and Counselling
- ❖ PMTCT
- ❖ Prevention Education

There is a strong multi-sectoral approach with Non- Governmental Organizations (NGOs), Faith Based Organizations (FBOs) and the Private Sector. Monitoring and evaluation has become a strong factor in assisting the national programme in addressing gaps in programmatic areas.

The national programme with its small, but committed staff has a few challenges that impede some of its progress. These include, but are not limited to, stigma and discrimination policy development and legislative reform, human and financial resources, space, and Support services

## **DISASTER MANAGEMENT**

The Ministry of Health recognizes the importance of disaster preparedness and response, as it strives to ensure that its health facilities remain functional in the event of a natural disaster, and health personnel are trained.

The Ministry of Health & Environment is a member of the National Emergency Planning Organization (NEPO), and the Permanent Secretary serves as the

Chairman of the Health Sub-committee for NEPO which includes representatives from the Dominica Red Cross, Fire & Ambulance, Medical Association, Nursing Association, and other health professionals from the Ministry of Health.

### *Partners*

The Pan American Health Organization (PAHO), with support from the European Commission Directorate-General for Humanitarian Aid (ECHO), as part of its commitment to the Safe Hospitals initiative, is involved in a program to strengthen communities through safer health facilities in the Caribbean. Dominica has, therefore, been selected as one of the countries where this program has been implemented. This initiative assessed the existing safety level of the PMH should it be affected by a disaster, evaluating the structural, non-structural and functional aspects of the hospital. A Safety Improvement Plan was subsequently developed, and with the assistance from PAHO, corrective measures will be taken.

The Ministry, in collaboration with PAHO, will be conducting a vulnerability assessment of all the main health centres (type III) including the hospital and the more vulnerable type 1 clinics. This is in an effort to put in place mitigative measures to protect these facilities in the event of a disaster.

### **Training**

In March of this year (2009), twenty-five persons from the response agencies (Red Cross, Fire & Ambulance, Police and Hospital) were trained in Emergency Care and Treatment (ECAT), which was facilitated and sponsored by PAHO. Health District teams have also been trained in Disaster Management to include Disaster Plan preparation. Consequently, all districts and the PMH have in place disaster plans.

Additional training sessions in Mass Casualty Management and Incident Command System will be conducted in 2008. This training will be geared towards improving the skills of members of the response agencies.

### **Recommendations**

- There is the need to train persons as facilitators in Mass Casualty Management in order that local trainings can be undertaken on a wider scale.
- Regular simulation exercises should be held to test disaster plans
- A Health Disaster Coordinator should be in place
- A health sector disaster plan must be developed
- Regular training in areas of Disaster Management should be undertaken for health professionals
- The Draft Avian Flu Plan should be finalized

## Overseas Referral Programme

Tertiary care is accessed in neighbouring islands, financed mainly from private sources. Persons seeking medical attention in the other Caribbean islands can apply to the Ministry of Health & Environment for financial assistance. In order to qualify for assistance, there are certain criteria which must be met:

- Individuals need to submit to the Ministry a completed Medical Assistance Form (obtained at the Ministry of Health or PMH). This form should be completed by the individual, the Welfare Department and a consultant physician.
- The service for which financial assistance is required must be one that is not available in Dominica.
- Along with the completed form, individuals should submit an invoice from the health institution/physician stating the approximate cost of the treatment and a letter indicating the appointment date.

Once this has been received, the Medical Assistance Committee will meet to discuss each case and determine the level of assistance which the Ministry can provide. The Permanent Secretary reviews the recommendation of the committee and gives the final approval. Payment is made directly to the attending physician or the health institution.

The following table gives the number of persons who were granted financial assistance for medical care and the amount spent by the Ministry on the various cases:

**Table 4.16: Persons receiving medical assistance**

YEAR	NUMBER OF PERSONS	COST EC \$
2004/05	15	40,761
2005/06	27	27,739
2006/07	30	46,253

*Source: Ministry of Health*

Some of the main services being sourced are radiation, MRI, CAT scan, consultations and various surgeries. These services are mainly obtained from Guadeloupe, Martinique, Barbados, Antigua, Jamaica and Trinidad.

## **PRIVATE SECTOR**

**Private services** are limited to private ambulatory care delivered by practitioners, generally on a part-time basis, and by the Dominica Planned Parenthood Association offering family planning services. Fees for these services are paid at point of service. Social Security does not own or operate health care institutions.

**Private participation** in the health system is very limited. There are privately operated primary care clinics; services are also available on a part-time by private medical practitioners. There are no non-profit organizations involved in the provision of health services.

The only **private Hospital** on the island, the **Justin Fadipe Medical Centre** has an eleven (11) bed capacity with approximately 40 full-time staff and 35 part-time. The hospital provides 24 hour care for both inpatient and outpatient services. Services provided include surgery, gynaecology, paediatrics, medical consultations, X-rays, scans, acute labs, endoscopies and many more.

### **Challenges:**

- The high cost of importing supplies/goods
- Complete trust in the company from whom the supplies are being ordered
- Limited staff
- Lack of a blood transfusion service
- Lack of an efficient and reliable ambulance service
- Ability to balance the philosophy of the institution with that of shareholders

### **Laboratory**

La Falaise House is the only private medical laboratory operating on the island. The lab offers many tests which are not available at the national lab. Their services are sometimes utilized by the government when equipment at the national lab is not functioning.

### **Imaging**

The privately owned diagnostic centre **Medicus Diagnostic**, provides services in areas of Diagnostic Ultrasound, X-rays, Contrast Radiography and Vascular Ultrasounds to include Echocardiogram and EKG. These services are provided as per referrals or walk-ins.

### **Dental Service**

There are approximately four private dental clinics on the island. Services offered include surgical extractions, fillings, root canals, crowns, dentures, cleaning and bridge placement. These dentists operate on a fee for service basis.

### **Traditional medicine**

The Chinese Medical Centre specializes in Chinese **traditional medicine** and therapy. Medical treatment is offered for several ailments including; gastritis, hepatitis, back pains, and paralysis.



## **Physiotherapy**

At least two physiotherapists provide private services to the public. Treatments include, medical massage, medicine acupuncture and hot therapy

## **Alternative Medicine**

Most Dominicans use local herbs or “bush medicine” as it is commonly called, in the treatment of common ailments such as colds, gastro intestinal disorders, skin problems and application of poultices. The practice has been passed down throughout generations. With few professional herbalists practising on the island, advice on what type of herbs should be used is usually sought from older persons.

Many people use herbs before consulting a medical doctor, and some even discard the medicines prescribed in favour of herbal medicines. Herbs are grown by individuals in pots or gardens, or they can be purchased at the local market or as dried preparations from roadside vendors.

## **SECONDARY CARE SERVICES**

### **INTRODUCTION**

The Princess Margaret Hospital (PMH) is a 227-bed acute care facility dedicated to providing specialist care. The facility provides for inpatient services, ambulatory specialist clinics, emergency service and diagnostic services. Specialty services include ENT, Ophthalmology, Radiology, Oncology, Gastroenterology, Intensive Care and Haemodialysis. Despite the inadequacy of available resources and the concurrent increasing workload, PMH has utilized its trained professionals and its technological resources to provide services in an efficient and appropriate manner to enhance survivability and achieve reduction in morbidity.



*Source: Hurricane Dean Report, 2007, Tony Gibbs*

Budgetary (cash flow) restrictions impact the quality of services and pose numerous challenges for management and staff. These restrictions were particularly felt during the early 2000's, and consequently, PMH fell short in goal achievement, resulting in traumatic experiences that have affected both staff and patients.

Quality care is also affected by the continuous attrition and non-replacement of professional staff, due mainly to migration and insufficient attention applied to the supply of essential Human Resources. The Ministry of Health is currently addressing both issues.

## **ORGANIZATION**

The services offered at the PMH are organised mainly along professional vertical lines, although some level of cross-functional teamwork is required to ensure the provision of optimum care. See Organizational chart (Appendix II)

### *General Administration*

Administrative (operational management) direction is given (assumed) by a Management Team comprising the Hospital Services Coordinator (HSC) as chair, the Hospital Medical Director (HMD), Matron (head of nursing) Facilities Manager, and the Permanent Secretary of the Ministry of Health. The HSC assumes oversight for administration and resource management. However, notwithstanding the above, there is no existing legislation in support of this structure; hence key decisions are taken at central level, a point remote from the hospital.

### **The 1998 Value for Money audit undertaken by KPMG cited the following:**

*The historical (current) structure of PMH is the “root cause of many of the areas of inefficiency and effectiveness in the delivery of services. It was judged by many managers to impact significantly on the quality of services provided.”*

*In the existing structure of HMD, (Hospital Medical Director) Matron, and HSC (Hospital Services Coordinator), no one person is “able to exercise management authority to achieve results and make difficult decisions” – thus “leading to a lack of accountability for performance at the senior management level in the hospital.”*

**The KPMG Audit raised the issue of lack of management autonomy and ineffective management structure and recommended that management autonomy be transferred from Government to Ministry (MOHSS) and subsequently to the hospital for personnel and financial management in a staged approach.**

None of these recommendations have been implemented. In 2002, a consultant hospital management advisor engaged by the Caribbean Development Bank (CDB) advisor, concurred with these recommendations. To date, the most significant change implemented is the appointment of a Facilities Manager, with

responsibility for Maintenance, Housekeeping, Dietary, Central Sterilization, Security and Grounds. The security services have been contracted out, as well as ancillary services.

## HOSPITAL USAGE PATTERNS

### 1. General Occupancy

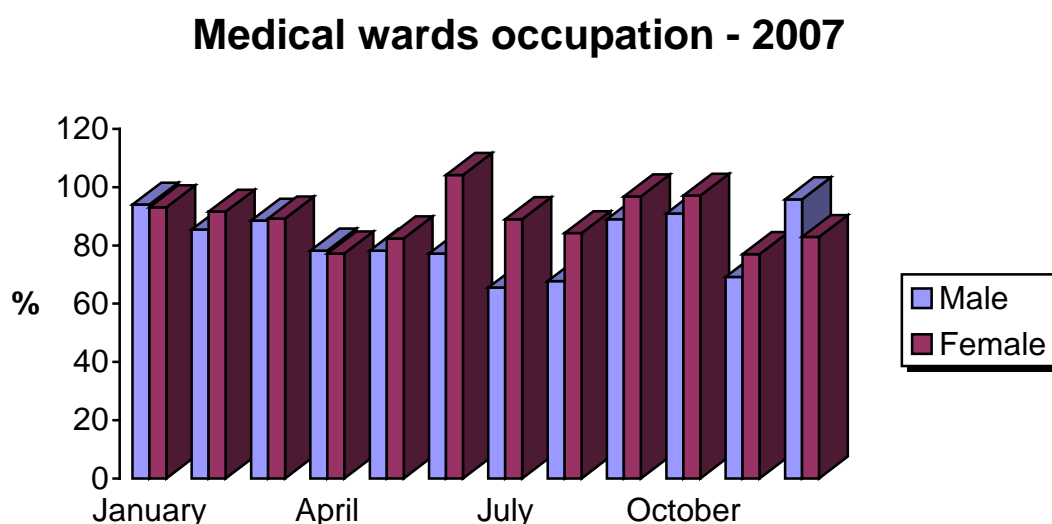
The occupation rates for the PMH for 2001, 2005 and 2007 were recorded at 77%, 75% and 63% respectively (median value). Occupancy rates are high for the Psychiatric and the Medical Wards and low for the Maternity and Paediatric Wards as seen in table 4.16. Admissions are high for the Maternity, Paediatric and Female Surgical Wards and very low for the Psychiatric Wards. While the number of Maternity and Paediatric beds may be adequate, there is a need to increase the number of Medical beds available. The trend towards increased community management of psychiatric patients would indicate that the present number of beds on the psychiatric wards is adequate for the foreseeable future.

## INPATIENT SERVICES

### *Medical Department*

The two medical wards exhibit high occupancy rates, which often peak above carrying capacity. It is anticipated that with the growing trend of demographic transition towards an aging population, chronic diseases will become more prevalent, thereby necessitating longer-term care. This trend is likely to continue and may have implications for healthcare policy development and management.

**Figure 4.16**



Source: Medical records Department: PMH

The three most frequent causes for admission for females are (in descending order) Deep Vein Thrombosis (DVT), Hypertension (HTN) and Diabetes Mellitus (DM); and for males, Cardiovascular Accident (CVA), Hypertension and Diabetes Mellitus (DM). However, the illnesses contributing to long stay for the medical

patients overall, are CVA, uncontrolled HTN / DM and End Stage Renal Disease (ESRD).

### *Challenges*

The overflow of patients poses the greatest challenge to the medical Wards. The Layout does not provide for separate areas for special groups such as adolescents, terminally ill and elderly requiring palliative care. Lack of specialist training for both doctors and nurses requires priority attention.

**Table 4.17**  
**In –Patient Statistics PMH- 2008**

Ward	Admissions	Discharges		Patient Days	Days Discharge Patients	Average Length of Stay	No. of Beds	% of Occupancy	Average Daily Census	Bed Turnover Rate
		<i>All Deaths</i>	<i>Total Discharges</i>							
Female Medical	794	72	789	5423	5221	6.6	20	74.3	14.9	39.5
Male Medical	685	64	678	4890	4400	6.5	20	67.0	13.4	33.9
Female Surgical	1137	21	1136	5863	5098	4.5	24	66.9	16.1	47.3
Male Surgical	873	17	852	4921	4079	4.8	18	74.9	13.5	47.3
Maternity	1355	0	1347	4983	5187	3.9	38	35.9	13.7	35.4
Paediatric	948	3	952	3839	3575	3.8	34	30.9	10.5	28.0
Neonatal	326	8	321	2069	2058	6.4	15	37.8	5.7	21.4
Psychiatric Female	82	0	90	4075	1831	20.3	22	50.7	11.2	4.1
Psychiatric Male	264	1	268	9888	5148	19.2	33	82.1	27.1	8.1
Intensive Care Unit	74	18	74	12	6	0.1	3	1.1	1.5	24.7
<b>TOTAL</b>	<b>6538</b>	<b>204</b>	<b>6433</b>	<b>45951</b>	<b>36597</b>	<b>5.7</b>	<b>227</b>	<b>55.5</b>	<b>125.9</b>	<b>28.3</b>

Source: Medical Records PMH

### *Surgical Department*

There are three surgical wards at PMH; male, female, and paediatric; staffed by eight specialists in the areas of general surgery, gynaecology, ophthalmology and otorhinolaryngology. Patients are admitted from both public and private systems. Congestion remains a long standing issue, particularly following emergency admissions. The most common conditions contributing to long stay in the Surgical Wards are Diabetic gangrene, Burns and Fractures. Fractures are more common among young males as a result of MVA's.

### *Operating Theatre (OT)*

There are four operating rooms, including one on the Maternity Unit. Elective surgery is performed Monday – Friday between the hours of 8am -4pm, Saturdays and Sundays 8am – 2pm and an on-call system is used thereafter. The top three conditions for surgical procedures by specialty are shown in table below.

**TABLE 4.18**

<b>GENERAL SURGERY</b>	<b>OPHTHALMOLOGY</b>	<b>GYNAECOLOGY</b>	<b>ENT</b>
Hernia	Cataract	Uterine Fibroids	Tonsillitis
Breast Lump	Pterygium	Abnormal Uterine Bleeding	Thyroid Conditions
Diabetic Gangrene	Diabetic Retinopathy	Dysplasia	Nasal Polyps

**Source:** Medical Records, PMH

The figures from the Operating Theatre (OT) indicate a progressive decline in surgery performed over a five- year period. The decline of 26.25% (2005) and 43.8% (2007) in emergency surgery performed is significant. The information is deficient as there was no further desegregation of the data to reflect work done within the other surgical sub specialities such as Ear, Nose and Throat (ENT), Ophthalmology and Orthopaedics.

**Table 4.19 No. of Surgeries – 2003 - 2007**

<b>Surgery</b>	<b>2007</b>	<b>2006</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>
Major operations (Gynaecology)	152	119	113	194	228
Major operations (Surgery)	587	502	700	641	652
Minor operations (Gynaecology)	118	130	158	154	183
Minor operations (surgery)	536	461	597	526	521
Emergency operations	191	217	340	325	335
<b>Total operations</b>	<b>1393</b>	<b>1212</b>	<b>1568</b>	<b>1515</b>	<b>1584</b>

*Source: Medical Records, PMH*

## Intensive Care Unit (ICU)

Intensive Care services were introduced at PMH in November 2006, with assistance from the government of Cuba. The three bed unit is staffed by two (2) Cuban doctors, and nine (9) nurses, four of whom are Cubans. One of the local nurses is currently in Jamaica, undergoing training in Intensive Care. A total of eighty (80) admissions were recorded for the first fourteen (14) months of operation.

A Hyperbaric Chamber was installed two (2) years ago in collaboration with the Ministry of Tourism. It is used primarily for diving accidents. A total of five hundred thirty four (534) ICU patient days were recorded at an occupancy rate of 1.25 patients per day. Table 4.20 Shows 5 main causes of admission to ICU.

**Table 4.20: Causes of Admissions to ICU**

NO.	UNDERLYING DISEASE	# CASES	% TOTAL ADMISSION
1	Cardio Vascular Disease	23	28.75
2.	1 <sup>o</sup> Respiratory Disease	20	25%
3.	Post Operative	16	20%
4.	Sepsis	12	15%
5	Traumatic Brain Injury	10	12.5%

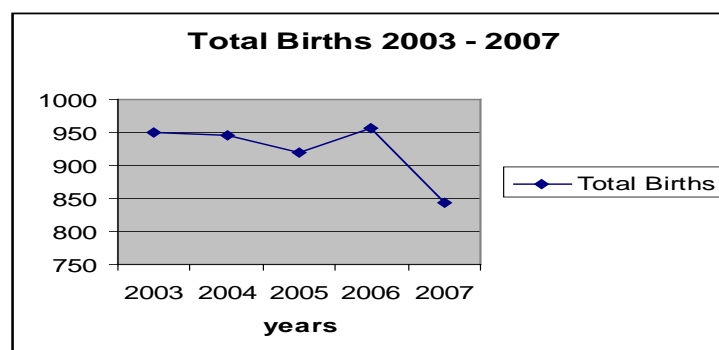
Source: ICU Report 2007, Medical Records PMH

Male admissions accounted for **53.75%** and female admissions **46.25%**, while female mortality rates among all deaths were recorded as **51.72%**. Overall mortality rates were stated as **36.25%**, male mortality among male admissions were recorded as **32.56%** and female mortality among females admissions recorded as **40.54%**.

## Maternity Unit

The Maternity unit consists of three wards and an operating theatre. Most deliveries are done at the PMH. See figure 4.17 below.

**Figure 4.17**



The Maternity Unit registered a decline in births of 13.5% in 2005 and 19.16% in 2007; with 89.46% (2005) and 89.92% (2007) of those births at the acceptable weight of 2,500 grams and over. However, of note is the increase in the number of male births over female births of 1.79% (2003), 8.15% (2004) and 3.26% (2005). Maternal deaths have remained at zero. This decrease in the number of births can be attributed partly to migration among women of child bearing age.

Staffing poses the greatest challenge to the Maternity Unit. The number of midwives lost to attrition has never been replaced, and the layout of the Unit further compounds the problem, in that it is impossible to stay in one ward and see what is happening in another.

**Table 4.21 : Maternity Department- Comparative report**

ACTIVITY	2007	2006	2005	2004	2003
Total Births	844	956	920	945	950
L.U.S.C.S	84	93	110	107	91
Instrumental deliveries (forceps & vacuum)	0	5	4	2	0
Breech deliveries	0	3	3	14	24
Other malpresentation deliveries	0	0	0	0	0
SVD – spontaneous vertex deliveries (normal)	561	778	795	765	816
Induced and augmented deliveries	258	374	285	269	271
B.B.A (born before arrival at PMH)	6	0	2	5	7
Twin births	8	10	14	12	13
Triple births	0	0	0	2	0
Primiparas	244	290	286	296	337
Multiparas	592	658	619	649	623
Parity unspecified	0	0	0	0	1
Live birth 2500 grams and over	713	881	805	880	869
Live births under 2500 grams	85	75	97	74	76
Live birth weight unspecified	0	0	0	0	2
Still births	14	24	18	17	11
Female live born infants	440	511	445	441	472
Male live born infants	404	445	475	518	489
Infants deaths	0	0	0	0	0

Source: Medical Records, PMH

### Paediatric Ward

The paediatric Department consists of two sections, the medical and surgical wards, with special rooms for children requiring critical care. The most frequent causes for admissions to the Paediatric Ward are Asthma, Bronchopneumonia, and Gastro Enteritis.

Total admissions recorded were 1054 (2005) and 943 (2007) with three (3) deaths for both years under review. Number of patient days totalled 4508 (2005) and 3543 (2007), with an average census of 12.4 (2005) and 9.7 (2007) and a monthly bed turn over rate, (median value) of 2.6 (2005) and 2.2 (2007).



### Neonatal Unit

The Neonatology Unit forms part of the Paediatrics Department, and while secondary care is easily achievable at PMH, specialist critical care is generally accessed overseas.

The leading cause for admissions and mortality in the nursery is premature births. (*Dominica Medical Association, January 2006*)

The Neonatal unit recorded total admissions of 372 (2005) and 363 (2007) admissions, with 2253 (2005) and 1899 (2007) patient days, an average census of 6.2 (2005), 5.2 (2007) and monthly bed turnover rate of 1.95 (2005) and 2.1 (2007) (median value).

### *Challenges*

The Dominica Medical Association, in 2006 cites “*insufficient human resources*” as “*significantly impacting the optimal functioning of the Neonatal Unit (NNU)*”. The document lists “*neonatal training for nurses, doctors and additional personnel like a respiratory therapist*”. A trained neonatologist would have significant positive impact on infant mortality.

None of the staff currently deployed to the Unit are trained in Neonatology. There is the need for policy to retain a core of specially trained personnel at the NNU. The current practice of rotating the nursing staff is seen as counterproductive.

Equipment and consumables are required to support the neonates. There is also a need to strengthen the capacity of the Medical Laboratory for the timely delivery of the additional services, which are requested in times of great urgency.

## ***AMBULATORY SERVICES***

### **Outpatient Clinics**

Specialist outpatient clinics are provided for, on the basis of an appointment schedule. This includes mainly referrals from other doctors and discharged patients for follow-up. Services are provided in all the main specialities of Paediatrics, Obstetrics & Gynaecology, Ophthalmology, Surgical and Medical and the related sub-specialities including Oncology and Haemodialysis.

In the department of surgery, the ophthalmology clinic is the largest with a total attendance of 1,946 clients, although the figures have decreased from 2004, when a total of 2,097 were seen. The decline may be due to the availability of alternative services provided by Cuban Eye Specialists. The Unit conducts three clinics per week with an average of seventeen (17) patients per clinic.

On an average fourteen (14) clients are seen at each ante-natal high-risk clinic. Three clinics are conducted weekly, one by each consultant gynaecologist.

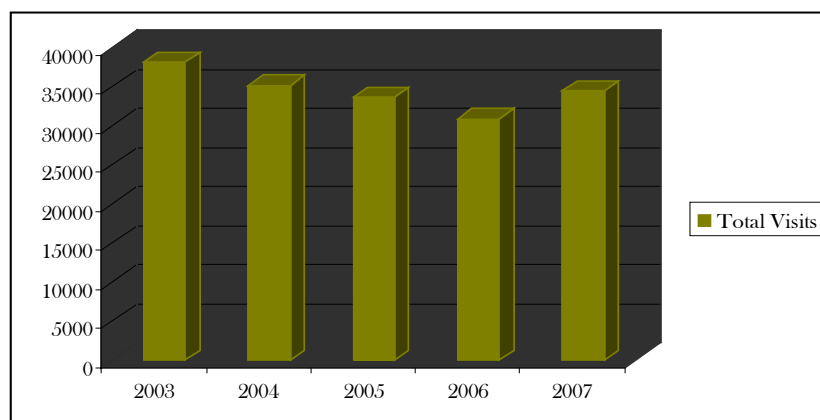
Total number of visits to the Out Patient Clinic recorded, indicate a general increasing trend from 13,259 (2001), to 42,142 (2005) and 40,863 (2007).

### ***Accident and Emergency Department (A & E)***

The A & E Department operates on a triage system, with services provided on a twenty-four (24) hour basis. The department is treated like a walk-in clinic, with clients from all over the island visiting for various ailments ranging from coughs and colds to chronic illnesses. For the past several years, the services at the Roseau Health Centre were disrupted due to dislocation; resulting in clients accessing care at A&E. Health centres throughout the island are usually closed during the afternoons. Clinical impressions indicate that approximately **25%** of visits to A & E can be classified as genuine emergencies. This increases the workload burden on the small staff, and further, has implications for queue management, and quality of care. In addition, the physical layout and small space occupied by the department create privacy, quality, and physical fatigue challenges for staff and patients alike.

The statistics indicate a general decline in visits made to the Accident and Emergency (A & E) Department at PMH. Data gathered from the Medical Records Unit indicate a decline in patient visits of **14.46%** and **11.63%** for 2005 and 2007 respectively over 2001 figures.

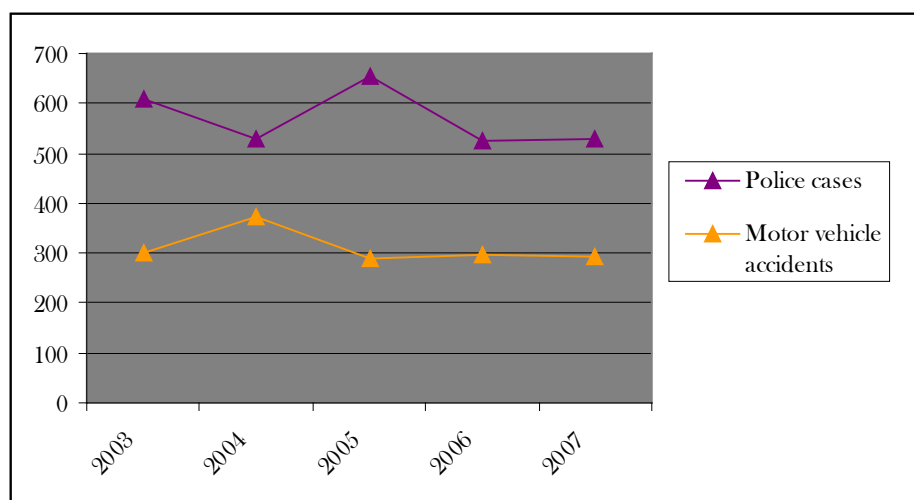
**Figure:4.18 Total number of visits to A&E 2003 - 2007**



*Source: Medical Records, PMH*

There has been a steady decline in visits to A&E resulting from Motor vehicular accidents of **32.01%** (2005) and **31.8%** (2007)

**Figure: 4.19 Trend showing number of MVA's and Police Cases**



Source: Medical Records, PMH

## Challenges

- Need for improving human resource capacity as initial responders in the management of the critically ill through training and re certification in advance life support for adult and children.
- Post graduate training in A&E nursing.
- Postgraduate training in emergency medicine required for Doctors posted in the A&E Department
- Improved and additional equipment, consumables and drugs
- Appropriate triaging for queue management and redirecting of cases best suited for treatment at primary care level (at Health Centres).
- Redefining and improving the physical space to achieve comfort and security for staff and patients
- Standardizing patient care through the development of, and monitoring, hospital management policies and patient care protocols.

## Haemodialysis

Haemodialysis Services were introduced as an outpatient service in 1990 with one (1) patient and one Dialysis machine. The services continued to expand and in 1998 the number of patients grew to nine, along with a corresponding increase to three haemodialysis machines.

Currently, the Haemodialysis Unit is equipped with six machines and provides services for 26 persons. Despite the high cost of providing this service to persons who are largely unable to afford it, the PMH has sustained dialysis services for patients who are in need of the treatment. With the introduction of new sterilizing equipment, there was an initial reduction of **56%** in the monthly cost supplies per person (from \$2,500 in 2001 to \$1,100 in 2005). A large proportion of this cost is borne by the Princess Margaret Hospital.

The workload at the Dialysis Unit increased from **37%** in 2005, to **102.4%** in 2007. Total number of procedures increased from 1,931 in 2001 to 3909 in 2007. PMH also provides Holiday Dialysis services for persons who are vacationing in Dominica.

#### Challenges

- Inadequate number of dialysis machines results in longer hours of work for the staff.
- The frequent breakdown of machines due to high usage.
- Demand exceeds available resources

#### Imaging (Radiology) Services

Services are largely under four main headings: Radiographs, CT Scans, ultrasound Scans and Special Procedures. Mammography services were re-introduced in 2006. Statistics show that the most common body part x-rayed is the extremities, followed by spine and pelvis. Abdominal ultrasounds are performed almost six times more often than any other scan.

The implementation in 2003 of the project *“Strengthening of Imaging and Maintenance Services”* resulted in significant improvements in service provision and workload reporting. This was a USD\$761,000 project funded by PAHEF (Pan American Health Foundation) with funds donated by the Diekel Foundation.

Some of the achievements under this project are:

- Electronic database for improved recording and reporting of clinical data and financial information
- Training in Radiography for four persons at COSTATT in Trinidad and Tobago,
- Training attachment for one Equipment Maintenance Technician in Iceland
- Training one X-ray Assistant to perform Quality Assurance tests on selected imaging equipment
- Purchase of Testing Equipment
- Commissioning and acceptance testing for mammogram machine
- Staff training and skills upgrade in mammography

#### **CONCLUSION**

PMH continues to provide quality services in spite of its many challenges. The management of the Princess Margaret Hospital requires immediate reform. In its present structure, the hospital is segmented and managed as several smaller departments of the Ministry of Health. Consequently, decision making is

fragmented, delayed and frustrating, as a result of continued emphasis on retaining vertical lines of command and control from central level.

Staff security is a cause for concern. Fencing of PMH and improved security (to include control of visitors) is being considered by the Management team.

It is anticipated that special attention will be paid to the recommendations of the KPMG “Value for Money” Audit, as well as the recommendations of the CDB consultant in strengthening and modernizing the management of the Hospital.

The emergence of cardiovascular disease as the main cause of extended stay at the hospital demands a strengthening of the medical department, and the development of a Cardiology Department.

# Resources for Health



## **5. HEALTH CARE FINANCING**

### **INTRODUCTION**

In Dominica, Health financing has gained much attention in the past few years, because of the need to identify ways to achieve financial sustainability and ensure equitable access to health services. The sources for financing the health sector, as well as the mechanisms used to allocate these resources within the health system, directly affect the final outcome.

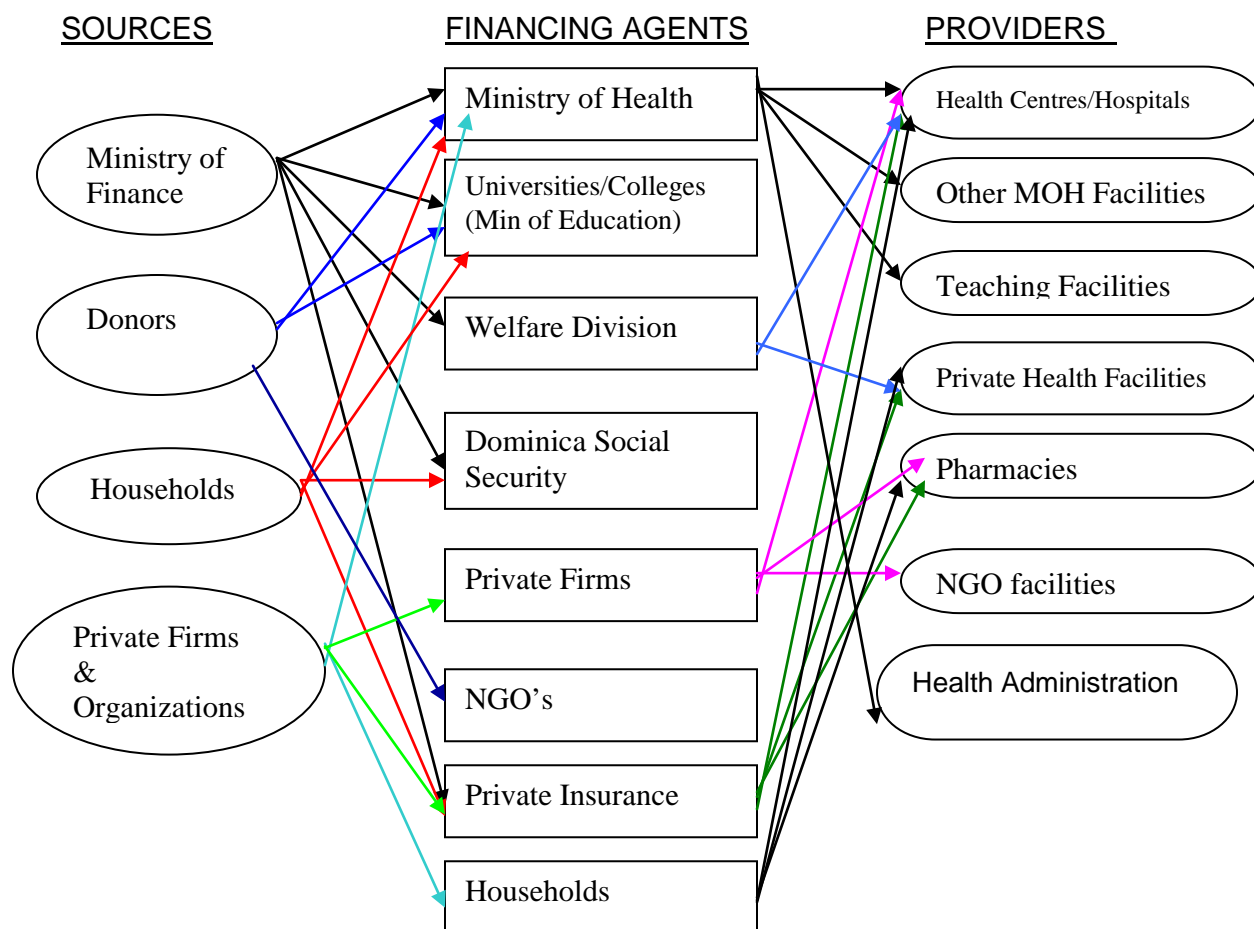
The Ministry of Health has for decades struggled with the many challenges associated with financing of its health services. Presently, the Government of Dominica spends approximately 13% of the annual recurrent budget on the health sector. Traditionally, the Dominican public paid very little for Public Health Care Services. Expectations for a higher quality and wider variety of health services are on the increase. This, coupled with increase in life expectancy with associated new patterns of diseases, creates greater demand for increased health care financing. The 2008/09 budget allocated an increase of 0.25% over that of the previous year to the Ministry of Health.

The historical budget mode is practised in Dominica. Hospitals and other health facilities are funded through a detailed line budget allocated to the Ministry of Health. There is no economic incentive to produce services in the most cost effective way.

### **PATTERNS OF RESOURCE FLOW**

#### **Flow of Funds**

To understand the flow of resources through the health system, it is important to answer the following questions, where does the money come from (sources)? Who receives the funds from the sources (financing agents) and to whom did the money go (providers)? Thus, funds flow from various sources to financing agents and finally to providers of health care services as illustrated by diagram below.



**Figure 5.1 Flow of Funds through the Health System**

## Sources of Financing

Currently, health care in Dominica is being financed through four main sources:

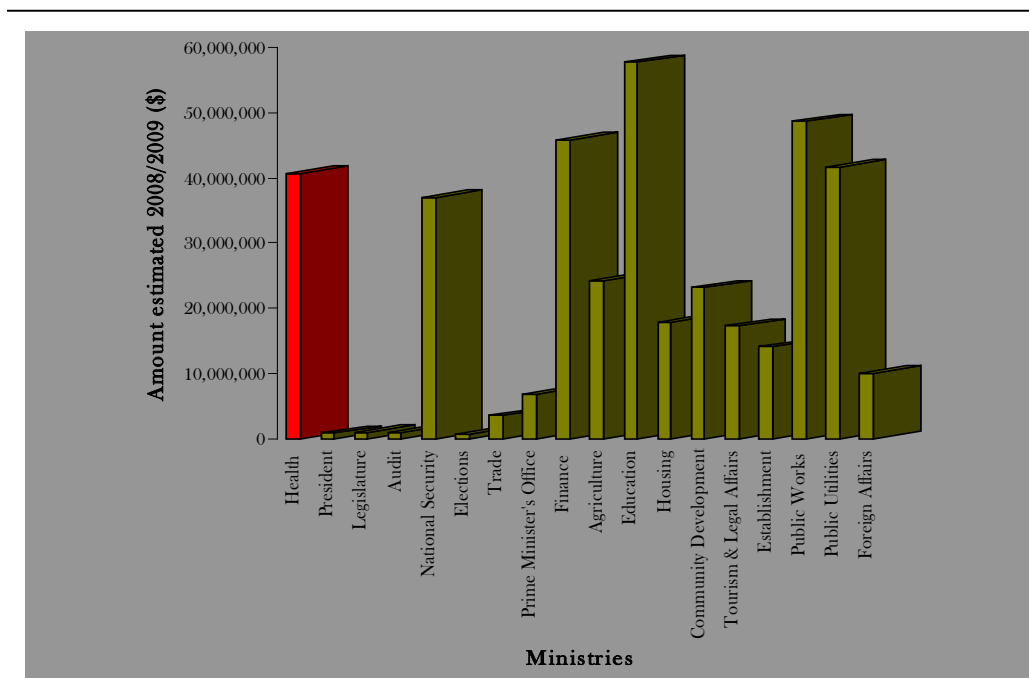
1. General Tax Revenue
2. Out of Pocket Payments
3. Private Insurance
4. Donations

### 1. General Tax Revenue

Government allocates approximately 13% of its recurrent budget (or 5% of GDP) to health. There are competing sectors for government finances and therefore any significant increase in allocation poses a challenge. Financing health care from general tax revenue is generally inadequate to meet the health needs of the population. There are no taxes earmarked for health or health levies. Table below shows allocation of budget for the fiscal year 2008/09.

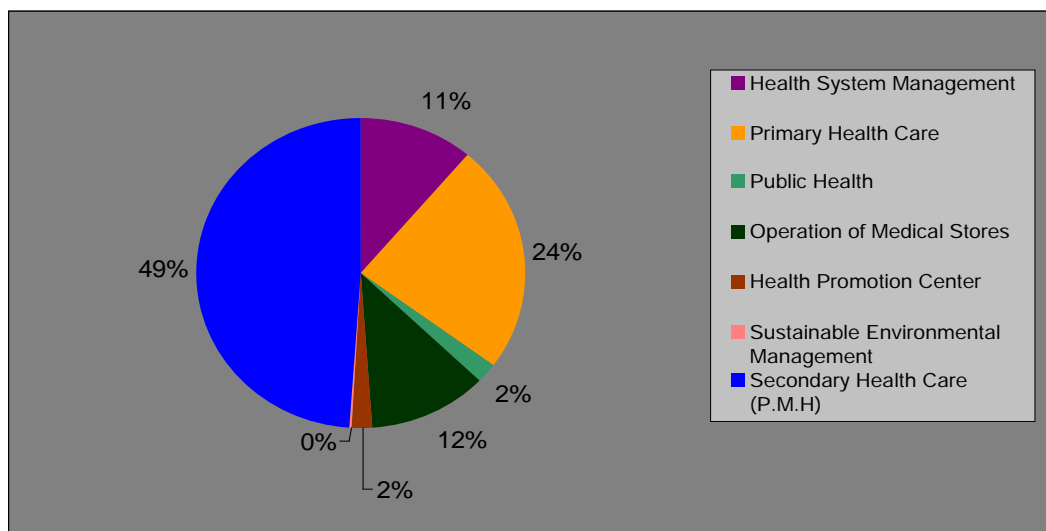


**Figure 5.2: Estimated Budget per ministry**



Source: Government Estimates 2008/09

**Figure 5.3: Summary allocation 2008/09 budget**



Source: Government Estimates 2008/09

As seen in figure 5.3 almost half of the budget (49%) is allocated to secondary care, compared with less than half that amount (24%) for primary health care. With the increasing number of persons suffering from CNCD's, serious consideration will have to be given to prevention instead of curative

programmes, if any impact has to be made on combating these lifestyle diseases.

**Figure 5.4 Allocation by Health District 2008/09**

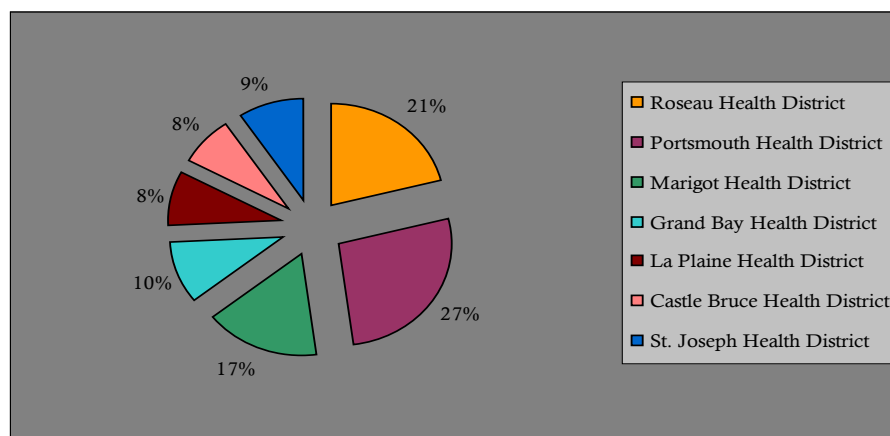


Figure 5.4 Source Government Estimates 2008/09

It is unclear how funds are allocated to the different health districts. Almost half of the population of Dominica (36,275) is located within the Roseau Health District, yet the budgetary allocation to Portsmouth Health District with a population of 8,203, is more than Roseau. See Figure 5.4. Roseau has sixteen (16) health facilities compared to eight (8) in Portsmouth

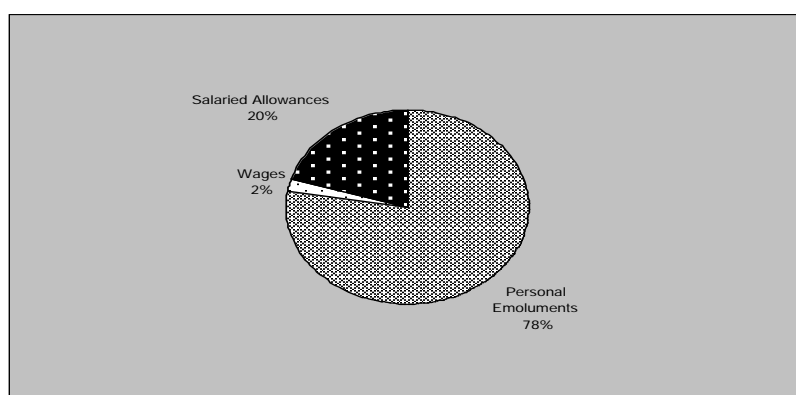
**Table 5.1**

<b>S.O.C Summary Estimates 2008/2009</b>	<b>\$</b>	<b>%</b>
Personal Emoluments	11,052,623	58
Wages	327,672	0.9
Salaried Allowances	2,881,154	8
<b>SUB TOTAL</b>	<b>19,229,697</b>	<b>66.9</b>

Source: Government Estimates 2008/09

Almost 70% of the budget goes towards payment of salaries and allowances, with 78% of the total amount allocated to personal emoluments.

**Figure: 5.5 Allocation of salaries and allowances**



Source: Government Estimates 2008/09

## 2. Out-of-Pocket Payments

In an effort to obtain alternative sources of funding for the health sector, the Government of Dominica through the Ministry of Health embarked on a number of initiatives, one of which was an increase in User Fees at the Princess Margaret Hospital in 1994 (Cabinet decision #89/243/246). The objectives of the increase in User Fees were to increase revenue and to create public awareness of the cost to government for providing health services.

The increase in the User Fees did not achieve the desired objective of increased revenue for the health sector, due to several factors including the weak collection system at the Princess Margaret Hospital. The practice of requiring consumers of health to pay at the point of accessing the service is deemed regressive and has negative accessibility and equity implications.

**Table 5.2**

User Fees (collected at Princess Margaret Hospital)

	<u>FY2006/07</u>	<u>FY2005/06</u>	<u>FY2004/05</u>
Hospital Fees	1,128,926.34	1,127,506.00	1,156,714.75
X-ray Fees	394,439.41	312,172.53	325,290.05
Laboratory Fees	412,639.41	400,480.60	340,076.00
Medical School Fees	430,112.00	430,112.00	430,112.00
Mortuary Fees	13,825.00	6,975.00	7,450.00
Nurses Hostel Fees	6,050.00	----	----

CT Scan Fees	302,223.46		
<b>Total</b>	<b><u>2,579,471.44</u></b>	<b><u>2,259,643.80</u></b>	
Central Medical Stores	<b>577,210.11</b>	<b>486,739.99</b>	<b>298,608.67</b>

Currently only 10 –12 % of operations costs are recovered through user fees, therefore the rationale for pursuing alternative sources of funding for health care services still remains.

### *3. Private Insurance*

The 2007 household survey indicated that only 20% of the population had some level of insurance coverage under an individual or employee medical plan, of which 47.4% were covered under a group health plan. The survey also showed that 44% of those with insurance coverage paid a monthly premium of less than \$99.00, while 32.3% paid \$100 - \$199.00 monthly, and 2.12% paid a monthly premium of \$500.00 and over.

On the issue of NHI, 71.2% of the respondents were of the opinion that there was a need for National Health Insurance (NHI) for Dominica; and 80.37% would be willing to pay the NHI premium. It is also note worthy that 23.95% of the population did not state an opinion regarding the need for NHI.

### *4. Donations*

The health sector has over the years received donations in the form of cash and kind. The Private Sector Foundation for Health Inc. has, over the past two financial years, contributed a total of \$430,481 to the health sector disaggregated as follows:

Procurement of Equipment	\$288,438
Assistance for overseas care (households)	\$142,043
Other Donations (in cash and equipment/supplies)	
Calendar Year 2004	\$ 868,565
Calendar Year 2005	\$1,020,979

## **Analysis of Expenditure and Revenue**

The analysis is limited by the lack of available data. There is no systematic means for collecting information on a regular basis, and little information exists on household expenditure and health insurance, therefore it is not possible to conduct a trend analysis. Most persons use a combination of mechanisms for financing their health care

The proportion of the recurrent budget allocated to the MOH has remained relatively constant, and actual expenditure is always dependent on the levels of cash flow. Actual recurrent expenditure remained much the same at \$29.184 million for Financial Year (FY) 2005/06 and \$29.334 million for FY2004/05, representing 96% and 93% respectively of the approved budget, while for the FY 2000/01 and FY 2002/03, actual expenditure represented 89% and 92% respectively of the approved budget. These figures do not reflect the true expenditure for services provided by the Ministry of Health. In addition, some health needs of the population remain unmet.

Revenue is generally in the form of fees paid for services offered by the public health sector, with PMH and the Central Medical Stores being the main revenue generating agencies of the Ministry of Health. During the period July 2004 to June 2007, spanning three (3) Financial Years (FY); revenue collected at PMH showed little variation of \$2,259,644.00, \$2,579,471.00, and \$2,385,992.00 for the three FY respectively. The CMS showed steady increase in revenue collection for the same period with \$298,609.00, \$486,740.00 and \$577, 210.00 for the three FY's respectively.

A household survey, which was conducted early in 2007, revealed that 28.7% of the population spent on average \$300.00 annually on health care. The data also indicated that approximately 6.3% of the population spends between \$1000 and \$1300, and 7.4% spend over \$2000.00 on health annually. Significantly, 12.04% are recorded as receiving health care free of cost. It was not possible to obtain information on amount spent on drugs and pharmaceuticals.

**Overseas care** is financed through personal savings, bank loans, contributions from family and friends, government and private sector contributions, friendly governments' (or donors) subsidies.

Findings from the household survey indicated 19.2% of **households** had persons who had traveled overseas for medical treatment. Of those who traveled overseas for treatment, 24.6% spent less than \$5000.00 for the care they received, 17.6% spent \$5000.00 - \$10,000.00 and 5.1% spent in excess of \$30,000.00. A significant 30.3% traveled to Cuba, mainly for eye care, at little expense to the household. The Ministry of Health has increased its allocation for financing of overseas medical care as the demand has increased.

**Table 5.3 Allocation for financing of overseas medical care**

Year	Amount	% increase over previous year
2006/07	50,000	45
2007/08	75,000	33
2008/09	100,000	25

Source: Ministry of Health

Resources flow to the **Social Security** from households and employers, both private sector and public sector. Health benefits are paid to individuals (households) with a small percentage accruing to the health sector. These benefits are categorized as sickness and maternity and employment injury.

During the period 2002 –2006, the number of claims for sickness benefits showed a slight increase from 4710 in 2002 to 5414 in 2006 with comparable increase in benefits paid from \$2.1 to \$2.7 (M). By contrast, and in keeping with the trend of decreased birth rates, maternity claims declined slightly from 305 in 2002 to 248 in 2006 with benefits paid out also reflecting slight decline \$0.751 - \$0.724 (M). Employment injury benefits paid, registered an increase with \$0.077 in 2002 to \$0.195 (M) in 2006.

The majority of Dominicans have no **health insurance** coverage. Private Health insurance generally targets persons of the workforce and also gives rise to accessibility and equity issues, especially for the poor and the elderly. A few large employers and trade unions provide group insurance for their employees. Workplace group, as well as individual health insurance, provides protection for a segment of population against catastrophic health situations and provides a source of financing for the health services.

Main benefactors of the health sector are nationals residing overseas, NGO's, international organizations, charitable organizations and private sector organizations.

**Donations** are considered an unreliable source of financing, which can be sporadic and sometimes inappropriate. Donations are in the form of gifts of equipment (new, refurbished or used), medical supplies, building materials and other goods and services or monetary contributions. There is no effective system in place for costing of donations, and most donated items are sent straight to the health facilities, hence there is no accurate record kept.

The economic down turn, which Dominica experienced during the 1990's, significantly affected the flow of resources into the health services. This was evident by the paucity of the cash flow and the accumulation of debt to suppliers of health goods and services both locally and internationally.

### **Main Challenges in Financing Health Care**

1. The rise in operational costs of health services due to the high externally driven costs of supplies and equipment, internal wastage and inefficiencies resulting from poorly defined systems and structures and lack of accountability
2. Public pressure from consumers of health for high quality services supported by technologically advanced equipment requiring extensive investment in the infrastructure both in terms of purchasing and sustainability.
3. The continuously increasing cost of administrative and health care costs, the burden of which is borne by the general tax revenue.
4. Competition for state financing by other “productive” sectors resulting in a smaller share of available resources being allocated to the “social” sectors. The effect on the health sector is often reflected in areas of “unmet” healthcare needs.
5. The increase in life expectancy and the dominance of chronic non - communicable diseases (CNCD’s) such as diabetes and hypertension contribute to escalating cost of health care, and difficulty in maintaining personal recurring health expenses.
6. Heavy dependence on public financing
7. Slow economic growth

## **National Health Coverage**

The strong pressures brought to bear on government financing by other sectors will threaten the ability of government to provide the financial resources required to sustain the high levels of subsidy currently being enjoyed by the health sector. Consequently, policy makers are advocating for the design and implementation of a mechanism that will contribute to the sustainability of the appropriate levels of healthcare financing and which will contribute to the accessibility and equity health developmental goals.

Consistent with the Cabinet Decision #89/243/246, a Committee was appointed in 1995 to initiate discussions with a view to developing a National Health Insurance Scheme. The development phase was never completed, therefore the initiative was aborted.

A Social Health Insurance system is now proposed for Dominica under the pseudonym National Health Coverage (NHC). This new strategy is in response to escalating health care costs and the desire of the government of Dominica to

increase individual responsibility with special provision for the under privileged. To be effective, NHC should meet the following objectives.

1. Provide adequate levels of revenue to finance and sustain essential healthcare services
2. Provide protection for families and individuals against financial catastrophe resulting from unpredictable ill health
3. Introduce and enforce administrative and financing policies and regulations to improve efficiency in the provision of health services
4. Ensure that the burden of payments is shared equitably by all population groups
5. Promote access to healthcare for all population groups.

Any health care financing initiative requires sound organizational and management structures that would bring efficiency and effectiveness to the delivery of healthcare services. Strengthening the management capacity of the managers of health services is essential for NHC success. In addition, attention must be given to the management of information to facilitate the collection and analysis of appropriate and reliable data for informed decision-making. The differing roles of the Ministry of Health, the agency responsible for the administration of the NHC and all health care providers must be clearly distinguished and communicated. In order to succeed, NHC requires the establishment of good accounting and financial systems; systems that will provide timely, appropriate and accurate information and a well trained staff.

## B. USER FEES

Consideration should be given to strengthening the present system in order to improve effectiveness. The Billing/Revenue collection system could be strengthened by:

1. Outsourcing billing and revenue collection
2. Reviewing fee structure, which would facilitate billing
3. Continued development of the Patient Administration System (PAS) to include the accounting module

## C PRIVATE SECTOR INVESTMENTS

While government remains the main provider of health care in the country, it will continue to bear the burden of financing the sector. In addition, there is the belief that any service provided by government should be free, and that it is not politically acceptable to take action against persons refusing to pay. There is urgent need to review the fiscal regime to attract private investors in the health services.



Financing the health sector in Dominica may require action outside of the traditional approach of mainly public sector investment. A model which encourages significant investment by the private sector must be considered. This method of health care financing should involve private/public sector cooperation, which would benefit all sectors of the population and /or provide services outside of the core services currently being provided by the public sector.

## HUMAN RESOURCES FOR HEALTH

### Introduction

The WHO Report (2006) reveals an estimated shortage of almost 4.3 million doctors, midwives, nurses and support workers worldwide. Dominica, like many of the small developing states, is subject to the many global phenomena of limited resources, inadequate investment in health sector, migration of skilled workers and lack of institutional capacity to develop and monitor health policies relating to quality. Expenditure on wages and salaries constitute the largest item of expenditure in the health budget and thus, people are our most valuable resource. This document subscribes to the WHO definition of health workers.



Included are those who promote and preserve health as well as those who diagnose and treat disease. Also included are health management and support workers – those who help make the health system function but who do not provide health.

The period 2006 – 2015 has been declared as the decade of human resources for health (HRH) for the Americas. According to the PAHO/WHO document "Toronto Call to Action," *this decade presupposes the need for making long-term, intentional and coordinated efforts to promote, strengthen, and develop the work force in health in all the countries of the Region of the Americas.*

Health sector reforms in Dominica were primarily financing reforms, and inadequate attention was paid to the health workforce. The various SWOT analyses conducted during the development of the Strategic Plan for Health 2009- 2018, point to the many human resource management challenges faced by the Ministry of Health and the need to bring about meaningful changes that would make a visible difference.

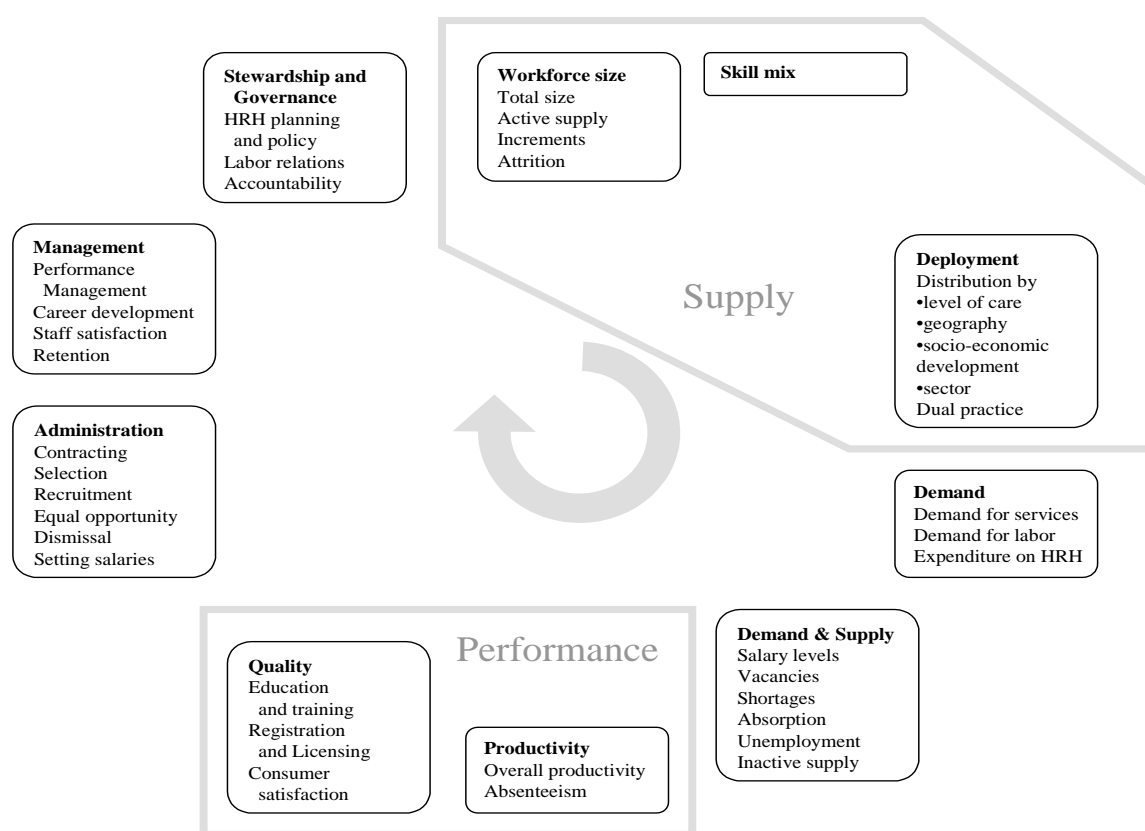
Technical staff within the Ministry of Health is qualified and experienced; particularly nurses. The correct skills mix is usually present within all sectors with

a few areas of deficiency such as planning and policy-making. There is need for re-organization in order to get the best value.

Numbers have not grown along with the expansion of services. Existing staff have been utilized to do new programmes. Late 2008, the first steps towards the development of an HRH policy and Plan were realized. Planning for the maintenance of motivated health staff requires current and accurate data about the situation of the health workforce.

The introduction of new systems while holding on to the past has adversely affected efficiencies. However, the system seems to be doing well in spite of its limitations. The supply and motivation level of the health workforce have implication to both access and quality of health services. ...The health related MDGs cannot be achieved if vulnerable populations do not have access to skilled personnel and to other necessary inputs<sup>20</sup>

**Figure 5.6** Human Resource Framework (Anna Dominick & Christoph Kurowski 2003) in Appraisal of human resources for health situation in Tanzania



The framework starts with attributes of workforce supply, including size, composition and deployment. It then captures health labor demand and outcomes resulting from the interplay between demand and supply. Other

<sup>20</sup> Dussault & Franceschini, 2006

attributes of workforce performance follow under the headings of quality and productivity. The final elements of the framework portray key HR management and HR governance functions as determinants of workforce performance under the control of employers and policy decision makers.

The MoH envisages having a dedicated HRH manager who would give attention to such issues as succession planning and training. There is need for building incentives into the system which would encourage staff to specialize in various fields since in this very competitive environment; many are contented with basic qualifications. Like the rest of the public service, there is no reward system in place.

## Nursing

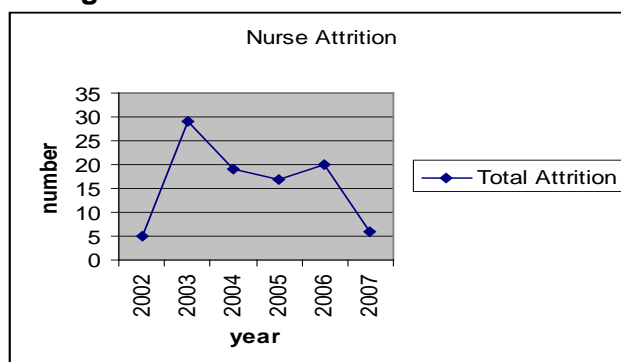
Ratio of nurses (public) 1:270

Ratio of non-medical professionals (CHA's ) 1: 784

Nurses form the largest cadre of health workers and HR information on nurses is readily available compared to other cadres of workers.

There are three hundred and fifty nurses on the allocation of the public service in Dominica. A total of 96 nurses left the service during the years 2002 – 2006. (See Figure 5.7) Twenty three (23) of them retired and seventy three (73) resigned. Resignations usually followed migration. The greatest loss was in the year 2003 – a total of twenty nine (29).

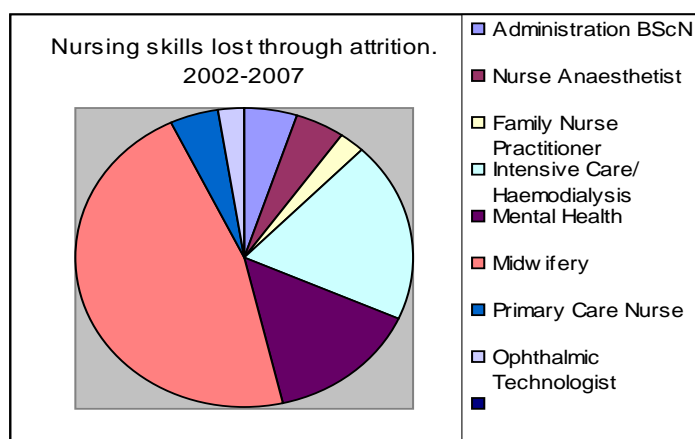
**Figure 5.7**



Source: Ministry of Health

Most of the nurses migrating during the period under review were senior nurses, many with specialized skills. Nineteen (19) of these were midwives. The system has never recovered from that loss. The next area of greatest loss was Intensive Care; consequently, the Ministry had had to recruit nurses from Cuba to manage the ICU. The only trained ophthalmic technician also left during this period. Summary of skills lost is depicted in figure 5.8

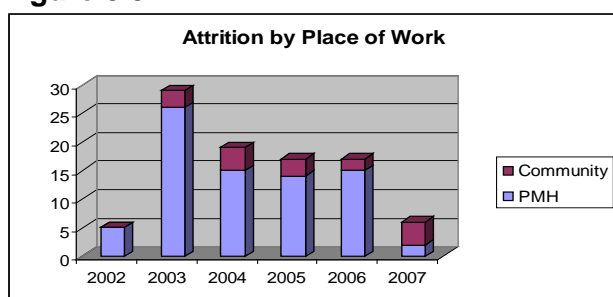
**Figure 5.8**



Source: Ministry of Health

Community nursing services were not as severely affected as hospital; however, in most instances, nurse migration had a more profound effect on the community, since Type I health centres are staffed by only one nurse, and their replacements became very difficult. Most of the nurses migrating were midwives and the inconsistency in training further compounded the problem, as one could not rely on trainees to fill the gap. See figure 5.9

**Figure 5.9**



Source: Ministry of Health

The WHO in its draft code of practice on the international recruitment of health personnel, observed that health worker migration from those countries experiencing a crisis shortage in their health workforce is further weakening already fragile health systems, and presents a serious impediment to achieving the health-related Millennium Development Goals.

## **Regulatory framework and management practices**

### *Registration and Licensing*

**Nurses** in Dominica register with the General Nursing Council for Dominica. Registration requirements include the successful completion of a prescribed nursing course in an institution approved by the Council, the passing of the Regional Examination for Nurse Registration. The Regional Examination for Nurse Registration is prepared by the General Nursing Councils of the

CARICOM region (RGNC's). Nurses are required to renew their licensure every three years. Proof of continuing education will soon become a requirement.

Foreign trained nurses can register with the GNC. Registration fees for foreign trained nurses are set at the US equivalent of the local fees.

**Medical doctors** are required to register with the Dominica Medical Board (DMB) following medical training in a registered medical school, and complete a one-year internship. Currently, the Board does not register doctors as specialists, but this is expected to change following the review of the Medical Act. The Act has been amended to allow for free movement of professionals under the CARICOM Single Market and Economy (CSME).

The DMB is responsible for accrediting medical schools on the island. There is no body responsible for the registration and licensure of allied health professionals such as physiotherapists, opticians, podiatrists etc. It is anticipated that the revised Medical Act will make allowances for inclusion of these cadres, since because of their small numbers it would not be practical to have a separate body responsible for their regulation.

**Pharmacists** are currently registered by the Dominica Medical Board. A Draft Pharmacy Act containing significant changes has been submitted to Cabinet. The draft makes allowance for the appointment of a Pharmacy Board which would have responsibility for registration and practice among pharmacists.

#### *Unionization*

As public servants, health workers in Dominica have freedom of association which gives them the right to join a trade union of their choice. Membership in a union is optional. Most health workers belong to the Public Service Union (PSU). Nurses and doctors also have their professional organizations, but they do not have bargaining rights.

#### *Appointments*

Appointments are made by the Public Service Commission and by Cabinet, upon recommendation of the Permanent Secretary. The academic and professional qualifications of the applicant are taken into consideration.

The vast majority of health workers in the public sector are on permanent contracts that entitle them to a variety of benefits including pensions and gratuities.

Fixed-term contracts are becoming increasingly common, and operational contracts are also used.

Fixed term contracts are used under the following circumstances:

1. When urgently required skills are in short supply and tasks are of limited duration.
2. When policies seek to bring people with fresh skills and talents from outside the Public Service.

### *Vacation leave*

Annual rates of vacation leave are dependant upon the salary of the officer' and they are allowed to accumulate leave based on their level. Because most positions in healthcare require formal training, it is not possible to replace workers proceeding on leave; however, for those officers holding senior positions, allowances are made for someone with similar qualifications to act in the position.

Procedures for dismissal of public health workers are laid out in the Public Service Regulation. Disciplinary action is rarely taken against officers, consequently dismissals are very rare.

### *Absenteeism*

Absenteeism continues to be a major cause for concern. According to *General Orders*, an officer can be absent from work for two days before submitting a medical certificate. This is interpreted by many workers to mean that they are entitled to take two days casual leave every week. No disciplinary action is taken against such behaviour; therefore, it too continues to proliferate, resulting sometimes in near crisis situations. The nursing service is usually the sector most affected. Public officers are required to sign attendance registers, and any absenteeism should be reported by the supervisors. There is little adherence to these rules.

### *Retirement*

Amendments to the Public Service Act and the Pensions Act in 2005, provided for the extension of the age of retirement from 55 years to 60 years in the case of nurses and teachers, and the rest of the public officers as provided for in the Schedule to the new section 13 of the Public Service (Amendment) Act which has the effect of postponing the age of retirement by one to five years<sup>21</sup>.

### *Salary scales*

Health workers in the public sector are civil servants; therefore, they receive benefits in the form of salaries and pension contributions.

Salaries of public sector health workers are set according to the Government scale with few executive scales for senior/political positions and a different arrangement for government statutory boards whose salaries are influenced by the market. Where the salary of the position is scalar, it is normal for the officer appointed to a permanent position to be paid initially at the minimum of the scale, and for his salary to be increased by annual increments at rates provided, until he reaches the maximum salary.

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<sup>21</sup> Public Officers and Pension Rights  
Establishment Personnel and Training Department March 21, 2005

Only few additional benefits exist, such as the travel allowance. Information on the difference between medical and non medical workers is not available. The private health sector is very small and not well established; hence information on salaries in the public sector vs. private sector is not available.

## **HRH Management**

HRH consumes approximately 41% of the budget of the Ministry of Health, and the consequences of not acting to improve how HRH are trained, deployed, managed can be costly and can have long-term negative effects.

The HRH function has traditionally been neglected, probably because it is complex and difficult, it requires skills which are not always available, and it is politically sensitive. Human resource management is an area of weakness in the Ministry of Health. There is no designated HR manager in place; consequently, HR activities are carried out by various persons including the Chief Medical Officer, Chief Nursing Officer, Administrative Officer Executive Officer, and even Permanent Secretary.

One of the main setbacks of this ad hoc arrangement is the lack of succession planning and coordination of training. Many of the persons trained in various specialties have left soon after completion of their studies, because no provisions were made for their return into the system; consequently, Dominica continues to train but does not retain its workers.

In 1997, the Republic of Cuba and the Commonwealth of Dominica signed the first Joint Cuban – technical Cooperation for the lending of medical collaborators from Cuba. During the past 10 ten years, Dominica has benefited from Cuban specialist services in the fields of psychiatry, Oncology, Radiology, General surgery, Internal medicine, Optometry, Pathology, Anaesthesiology and Bio-medical engineering.

On the initiative of the Prime Minister, the Technical Assistance was broadened to include Nursing. The government has also had a long standing agreement with the government of Nigeria to provide medical personnel under the TAC programme. For over 20 years, Dominica has received assistance in specialist services in the areas of Mental Health and Psychiatry, Paediatrics, Laboratory, School of Nursing among other services.

Presently, the Diagnostic centre at Portsmouth and the Intensive care Unit at PMH are fully staffed by Cubans. The only trained Mental Health Level I Nurses at PMH are Nigerian Volunteers. To ensure sustainability of these programmes, there is need for Dominica to train its own staff.

## *HR Information Management Systems*

Apart from the nursing service, there is no existing database to provide information for decision making. Information on HRH is extremely limited and of poor quality. A database will prove beneficial to many including educators, policy makers, planners, providers and consumers and others in the health care delivery market.

This database will be able to:

- Provide current information on status of HRH
- Determine the HRH ratios for all health professions, allowing for comparisons with standard guidelines and an assessment of adequacy of health personnel in terms of numbers, distribution and skill-mix
- Determine whether the current cadre of health professionals is consistent with Dominica's epidemiological profile
- Assess training needs

### *Access*

There are no trained persons available to manage and collect data for HRH. The Ministry lost the services of one such person who was forced to seek employment in the private sector.

### *Management system*

The performance management system is the same system used in the wider public service. Performance appraisals are required for all staff on an annual basis.

### *Challenges*

The performance management system is a good one; however, there is difficulty in implementation as no work plans are prepared at the beginning of the reporting period, resulting in reduced levels of compliance in completion of reports. There is limited feedback to officers.

Many supervisors view the tool as being punitive and not developmental. Mid term reviews are rarely done as supervisors are too involved in service delivery. The span of control for some supervisors e.g. nursing, is too wide.

### *Promotion*

Methods to promote health workers include seniority list, performance based system, and advertisement of vacancies. Information on career paths and promotion is not available and Dominica does not have career succession plans for health workers. Job description documents are available for all categories of staff. Academic achievement does not guarantee promotion. This has resulted in lack of motivation among workers, many of whom have financed their education at great personal sacrifice. There are a large number of workers holding acting positions; some for as many as 13-15 years.



### *Retention and motivation*

Very little attention is given to ways of motivating health workers. In spite of their limitations, the health workforce in Dominica has always been very committed. Salaries for health workers, particularly nurses, are not very competitive. In 2005, the Government set up a Task Force to examine the issues germane to the motivation and retention of nurses. Some of the recommendations of the Committee have been implemented, however, other important ones such as a revision of their salaries to make them comparable to that of the police service, have not yet received any attention.

### *Continuous professional education*

The scope for continuous professional education has increased with the advent of on-line courses. Prior to that, most professionals would have to access courses overseas.

The Nursing service at PMH has a vibrant in- service education programme which has been integrated into the system. The General Nursing Council for Dominica requires proof of continuing education as part of the criteria for renewal of licensure. The Medical staff at PMH also provides a weekly forum where presentations are made and cases discussed.

### *Training*

Conditions of training awards are set out in General Orders. Scholarship programmes for health personnel, like other public service workers, are available through the Ministry of Education. As a means of retaining those offered scholarships, a bonding mechanism is in place. The student enters an agreement to serve for a specified period dependent on the value of the scholarship, or the amount of study leave granted. The PAHO provides most of the training to health care personnel through funding of local programmes, attendance at regional, short courses and provision of fellowships for longer term training.

### *Attrition-*

The main causes for attrition are migration, resignation, compulsory retirement, expiration of contract and death. Figures are only available for the nursing service.

### *HIV AND AIDS & HRH*

There are no HIV and AIDS workplace programmes and national infection prevention control policies in the public health system.

## **3. Education System**

The Dominica State College through its Faculty of Health Sciences is the main training institution for health care workers on the island. Over the past two years, the faculty has expanded the courses offered to include a 3-Step programme in

Environmental Health which is being offered with the assistance of PAHO, and an accelerated programme upgrading Level II nurses to Level 1. Given the heavy dependence on foreign assistance to train health workers, many of whom have to access that training outside of the country, the Ministry of Health is seeking to increase the number of courses which could be offered locally. The return on this investment is that a larger number of trainees could be trained, utilizing the same amount of money which would support only one person for overseas training.

There are two off- shore medical schools on the island; however, most of the medical doctors in Dominica are trained in Cuba at no cost to the government.

**Table 5.4**  
**Graduation by cadre – for past 5yrs**

<b>Cadres Trained</b>	<b>Graduates</b>					
	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
General Nursing				30	69	56
Nursing Assistants					28	-
Nursing Assistant Midwives	-	-	-	-	7	-
Environmental Health	-	-	-	-	-	18
Level II to Level I nurses						42

Source: Ministry of Health

**Table 5.5**  
**Cadres Trained within past 5 years**

<b>Cadres Trained</b>	<b>Duration of training</b>	<b>Drop out</b>	<b>Entry requirements</b>	<b>Cost</b>	<b>Average graduate age</b>
General Nursing	3 years	0.05%	5 CXC grades 1, 2 in English, Maths, Biology, Chemistry	8,000 XCD	26
Nursing Assistants	15 months	.05%		2,000 XCD	24
Nursing Assistant Midwives	12 months	.0%	CXC passes in English, Biology	2,600	34
Environmental Health	-	1%	4 CXC passes	6,000	30
Level II to Level I nurses				4,000	40

Source: Ministry of Health

Due to the fact that local training was inconsistent as shown in table above, and the lack of funds for overseas training, demand has exceeded output for the past five years. In an effort to balance the situation, the intake of nursing students was increased by approximately 200%.

The main challenge of the FHS is the inability to run programmes concurrently because of the lack of qualified trained staff with different specialization, and very limited physical space. The FHS requires at least 11 trained staff to run its programmes. Presently, there are about 20 Cuban nurse educators assisting in the nursing programmes. This large number is due to the fact that they are all specialists (teach only one subject).

The standard of the courses would be greatly improved with the addition of a modern clinical lab with simulators and the clinical software with simulation exercises. The library needs to be expanded to accommodate the growing number of students. The large number of students compared to the number of patients available for clinical practice poses a great challenge, given that medical students also use the same facilities. The school would benefit from a “living lab”, i.e. a ward with patients who are not critically ill, which would be dedicated to the school.

Notwithstanding its challenges, the FHS plans to introduce the BSc in nursing next year beginning with an RN to BSN program. It also anticipates starting a program to train medical technologists.

In January 2008, a SWOT analysis which formed part of a short questionnaire survey conducted among heads of departments and upper level managers in the MoH yielded the following results;

### SWOT Analysis – Ministry of Health

<b>Strengths</b> Some dedicated willing managers Knowledge of the diversity of the health system Most departments headed by someone with extended training in that area Strong partnerships	<b>Weaknesses</b> Weak ineffective management Weak recruitment and retention mechanisms Insufficient opportunities for staff development Limited job mobility and career planning Lack of appreciation by policy makers of the role and function of the health care worker Low wages that are not consistent with the rest of the public service
<b>Opportunities</b> E- learning Continuing education	<b>Threats</b> Global phenomenon of health worker shortage Free movement of professionals under CSME agreement Attractive packages offered by overseas recruiting agencies Salaries offered by other professions



### *Challenges*

- Number of incumbent professionals in various categories falls short of budgeted positions
- Number of budgeted positions insufficient
- High rates of migration
- Health workers often perform sub-optimally due to low wages, excessive workloads and poor support
- Dominica does not have a sustainable, comprehensive listing of human resources in health
- Where data are available it is often incomplete particularly in respect of the private sector contribution to health care
- Legal frameworks
- Bureaucracy

### **Conclusions**

Any country, rich or poor, needs a well trained and motivated stock of health workers, sufficient in numbers, and well distributed -- geographically, and by type and level of services -- to ensure that its health care system is performing well.<sup>22</sup> The formulation and effective implementation of HRH policies and practices is one of the most critical tasks in the health sector. Regrettably, in the case of Dominica, this is often neglected, or at least fails to receive the attention it deserves.

The health related MDGs (reduction of maternal and child mortality, reversing the progress of HIV-AIDS, TB and other communicable diseases) are highly dependent on the delivery of proven and effective interventions by health workers. The effectiveness of these interventions and services, in turn, depends on the availability and optimal deployment of personnel, on the quality of their training and supervision, on their access to other necessary inputs (medicines, vaccines, information systems), and on their motivation to provide good quality services where and when these are needed.

The progress towards achieving the health-related MDGs and other health objectives which countries like Dominica pursue is largely determined by the capacity of health services delivery systems whose performance depends on a combination of access to basic inputs (financial, technical, human, material), and adequate management.

### **PHYSICAL INFRASTRUCTURE**

Approximately 95% of all health facilities on the island are Government owned. This includes one general hospital, two district hospitals and a network of 52

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<sup>22</sup> (OECD 2002)

health centres and clinics. Most of these facilities were constructed during the implementation of the Primary Health Care System in the early 1980's with funding received from donor agencies such as the Brenda Strafford Foundation, Basic Needs Trust Fund and the European Union STABEX Funds. The focus was "bringing health to the doorstep". The strategy worked very well then, however, with improved roads and economic activity, including increased private provision of services, the level of utilization in many, has decreased significantly.

Maintenance of these buildings poses a challenge and as indicated by the results of the Vulnerability Assessment 2009 presented in Table 5.8, many of the facilities are not properly equipped and therefore cannot adequately address the health care needs of the communities. As the trend moves gradually towards a wellness model, the number and type of facilities needed will have to be evaluated taking into account the following:

- It is evident that individuals have become more mobile and therefore will access health care at any location.
- It may now be more prudent to upgrade the seven health centres and selected clinics
- The focus must now shift to the establishment and maintenance of wellness Centres
- Provision of higher levels of health care including improving tourism related services.
- As air access is improved, there is need to upgrade Marigot hospital to a Trauma centre

The Vulnerability Assessment results briefly indicate the status or conditions of all of the health facilities on the island. It also bears evidence of the challenges faced by the Facilities.

Table 5.6

Vulnerability Assessment for Health Centres in the 7 Health Districts			
Health District	Health Centre	Findings	Recommendations
1. Portsmouth	Portsmouth R F Armor Hospital Health Centre  <b><i>The Portsmouth Hospital and Health Centre occupy the same building. Primary and Secondary Health Care services are administered in designated areas.</i></b>	<ol style="list-style-type: none"> <li>1. The building is a concrete structure with concrete roof designed to allow for a free flow or circulation of fresh air (some skylight windows facilitate this flow) and concrete floor.</li> <li>2. Skylight windows over men's ward allow rain during adverse weather.</li> <li>3. Small skylight windows in kitchen area also leak during rain storms.</li> <li>4. Other areas of the concrete roof leak during heavy rains(some areas affected by the earthquake of 2005 bear cracks that may have to be repaired)</li> <li>5. There are areas of stagnated water where waste water should flow freely and some plumbing issues have been highlighted</li> <li>6. The premises are opened and easily accessible to the general public</li> <li>7. The Electricals and plumbing and telephones are in- wall. The electrical system has been plagued with issues and the staff of the Hospital/Health Centre complains of having to operate in a relatively dark environment – numerous requests for servicing have not solved the problems being experienced. Main water supply from public system.</li> <li>8. The hospital is equipped with 4 concrete water tanks however; these have not functioned since installation.</li> <li>9. The hospital is easily accessed by the general public</li> </ol>	<ul style="list-style-type: none"> <li>• Skylight windows should be fitted with hurricane shutters or similar type of installation that can be easily operated or installed in the advent of storms</li> <li>• The skylight windows in kitchen and leaking areas of the roof require immediate attention to stop the leaks and possible electrical short-circuiting due to water penetration or seepage</li> <li>• Maintenance of the electrical systems, Plumbing, repairs to waste water disposal systems ( this area needs urgent attention as excess water during storms would not flow freely and cause flooding, stagnant water provide easy breeding areas for mosquitoes), etc</li> <li>• Fencing of the premises to prevent vandalism and invasion of clients' and staff safety and privacy.</li> <li>• A thorough assessment of the system must be carried out and repairs done immediately to ensure that the systems functions well</li> <li>• The old hospital building should be renovated to provide living quarters for medical staff employed by the ministry of Health in the area. A comparative cost of construction and maintenance verses rent can be developed to justify or reject renovation of the building.</li> </ul>
	Vieille Case	<ol style="list-style-type: none"> <li>1. Concrete structure with concrete walls, galvanized roof, aluminum windows and wood doors</li> <li>2. Building is shared with other community program</li> <li>3. Electrical, plumbing and telephone installations in-wall</li> <li>4. Waiting area fitted with side mounted concrete blocks for added ventilation</li> <li>5. The building is easily accessed from the main road</li> <li>6. May be able to withstand some adverse weather conditions</li> </ol>	<ul style="list-style-type: none"> <li>• Maintenance to electricals and plumbing</li> <li>• Centre requires a paint job</li> <li>• Two doors need replacement</li> <li>• Installation of a water storage tank recommended</li> </ul>

	Anse De Mai	<ol style="list-style-type: none"> <li>1. The building is made of galvanized roof, with asbestos type walls and aluminum windows, wood doors and a concrete foundation and floor</li> <li>2. Electricals and plumbing and telephones installations,— in-wall</li> <li>3. The asbestos walls appear to be termite infested though the material itself will not be eaten by the termites</li> <li>4. The integrity of the masonry outside walls may no longer be sound</li> <li>5. Wall paint flaking off</li> <li>6. The outside entrance doors are weather worn and damaged; the internal doors are also termite infested.</li> <li>7. The ceiling is water damaged and infested with termite and wood ants.</li> <li>8. The floor tiles have come loose due to wear and tear over time.</li> <li>9. Operators for windows in waiting area do not work.</li> <li>10. The galvanized roof is badly corroded and many of the sheets must be replaced.</li> <li>11. Main entrance door to nurses' annex damaged</li> </ol>	<ul style="list-style-type: none"> <li>• Electrical system requires servicing and may be faulty due to corroded wires that are exposed to water.</li> <li>• The selection of a suitable alternative site for the construction of a new health center for the area, taking into consideration the challenges being encountered at the current site or construction of an alternative type of structure as a replacement in the same area.</li> <li>• That immediate consideration/attention should be given to this request as the health of the nurses in this area is perceived to be at risk and the integrity of the structure is uncertain.</li> <li>• The nurses' annex requires repairs to the kitchen counter, the galvanized roof and the front entrance door.</li> <li>• Installation of a water storage tank should also be a priority</li> <li>• Maintenance of the electricals and plumbing</li> <li>• Kitchen counter in annex damaged and should be repaired</li> <li>• Door frame to kitchen also requires repairs</li> </ul>
	Dublanc	<ol style="list-style-type: none"> <li>1. The building is a concrete structure with concrete walls, concrete floors, galvanized roof, aluminum windows and wood doors. The structure is relatively sound and the galvanized roof is in good condition</li> <li>2. Electrical, plumbing and telephones installations – in-wall,</li> <li>3. Main entrance and side door weather damaged</li> <li>4. There is evidence of termite invasion of the ceiling</li> <li>5. Some of the window operators do not work</li> <li>6. Some floor tiles have been dislodged due to normal flow of traffic over time</li> <li>7. A number of faucets are malfunctioning</li> <li>8. Electrical and water supply comes from the public system, there is no stand by electrical supply or water storage system</li> </ol>	<ul style="list-style-type: none"> <li>• Sink and faucet needed in patient toilet with supporting cupboard for additional storage</li> <li>• Complete and thorough examination of the ceiling to determine extent of termite damage and preparation for replacement or repairs to it.</li> <li>• The electrical system requires maintenance</li> <li>• Centre may have to be fenced to reduce the occurrence of vandalism</li> <li>• A water storage tank with at least 500 gallon capacity should be installed to provide for times of water shortages</li> <li>• Replacement of weather damaged doors</li> <li>• Replacement of floor tiles</li> </ul>

	Penville	<ol style="list-style-type: none"> <li>1. The building is a concrete structure with concrete walls, concrete floor, aluminum windows, wood doors and aluminum front and rear entrance doors, galvanized roof with side mounted concrete blocks for added ventilation in waiting area</li> <li>2. Electrical, plumbing and telephones installation, – in-wall</li> <li>3. Exit door frame is loose due to broken concrete support around it.</li> <li>4. Kitchen cupboards are aged</li> <li>5. Toilet in patients area requires replacement</li> <li>6. The centre is easily accessed by the public by a secondary</li> <li>7. Is likely to be able to withstand some adverse weather conditions</li> </ol>	<ul style="list-style-type: none"> <li>• Door frame to exit door in examination room requires repairs.</li> <li>• Kitchen cupboards require renovation/repairs or should be replaced and made more functional.</li> <li>• Both interior and exterior walls of the building need repainting</li> <li>• Concrete slab around perimeter of building requires resurfacing</li> <li>• Building should be fenced to prevent the occurrence of vandalism especially to the water supply line at rear of building.</li> <li>• Roof is in good condition</li> <li>• May require the installation of a water tank to provide for times of water shortages</li> <li>• During heavy rains and windy combinations side mounted blocks allow water into the waiting area</li> </ul>
	Clifton	<ol style="list-style-type: none"> <li>1. The Clifton Health centre is a concrete structure with galvanized roof, aluminum windows and wood doors</li> <li>2. Fitted with electrical and plumbing installations and telephones in-wall</li> <li>3. The building is in a poor condition at this point and requires extensive renovation.</li> <li>4. The Government of Dominica Basic Needs trust Fund Project 5 has began the process of addressing the renovation based on a request by the Ministry of Health and Environment</li> </ol>	A new building is currently being constructed to replace the old structure used as the Health centre in that area.
	Dos D'Ane	<ol style="list-style-type: none"> <li>1. The building is a concrete structure with concrete walls, concrete floors, Galvanized roof, aluminum windows, wood doors</li> <li>2. Electrical, plumbing and telephone installations in-wall</li> <li>3. Waiting area enclosed by wrought iron bars</li> <li>4. Nurses' annex constructed as part of building with all amenities</li> <li>5. Easily accessed from public road</li> </ol>	<ul style="list-style-type: none"> <li>• Repairs and maintenance of electricals and plumbing may be required at this time</li> <li>• Installation of water storage tank</li> <li>• Regular weeding of the yard</li> </ul>



	Thibaud	<ol style="list-style-type: none"> <li>1. The building is a concrete structure with concrete walls, concrete floor and concrete roof</li> <li>2. Is likely to be able to withstand some of the adverse weather conditions that may affect the area.</li> <li>3. Aluminum windows and two front entrance doors with exit doors of wood</li> <li>4. Electricals, plumbing and telephones installations – in wall</li> <li>5. Some external lights do not work</li> <li>6. Some faucets are malfunctioning</li> <li>7. One face basin has a leak</li> <li>8. There is evidence of the presence of termites</li> <li>9. The entrance doors on the Northeastern side do not work</li> <li>10. Window operators no longer function due to the effects of highly corrosive sea spray.</li> <li>11. The rear entrance door is sealed shut due to expansion of the wood structure.</li> <li>12. May easily withstand adverse weather conditions</li> </ol>	<ul style="list-style-type: none"> <li>• The Centre requires regular maintenance of doors and their hinges, windows and window winders, light bulb fixtures, appliances and other fixtures that are liable to be affected by weathering.</li> <li>• The sea spray in the area is relative strong and therefore causes corrosion of door hinges, window operators, etc. maintenance of these is needed immediately.</li> <li>• Installation of a water tank recommended</li> </ul>
<b>2. Roseau Health District</b>	Roseau Central Botanic Gardens	<p>The building located in the Botanic Gardens and formerly occupied by the Roseau Primary School is currently under refurbishment.</p> <p>Originally constructed of concrete roof, concrete walls and hard plastic louvers with wire mesh burglar bars, the refurbishment activities include installation of plywood siding, glass louvers, internal partitioning of plywood and lumber, installation of electrical, plumbing and telephone fixtures, etc.</p> <p>A number of areas are still to be covered and will be addressed during the new financial year</p>	<p>The areas to be covered include the follows:</p> <ol style="list-style-type: none"> <li>1. Standby Generator</li> <li>2. Water Storage tank</li> <li>3. Increased space for Community Health Nurses</li> <li>4. Tiling</li> <li>5. Provision for installation of hurricane shutters in vulnerable areas</li> <li>6. Security</li> </ol>
<b><u>Roseau North</u></b>	Warner	<ol style="list-style-type: none"> <li>1. The Warner Health Centre is constructed of concrete walls, galvanized roof, aluminum windows, concrete foundation and floor.</li> <li>2. There is an adjoining nurses' annex,</li> <li>3. A 400 gallon water tank</li> <li>4. Premises are enclosed by an 8 foot wire mesh fence.</li> <li>5. The centre is fitted with electrical, plumbing and telephone installations in-wall.</li> <li>6. The premises are fenced and appear to be generally well kept</li> <li>7. May be able to withstand some adverse weather conditions</li> </ol>	<ul style="list-style-type: none"> <li>• General maintenance of the electricals, plumbing required.</li> <li>• Some painting may be required as the walls have been soiled by mildew</li> </ul>

	Mahaut	<ol style="list-style-type: none"> <li>1. The Mahaut Health Centre is constructed of a precast or prefab type concrete material and concrete floor.</li> <li>2. Roof is of imitation clay colored metal roof, aluminum windows, and aluminum doors including one exit door from the nurses' annex and two wrought iron front entrance gates to the waiting area.</li> <li>3. Electrical, plumbing and telephone installation in-wall</li> <li>4. The building appears to be able to stand against all types of adverse conditions. However, due to poor drainage around the building there have been occasions of heavy flooding during rainstorms. Of particular concern is a piece of land which slopes toward the rear of the building. The centre becomes a collection point for debris carried by the rushing water during the floods.</li> <li>5. A drop shed, constructed to provide some shelter at the entrance, was poorly constructed and must be redesigned as it also contributes to the flooding during heavy rains</li> <li>6. Wall mounted fans provide much needed ventilation in the waiting area and other rooms</li> <li>7. Easily accessed by public</li> </ol>	<ul style="list-style-type: none"> <li>• Construction of a 12 x 12 drain on the Southern and Western sides of the building</li> <li>• Redesign of the drop shed over the main entrance of the centre</li> <li>• Construction of a 6 x 6 drain at the entrance covered with some wire mesh to prevent the overflow of water from the road from entering the premises</li> <li>• Installation of a water storage tank recommended</li> </ul>
	Fond Cole	<ol style="list-style-type: none"> <li>1. The centre is a concrete building with galvanized roof, concrete flooring, wood doors and glass windows</li> <li>2. Electrical, plumbing and telephone installation in-wall</li> <li>3. Premises are fenced</li> <li>4. Easily accessed by general public - located off the main road in close proximity to the Dominica Port</li> </ol>	<p>The centre requires some repairs including</p> <ul style="list-style-type: none"> <li>• Plumbing and washroom facilities – toilets and face basins</li> <li>• Aborite on dressing room cupboards lifting therefore require repairs</li> <li>• Nurses recreation room required (nurses are forced to snack or have meals on their screening and examination room desks)</li> <li>• Partitioning required in screening room to provide privacy for clients</li> <li>• One additional room needed for screening. During full clinic days one nurse uses a part of the waiting area for screening</li> <li>• Some electrical maintenance is also required</li> <li>• A water storage tank should be installed for emergency purposes</li> </ul>

	Massacre	<ol style="list-style-type: none"> <li>1. The Massacre Health Centre is a concrete structure with concrete walls, concrete roof and floor, aluminum windows, two front entrance wrought iron gates on the Southern and Western sides of the building</li> <li>2. The building includes a nurses' annex</li> <li>3. The waiting area is fitted with side mounted concrete blocks for added ventilation</li> <li>4. Electrical, plumbing and telephone installations in-wall</li> <li>5. The building bears cracks that were formed during the earthquake of 2005</li> <li>6. Some of the cracks are on the roof of the building and these cracks leak during heavy rains. This is particularly evident in the Consultation room</li> <li>7. A 400-500 gallon water tank provides stored water for the centre</li> <li>8. A small 6'x6' room has been provided for use by the pharmacist.</li> <li>9. A small incinerator is also provided at the centre</li> <li>10. Located on a main road and is easily accessed by the public</li> <li>11. Concrete roof, though leaking, may allow the building to withstand adverse weather conditions</li> </ol>	<ul style="list-style-type: none"> <li>• An assessment of the integrity of the structure paying particular attention to the cracks in the building.</li> <li>• Repairs to the cracks in the roof to stop the leaks</li> <li>• General maintenance of the electricals and plumbing</li> <li>• The water storage tank requires cleaning</li> <li>• The incinerator appears to be unused and should be cleaned for future use</li> </ul>
	Campbell	<ol style="list-style-type: none"> <li>1. The Campbell Health Centre is constructed of concrete walls, concrete floor, galvanized roof, aluminum windows and wood doors.</li> <li>2. The centre is fitted with electrical, plumbing and telephone installations in-wall.</li> <li>3. The waiting area is fitted with side mounted concrete blocks to allow for additional ventilation.</li> <li>4. The centre is located on the main road and is therefore easily accessed by the public</li> </ol>	<p>A few repairs may be required at the centre at this time including:</p> <ul style="list-style-type: none"> <li>• Replacement of window winders</li> <li>• Replacement of floor tiles</li> <li>• Installation of additional guttering to control excess water during heavy rains. The waiting area is also prone to flooding during heavy rains as a result of the missing guttering.</li> <li>• Washroom water closets need repairs</li> <li>• Some landscaping may be required around the building to allow for better flow of water during heavy rains and a safer yard space for clients use</li> <li>• The centre is in a generally vulnerable location as it may be easily cut off from the rest of the island by landslides</li> <li>• Installation of a water storage tank and a small standby generator would therefore be recommended</li> </ul>

	Cochrane	<p>The health centre is located in the community centre building.</p> <ol style="list-style-type: none"> <li>1. A concrete structure with a concrete roof</li> <li>2. Wood louvers and doors</li> <li>3. Accessed by stairs from the road</li> <li>4. Is partially enclosed by fencing</li> <li>5. Electrical and plumbing installations and telephone</li> </ol>	<ul style="list-style-type: none"> <li>• The centres requires maintenance to the plumbing particularly repairs to the outside plumbing and separation/isolation of the general supply to allow for a separate supply for the health centre</li> <li>• Some painting to give a facelift is recommended</li> <li>• The windows also require maintenance</li> </ul>
<b><u>Roseau South</u></b>	Newtown	<ol style="list-style-type: none"> <li>1. The Newtown Health Team operates from a building complex owned by the Catholic Priests and shares the compound with two other community groups.</li> <li>2. The building is constructed of brick walls, galvanized roof, aluminum windows and wood doors.</li> <li>3. The bricks in some parts of the wall in the waiting area are deliberately left with open spaces to allow for ventilation</li> <li>4. The centre is enclosed by an 8 foot concrete block wall with an entrance gate</li> <li>5. Electrical, plumbing and telephones installations in-wall</li> <li>6. The entrance in well kept and planted with flowers</li> </ol>	<ol style="list-style-type: none"> <li>1. The centre requires additional storage in the form of cupboards in the screening room</li> <li>2. Regular maintenance of the plumbing and electricals will ensure the sustained and smooth operation with very few disruptions</li> <li>3. The centre is also expected to withstand adverse weather conditions</li> </ol>
	Point Mitchel	<ol style="list-style-type: none"> <li>4. The Point Mitchel Health Centre is a concrete structure with galvanized roof, aluminum windows, wood doors and wrought iron entrance gate.</li> <li>5. The waiting area is fitted with side mounted concrete blocks and wall fans to allow for additional ventilation</li> <li>6. The premises are fenced and gated and most of the yard space is paved with concrete. The area appears to be generally well kept.</li> <li>7. During very busy clinic days screening of clients must be done outside of the building</li> <li>8. The centre has no observation/rest area for clients</li> </ol>	<p>The centre is in a good condition but requires a few adjustments/additions</p> <ol style="list-style-type: none"> <li>1. The centre appears to be too small for busy clinic days and would need additional space in the waiting area, a nurse's recreation room, a screening room, an observation room and a dispensary for pharmaceuticals.</li> <li>2. Installation of a water storage tank</li> <li>3. Electrical and plumbing maintenance</li> </ol>
	Soufriere	<p>Soufriere Health centre is currently undergoing some renovation works funded under the BNTF 5 Programme.</p> <ol style="list-style-type: none"> <li>1. A concrete structure, concrete floor, galvanized roof, aluminum windows and wood doors</li> <li>2. Electrical, plumbing and telephones installation in-wall</li> <li>3. Easily accessed from the main road</li> <li>4. May be able to withstand adverse weather conditions</li> </ol>	<p>Areas being covered are as follows:</p> <ol style="list-style-type: none"> <li>9. Demolition of wooden patio and walkway and construction of covered concrete walkway and patio</li> <li>10. Reconstruction of floor of 1<sup>st</sup> and 2<sup>nd</sup> screening rooms from wood to concrete</li> <li>11. Installation of additional windows and one exit door in kitchen, etc</li> <li>12. Renovation of Kitchen cupboards and creation of additional cupboard space</li> <li>13. Repairs to waiting area ceiling fans and painting of the health</li> </ol>

			centre walls
	Scotts Head	<ol style="list-style-type: none"> <li>1. The Scotts Head Health Centre is concrete structure, concrete floor with galvanized roof, aluminum windows and wood doors.</li> <li>2. Electrical, plumbing and telephones installations in-wall</li> <li>3. Water storage tank</li> <li>4. Waiting area fitted with side mounted concrete blocks for added ventilation</li> <li>5. Ceiling fans</li> </ol>	<p>The centre appears to be well kept but would require the following preventive maintenance activities:</p> <ul style="list-style-type: none"> <li>• Plumbing and electricals</li> <li>• Repairs to burglar bars</li> <li>• Change of position of water storage tank to allow gravitational flow</li> <li>• Ceiling fans need servicing</li> </ul>
<b><u>Roseau Valley</u></b>	Eggleston	<ol style="list-style-type: none"> <li>1. The Eggleston Health Centre is a concrete structure with concrete floor, galvanized roof, aluminum windows and wood doors.</li> <li>2. The building is fitted with electrical, plumbing and telephone installations in-wall.</li> <li>3. During adverse weather conditions the village is likely to be isolated from the city through the effects of landslides.</li> <li>4. Access to the centre is easy as the centre is located near the public roadway however;</li> </ol> <ul style="list-style-type: none"> <li>• The centre is not fenced and therefore easily accessed by the members of public.</li> </ul>	<ul style="list-style-type: none"> <li>• The Eggleston Health Centre requires some attention particularly in the area of fresh or running water for washing of hands and instruments.</li> <li>• The Centre requires some care of the surrounding yard space to keep grass and other weed growth at a minimum level</li> <li>• The premises are not regularly maintained and are therefore partially overgrown by shrubs and grass.</li> <li>• Electricals and plumbing require regular checks.</li> <li>• Installation of a standby generation and water storage tank is recommended for the centre.</li> <li>• The centre should be fenced to prevent access to would be vandals</li> </ul>
	Giraudel	<ol style="list-style-type: none"> <li>1. The Giraudel Health Centre is on the ground floor of a building constructed of concrete with aluminum windows, and wood doors.</li> <li>2. Concrete floors and galvanized roof.</li> <li>3. The area occupied by the centre is separated into two rooms, the waiting room and the doctors' or examination room.</li> <li>4. During doctors' visits there is no private area for screening (this is done in the waiting area)</li> </ol>	<ul style="list-style-type: none"> <li>• Plumbing requires maintenance, including repairs to toilet.</li> <li>• Maintenance to electricals</li> <li>• Yard requires regular maintenance of vegetation</li> <li>• The premises should be fenced to limit public access to clinic sessions</li> </ul>
	Morne Prosper	<ol style="list-style-type: none"> <li>1. The centre is a concrete structure with concrete floor, galvanized roof, aluminum windows and wood doors</li> <li>2. Electrical, plumbing and telephone installations in-wall</li> <li>3. Open premises easily accessed by public</li> </ol>	<p>The structure is relatively sound however:</p> <ul style="list-style-type: none"> <li>• May require some maintenance to the electricals, plumbing (repairs to toilet, etc).</li> <li>• The building may require an exit door</li> <li>• Premises should be fenced to prevent vandalism</li> </ul>

	Laudat	<ol style="list-style-type: none"> <li>1. The Laudat Health Centre is constructed of concrete walls, a concrete roof and flooring, aluminum windows and wood doors.</li> <li>2. The building is fitted with electrical, plumbing and telephone installations in-wall.</li> <li>3. There are a few cracks in the concrete roof that leak during heavy rains.</li> <li>4. Premises are fenced</li> <li>5. Easily accessed by the public</li> <li>6. May be able to withstand adverse weather conditions</li> </ol>	<ul style="list-style-type: none"> <li>• Maintenance of the electricals and plumbing</li> <li>• Repairs to leaking concrete roof</li> <li>• This centre may also require additional water storage and a standby generator as the area is likely to be isolated from the city by landslides</li> </ul> <p>During adverse weather conditions</p>
	Trafalgar	<ol style="list-style-type: none"> <li>1. The Trafalgar Health Centre is a concrete structure with concrete roof, concrete floor, aluminum windows</li> <li>2. Electrical and plumbing installations and telephones in-wall</li> <li>3. Easily accessed from the public road</li> <li>4. May withstand adverse weather conditions</li> </ol>	<ul style="list-style-type: none"> <li>• The centre requires maintenance to the plumbing and electricals</li> <li>• Regular maintenance of the premises</li> <li>• Fencing is required to prevent vandalism, a sleeping area for vagrants and the use of the premises as an animal shelter</li> </ul>
	Wotten Waven	<ol style="list-style-type: none"> <li>5. Building being used for Health Centre is a relatively old wood house shared with another tenant.</li> <li>6. All facilities are being share with another tenant</li> <li>7. May not be suitable for use during and after adverse weather conditions</li> </ol>	<ul style="list-style-type: none"> <li>• The current arrangement does not allow for hygienic operations of the health centre and may be inconvenient for the nurses.</li> <li>• Windows do not function due to the corrosive action of the sulfur in the area</li> <li>• Identification of another building for operations would be recommended</li> </ul>
	Bellevue Chopin	<ol style="list-style-type: none"> <li>1. Bellevue Chopin Health Centre is a concrete structure with concrete floor, galvanized roof, aluminum windows and wood doors. Structure relatively sound and may withstand adverse weather conditions</li> <li>2. Electrical, plumbing and telephone installations in-wall</li> <li>3. Easily accessed by public – located close to road</li> </ol>	<ul style="list-style-type: none"> <li>• A concrete walkway should be constructed to allow for easier access to Health Centre during rainy conditions at Bellevue Chopin</li> <li>• Requires additional washroom facilities. Nurses are required to share with clients currently</li> <li>• Electricals and plumbing may require maintenance</li> </ul>



3. Marigot Health District	<p>Marigot Hospital Health Centre</p> <p><b><i>The Hospital occupies the top floor area and the Health centre occupies part of the basement section</i></b></p>	<ol style="list-style-type: none"> <li>1. A concrete structure with concrete walls and floor. Aluminum and glass windows, wood doors.</li> <li>2. Many of the Hospital's windows will not be able to withstand any type of adverse weather conditions particularly wind and rain.</li> <li>3. Winders for the aluminum windows do not work</li> <li>4. Centre is fed by a 400 gallon water storage tank in case of water shortages</li> <li>5. Area is easily accessible to passersby to the extent that vandalism to the premises and property belonging to the nurses have taken place (Vehicles parked in the yard)</li> <li>6. There are two other small buildings on the premises. The old hospital and the old doctors' quarters.</li> <li>7. The Health Centre, located downstairs of the Hospital requires some attention as well – Cracked columns, flooding, etc</li> </ol>	<ul style="list-style-type: none"> <li>• Window winders in some cases should be replaced, some window frames and panes may also have to be replaced</li> <li>• Water storage tank size should be increased</li> <li>• One of the buildings on the premises should be demolished the other should be renovated to provide lodging for doctors and or nurses having to travel for long distances. This will reduce the rental expenses accruing to the ministry of Health and reduce the response time of Doctors and nurses who use the premises while on call.</li> <li>• The premises should be fenced to provide some control of visitors (some unwanted) to the site, particularly in cases of mass casualty where persons crowd in to the hospital. The fencing will also prevent vandalism to staff personal property</li> <li>• Columns found to be cracked should be repaired and outlets should be created for the easy outflow of excess water from the compound.</li> <li>• An infestation of termites originating in the surrounding bushes should be dealt with by the Environmental Health department</li> </ul>
	Woodford Hill	<p>The general structure of the building remains satisfactory.</p> <ol style="list-style-type: none"> <li>1. Concrete structure with galvanized roof wood and aluminum doors and aluminum windows. Concrete floor covered with ceramic tiles</li> <li>2. Electrical, plumbing and telephone installations in-wall</li> </ol>	<p>Areas needing attention:</p> <ul style="list-style-type: none"> <li>• Modification to the entrance on the eastern side of the building to avoid water leakage and floods when it rains.</li> <li>• That the vacant room downstairs be converted into a laundry/storage area for the health centre.</li> <li>• Installation of a water storage tank</li> </ul>
	Wesley	<p>The physical structure remains in a satisfactory condition.</p> <ol style="list-style-type: none"> <li>1. It is a concrete structure with concrete roof, concrete floor, wood doors and aluminum windows. Floor is covered with ceramic tiles</li> <li>2. Electrical, plumbing and telephone installations in-wall</li> <li>3. Evidence of vandalism</li> <li>4. Faulty faucet in consultation room.</li> <li>5. The lock to the entrance of the building is damaged</li> </ol>	<ul style="list-style-type: none"> <li>• One damaged window at the back of the building (western side) is in need of replacement.</li> <li>• That a ramp be built for handicap access to building.</li> <li>• Fencing and installation of burglar bars to improve the security of the facility and reduce the frequency of vandalism</li> <li>• Installation of a water storage tank</li> </ul>

	Atkinson	<ol style="list-style-type: none"> <li>1. Concrete structure, with concrete walls, concrete floor, galvanized roof and aluminum windows and wood doors</li> <li>2. Some plumbing issues</li> <li>3. There is a problem with mold as a result of a poorly constructed basement</li> </ol>	<ul style="list-style-type: none"> <li>• The plumbing requires maintenance including fixing of two toilets and face basin faucets</li> <li>• This situation with the mold must be addressed immediately as it has become a challenge to store supplies in the kitchen area affected by the mold. This may prove to be a health hazard if allowed to grow. A thorough assessment of the plumbing and electricals is needed at this time</li> <li>• Floor of patients and staff toilets require retiling</li> </ul>
	Calibishie	<ol style="list-style-type: none"> <li>1. Concrete structure with galvanized roof, aluminum windows and wood doors. Concrete floor covered with ceramic tiles</li> <li>2. Leaking roof, damaged by Hurricane Dean</li> <li>3. Located close to a slide prone hillside. A preschool located between the Health Centre and the hill was recently destroyed by a landslide</li> </ol>	<ul style="list-style-type: none"> <li>• Roof requires replacement or major repairs to stop leaks in the conference room, toilet and other areas and some minor work must be done on the structure</li> <li>• Toilet in staff washroom is faulty and needs replacement</li> <li>• A retaining wall is needed to protect the health centre from future slides</li> <li>• Glass louvers in back area should be replaced by aluminum windows</li> <li>• An exit door be installed on the opposite side of the slide prone area for easy exit in the event of a landslide</li> </ul>
<b>4. La Plaine Health District</b>	La Plaine	<ol style="list-style-type: none"> <li>1. Concrete structure with concrete roof and wood and aluminum doors and glass windows and louvers.</li> <li>2. Electrical and plumbing installations and telephones</li> </ol>	<p>A new Standby Generator has recently been installed and commissioned, Some electrical works have been done at the centre however, the structure requires some work – this includes replacement of doors, tiling, installation of hurricane shutters in skylight and other type windows, painting, and some additional electricals works.</p> <p>A small structure formerly housing the health centre and located on the northern side of the new building could be used as a means of housing for the resident Doctor for the district. This building will need extensive repairs but would save on travel time during callouts and rental expenses for the Ministry of Health</p>
	Delices	<ol style="list-style-type: none"> <li>1. Concrete structure with galvanized roof, aluminum windows, wood doors</li> <li>2. Premises are fenced</li> <li>3. Area relatively well kept</li> </ol>	<ul style="list-style-type: none"> <li>• The centre was recently renovated by the European funds/Government of Dominica however; maintenance of the plumbing is required at this time.</li> <li>• The public water supply is not regular. Some collaboration with the water and sewerage company to address this problem would be advised at this time. A storage tank has been provided for the centre however the placement of the tank needs to be reviewed</li> <li>• Some areas of the fence may need reinforcement.</li> </ul>



	Boetica	<ol style="list-style-type: none"> <li>1. Concrete structure, galvanized roof, aluminum windows, wood doors, side mounted concrete blocks for added ventilation in waiting area.</li> <li>2. Electrical and plumbing installation, telephone.</li> <li>3. One main entrance</li> </ol>	<p>The following maintenance activities are required:</p> <ul style="list-style-type: none"> <li>• Servicing of the electrical system</li> <li>• Approximately 80 sq ft of floor space requires retiling.</li> <li>• Servicing of the plumbing fixtures</li> <li>• Some painting of the building</li> </ul>
	Grand Fond	<ol style="list-style-type: none"> <li>1. Concrete building with galvanized roof, aluminum windows, wood doors</li> <li>2. Side mounted concrete blocks in waiting area for added ventilation</li> <li>3. Electrical, plumbing installations and telephone</li> <li>4. Ceramic floor tiles</li> <li>5. Fenced premises</li> <li>6. The centre is located next to the Grand fond Primary School</li> </ol>	<p>The centre requires the following maintenance activities:</p> <ul style="list-style-type: none"> <li>• Replacement and repairs of some doors and locks.</li> <li>• repairs to toilets and plumbing required</li> <li>• Yard requires some cleaning</li> <li>• Kitchen cupboard and cupboard doors need repairs</li> <li>• Some windows need repairs</li> <li>• Building requires some painting</li> <li>• Request was made for an additional room for screening as the population has outgrown the centre. Nurses indicated that there is not enough privacy during heavy clinic days</li> </ul>
	Riviere Cyrique	<ol style="list-style-type: none"> <li>1. Concrete structure with concrete roof, wood doors and aluminum windows</li> <li>2. Side mounted concrete blocks in waiting area for added ventilation</li> <li>3. Electricals, plumbing installations and telephones</li> <li>4. The building is located on the main road and is therefore easily accessed</li> </ol>	<p>A number of maintenance activities are require immediately</p> <ul style="list-style-type: none"> <li>• Repairs to the plumbing including the water tank, toilets, face basins, and installations in nurses' annex</li> <li>• Repairs to electricals including</li> <li>• Doors and windows repairs particularly the replacement of window winders</li> <li>• Fencing required at the back of the centre to prevent access to animals and access to individuals who engage in drug abuse activities</li> <li>• Repairs required in kitchenette to cupboard doors</li> <li>• Repairs to iron gates at entrance</li> </ul>
<b>5. Grand Bay Health District</b>	Grand Bay	<ol style="list-style-type: none"> <li>1. A concrete structure with part concrete and part galvanized roof, concrete flooring, aluminum windows, wood and aluminum doors,</li> <li>2. Electrical and plumbing installations and telephones</li> <li>3. Located on the main road therefore easily accessed</li> <li>4. Manual standby generator</li> </ol>	<ul style="list-style-type: none"> <li>• The Grand Bay Health Centre requires water storage capability, an automatic on/off switch for the standby Generator, and residential quarters for doctors and nurses for both reduced response time during call out situations and the event of adverse weather conditions</li> </ul>

	Pichelin	<ol style="list-style-type: none"> <li>1. Concrete structure with galvanized roof, aluminum windows and wood doors</li> <li>2. Electrical and plumbing installations and telephones renovated, and is in an area that is sheltered from direct effects of winds.</li> </ol>	This area may be cut off during adverse weather conditions as the small stream over which clients must cross may become impassable during heavy storms if the small walkover that serves the area is washed away.
	Tete Morne	<ol style="list-style-type: none"> <li>1. Concrete Structure, concrete roof and aluminum windows</li> <li>2. Electrical, plumbing installations and telephones</li> <li>3. Waiting area ventilated with side mounted concrete blocks</li> <li>4. Water storage tank</li> <li>5. Partially fenced</li> <li>6. Easily accessed by clients, close to main road</li> </ol>	<ul style="list-style-type: none"> <li>• The centres requires some maintenance to electricals and plumbing</li> <li>• Some painting to give a face lift</li> <li>• Completion of fencing</li> <li>• Adjustment of the level of the water storage tank for more effective use of the tank.</li> </ul>
	Bagatelle	<ol style="list-style-type: none"> <li>1. Built with Prefab material (sheetrock) and lumber, galvanized roof, aluminum windows, wood and aluminum doors</li> <li>2. Electricals and plumbing installations, and telephones, ceiling fans</li> <li>3. Located on a secondary road but within close proximity of the main road.</li> </ol>	<ul style="list-style-type: none"> <li>• Recent renovations to the centre have improved the plumbing and created and improved storage. Repairs to the roof and painting were also included.</li> <li>• Some electrical maintenance is required</li> <li>• Installation of a water storage tank ( received from the Disaster Management Officer)</li> </ul>
	Petite Savanne	<ol style="list-style-type: none"> <li>1. Concrete structure with galvanized roof, wood doors and aluminum widows</li> <li>2. Electrical and plumbing installations and telephones in-wall</li> <li>3. Located on main road therefore easily accessed by public</li> <li>4. Appears to be</li> </ol>	<p>The centre is relatively well kept but requires the following;</p> <ul style="list-style-type: none"> <li>• Some repairs to a damaged wall at the entrance</li> <li>• Installation of a water storage tank (received from the Disaster Management Office)</li> <li>• Maintenance of its electricals</li> </ul>
<b>6. Castle Bruce Health District</b>	Castle Bruce	<ol style="list-style-type: none"> <li>1. Newly constructed with concrete roof, wood doors and glass windows including,</li> <li>2. Electricals and plumbing installations and telephones/internet.</li> <li>3. The Centre is equipped with a new standby generator</li> <li>4. Completely fenced with provision for external parking for clients.</li> </ol>	<ul style="list-style-type: none"> <li>• The centre requires a water storage tank, and telephone and internet extensions for the different offices there.</li> <li>• Hurricane shutters may also have to be provided for installation during the approach of storms</li> </ul>

	Salybia	<p>At the current location of the Health Centre a number of areas have been identified for corrective maintenance. These include:</p> <ol style="list-style-type: none"> <li>1. Water supply issues</li> <li>1. Broken fences</li> <li>2. Structural issues such as - termite infestation, maintenance of faucets and toilets and, a general lack of respect for the facilities occupied by the health team from the villagers in the area</li> </ol>	<p>The intention to occupy the new Salybia Health Centre building constructed by the Caribe Council will meet some of the needs being addressed in relation to the current arrangement However, access to this new centre needs to be addressed as follows:</p> <ol style="list-style-type: none"> <li>1. The road must be paved to enable easier access</li> <li>2. The road side must be maintained and lit for nighttime emergencies and</li> <li>3. The lot on which the centre is located should be fenced and lit to prevent vandalism or to minimize easy access to would be vandals.</li> </ol>
	Mahaut River	<ol style="list-style-type: none"> <li>1. Concrete structure with concrete roof, aluminum windows, wood doors</li> <li>2. Electrical and plumbing installations and telephones, fixtures, structure, etc are in a fair condition.</li> <li>3. The structure is relatively sound and should be able to withstand some adverse weather conditions</li> <li>4. Located on the main road</li> <li>5. Premises are fenced</li> </ol>	<p>Though no major over haul is required the following maintenance activities are required :</p> <ul style="list-style-type: none"> <li>• The electricals require some maintenance</li> <li>• Maintenance of the plumbing and some of the fixtures is required – including replacement of faucets and face basins and repairs to toilets</li> <li>• The door frame on the northern side (side entrance) requires replacement and some windows need repairs, particularly replacement of window winders/operators</li> </ul>
	Good Hope	<p>The building is a concrete structure with a concrete roof , aluminum windows, wood doors Electrical and plumbing installations and telephones</p>	<ul style="list-style-type: none"> <li>• The centre requires fencing to prevent or reduce vandalism and burglary</li> <li>• The concrete roof is cracked in some areas and requires repairs</li> <li>• The building requires some painting</li> </ul>
	Petite Soufriere	<p>This centre is housed in a building being rented from one of the locals. The roof is made of galvanized sheets and the windows are of aluminum.</p>	<ul style="list-style-type: none"> <li>• The facility is relatively small, the winders on the aluminum windows no longer work – these should be replaced</li> </ul>
<b>7. St. Joseph Health District</b>	St. Joseph	<ol style="list-style-type: none"> <li>1. The Centre is housed in a concrete structure with a concrete roof. Windows are aluminum with wooden doors.</li> <li>2. Electrical and plumbing installation and telephones</li> <li>3. Premises are fenced</li> <li>4. Easily accessed by public</li> <li>5. Annex for the centre provides accommodation for the doctor or nurse on call in the district on a regular basis</li> </ol>	<ul style="list-style-type: none"> <li>• The building requires a new paint job</li> <li>• The concrete roof leaks during heavy rains and therefore needs resurfacing or the application of a suitable sealant.</li> <li>• The electrical system requires some maintenance as the leaks may cause corroding of the wiring and eventual short-circuiting.</li> <li>• The exterior pavement requires repairs/replacement</li> <li>• The annex requires some repairs to the plumbing, kitchen cupboards, floor tiles,</li> </ul>
	Belles	<ol style="list-style-type: none"> <li>1. The building is a concrete structure with concrete roof, Aluminum windows, and wood doors.</li> </ol>	<ul style="list-style-type: none"> <li>• May require some minor maintenance activities to plumbing, electricals, to window winders, etc</li> </ul>

		<ol style="list-style-type: none"> <li>Electrical and plumbing installation and telephones</li> <li>A water storage tank is used to collect rain water. This is the centre's only water supply.</li> </ol>	<ul style="list-style-type: none"> <li>There is no running water at the centre – the water supply comes from collection of the rain water in the area. The Dominica Water and Sewerage Company has advised that they would be willing to assist with the treatment and cleaning of the water if requested by the ministry</li> </ul>
	Colihaut	<ol style="list-style-type: none"> <li>Concrete structure, galvanized roof, aluminum windows, wood doors</li> <li>The building has two floors, the ground floor occupied by the health centre and the first floor occupied by the village council</li> <li>The centre is in a relatively good condition at this time</li> <li>Electrical and plumbing installations and telephones</li> <li>Partially fenced</li> </ol>	<ul style="list-style-type: none"> <li>May require normal maintenance activities such as servicing of the electricals and plumbing</li> <li>Front area should be fenced</li> <li>Staff toilet does not work as the water supply needs repairs</li> <li>A water storage tank is required for the health centre</li> </ul>
	Coulibistrie	<ol style="list-style-type: none"> <li>The Building is a concrete structure with concrete roof, aluminum windows, and wood doors.</li> <li>The waiting area is fitted with side mounted concrete blocks for added ventilation.</li> <li>The building is accessed through the waiting area only with two wood doors</li> <li>Some of the door locks do not function well</li> <li>The floor tiles in some of the rooms require replacement. Due to wear and tear over time the tiles in these areas have come loose.</li> <li>The nurses' annex shows some signs of disrepair including some missing glass louvers and the use of the entrance porch by vagrants</li> </ol>	<p>A general maintenance is required at the health centre. This should include but should not be limited to:</p> <ul style="list-style-type: none"> <li>Repairs to the doors and door locks including entrances doors</li> <li>Replacement of some of the floor tiles</li> <li>Painting</li> <li>Replacement of the windows in the nurses' annex</li> <li>Fencing of the property to prevent vandalism and easy access to the general public and vagrants</li> </ul>
	Salisbury	<ol style="list-style-type: none"> <li>The building is a concrete structure with galvanized roof, aluminum windows, wood doors and concrete floor.</li> <li>Normal electrical and plumbing installations and telephone</li> <li>Waiting area consultation</li> <li>The yards at the rear of the building is partially overgrown by grass</li> <li>There are numerous cracks at the front and inside of the building.</li> <li>Some areas of the fence appears to be weakened by the weight of overgrown vines</li> </ol>	<p>The centre appears to be well kept by the staff however:</p> <ul style="list-style-type: none"> <li>The plumbing and electricals require regular occasional maintenance</li> <li>The yard requires regular maintenance – cutting of grass and small trees</li> <li>A nurses' recreation room with washroom facilities is required in the centre</li> <li>Part of the fence at the rear of the building requires some repairs</li> <li>The building requires a facelift in the form of painting</li> <li>An assessment of the integrity of the structure is recommended as a result of the numerous cracks in the building</li> <li>Additional storage and an exit door are needed in the health</li> </ul>

			<p>centre</p> <ul style="list-style-type: none"><li>• The front entrance requires some form of covering to prevent flooding during heavy rains. The wind direction results in flooding during heavy rains if the entrance door is kept opened. A simple drop shed supported by two 3” in diameter metal poles and measuring 8’ x 5’ would be ideal</li></ul>
<p><b>Summary Note</b></p> <ul style="list-style-type: none"><li>• <i>Many of the health centres have been outgrown by the village populations that they serve. In most cases the additional rooms needed are examination/screening/nurses recreation and expanded waiting area</i></li><li>• <i>Many of the health centres were not provided with exit or rear entrance doors. This should be provided for safety and easy movement during emergencies.</i></li><li>• <i>All of the health centres must be provided with water storage tanks to provide for emergency periods. In cases where the centre is likely to be isolated during disasters, installation of a standby generator is recommended</i></li><li>• <i>Annual preventive maintenance schedules must be set to prevent the extensive and costly repairs resulting from long term neglect of the facilities. A more proactive response through monthly and quarterly reports from district team leaders would alert the ministry of the needs of the districts.</i></li><li>• <i>Side mounted concrete blocks provide an efficient form of ventilation for the health centre where this is used. However, during heavy rainfall accompanied by strong winds the centres are vulnerable to flooding. Hurricane shutters may have to be provided where these areas are in the direct path of the wind</i></li></ul>			





other ministries and international partners. This is particularly important in order for Dominica to capitalize on opportunities as they become available as well as for access to current information within the country and outside the country. Communication technologies such as email should become the new standard method of communication. Electronic information management is also likely to be more cost-effective than the present cumbersome paper system. Indeed this concept is consistent with government's thrust towards e-government which is expected to be given a significant boost through the E-Government for Regional Integration Projects (EGRIP) which is expected to come on-stream in September 2008. One of the subcomponents in this project will focus on the health sector and is expected to rapidly build on initiatives that the MoH has undertaken over the past 5 years that include the launch of the Princess Margaret Hospital electronic Patient Administration System in June 21, 2006.

Ultimately it is envisioned that the MoH will meet most of its information needs through an intranet that is linked to the wider government system and to others through the World Wide Web. It is expected that these developments will focus at two levels –PMH and at the level of the district health centres.

### ***Princess Margaret Hospital***

The plan for strengthening the PMH is to be undertaken in several phases as outlined in the *Princess Margaret Hospital Information System Plan*:

Phase 1A: Construction of PMH intranet (first phase) and introduction of electronic patient administration system, introduction of electronic accounts and billing. (Completed)

Phase1B: Introduction of electronic records at A&E, Medical Records Abstracting

Phase 2: Upgrade of Laboratory Information System

Phase 3: Site wide expansion of network, integration of major services

### ***Primary Health Care***

The renewal of Primary Health Care in Dominica will require a much stronger health information system than currently exists. This system will need to be capable of integrating information about patients that make is easy to follow the progress of individual patients and allows for aggregate information to be generated for the purposes of monitoring and evaluating programmes e.g. HIV and AIDS, CNCDs. The most effective approach to realizing this goal will have to



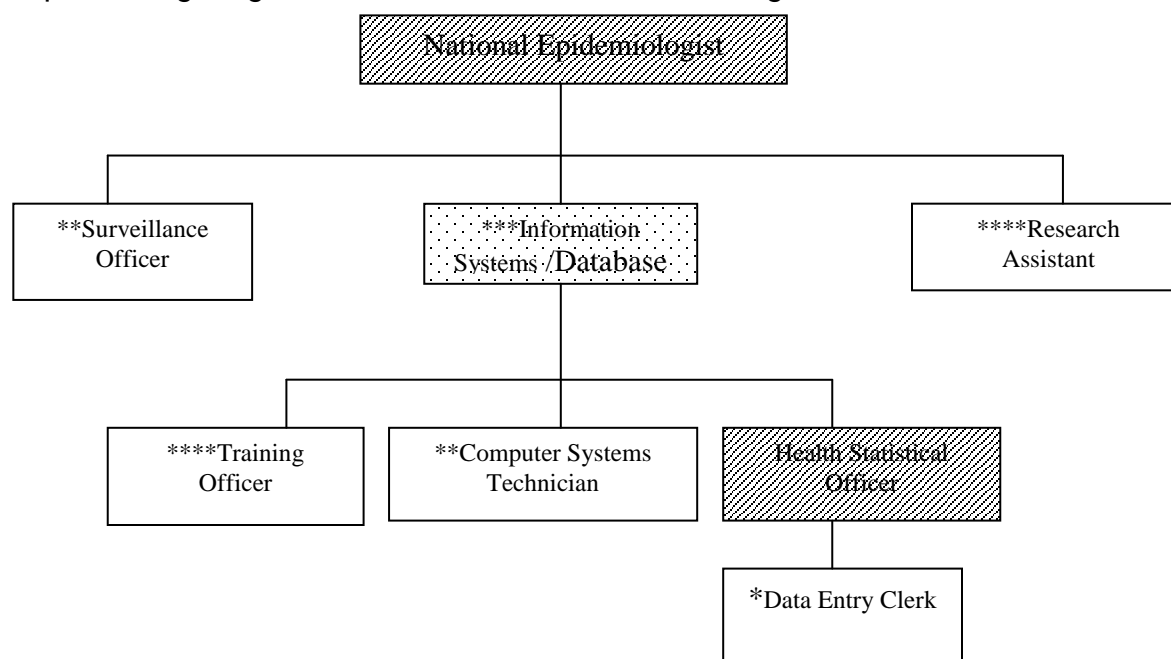
be determined through consultation with key agencies and experts including PAHO/WHO.

### Coordination and Oversight

The Health Information Unit (HIU) will be the coordinating unit for the implementation of the upgraded HIS. In order to accomplish this there will need to be adjustments in the number and range of qualifications of staff in this Unit. The following organizational chart outlines the core staff necessary to for the Unit to achieve its goals. To reflect the wider role that the Unit will need to have there should be a name change as well to *Health Surveillance, Training and Research Unit*.

**Figure 5.11**

Proposed Organogram for Health Surveillance, Training and Research Unit



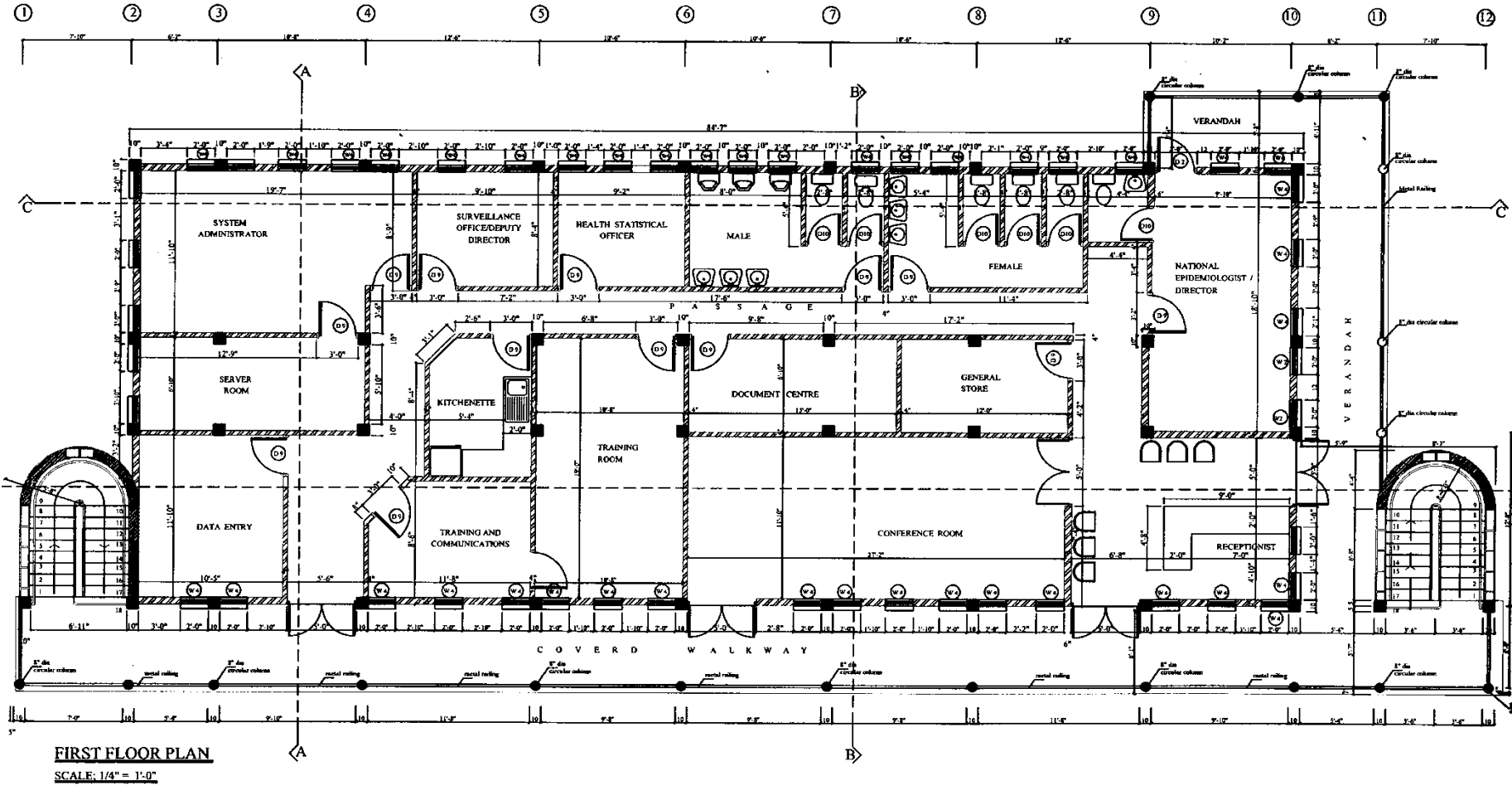
So as to develop a strong plan of action that addresses the health information and communication needs at all levels of the country there needs to be an assessment of the information system. This is consistent with guidelines for the development of national health information systems put out by the WHO<sup>23</sup>.

Crucial to this plan to scale up the information system is the need for secure space to protect the investments equipment and data as well as to provide space for personnel to work. Permission has been secured to build a floor on top of the

<sup>23</sup> <http://www.who.int/healthmetrics/en/>

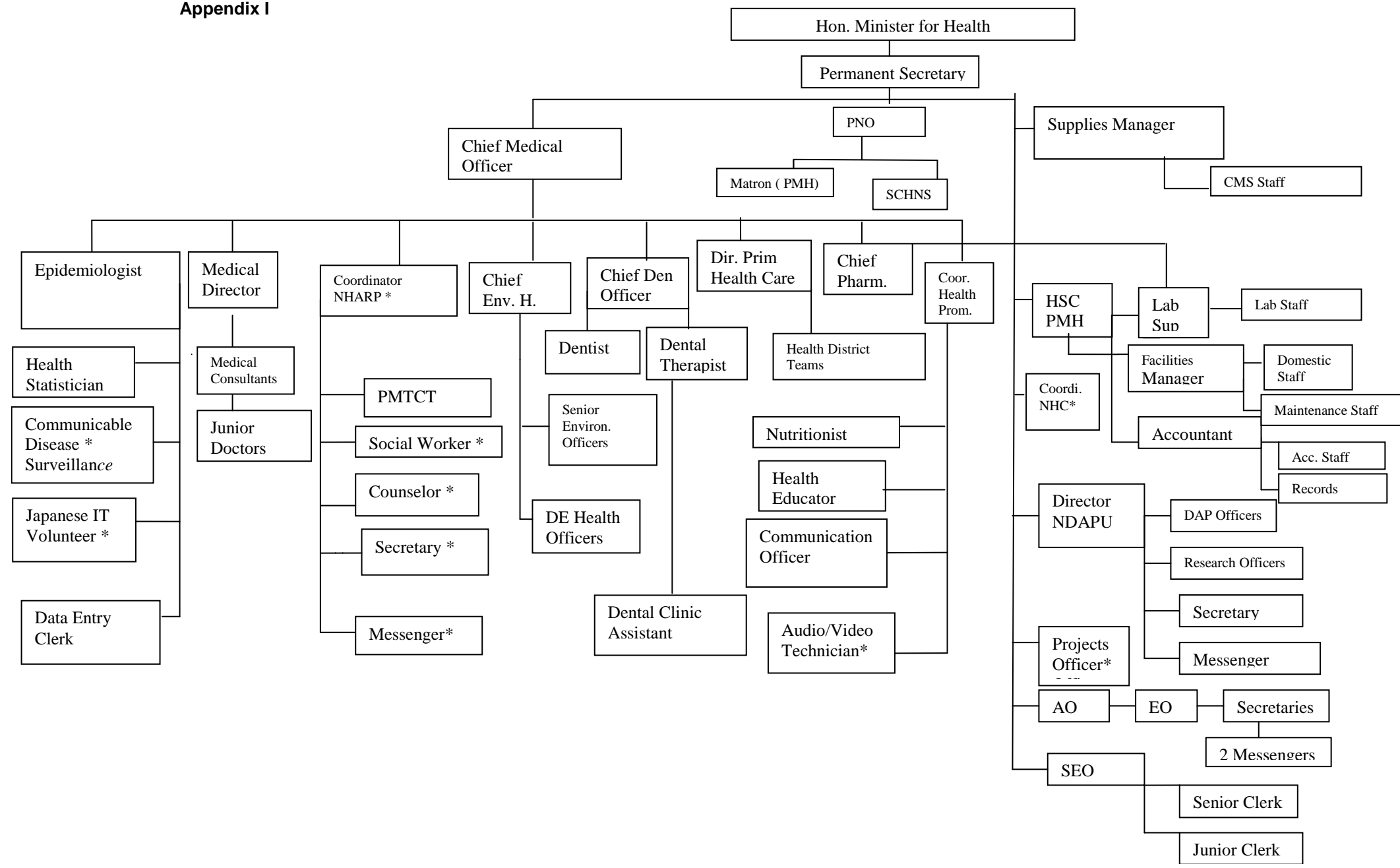
proposed new Brenda Stafford Eye Care Centre to be constructed at PMH. The construction is expected to cost of the order of US\$0.5 million.

Figure 5.12: Floor Plan for Proposed Health Surveillance, Training and Research Centre



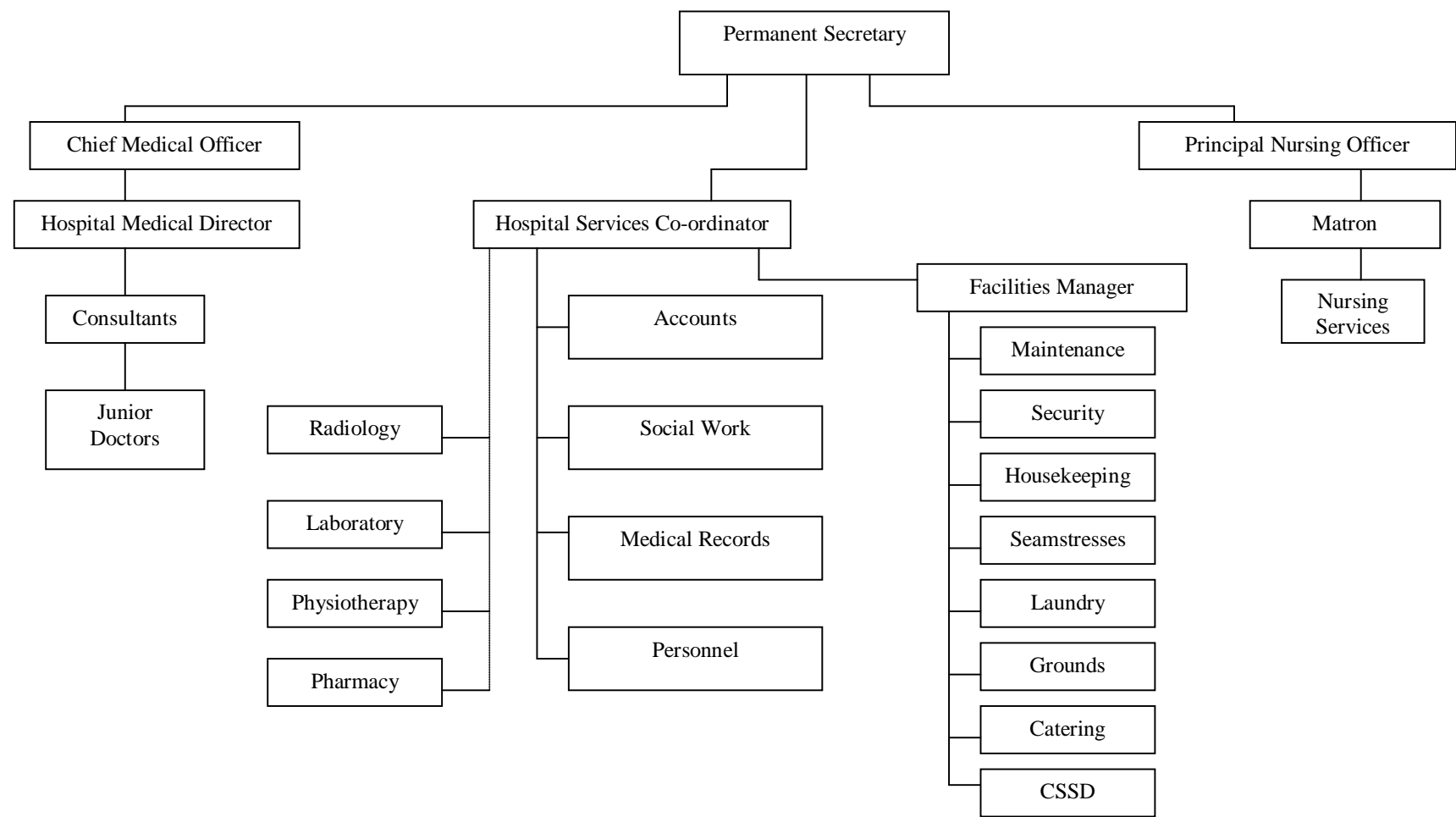
# APPENDICES

Appendix I



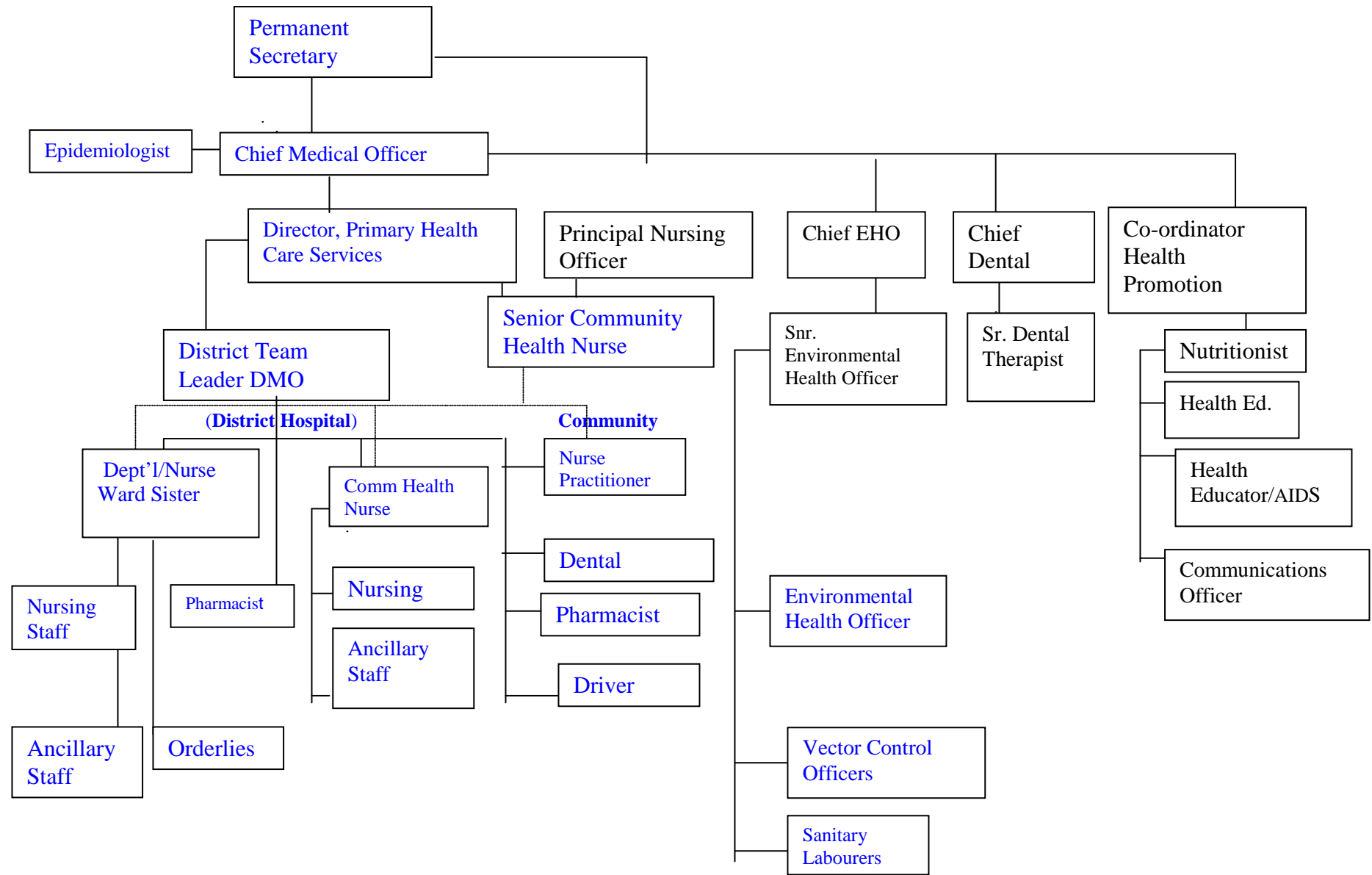
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ORGANIZATIONAL CHART - PRINCESS MARGARET HOSPITAL



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PRIMARY HEALTH CARE SERVICES



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## List of Abbreviations

<b>ACM</b>	<b>CS</b>	<b>CSW</b>
Asbestos Containing Material	Co	Commercial Sex Workers
<b>ADECRI</b>	<b>DA</b>	<b>DADP</b>
Association for Development & Coordination of Do		Dominica Association of Disabled Persons
International Relations		<b>DPHCS</b>
<b>AIDS</b>		Director Primary Health Care Services
Acquired Immune Deficiency Syndrome		<b>DMO</b>
<b>APU</b>		District Medical Officer
Acute Psychiatric Unit		<b>DPPA</b>
<b>ARI</b>		Dominica Planned Parenthood Association
Acute Respiratory Infections		<b>DSWMC</b>
<b>AIMS</b>		Dominica Solid Waste Management
Assessment Instrument for Mental Health		Corporation
Systems		<b>DOMSAVE</b>
<b>BRF</b>		Dominica Save the Children
Behaviour Risk Factors		<b>ECU</b>
<b>BSS</b>		Environmental Coordinating Unit
Behavioural Surveillance Survey		<b>EHD</b>
<b>CALLS</b>		Environmental Health Department
Centre where Adolescents Learn to Love&		<b>EIA</b>
Serve		Environmental Impact Assessments
<b>CFLI</b>		<b>ECT</b>
Canadian Fund for Local Initiatives		Emergency Care & Treatment
<b>CAREC</b>		<b>EPI</b>
Caribbean Epidemiology Centre		Expanded Program on Immunization
<b>CCB</b>		<b>EPHF</b>
Caribbean Council for the Blind		Essential Public Health Functions
<b>CDB</b>		<b>EPTD</b>
Caribbean Development Bank		Establishment, Personnel & Training
<b>CPC</b>		Department
Caribbean Program Coordination		<b>FBO</b>
<b>CSME</b>		Faith Based Organization
CARICOM Single Market & Economy		<b>FNP</b>
<b>CBR</b>		Family Nurse Practitioner
Crude Birth Rate		<b>FAO</b>
<b>CCF</b>		Food & Agricultural Organization
Christian Children Fund		<b>FCTC</b>
<b>CEDAW</b>		Framework Convention on Tobacco
Convention on the Elimination of All Forms of		Control
Discrimination Against Women	<b>GF</b>	<b>GFTAM</b>
<b>CMS</b>	Glo	Global Fund against Tuberculosis, AIDS,
Central Medical Stores	Ma	Malaria
<b>CNCD</b>	<b>GY</b>	<b>GYTS</b>
Chronic Non-communicable Diseases	Glo	Global Youth Tobacco Survey
<b>CMHT</b>		<b>GNC</b>
Community Mental Health Team		General Nursing Council
<b>CQI</b>	<b>GS</b>	<b>GSPS</b>
Continuous Quality Improvement	GI	Global Social Protection Strategy

<b>HCA</b>		<b>NHC</b>	
Healthy Community Approach	Nat	National Health Coverage	
<b>HSC</b>		<b>NISE</b>	
Hospital Services Coordinator	Nat	Nature Island Standard of Excellence	
<b>HFLE</b>		<b>NGO</b>	
Health & Family Life Education		Non-governmental Organizations	
<b>HIS</b>		<b>NSPH</b>	
Health Information Systems		National Strategic Plan for Health	
<b>HPRC</b>		<b>OSH</b>	
Health Promotion Resource Centre		Occupational Safety & Health	
<b>HSR</b>		<b>PAHO</b>	
Health Sector Reform		Pan American Health Organization	
<b>HIV</b>		<b>PAS</b>	
Human Immuno-Virus		Patient Administrative System	
<b>HMD</b>		<b>PPS</b>	
Hospital Medical Director		Pharmaceutical Procurement Services	
<b>HCS</b>		<b>PHC</b>	
Home-based Care Services		Primary Health Care	
<b>IMF</b>		<b>PLWHA</b>	
International Monetary Fund		People Living with HIV&AIDS	
<b>ICU</b>		<b>PMH</b>	
Intensive Care Unit		Princess Margaret Hospital	
<b>IHR</b>		<b>PMTCT</b>	
International Health Regulations		Prevention of Mother-to-Child Transmission	
<b>ILO</b>		<b>PSI</b>	
International Labour Organization		Population Service International	
<b>KAPB</b>		<b>PPA</b>	
Knowledge Attitude and Practice	<b>PP</b>	Participatory Poverty Assessment	
<b>KPMG</b>	Par	<b>PSC</b>	
<b>MCH</b>	<b>PP</b>	Public Service Commission	
Maternal and Child Health	Pu	<b>REACH</b>	
<b>MDG</b>	<b>RE</b>	Reaching Elderly Abandoned Citizens	
Millennium Development Goals	Re	house-bound	
Mean Attitudinal Scores	Ho	<b>SDOH</b>	
<b>MSM</b>	<b>SD</b>	Social Determinants of Health	
Men who have sex with Men	So	<b>SWOT</b>	
<b>MoH</b>	S	Strengths Weaknesses Opportunity Threat	
Ministry of Health		<b>SLC</b>	
<b>NAC</b>	<b>SL</b>	Survey of Living Conditions	
National AIDS Committee	Sur	<b>UWI</b>	
<b>NCH</b>	<b>U</b>	University of the West Indies	
National Children's Home	U	<b>VAT</b>	
<b>NDC</b>	<b>VA</b>	Value Added Tax	
National Development Corporation	Val	<b>VOSH</b>	
<b>NDAPU</b>	<b>V</b>	Voluntary Optometric Services to Humanity	
National Drug Abuse Prevention Unit		<b>WHO</b>	
<b>NEPO</b>	<b>W</b>	World Health Organization	
National Emergency Plan Organization	Wo		
<b>NHA</b>			
National Health Accounts			

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